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WAGES AND HOURS OF LABOR SERIES

WAGES AND HOURS OF LABOR
IN THE IRON AND STEEL
INDUSTRY : 1907 TO 1926



JUNE, 1927

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Bar mills.....	158
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Tin-plate mills.....	192

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WAGES AND HOURS OF LABOR IN THE IRON AND STEEL INDUSTRY: 1907 TO 1926

INTRODUCTION AND SUMMARY¹

The figures presented in this report are based on a study of wages and hours of labor of wage earners in 10 departments of the iron and steel industry in the United States. The study was made in the early part of 1926 and is similar to former wage studies of the bureau presenting information back to 1907. Only 3 departments were covered in the data collected for 1907, and it was not until the study of 1914 that all 10 departments were included. For the purposes of comparison summary figures for years prior to 1926, taken from previous reports of the bureau,² are repeated in this report.

The departments covered together with the period for which information is available for each department are as follows:

- Blast furnaces, 1907-1926.³
- Bessemer converters, 1907-1926.³
- Open-hearth furnaces, 1910-1926.³
- Puddling mills, 1914-1926.⁴
- Blooming mills, 1910-1926.³
- Plate mills, 1910-1926.³
- Standard rail mills, 1924 and 1926.⁵
- Bar mills, 1907-1926.⁴
- Sheet mills, 1910-1926.³
- Tin-plate mills, 1910-1926.⁴

The basic iron and steel industry consists of three distinct steps or processes—the reduction of the iron ore into pig iron, the conversion of the pig iron into steel or wrought iron, and the rolling of the iron or steel into such shapes or sizes as will be suitable for further manufacture or in some instances for immediate consumption. The 10 departments covered in this study do not include all of the departments in the industry, but each of the three different processes is represented. The iron ore is reduced to pig iron in the blast furnace.

¹ Summary figures for 1926 appeared in the Monthly Labor Review for September and October, 1926, and April, 1927.

² See for years up to 1915, Bul. No. 218; for 1917, Monthly Labor Review for March, 1918; for 1919, Bul. No. 265; for 1920, Bul. No. 305; for 1922, Bul. No. 353; and for 1924, Bul. No. 381.

³ No data available for 1916, 1918, 1921, 1923, or 1925.

⁴ No data available for 1916, 1917, 1918, 1921, 1923, or 1925.

⁵ In the 1924 survey the plants covered in the standard rail mill department were in many cases different from those covered in previous studies and no comparison was made between the figures for that year and those for former years. In this report in the tables dealing with the selected occupations only, no comparison is made between the 1926 figures and those for years prior to 1924. However, the averages for all employees in the country as a whole were not affected by the change in plants to the extent that were the averages for employees in the selected occupations only, and in all comparative tables covering all employees data have been included for all years available. No data available for 1916, 1917, 1918, 1921, 1923, or 1925.

The pig iron is converted into steel in the Bessemer converter or in the open-hearth furnace, or into wrought iron in the puddling mill. The remaining 6 departments are rolling mills and in quantity of production include a large percentage of all rolled products. Thus, while all departments have not been covered, a sufficient representation of the principal departments has been included to show the conditions in the industry.

As in other wage studies of the bureau, it was not practical to make a complete census of all plants, but data were obtained from a sufficient number in each district in which the departments covered were of material importance to represent fairly the conditions in that district and in the country as a whole. The bureau endeavored to cover from 30 to 40 per cent of the capacity or equipment of each department in the United States. While there are no complete records available, computations from the most authoritative index of companies and equipment in the United States indicate that this has been pretty generally accomplished. Wherever possible the 1926 data were obtained from the same establishments as were covered in 1924. In a few instances the plants covered in 1924 were not in operation in 1926 or had ceased to be representative of the industry. In such cases it was necessary to substitute plants which were regularly operated under representative conditions.

The 1926 data were obtained from 199 plants or departments of plants and covered 75,109 wage earners. These were distributed between the various departments as follows:

Department	Number of plants	Wage earners
Blast furnaces.....	37	15,329
Bessemer converters.....	11	2,948
Open-hearth furnaces.....	31	13,424
Puddling mills.....	13	2,488
Blooming mills.....	26	6,188
Plate mills.....	17	4,202
Standard rail mills.....	7	3,280
Bar mills.....	35	7,605
Sheet mills.....	14	10,753
Tin-plate mills.....	8	8,892
Total.....	199	75,109

According to the Census of Manufactures for 1925, the latest figures available, there was an average of 399,914 wage earners employed in all departments of the industry during that year. They were divided—29,188 in blast furnaces and 370,726 in steel works and rolling mills. These figures indicate that the bureau covered approximately 19 per cent of all employees in all departments (including those not covered by the bureau) and more than 50 per cent of the employees in blast furnaces alone. Unfortunately employees in steel works and rolling mills are not subdivided under the various departments in the census figures. Thus, no data are available from which to determine the per cent of employees covered by the bureau in the other departments. Figures taken from the reports of the Census of Manufactures, showing the importance of the iron and steel industry, are given on page 15.

All figures in this report are based on actual pay-roll data for one pay period, and do not therefore show month to month changes or

yearly averages. Data for practically all establishments covered in the 1926 survey are for a period in January, which in most cases was the last half of the month. The figures for the years 1907 to 1915 are for the second half of May, those for 1917 are for a pay period in September, and those for 1919 are nearly all for a half-month pay period somewhere in the first three months of that year. The 1920 survey covered the last half of October, and in most instances the figures for 1922 relate to the first half of October. The last half of January was the period selected for 1924 and a large majority of the schedules cover that period.

A summary of the changes in hours and earnings in the industry as a whole and in each of the 10 departments is shown in the following table of averages and of index numbers based thereon. Available figures for earlier years are brought into comparison with those for 1926.

In the computation of the index numbers the year 1913 is taken as the base or 100, and the index for each year is simply the per cent that the average for that year is of the average for 1913.

For puddling mills 1914 is taken as the base, as data for that department were first obtained for that year.

TABLE 1.—Average full-time hours per week, earnings per hour, and full-time earnings per week, together with index numbers computed therefrom, for all employees in all occupations in each department separately and all departments combined, 1913 to 1926, by department and year

Department and year	Averages			Index numbers (1913=100) ¹		
	Full-time hours per week	Earnings per hour	Full-time weekly earnings	Full-time hours per week	Earnings per hour	Full-time earnings per week
All departments:						
1913.....	66.1	\$0.301	\$18.89	100	100	100
1914.....	64.9	.301	18.60	98	100	98
1915.....	65.5	.297	18.65	99	99	99
1920.....	63.1	.745	45.65	95	248	242
1922.....	63.2	.513	31.67	96	170	168
1924.....	55.2	.644	35.22	84	214	186
1926.....	54.4	.637	34.41	82	212	182
Blast furnaces:						
1913.....	76.9	.205	15.76	100	100	100
1914.....	74.8	.206	15.41	97	100	98
1915.....	74.9	.207	15.50	97	101	98
1920.....	72.1	.571	41.17	94	279	261
1922.....	72.3	.398	28.78	94	194	183
1924.....	59.7	.520	31.04	78	254	197
1926.....	59.8	.517	30.92	78	252	196
Bessemer converters:						
1913.....	70.0	.284	19.88	100	100	100
1914.....	68.4	.255	17.44	98	90	88
1915.....	68.7	.264	18.14	98	93	91
1920.....	70.3	.677	47.59	100	238	239
1922.....	68.7	.470	32.29	98	165	162
1924.....	52.3	.624	32.64	75	220	164
1926.....	52.6	.641	33.72	75	226	170
Open-hearth furnaces:						
1913.....	76.7	.237	18.18	100	100	100
1914.....	74.6	.237	17.66	97	100	97
1915.....	74.4	.246	18.30	97	104	101
1920.....	68.7	.671	46.10	90	283	254
1922.....	70.8	.480	33.98	92	203	187
1924.....	58.0	.635	36.83	76	268	208
1926.....	57.1	.677	38.66	74	286	213

¹ Except for puddling mills, for which 1914=100.

TABLE 1.—Average full-time hours per week, earnings per hour, and full-time earnings per week, together with index numbers computed therefrom, for all employees in all occupations in each department separately and all departments combined, 1913 to 1926, by department and year—Continued

Department and year	Averages			Index numbers (1913=100)		
	Full-time hours per week	Earnings per hour	Full-time weekly earnings	Full-time hours per week	Earnings per hour	Full-time earnings per week
Puddling mills:						
1913.....	53.2	\$0.328	\$17.45	100	100	100
1914.....	52.2	.315	16.44	98	96	94
1915.....	53.9	.385	47.70	101	270	273
1920.....	52.1	.496	25.84	98	151	148
1922.....	55.7	.721	40.16	105	220	230
1924.....	52.1	.657	34.23	98	200	196
Blooming mills:						
1913.....	73.0	.265	19.35	100	100	100
1914.....	70.5	.269	18.96	97	102	98
1915.....	71.0	.268	19.03	97	101	98
1920.....	67.5	.659	44.48	92	249	230
1922.....	68.0	.472	32.10	93	178	166
1924.....	54.6	.613	33.47	75	231	173
1926.....	54.2	.627	33.98	74	237	176
Plate mills:						
1913.....	69.9	.255	17.82	100	100	100
1914.....	69.0	.258	17.80	99	101	100
1915.....	69.8	.270	18.58	98	106	104
1920.....	68.8	.671	46.16	98	263	259
1922.....	66.2	.476	31.51	95	187	177
1924.....	57.2	.562	32.15	82	220	180
1926.....	55.8	.606	33.81	80	238	190
Bar mills:						
1913.....	61.5	.288	17.71	100	100	100
1914.....	61.7	.278	17.15	100	97	97
1915.....	61.4	.266	16.33	100	92	92
1920.....	61.8	.713	44.06	100	248	249
1922.....	61.2	.486	29.74	100	169	168
1924.....	55.6	.585	32.53	90	203	184
1926.....	54.7	.591	32.33	89	205	183
Standard rail mills:						
1913.....	70.9	.254	18.01	100	100	100
1914.....	70.1	.252	17.67	99	99	98
1915.....	70.9	.246	17.44	100	97	97
1920.....	61.2	.6	38.68	86	249	215
1922.....	61.5	.470	28.91	87	185	161
1924.....	57.4	.573	32.89	81	226	183
1926.....	55.5	.595	33.02	78	234	183
Sheet mills:						
1913.....	52.3	.483	25.26	100	100	100
1914.....	52.3	.488	25.52	100	101	101
1915.....	52.5	.450	23.63	100	93	93
1920.....	50.3	1.039	52.26	96	215	207
1922.....	51.1	.694	35.46	98	144	140
1924.....	50.2	.809	40.61	96	167	161
1926.....	48.9	.759	37.12	93	157	147
Tin-plate mills:						
1913.....	46.1	.417	19.22	100	100	100
1914.....	46.0	.425	19.55	100	102	102
1915.....	50.4	.428	21.57	109	103	112
1920.....	50.6	.949	48.02	110	228	250
1922.....	49.9	.650	32.44	108	156	169
1924.....	48.8	.795	38.80	106	191	202
1926.....	48.1	.704	33.86	104	169	176

When the year 1926 is compared with 1913 the working time of employees in the iron and steel industry as a whole shows much improvement. The long working hours in force in most of the departments in 1913 have been materially shortened and earnings, both per hour and per week, have increased greatly. In the 10 departments covered by the bureau, combined, the average full-time hours per week decreased 18 per cent during the 14-year period; average

full-time weekly earnings increased 82 per cent, and average earnings per hour were $2\frac{1}{8}$ times as much as in 1913.

The more favorable hours and higher earnings have not been the result of gradual development over the entire period, however. From 1913 to 1922, owing largely to the increasing practice of giving employees a day of rest in seven-day plants, average full-time hours per week decreased about 4 per cent, but employees still worked the long 12-hour turn in many departments. It was not until the latter part of 1923 that a general decrease in working time took place in the industry and the 8-hour day was adopted as the standard for all employees in a large number of plants. In 1913 employees as a whole had an average full-time week of 66.1 hours, which decreased to 64.9 hours in 1914. In 1915 the average increased to 65.5 hours per week and decreased again in 1920 to 63.1 hours. There was scarcely any change in working time in 1922 as compared with 1920, but in 1924, following the general 1923 decrease in hours, employees worked but 55.2 hours per week regularly. The decrease continued in 1926 to 54.4 hours.

When the 10 departments are considered separately, however, changes in hours in 1926 as compared with 1913 range from a 4 per cent increase in tin-plate mills to a 26 per cent decrease in open-hearth furnaces and blooming mills. Average full-time hours per week decreased 22 per cent in blast furnaces, 25 per cent in Bessemer converters, 20 per cent in plate mills, 22 per cent in standard rail mills, and 11 per cent in bar mills. In puddling mills, sheet mills, and tin-plate mills the shorter workday has been in force for many years and hours have been subject to only slight changes in recent years.

Employees in all departments combined earned an average of 30.1 cents per hour in 1913, which decreased to 29.7 cents in 1915. Earnings increased rapidly from 1915 to 1920, owing to war conditions, and employees earned on an average 74.5 cents per hour in the latter year. In 1922 the industry had not yet recovered from the 1921 industrial depression and employees earned but 51.3 cents per hour in that year. Earnings recovered to a large extent in 1924 when average earnings per hour increased to 64.4 cents. In 1926 the average was 63.7 cents per hour. Large increases are shown in 1926 over 1913 in all of the various departments. Only 1 department, however, open-hearth furnaces, shows higher earnings in 1926 than 1920. That department also shows a larger increase in earnings in 1920 and all later years as compared with 1913 than that recorded in any of the other 9 departments. In 1913 employees in open-hearth furnaces earned an average of 23.7 cents per hour, which increased to 67.1 cents in 1920, an increase of 183 per cent—that is, earnings were more than $2\frac{3}{4}$ times as high in 1920 as in 1913. In 1926 earnings in open-hearth furnaces were 67.7 cents per hour on the average, or 186 per cent greater than in 1913. The high earnings of 1926 are due largely to increases in production, as tonnage rates in 1924 and 1926 were practically the same. Employees in 1924, however, earned only 63.5 cents per hour.

The tonnage rates in puddling mills, sheet mills, and tin-plate mills are based directly on the selling price of the product. At the close of each two-month period tonnage rates are adjusted in accordance with the price of the product during that interval. Thus the rates

paid in those departments are subject to wide fluctuations in a two-year-interval study such as the bureau makes.

Full-time weekly earnings for all employees combined followed the movement of hourly earnings quite closely up to 1922, as changes in full-time weekly hours were comparatively small. In 1924 and 1926, however, the reduction in hours was sufficient to offset partly the increase in hourly earnings, and earnings per week increased much less than hourly earnings in those years.

The monthly trend of employment and earnings in the iron and steel industry as published monthly in the Labor Review are repeated in this report on page 17.

CLASSIFIED FULL-TIME HOURS PER WEEK

Before the war the major branches of the steel industry were largely operated on a two-shift basis. During the war there was some tendency toward the three-shift system but following the armistice many of the plants which had adopted the three 8-hour shifts for emergency reasons returned to the two 12-hour shifts. In the latter part of 1923, as before stated, there was a general reduction in the customary hours of labor of employees in the iron and steel industry and many companies adopted the three 8-hour shifts for all employees. This reduction is reflected in the bureau's figures for 1924. Since 1924 hours have decreased a little in the industry and the 1926 study shows a slight reduction in most departments covered.

Table 2 contains a percentage distribution of all employees collectively in each department according to their customary full-time hours per week. The 1926 percentages are compared with those for preceding years.

The classified hours of the table are average hours for the individual and do not reflect the long hours of one week that may alternate with shorter hours the next. Thus a man who works 72 hours one week and 60 hours the next has an average of 66 hours, which is tabulated in the group "Over 60 and under 72."

TABLE 2.—Per cent of employees in all occupations working each specified number of average full-time hours per week, 1914 to 1926, by department and year

Department and year	Number of plants	Per cent of employees whose average full-time hours per week were—							
		48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84	Over 84
Blast furnaces:									
1914.....	38	(1)	5	13	12	22	7	41	(1)
1915.....	38	(1)	6	12	12	23	7	41	(1)
1920.....	28	1	18	7	11	16	17	29	(1)
1922.....	32	1	7	13	10	39	13	17	(1)
1924.....	36	2	59	15	15	3	1	5	(1)
1926.....	37	1	59	16	15	2	(1)	6	(1)
Bessemer converters:									
1914.....	12	12	9	4	11	40	13	12	-----
1915.....	12	12	7	5	8	44	11	13	-----
1920.....	11	14	7	2	14	25	17	21	-----
1922.....	11	11	6	6	10	53	5	9	-----
1924.....	11	50	28	17	5	(1)	-----	-----	-----
1926.....	11	52	24	15	9	-----	-----	-----	-----

¹Less than 1 per cent.

TABLE 2.—Per cent of employees in all occupations working each specified number of average full-time hours per week, 1914 to 1926, by department and year—Con.

Department and year	Number of plants	Per cent of employees whose average full-time hours per week were—							
		48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84	Over 84
Open-hearth furnaces:									
1914	22	(1)	7	6	9	23	32	24	(1)
1915	22	(1)	7	5	11	24	30	23	(1)
1920	19	1	32	2	9	14	38	6	(1)
1922	22	3	15	4	15	28	20	16	(1)
1924	26	6	69	5	12	2	3	2	
1926	31	14	64	5	11	2	2	2	
Puddling mills:									
1914	29	27	55	6	9	1	1	(1)	
1915	29	31	53	6	9	1	(1)	(1)	
1920	15	24	41	12	15	7	(1)	1	(1)
1922	13	41	33	10	15	(1)	1	1	(1)
1924	17	27	53	9	9	1	1	1	(1)
1926	13	29	56	9	2	2	(1)	1	(1)
Blooming mills:									
1914	23	3	8	5	8	59	9	9	(1)
1915	23	2	7	4	7	58	12	9	(1)
1920	20	12	12	2	12	35	18	8	(1)
1922	24	4	21	7	12	27	18	12	(1)
1924	25	27	48	12	10	1	1	1	
1926	27	38	36	12	12	1	1	(1)	
Plate mills:									
1914	13		3	4	44	39	6	4	
1915	13		5	5	41	38	7	4	
1920	11	(1)	5	4	41	42	4	3	
1922	12	(1)	22	16	22	28	4	7	(1)
1924	13	30	23	24	20	(1)	1	2	
1926	17	32	21	29	15	(1)	1	2	
Standard rail mills:									
1914	7	5	(1)	3	13	74	1	4	
1915	7	4	1	2	9	77	2	5	
1920	4	33	4	2	20	37	2	2	
1922	4	32	12	3	19	26	2	6	
1924	7	21	37	20	13	(1)	7	(1)	
1926	7	25	35	26	13				
Bar mills:									
1914	57	4	31	12	44	7	2	1	
1915	57	8	30	10	42	8	1	(1)	
1920	25	9	28	8	40	12	3	(1)	
1922	25	6	39	4	35	14	1	1	
1924	31	25	36	26	10	2	(1)	1	(1)
1926	35	32	35	26	5	1	(1)	1	(1)
Sheet mills:									
1914	15	62	2	8	10	13	2	2	
1915	15	61	2	10	12	11	2	2	
1920	13	64	6	8	9	9	2	1	
1922	14	60	8	10	10	7	2	3	(1)
1924	14	66	12	11	4	5	1	1	(1)
1926	14	67	16	12	3	2		(1)	(1)
Tin-plate mills:									
1914	11	59	17	9	12	2	(1)	1	(1)
1915	11	60	18	9	11	1	7	1	(1)
1920	9	53	18	6	10				(1)
1922	9	61	18	5	9	5	1	1	(1)
1924	9	66	19	13	2		(1)	(1)	(1)
1926	8	68	20	9	3		(1)	(1)	(1)

¹ Less than 1 per cent.

The changes in working time which have taken place in this industry are clearly reflected in the above table. In 1914, 93 per cent of all employees in plate mills, 92 per cent in standard rail mills, 88 per cent in open-hearth furnaces, 85 per cent in blooming mills, 82 per cent in blast furnaces, 76 per cent in Bessemer converters, and 54 per cent in bar mills, had a working week of more than 60 hours.

Employees in sheet and tin-plate mills have long been on an 8-hour day, 5 or 6 days per week basis, and except for a small per cent of the

employees, mostly laborers, none of them have worked as many as 60 hours per week for many years. In the puddling mill department the hours per day are governed by heats, 5 heats usually constituting a day's work. The time necessary to produce 5 heats is usually between 8 and 9 hours, depending on conditions. Thus, since the mills in practically all instances are operated on a 5½ or 6 day week, the majority of the employees in that department have not worked as many as 60 hours per week regularly in any of the bureau's studies.

In 1922, 79 per cent of the employees in blast furnaces, 77 per cent in Bessemer converters, 79 per cent in open-hearth furnaces, 69 per cent in blooming mills, 61 per cent in plate mills, 53 per cent in standard rail mills, and 51 per cent in bar mills still were on a basis of more than 60 hours per week.

Following the reductions in 1923, however, only 24 per cent of the employees in blast furnaces, 5 per cent in Bessemer converters, 19 per cent in open-hearth furnaces, 13 per cent in blooming mills, 23 per cent in plate mills, 21 per cent in standard rail mills, and 13 per cent in bar mills were on that basis. In puddling, sheet, and tin-plate mills the percentages were 12, 11 and 2, respectively.

When 1926 is compared with 1924, decreases in the per cent of employees working over 60 hours per week regularly are noted in all but three departments. In Bessemer converters the percentage increased from 5 to 9, in blooming mills from 13 to 14, and in tin-plate mills from 2 to 3. The decreases ranged from 2 per cent in the open-hearth furnace department to 8 per cent in the standard rail mill department. All departments have not been combined except for 1924 and 1926. Combining all departments, only 15 per cent of all employees in 1924 had a full-time week of more than 60 hours, and only 13 per cent of all employees in all departments combined had a full-time week of more than 60 hours in 1926.

In Table 3 employees in all occupations combined are classified by percentages according to their customary number of turns per week. As in Table 2, figures for preceding years are given in addition to those for 1926, for each department.

TABLE 3.—Per cent of employees in all occupations working each specified number of days per week, 1914 to 1926, by department and year

Department and year	Number of plants	Per cent of employees whose customary working turns per week were—									
		5	5 and 6 alternately	5, 5, and 6 in rotation	5, 6, and 6 in rotation	6	5 and 7 alternately	6 and 7 alternately	6, 6, and 7 in rotation	6, 7, and 7 in rotation	7
Blast furnaces:											
1914	38					42		5	(1)		53
1915	38					42		4	(1)		54
1920	28					29		17			54
1922	32					57		14			29
1924	36					20		5		30	45
1926	37					22		6		22	49
Bessemer converters:											
1914	12					80		3	3	(1)	13
1915	12					80		3	3	(1)	14
1920	11					59		10	3	2	26
1922	11					81		2	4	3	10
1924	11					71		4	7	10	8
1926	11				8	61		7	7	5	12

¹ Less than 1 per cent.

TABLE 3.—Per cent of employees in all occupations working each specified number of days per week, 1914 to 1926, by department and year—Continued

Department and year	Number of plants	Per cent of employees whose customary working turns per week were—									
		5	5 and 6 alternately	5, 5, and 6 in rotation	5, 6, and 6 in rotation	6	5 and 7 alternately	6 and 7 alternately	6, 6, and 7 in rotation	6, 7, and 7 in rotation	7
Open-hearth furnaces:											
1914.....	22					39		26	(1)	(1)	34
1915.....	22	(1)	(1)			39		27	(1)	(1)	34
1920.....	19		(1)			27	(1)	37			33
1922.....	22	(1)				50		16	4	2	27
1924.....	26					16		6	12	14	52
1926.....	31				1	26		6	2	13	52
Pudding mills:											
1914.....	29	13	63	8		15		1			1
1915.....	29	24	50	11		13		1			1
1920.....	15	(1)	60	13		26		(1)			1
1922.....	13	17	47	15		19		(1)			2
1924.....	17	8	62	2		26		(1)			2
1926.....	13	5	67			24		1			2
Blooming mills:											
1914.....	23	2	2			74		7	3	(1)	11
1915.....	23	2	1			73		9	3	1	11
1920.....	20	1	(1)			67		14	2	1	15
1922.....	24	(1)	5			56		17	3	1	18
1924.....	25		6			38		4	19	12	21
1926.....	27	(1)	1		11	46		7	8	8	20
Plate mills:											
1914.....	13		34			57		3		(1)	6
1915.....	13	(1)	35			55		3		(1)	6
1920.....	11		18			78		1			3
1922.....	12	(1)	28			60		3			9
1924.....	13	(1)	12			66		8		3	11
1926.....	17		9		21	49		6	3	6	6
Standard rail mills:											
1914.....	7		7		1	88		1			4
1915.....	7		5		1	88		1			5
1920.....	4					92		3	1		4
1922.....	4					86		2			11
1924.....	7					44		17	(1)	29	10
1926.....	7					51		12		31	6
Bar mills:											
1914.....	57	6	47	2	1	38	(1)	1	4	(1)	1
1915.....	57	6	48	1	1	43	(1)	1	(1)		1
1920.....	25	3	33	4	3	46	(1)	3	7	1	1
1922.....	25	1	35	2	3	47	(1)	2	7	(1)	1
1924.....	31	8	25	5	9	48	(1)	1	(1)	(1)	2
1926.....	35	13	8	6	13	54	(1)	1	(1)	2	2
Sheet mills:											
1914.....	15	(1)	2	58	3	32		1			4
1915.....	15	1	3	55	4	32		1			4
1920.....	13	1	3	53	6	33		1			3
1922.....	14	2	2	45	15	31		1			4
1924.....	14	1	4	47	15	30		(1)			4
1926.....	14	1	3	46	16	28		1			5
Tin-plate mills:											
1914.....	11	(1)	4	58		37		(1)			1
1915.....	11	(1)	3	57		37		(1)			2
1920.....	9	1	5	55		38		(1)			1
1922.....	9	1	5	54		38		2			2
1924.....	9	(1)	2	51		44		1			2
1926.....	8	1	2	55		36		2	1	1	2

¹ Less than 1 per cent.

SEVEN-DAY WEEK

Seven-day week work in the iron and steel industry is quite common in many of the departments. From the nature of the process, the blast-furnace department is in continuous operation 7 days per week and 24 hours per day. Also, the open-hearth furnace department is operated 7 days per week to a considerable extent, although the Sunday force is usually not so large as on the other days of the week. In the Bessemer-converter department the

Sunday "fix-up" turn provides 7-day work for a number of employees, although the plants as a rule are not in continuous operation. In the blooming, plate, and standard rail mill departments there is also considerable Sunday repair work. In addition, it is the common practice in many of these mills to start the week's operation on the Sunday night turn and to close either on the intermediate or night turn on Saturday. Thus the plants are not closed down a full 24-hour period in any week and one or more of the turns runs 7 days. Seven-day work in the remaining four departments covered by the bureau is negligible.

In the blast-furnace department in 1914, 53 per cent of all employees covered worked 7 days per week regularly, while an additional 5 per cent alternated weekly from 6 to 7 days. In 1915 there was practically no change in working conditions as compared with 1914, but the turns per week of 13 per cent of the force were increased from 6 days regularly in 1915 to alternate weeks of 6 and 7 days in 1920. In 1922 the practice of relieving employees became general and only 29 per cent of the employees had a working week of 7 days all the time and 14 per cent worked 6 days one week and 7 days the next. In 1924, however, following the reduction in hours per turn, the number of turns per week were increased for a large per cent of the force. In that year a total of 80 per cent of all employees covered worked a week of 7 days—45 per cent regularly, 30 per cent two weeks out of three, and 5 per cent in alternate weeks. Very little change took place from 1924 to 1926, and in the latter year 49 per cent worked 7 days each week, 22 per cent worked 6 days, 7 days, and 7 days in rotation, and 6 per cent alternated weekly from 6 to 7 days.

In the open-hearth furnace department in 1914 a total of 60 per cent of all employees had a working week of 7 days, 34 per cent having it each week and 26 per cent one week out of every two. The number of 7-day workers decreased to 49 per cent in 1922 and only 27 per cent worked 7 days each and every week. In 1924, 52 per cent of the employees worked 7 days per week regularly while an additional 32 per cent alternated or rotated regularly from 6 to 7 days, this being the largest percentage of 7-day work reported for any department for any year shown. In 1926 the percentage of all employees in this department who worked 7 days each week remained the same as in 1924, but the percentage of those who worked 7 days only part of the time decreased from 32 to 21.

There was more 7-day work shown in blooming mills, standard rail mills, and plate mills in 1924 than in any previous year for which figures are reported. All 3 departments show decreases since 1924, although the decrease in plate mills is comparatively slight.

Turns per week in Bessemer converters were at the highest point in 1920, but turns per week were greater in 1926 than for any other year except 1920. In the latter year 12 per cent worked 7 days per week regularly and 19 per cent alternated or rotated from 6 to 7 days.

Seven-day work in the other 4 departments is almost negligible, as it is usually confined to only a few employees for "light-up" or repair.

COMMON LABORERS

There is a great amount of unskilled or slightly skilled work in the iron and steel industry and thus common labor becomes a very important occupation both numerically and with respect to rates of pay. In some departments a large per cent of the occupations require little skill, and in 5 of the 10 departments covered by the bureau the number of laborers for whom data are shown exceeds the number for any other occupation. The rate paid to common labor is highly important, not only as a measure of pay received by a large number of men, but also as a basis for determining the rates to be paid to the large force of other remaining unskilled or slightly skilled workers. The slightly skilled workers are to a large extent employed in occupations for which the requirements are very little above those for common labor, and in most instances they receive only a few cents per hour more than the basic common-labor rate. The other unskilled employees usually receive the common-labor rate, though not treated as common labor in this report.

In this survey "common labor" has been confined as far as possible to laborers, wholly unskilled and more or less a floating gang, who worked in and about the mill proper but upon whose work the mill was not primarily dependent for operation. While the various methods used in the several plants in classifying common labor has led to numerous difficulties in the tabulation, no employee has been placed under that heading who was not paid the common-labor rate in the plant in which he worked.

Average earnings per hour of common laborers from 1907 to 1926, so far as available, are shown in Table 4. Figures for standard rail mills are shown for 1924 and 1926 for all districts combined only.⁶ No attempt has been made to group the data according to geographical districts. The 1926 figures for puddling mills are also not identified by districts. While no data are shown for standard rail mills prior to 1924, the averages for all departments combined contain the averages for that department in many instances, all of which are noted in Table 4. It was not practical to remove the standard rail mill averages from the averages for all departments, although it was deemed inadvisable to show separate figures for that department for years prior to 1924.

⁶ See note 5, p. 1.

TABLE 4.—Average earnings per hour of common laborers in specified departments of the iron and steel industry, 1907 to 1926, by district and year

[For number of plants reporting see sections relating to the specified departments, published elsewhere in this report]

District and year	Average earnings per hour in—										
	All de- part- ments	Blast fur- naces	Besse- mer con- vert- ers	Open- hearth fur- naces	Pud- dling mills	Bloom- ing mills	Plate mills	Stand- ard rail mills	Bar mills	Sheet mills	Tin- plate mills
Eastern:											
1907	\$0. 134	\$0. 135									\$0. 132
1908	. 120	. 115									. 131
1909	. 123	. 119									. 131
1910	. 142	. 142									. 147
1911	. 141	. 140		\$0. 145		\$0. 143	\$0. 131				. 145
1912	. 144	. 144		. 146		. 139	. 131				. 145
1913	. 144	. 144		. 152		. 141	. 133				. 145
1913	¹ 157	151		. 168		. 162	. 151				. 156
1914	¹ 156	153		. 169	\$0. 163	. 172	. 151				. 151
1915	¹ 155	151		. 171	. 157	. 154	. 151				. 150
1917	. 278	. 271		. 287		. 250	. 250				
1919	. 398	. 423		. 408	. 400	. 437	. 368				. 409
1920	. 451	. 444		. 485	. 451	. 437	. 398				. 479
1922	. 322	. 345		. 326	. 323	. 326	. 300				. 313
1924	. 386	. 394		. 388	. 410	. 389	. 349				. 374
1926	. 374	. 383		. 383		. 382	. 335				. 371
Pittsburgh:											
1907	. 154	. 152	\$0. 156								. 154
1908	. 156	. 154	. 156								. 157
1909	. 152	. 152	. 153								. 151
1910	¹ 164	166	. 164		. 162		. 167				. 161
1911	¹ 166	165	. 167		. 164		. 168	. 167			\$0. 164
1912	¹ 167	163	. 168		. 165		. 169	. 172			. 163
1913	¹ 190	191	. 192		. 190		. 192	. 191			. 163
1914	¹ 190	192	. 193		. 188	. 190	. 192	. 188			. 183
1915	¹ 190	189	. 193		. 193	. 189	. 192	. 189			. 184
1917	. 301	. 292	. 299		. 300		. 300	. 300			. 321
1919	¹ 480	484	. 485		. 471	. 447	. 489	. 494			. 482
1920	¹ 530	525	. 532		. 537	. 529	. 537	. 532			. 460
1922	¹ 360	353	. 359		. 365	. 362	. 359	. 357			. 517
1924	. 451	. 451	. 459		. 448	. 423	. 466	. 472			. 358
1926	. 452	. 441	. 447		. 452		. 463	. 469			. 430
Great Lakes and Middle West:											
1907	. 158	. 162	. 154								. 159
1908	. 153	. 152	. 152								. 158
1909	. 151	. 153	. 146								. 157
1910	¹ 163	162	. 161		. 162		. 163	. 164			. 167
1911	¹ 166	166	. 164		. 166		. 166	. 164			. 166
1912	¹ 168	166	. 166		. 170		. 167	. 162			. 170
1913	¹ 189	189	. 190		. 190		. 190	. 195			. 189
1914	¹ 189	190	. 191		. 191	. 182	. 190	. 190			. 187
1915	¹ 188	187	. 191		. 191	. 180	. 190	. 189			. 180
1917	. 313	. 296	. 297		. 299		. 295	. 289			. 186
1919	¹ 469	466	. 501		. 485	. 464	. 487	. 469			. 180
1920	¹ 541	549	. 545		. 559	. 521	. 528	. 514			. 186
1922	¹ 363	374	. 367		. 366	. 361	. 374	. 349			. 335
1924	. 443	. 456	. 436		. 450	. 399	. 502	. 437			. 357
1926	. 458	. 459	. 439		. 448		. 514	. 438			. 432
Southern:											
1907	. 130	. 130									
1908	. 111	. 111									
1909	. 112	. 112									
1910	. 129	. 128		. 130			. 131				
1911	. 131	. 131		. 130			. 132				
1912	. 130	. 130		. 132			. 131				
1913	. 140	. 136		. 152			. 138				. 142
1914	. 146	. 137		. 169	. 144		. 148				. 141
1915	. 141	. 134		. 158	. 146		. 140				. 142
1917	. 222	. 226		. 221			. 217				
1919	. 331	. 334		. 370	. 299		. 374				. 275
1920	. 396	. 359		. 480	. 312		. 404				. 381
1922	. 253	. 257		. 296	. 219		. 283				. 222
1924	. 282	. 269		. 342	. 278		. 334				. 262
1926	. 281	. 265		. 337			. 318				. 263

¹ Including earnings of common laborers in rail mills although average earnings for that department are not shown separately.

TABLE 4.—Average earnings per hour of common laborers in specified departments of the iron and steel industry, 1907 to 1925, by district and year—Continued

District and year	Average earnings per hour in—										
	All departments	Blast furnaces	Bessemer converters	Open-hearth furnaces	Puddling mills	Bloom-ing mills	Plate mills	Stand-ard rail mills	Bar mills	Sheet mills	Tin-plate mills
All districts:											
1907.....	\$0.151	\$0.146	\$0.155						.153		
1908.....	.147	.140	.155						.153		
1909.....	.145	.138	.151						.150		
1910.....	¹ .158	.150	.163	\$0.157		\$0.162	\$0.159		.160	\$0.164	\$0.165
1911.....	¹ .161	.151	.166	.161		.163	.158		.159	.166	.164
1912.....	¹ .162	.152	.167	.164		.163	.161		.160	.168	.167
1913.....	¹ .181	.173	.192	.185		.185	.175		.169	.190	.189
1914.....	¹ .181	.177	.193	.185	\$0.173	.187	.174		.173	.188	.189
1915.....	¹ .180	.171	.193	.186	.167	.187	.174		.173	.188	.190
1917.....	.298	.281	.298	.292		.287	.294			.331	
1919.....	¹ .461	.457	.469	.468	.436	.469	.450		.443	.462	.461
1920.....	¹ .508	.474	.537	.525	.457	.511	.498		.506	.536	.533
1922.....	¹ .336	.315	.363	.354	.305	.350	.336		.316	.356	.359
1924.....	.417	.401	.448	.434	.305	.462	.432	\$0.385	.392	.420	.436
1926.....	.419	.389	.443	.429	.357	.451	.425	.421	.411	.475	.429

¹ Including earnings of common laborers in rail mills although average earnings for that department are not shown separately.

AVERAGE HOURLY EARNINGS IN DEPARTMENTS, 1926, BY DISTRICT

Table 5 shows by districts the average hourly earnings in 1926 in each department as a whole, all occupations combined. The average was obtained by dividing the total earnings by the total hours worked.

TABLE 5.—Average hourly earnings in each department, all occupations combined, 1926, by district

District	Blast furnaces	Bessemer converters	Open-hearth furnaces	Puddling mills ¹	Bloom-ing mills	Plate mills	Stand-ard rail mills ¹	Bar mills	Sheet mills	Tin-plate mills
Eastern.....	\$0.475		\$0.627		\$0.589	\$0.448		\$0.536		
Pittsburgh.....	.567	\$0.654	.690		.640	.683		.638	\$0.708	\$0.718
Great Lakes and Middle West.....	.592	.624	.725		.666	.668		.636	.748	.674
Southern.....	.374		.542		.521			.424		
All districts.....	.517	.641	.677	\$0.657	.627	.606	\$0.595	.591	.759	.704

¹ Not reported by districts to avoid identification of any plant.

Average hourly earnings in the 10 departments ranged from 51.7 cents in blast furnaces to 75.9 cents in sheet mills. In blast furnaces the low earnings are due mainly to the preponderance of unskilled or slightly skilled labor, while in sheet mills the crews, consisting mostly of skilled employees, work in three shifts at high speed and make much higher hourly earnings. In tin-plate mills the crews are also skilled and work at high speed which is reflected in the average of 70.4 cents per hour. The large production of the furnaces in the open-hearth department aided employees considerably in attaining an

average of 67.7 cents per hour, although the average of 64.1 cents in the other steel-making department, Bessemer converters, was not far behind. In puddling mills the employees earned an average of 65.7 cents per hour. In the 4 remaining departments—blooming, plate, standard rail, and bar mills—the average hourly earnings all fell within a range of less than 4 cents, the average for blooming mills (62.7 cents) being the highest.

The Pittsburgh and the Great Lakes and Middle West districts show considerably higher average hourly earnings than the eastern and the southern districts in all departments. This condition was due to the lower rates paid to common labor in the eastern and the southern districts. In nearly every department the proportion of common labor and of occupations requiring little skill was sufficient to affect materially the average for all occupations even though there was in many cases much less variation between the rates of highly skilled occupations in the several districts.

SCOPE OF 1926 DATA

In 1926 information was obtained from plants located in 13 States. The plants covered have been grouped into four districts. These districts were established, not strictly on geographical lines, but rather according to similar industrial conditions. The "eastern" district covers the eastern parts of New York, Pennsylvania, and Maryland. The "Pittsburgh" district includes not only the plants in Pittsburgh proper but also others in western Pennsylvania, those along the border line of Ohio from Youngstown south to Bellaire, and those located in the "panhandle" of West Virginia. The "Great Lakes and Middle West" district includes plants scattered along the Great Lakes and also some in inland territory, including Colorado. Although this last is a very large territory geographically, it is essentially a unit industrially as far as the iron and steel industry is concerned, the wage rates of the entire district being based largely on those paid in the large producing centers, Buffalo and Chicago. The "southern" district includes plants in Virginia, Tennessee, Alabama, Kentucky, and the southern parts of Ohio and Indiana. The southern Ohio and Indiana plants are included in the southern district because the conditions, both as to wages paid and the general class of labor employed, resemble much more closely the conditions of the Alabama and Kentucky plants than they do those of the other plants of Ohio and Indiana.

The actual number of plants and of employees covered in each district in each department in 1926 are shown in Table 6. Each department of an establishment has been counted as a separate plant.

TABLE 6.—Number of plants and of employees shown on pay rolls, 1926, by department and district

Department	Eastern district		Pittsburgh district		G. L. and M. W. district		Southern district		Total	
	Plants	Employees	Plants	Employees	Plants	Employees	Plants	Employees	Plants	Employees
Blast furnaces.....	6	1,588	11	4,993	10	5,129	10	3,619	37	15,329
Bessemer converters.....			6	1,737	5	1,211			11	2,948
Open-hearth furnaces.....	6	1,672	8	4,642	13	5,660	4	1,450	31	13,424
Puddling mills ¹									13	2,488
Blooming mills.....	5	743	9	2,788	9	2,056	4	601	27	6,188
Plate mills.....	6	1,094	6	1,845	5	1,263			17	4,202
Standard rail mills ¹									7	3,280
Bar mills.....	6	1,153	10	2,804	11	2,576	8	1,072	35	7,605
Sheet mills.....			9	6,054	5	4,699			14	10,753
Tin-plate mills.....			6	6,242	2	2,650			8	8,892
Total.....	29	6,250	65	31,105	60	25,244	26	6,742	200	75,109

¹ Details not given by districts to avoid identification of any plant.

IMPORTANCE OF THE INDUSTRY

The iron and steel industry is one of the largest and most important manufacturing industries in the United States. All other manufacturing industries depend on iron and steel products either for their raw materials or the machinery necessary to operate their plants. Without iron and steel the industrial progress made by the United States could never have been accomplished. According to the figures of the Census of Manufactures for 1923, the latest data available for comparison, steel works and rolling mills ranked fifth in number of wage earners employed, third in cost of materials, second in value of products, and third in value added by manufacture. Blast furnaces were not of sufficient importance to be ranked by the census. It was not practical to combine the cost of materials and the value of products for blast furnaces with those for steel works and rolling mills; thus a total for the industry is not shown. The combined wage earners for blast furnaces and steel works and rolling mills, however, did not change the rank from that shown for steel works and rolling mills alone.

The following table, taken from the reports of the Census of Manufactures, shows the size of the industry and also furnishes a good idea of its importance. In 1925 an average of 29,188 wage earners were employed in blast furnaces and 370,726 in steel works and rolling mills. These employees were paid \$45,312,000 and \$614,985,000, respectively, or an average annual wage per employee of \$1,552 in blast furnaces and \$1,659 in steel works and rolling mills. The cost of materials in blast furnaces was \$617,417,000 and the value of products \$765,286,000 which leaves \$147,869,000 for the value added by manufacture. In steel works and rolling mills the cost of materials was \$1,811,961,000, the value of products \$2,946,068,000, and the value added by manufacture \$1,134,107,000. The wages paid in blast furnaces represented 31 per cent of the value added by manufacture, and in steel works and rolling mills wages represented 54 per cent.

In blast furnaces and steel works and rolling mills combined, there were more wage earners employed in 1923 than in any other

year covered by the census, but the average annual earnings were at the highest point in 1919. In that year the average annual earnings per employee were \$1,707 as compared with \$1,640 in 1923.

TABLE 7.—Number of establishments, wage earners, cost of materials, value of products, and value added by manufacture in the iron and steel industry, 1914 to 1925

Branch of industry and year	Number of establishments	Average number of wage earners	Wages	Cost of materials	Value of products
Blast furnaces:					
1914.....	160	29,356	\$22,781,000	\$264,580,000	\$317,654,000
1919.....	195	41,660	75,769,000	621,286,000	794,467,000
1921.....	134	18,698	29,370,000	361,050,000	419,771,000
1923.....	169	36,712	58,936,000	827,630,000	1,007,613,000
1925.....	122	29,188	45,312,000	617,417,000	765,286,000
Steel works and rolling mills:					
1914.....	427	248,716	188,142,000	590,826,000	918,665,000
1919.....	500	375,088	637,637,000	1,680,576,000	2,828,902,000
1921.....	494	235,515	324,987,000	1,005,125,000	1,481,659,000
1923.....	489	358,201	637,825,000	2,044,398,000	3,154,325,000
1925.....	473	370,726	614,985,000	1,811,961,000	2,946,068,000

Branch of industry and year	Value added by manufacture	Average annual wages per wage earner	Cost of material per wage earner	Value of products per wage earner	Value added by manufacture per wage earner	Per cent wages are of value added
Blast furnaces:						
1914.....	\$53,074,000	\$776	\$9,013	\$10,821	\$1,808	43
1919.....	173,181,000	1,771	14,913	19,070	4,157	43
1921.....	58,721,000	1,571	19,310	22,450	3,140	50
1923.....	179,983,000	1,605	22,544	27,446	4,902	33
1925.....	147,860,000	1,552	21,153	26,219	5,066	31
Steel works and rolling mills:						
1914.....	327,839,000	756	2,376	3,604	1,318	57
1919.....	1,148,326,000	1,700	4,480	7,542	3,062	56
1921.....	476,534,000	1,380	4,268	6,291	2,023	68
1923.....	1,109,927,000	1,643	5,268	8,125	2,859	57
1925.....	1,134,107,000	1,659	4,888	7,947	3,059	64

TREND OF EMPLOYMENT

In addition to studies of wages and hours of labor of employees in certain industries in the United States the Bureau of Labor Statistics monthly collects data covering employment and earnings in all of the more important ones. Such figures are published monthly in the Labor Review in the form of index numbers or percentages of increase or decrease in the number of employees appearing on the pay rolls from month to month, together with the increase or decrease in the amounts paid such employees in wages. Such index numbers for iron and steel are repeated in this bulletin for the purpose of throwing additional light on labor conditions in the iron and steel industry but they should not be confused with the index numbers developed by the wage study.

Since the employment figures are based on data collected monthly, it is of course not possible to cover wage conditions in the same detail as in the biennial wage studies. Such figures necessarily indicate the trend of conditions only in a general way and conclusions drawn from them must be considered in that light; for example, the index of employment shows principally the rise and fall of the number of

wage earners employed in the industry. This, of course, indicates in a general way the regularity or continuity of employment but does not indicate a change in regular or actual hours or days of labor. The data collected cover only the number of employees appearing on the pay rolls and no reference is made to hours or days of employment. Likewise, the index of pay roll totals is an index of total earnings during one pay period and does not indicate an increase or decrease in hourly or full-time weekly earnings. It does show an increase or decrease in per capita earnings which might be due to changes in rates of pay, changes in production where employees are paid on tonnage basis, or changes in the amount of time actually put in.

In computing the index numbers for employment and earnings the average for the year 1923 was taken as the base or 100 per cent. The index for each month is simply the per cent that the average for that month is of the average for 1923. These indexes are presented in the following table for each month beginning with July, 1922, and ending with December, 1926. The index for the full years 1923, 1924, 1925, and 1926 are also shown.

A study of the table shows that the number of employees reported for January, 1926, the period covered by the present wage study of the industry, was 1.6 per cent less than the monthly average for 1923 and 0.6 per cent less than in January, 1924, the period covered by the 1924 study. Wages or pay-roll totals were 2.6 per cent greater in January, 1926, as compared with the monthly average for 1923, and 2.4 per cent greater than in January, 1924. Thus, while the wage study shows a decrease in average earnings per hour in 1926 as compared with 1924, the above figures indicate more regular employment and greater per capita earnings.

The averages of both employment and pay-roll totals for the full year 1926 show improvement over 1924 and 1925. Pay-roll totals were 2.8 per cent greater in 1926 than in 1923, but employment in 1926 was 2.1 per cent less than in 1923.

TABLE 8.—*Index numbers of employment and of pay rolls in the iron and steel industry, July, 1922, to December, 1926, by months and years*

[Average for 1923=100]

Month	Index numbers of—									
	Employment					Pay rolls				
	1922	1923	1924	1925	1926	1922	1923	1924	1925	1926
January.....		94.6	99.0	98.2	98.4		89.5	100.2	103.9	102.6
February.....		97.3	103.7	100.0	99.9		94.7	110.8	105.3	105.6
March.....		99.0	106.3	100.6	99.6		97.1	113.3	105.8	107.3
April.....		99.3	105.6	98.4	100.2		94.6	110.3	102.9	106.3
May.....		101.2	96.3	96.2	98.9		107.0	99.0	100.9	103.1
June.....		103.8	89.6	93.5	97.2		108.6	82.3	98.2	102.0
July.....	87.4	100.7	84.4	92.1	95.7	60.4	93.7	71.7	88.2	95.9
August.....	86.4	103.3	82.1	92.1	96.7	68.8	104.0	79.4	93.1	97.8
September.....	84.8	102.4	84.6	92.6	98.2	74.0	101.6	82.0	91.7	102.0
October.....	88.7	102.1	88.1	93.9	98.1	81.2	106.7	88.8	99.1	106.6
November.....	90.8	100.2	88.5	95.3	97.0	87.7	103.8	89.7	98.7	103.0
December.....	93.2	96.3	93.5	98.1	94.7	90.3	98.7	98.9	105.1	101.3
Year.....		100.0	93.5	95.9	97.9		100.0	93.9	99.1	102.8

EXPLANATION AND TREATMENT OF THE DATA

In the following pages of this report each of the 10 departments covered in the 1926 study has been treated as a separate industry. The treatment of the data is the same for each department, however, and the same forms of statistical tables have been used in each case. From these tables, of which there are eight, figures have been taken to a large extent for the summary tables already presented. Thus, a general explanation of the methods used in handling the data and the figures shown in the tables will serve as a guide in the study of the figures for each department and the summary of the figures for all departments previously presented.

Adjustment of the data.—As previously stated all data in this report refer to one representative pay period only. Unfortunately for statistical purposes there is no length of pay period universally followed by all companies. While a large majority of the plants in this industry pay their employees on a semimonthly basis, some establishments pay weekly, some biweekly, and at least one establishment pays three times a month. It would have been a prohibitive task to attempt to obtain data from an establishment for any group of days other than a regular pay period.

The period selected for this survey was from January 16 to 31, but that period was not always representative. Some of the establishments covered were closed down almost completely during the last half of January. Thus, while the schedules obtained are in a large measure for the January 16 to 31 period, some of them were taken for other periods. In the case of weekly periods the bureau agents combined the pay rolls for two consecutive weeks, making in effect a two-week pay period.

Therefore before combinations of actual time and actual earnings could be made and averages computed therefrom it was necessary to adjust the figures of a few establishments in order that all schedules would refer to the same or an equivalent length pay period. The period covered by a majority of the schedules in any department was accepted as the base and all others adjusted to cover the same length of time. The adjustments were made for the selected occupations only as no tables are presented wherein it was necessary to adjust the hours and earnings of the other employees.

In making the adjustment it was first assumed that all employees in an occupation would work the same per cent of full time during any period as they did during the period for which the schedule was taken. The full time of all employees in an occupation was then computed for the new period chosen as the basis for adjustment and the full time for the new period was then multiplied by the per cent of full time which the employees had worked during the period actually covered. That result then became the equivalent actual hours worked in that occupation as used in the preparation of the tables.

The actual earnings of employees were adjusted by multiplying the adjusted hours of employees in an occupation by the average earnings per hour of that occupation. The average earnings per hour were obtained before any adjustments were made and have not been affected by any later computations.

Positions.—The term "positions" or "jobs" as used in this report means the number of places to be filled by employees working the

regular full time required to operate a plant under normal working conditions, with provision for two or three shifts or turns per day but with no provision for relief of employees; for example, a blast furnace must have a keeper on duty all of the time. If the furnace employees are on a 12-hour shift then there are two positions for keeper at the furnace; if on a three-shift basis there are three keepers' positions.

Employees.—In all years prior to 1919 the number of positions have been used as the number of employees, but in 1919 and all later years the actual number of individual employees are shown.

In all tables in this report employees appear but once. In cases where they worked at two or more occupations during the period or at more than one set of hours or turns per day or week they have been tabulated under the occupation or number of hours or turns at which they spent the most of their time. This has resulted in disregarding the hours and earnings of some employees in some secondary occupations, but on the whole the figures eliminated were so small as to be of no consequence in determining the averages.

Average earnings per hour.—The earnings per hour shown in the tables include both the earnings of time workers and those of tonnage or piece workers. All earnings per hour are for individuals, no contractors being included. The average was obtained by dividing the total amount earned by the total number of hours actually worked in an occupation before any adjustment was made in the data.

Average full-time hours per week.—The full-time hours of labor as shown in the tables are the customary regular hours of work of individual employees under normal conditions in the establishment. The working time is the time on duty, including intervals of waiting for work—in other words, the time between the hour of reporting for duty and the hour of going off duty. The working time of individuals is not always the working time of their occupation as a whole. Some plants which operate 7 days per week make provision for laying off each employee 1 day a week. In such a plant the full-time hours per week of an employee working 8 hours per day is 48 hours, and this figure would be used in the compilation of the averages presented in the tables.

In computing the average for all employees in an occupation the individual averages in the various plants were weighted by the number of positions in those plants instead of the number of employees on the pay roll. The number of positions in a plant are practically constant from year to year while considerable variation is shown in the number of employees. Thus the use of the number of employees as weights would tend to change the average whether any change was actually made in the working time of employees or not.

Average full-time weekly earnings.—Full-time weekly earnings are the earnings per week of employees working their customary full-time or the earnings on broken time reduced to equivalent earnings for a full week. The average has been obtained in each instance by multiplying the average full-time hours per week by the average earnings per hour.

Table A.—Average customary full-time hours per week, average earnings per hour, and average full-time earnings per week, together with the index numbers computed from these averages for the country as a whole, are presented in this table for each of the

selected occupations in each department. The table also shows a percentage distribution of employees according to their full-time hours per week. Figures for 1926 were compiled for this report and those for earlier years were taken from previous reports published by this bureau. For the purposes of comparison the class limits used in the distribution of hours of employees were necessarily very wide. A much more comprehensive distribution for employees in several of the occupations in 1926 is contained in Table E. The index numbers have been included as an aid in making a comparison of the actual data over a period of years. The index for each year is the per cent that the average for that year is of the average for 1913.

Table B.—A classification showing numbers and percentages of employees according to the number of turns per week customarily worked is presented in Table B. Figures are shown for employees in all occupations combined for 1926 and preceding years. The plants are grouped according to the four geographical districts used in this survey, and the number and per cent of employees in each district are shown in the table as well as the total for all districts combined.

Most of the departments of the iron and steel industry are operated day and night. Each day of 24 hours is divided into two or three turns, usually of equal length, and each employee is expected to work but one turn per calendar day, except when changing from one turn to another employees often work two consecutive shifts. It is customary for the men in these plants to alternate or rotate from one turn to another at regular intervals, spending equal periods of time on each turn. Thus the term "turns" as used in this table means a day's work performed on day, night, or intermediate turn and the column headings which include more than one turn indicate a weekly shift from one turn to another. All employees do not change turns each week, however, as it is the practice in many plants for employees to work two weeks on a turn before a change is made. This serves only to increase the time necessary to make a complete rotation of turns. The number of turns worked in the long run is not affected, and in order to combine the data for the various plants all employees have been classified as though turns were all changed weekly.

Various provisions for the relief of employees are in force in many plants whereby employees are given a day of rest even though the plant, and of course most of the occupations, may normally operate 7 days per week. Some 7-day plants have regular systems of relief requiring the men to lay off 1 day in 7, others 1 day in 14, etc. Only definite systems of relief where men are required to take advantage of the day of rest, or at least exercise the privilege reasonably often, have been considered. In the study of this table it must be kept in mind that the turns worked by individuals are shown and not the working turns of the occupations in which they are employed.

All employees in 1926 were classified as nearly as possible by their regular working time. Gas or repair turns have been disregarded when employees customarily worked such turns at less frequent intervals than once every three weeks, and relief systems have also been omitted in a few instances where the periods elapsing between reliefs were longer than that time.

Table C.—This table presents the most important facts for 1926 relative to the customary working time, actual earnings, and actual hours of employees in the selected occupations in each department. The data for each occupation are presented by districts and for all districts combined. In the arrangement of the table the averages are presented in three groups or sections. (1) Averages relating to the customary working time of employees; (2) averages for the hours worked and earnings received by employees while engaged in each specified selected occupation; and (3) averages for the hours and earnings of those same employees while engaged in those and any other occupations within the department at which they may have worked during the pay period.

The first group of averages, including customary turns per week, hours per turn, and hours per week, have been computed for the number of positions necessary to be filled in the different occupations instead of the actual number of employees hired during the pay period. (For definition of a position see p. 18.) For this reason the number of positions appears in the table in connection with these averages. The number of positions represents the number of men who would be employed at any one time in the occupation. Several men might be necessary to keep a position filled during the pay period but only one man would be employed at a time. Thus the customary working time of each man employed in a position would be the same while he worked in that occupation, and the aggregate full-time hours or turns in a plant would depend upon the number of available positions and not upon the number of men employed to fill them during the pay period. However, while the number of positions have been used as a weight for computing the averages, the working time of individual employees is shown in this table and not the hours or turns of the positions; for example, in a blast furnace having 5 stacks in operation 3 turns per day, there would be 15 positions for the occupation of keeper. The plant has a relief system in force whereby each man works but 6 turns each week although the furnaces, and of course the positions, are necessarily in operation continuously, or 7 turns per week. In the computation of the averages shown in the table the 8 hours per turn, 6 turns, and 48 hours per week customarily worked by the men are used and each multiplied by 15, the number of positions, in order to obtain aggregates for the plant. While the 15 positions would remain constant with 5 stacks in operation, it might be necessary to employ 20 or even more different men during a pay period to keep those positions filled. Were the number of employees used as weights, the hours of labor in the different establishments would not be properly weighted and would depend to a large extent upon unusual plant conditions.

The second group of averages shows the average hours worked and earnings received for the pay period (subject to the adjustment of hours and earnings, as explained on p. 18), average earnings per hour, and average full-time earnings per week of the men who were actually employed during a majority of their time, at least, in the occupation specified. These averages are based on the hours and earnings of each employee in his principal occupation only and do not in any way refer to the number of positions. The actual hours which men have put in and the earnings which they have received are of

greater significance than the hours and earnings of an impersonal particular job. (For further definition of employees see p. 19.)

However, while the averages in the second group are based upon employees they do not in any way constitute a measure of employment or unemployment. They refer to the occupation under consideration only, and it must not be assumed that the employees in that occupation had no further opportunity for work. A large percentage of the employees did work at more than one occupation during the period scheduled; hence none of the averages in this group measure the total work or total earnings of the employees.

The average hours worked during the pay period as shown in the table is the result of combining all the hours worked by all employees in that occupation and then dividing by the number of employees. The average earnings per pay period was obtained in the same way. The average earnings per hour and full-time weekly earnings are explained on page 19.

The averages in the second group show the work done in a specified occupation only. The averages in the third group show the total work done by the same employees in any and all occupations at which they may have been engaged in the department during the payroll period, including the specified occupation. These averages have been deemed necessary, as the averages for the specified occupation alone fail to indicate the entire time and earnings of the individuals under consideration. The averages in the third group apply to an employee within the particular department only. To trace the employee from one department to another was practically impossible.

The averages were obtained by the same methods that were used for the second group of averages.

Table D.—The customary turns and hours worked by all employees in the several departments in 1926 are shown in detail in this table. The number of turns per week, hours per turn, hours per week, and average hours per week are presented for three groups of employees: Those who work day turns only, those who work night turns only, and those who alternate or rotate from day to night shift. Data are shown for each district and for all districts combined. Further, like figures are given for one representative key occupation in each department.

The order of arrangement begins with the highest number of average full-time hours per week. As the number of hours worked per day seldom varies during the period Monday to Friday, hours per turn are shown but once under that heading. The hours worked on Saturday and Sunday, however, often differ from the number worked during the first five days of the week, and hours are shown separately for both Saturday and Sunday.

It is the purpose of this table to give a clear picture of the customary working time of all employees in each department in every important detail. At the same time, however, the bureau has endeavored not to allow the numerous small changes, which occur at infrequent intervals of time and affect the hours and turns of employees in only a slight degree, to assume an importance not warranted by conditions. Thus, the regular working time of employees has been considered as nearly as possible, and gas or repair turns have been disregarded, when employees customarily work such turns at

less frequent intervals than once every three weeks in the case of three-shift workers and once every four weeks for two-shift employees. Relief systems have also been omitted in a few instances where the periods elapsing between reliefs were longer than that time.

The brackets appearing in the table have been used to indicate a working cycle—that is, employees working on shifts which have been bracketed customarily alternate or rotate from one shift to another until they have spent one week on each shift included. The hours and turns of employees who change regularly from one turn to another have been tabulated as though the shift was made weekly in all plants. As explained for Table B, this assumption is not entirely correct as it is the practice in many plants for employees to work two weeks on a turn before a change is made. This, however, only serves to increase the time necessary to make a complete rotation of turns. The number of turns worked in the long run is not affected, and in order to combine the data for the various plants all employees have been classified as though turns were all changed weekly. The three 8-hour turns per day are shown as one day turn and two night turns—this for the reason that only one of the three turns is an all-daylight turn, the other two either beginning or ending in the night.

In some instances in the table hours are reported for the seven days of the week, yet the number of days worked are reported as six. This is owing to the fact that the figures are for a seven-day occupation wherein each employee was relieved one day in seven. Either relief was not always on the same day each week or information as to which day was not available; therefore, the hours for all days have been shown and the relief indicated in the full-time hours per week.

The table shows the extent of regular relief systems and their working, but it must not be assumed that there was no chance for rest where such has not been shown. In some plants, while there is no *regular* system of relief, the employees are not held strictly to the working days of the plant and may often take a day off as they desire it, the plant putting another man in the place of the one absent. As it was impossible to determine when or how often a man might be *excused*, such plants have been treated in this table as though no relief was granted.

Workmen whose labor is continuous and who are subjected to high temperatures usually have spell hands—that is, three men work on a two-man position or two men work on a one-man position, which arrangement allows each man in rotation intervals for rest. Such intervals of rest are considered as time on duty.

While this table shows the working time of all employees in the department as a whole, no effort has been made to show the hours and turns worked by employees in the different occupations separately. This was too formidable a task to be undertaken. However, in each department one of the principal occupations has been selected and shown as a sample of the hours and turns worked by members of the producing crew. All members of the producing crew do not always work the same hours, but usually there is very little difference, and the occupation shown will give an excellent idea of conditions as regards the productive gang proper. Common labor and certain other unskilled or slightly skilled employees quite often work more hours than the rest of the force.

The remaining four tables—E, F, G, and H—are distribution tables and show the 1926 hours and earnings of employees in considerable detail for a few of the more important principal occupations in each department. It would have been too great a task to attempt to classify all of the principal occupations in the minute detail in which these tables are presented, but the occupations for which data are shown may be accepted as fairly representative of all of the occupations. The occupations tabulated include unskilled, slightly skilled, and skilled employees, and are some of the most important occupations, both numerically and in the process. Common laborers, a very important occupation in this industry, have been included in each department.

In classifying employees in these tables a range of hours or earnings has been used which is sufficiently wide to include all employees for which data are shown, yet the class limits are small enough to show fairly the spread or variation of employees in each occupation. Thus occupations in a department may be compared with one another or with occupations in other departments. The data are shown for each of the four geographical districts separately as well as for all districts combined.

Table E.—Employees in six of the principal occupations in each department, except standard rail mills, are classified according to their full-time hours per week. In standard rail mills employees in only five occupations are shown.

The classification of hours begins with employees who customarily work 40 hours per week and ends with those who work 84 hours per week and over. Employees who regularly work 48 hours, 56 hours, 60 hours, or 72 hours per week have been arranged in separate groups, and the group of "84 and over" means 84 hours per week in practically all instances.

The classified hours of the table are average hours for the individual and do not reflect the long hours of one week that may alternate with shorter hours the next. Thus a man who works 72 hours one week and 60 hours the next has an average of 66 hours, which is tabulated in the group "66 and under 72."

Table F.—This classification table begins with employees who earned an average of 18 cents per hour and ends with those who earned \$3 or more per hour. Employees are classified by 5-cent groups from 20 cents to \$1 per hour and by 10-cent groups from \$1 to \$2 per hour. All who earned \$2 or more per hour are shown in 25-cent groups.

Exceptionally high or low earnings per hour in practically all occupations indicate that the employees were working under unusual conditions, such as performing work on Sunday at time and one-half rate, or working on a turn which produced exceedingly high or low tonnage.

Table G.—The classification of hours actually worked begins with those who worked less than 32 hours during the pay period and ends with those who worked 192 hours and over.

In preparing this table no adjustment has been made in the data, although, as previously stated, all of the schedules do not cover pay periods of equal length. The hours actually worked by the employees, as taken from the schedules, have been tabulated in all instances. While some few of the schedules were taken for 14-day and 15-day pay periods the large majority of the schedules cover a 16-day period. One plant had three pay periods each month and the

schedule for it was taken for 21 days. This plant has been omitted from this table. It was found from a thorough examination of the data that employees as a whole worked about the same ratio of full time in one pay-roll period as they did in another. Also, since the pay periods included were so nearly the same in length the actual grouping of the data was approximately the same in each case. Thus, as it was desirable to include all the employees possible in an occupation, all schedules except the one mentioned above have been used.

In classifying the actual hours worked by an employee all of the hours which he worked in any and all occupations in which he may have been engaged during the pay period were included and tabulated under the occupation at which he worked the longest time; for example, if a man worked 40 hours as a larry man in a blast furnace, 35 hours as a keeper, and 20 hours as a keeper's helper he would be classified under the occupation of larry man but the table would show 95 hours of work.

It must not be assumed that employees worked all the time that there was work for them. Employees may have been ill, on vacation, may have quit, may have been discharged, etc. The data collected by the bureau do not show the availability of employment nor the various reasons for unemployment. The purpose of the table is to show what the employees in this industry are actually doing, but no attempt has been made to interpret the figures.

Table H.—In this table employees are classified according to their actual earnings during the pay period for which they were scheduled. The classification begins with those who earned under \$5 during the pay period and ends with those who earned \$250 and over. The classification is by \$5 groups up to \$100 and by \$10 groups from \$100 to \$160. Earnings from \$160 to the end of the table are divided into four groups—two with a spread of \$20 each, one with a spread of \$50, and the last group of “\$250 and over.”

The data in this table have been treated in the same way as those in Table G, and the explanation of that table should be read in connection with the explanation of this table.

In classifying the actual earnings received by an employee, all of the earnings shown on the pay roll for him in payment for work in any and all occupations in the department in which he may have been engaged during the pay period were included and tabulated under the occupation at which he worked the longest time; for example, if a man received \$20.80 as a larry man in a blast furnace, \$18.90 as a keeper, and \$10 as a keeper's helper, he would be classified under the occupation of larry men but the table would show earnings of \$49.70.

While the table shows the total earnings of employees in the various occupations, it must not be assumed that employees have received all the wages that it was possible for them to earn during the pay period, as explained for hours actually worked in Table G.

Index numbers.—The wage studies of this industry prior to 1914 were limited to employees in certain of the principal occupations only. These occupations included actual members of the producing crews almost entirely, laborers being practically the only other occupation covered. No data were collected for employees in the several other less important occupations.

The occupations selected for the studies were assumed as fairly representative of all occupations, and the studies thus limited were

accomplished in much less time than would have been required had all occupations been covered.

In the published reports for those earlier years the average full-time hours per week, average earnings per hour, and average full-time weekly earnings, and index-numbers computed therefor were shown for each of the principal occupations separately, and the data were further consolidated and expressed in the form of index numbers for each department. In subsequent wage investigations the practice of basing the index numbers for the department upon the principal occupations only was continued, although in the studies of 1914, 1915, 1920, 1922, 1924, and 1926 all employees in the various plants were covered. This was done so that the data for the later years, though not complete, would be strictly comparable with years prior to 1914.

The method of computing index numbers from specified occupations only has been discontinued in this bulletin, and except for the connecting link between 1913 and 1914 the index numbers here presented for the departments and for the industry reflect the changes in all occupations as a composite whole.

The year 1913 has been used by the bureau as the base year for the computation of index numbers in its many wage and price studies and for that reason it has been deemed highly desirable to construct the index for this industry upon that base. Unfortunately, as stated, data were not collected for all occupations in 1913. However, there was very little change in wage conditions as between 1913 and 1914 so far as shown by the averages for the principal occupations. Also, the change in the averages for all occupations between 1914 and 1915 was practically the same as the change in the averages for the principal occupations. Thus, since the change in the principal occupations between 1913 and 1914 was very slight, it has been assumed that the change in all occupations would also be very small and in the same ratio as the change in the principal occupations. The estimated average for 1913 from which the index number was computed was obtained from the proportion, "the average for the principal occupations in 1914 is to the average for all occupations for that year as the average for the principal occupations in 1913 is to x."

While the index numbers for the departments extend back only to 1913, the index numbers for the several occupations in Table A extend back as far as data are available.

In this bulletin the bureau for the first time has consolidated the data for the several departments into a general index to represent the iron and steel industry as a whole at least to the extent covered. This general index was constructed by weighting the data for the various departments by the number of employees covered in each department in 1926. The most desirable weighting, of course, would have been the total number of wage earners employed in the United States in each separate department. Such figures are not available because as elsewhere stated, the Census of Manufactures does not show the wage earners in the different departments of steel works and rolling mills separately and there are no other authoritative records from which to obtain them. However, the bureau in its studies has endeavored to cover a fair representation of wage earners in each department, and it is believed the relative weight given each department by the bureau's figures would not be materially changed by using the number of wage earners in the country generally, if such were available.

BLAST FURNACES

Data for 1926 were collected from the pay rolls of 37 blast-furnace establishments and cover 15,329 employees in all occupations. Of the 15,329 employees reported, 8,058 are found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department for 1907, and from 1907 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years all employees in all occupations were included, and the tables showing figures for *all* employees cover the period 1914 to 1926.¹ Comparative figures are presented in Table A for employees in the selected occupations from 1907 to 1926.

The hours of labor of blast-furnace employees have decreased materially in recent years. Up until the summer of 1923 this department, while showing a small gradual decrease from former years in the working time of employees as a whole, was still largely on a 12-hour basis and some employees also worked 7 days per week. A general reduction in the regular daily hours of employees, however, took place in the latter part of 1923, and a large number of the plants adopted the 8-hour day for all employees. In 1914 employees as a whole had a full-time week of 74.8 hours or more than 6 days per week of 12 hours each. By 1922, as the practice of relieving 7-day employees became more general, the average had decreased to 72.3 hours. Following the 1923 decrease, however, full-time hours per week were reduced to such an extent that employees were asked to work but 59.7 hours per week regularly in 1924 and 59.8 hours in 1926. Average full-time hours per week, earnings per hour, and full-time earnings per week for the department as a whole, and for each of the specified years from 1914 to 1926 are shown in Table 1, page 3.

Comparisons of the full-time hours per week of employees in the various selected occupations, which may be made from Table A, show like reductions. In 1907 the average full-time hours per week in all of the selected occupations combined was 81.1, and all employees in 12 of the 16 occupations had a full-time week of 84 hours. In 1926 working time had been so far reduced that the average of 69.2 hours per week for iron handlers and loaders was the highest of any of the occupations, and the average for all 16 occupations combined was only 59.4 hours per week. The average for bottom fillers, 53.5 hours, was the lowest working week of any occupation shown.

While hours per day and per week were considerably less in 1924 and 1926, as compared with former years, the 7-day week increased among employees. From the nature of the blast-furnace process furnaces are necessarily kept in operation 7 days per week and 24 hours per day, and it is necessary to have a producing crew, at least, on duty at all times. Laborers and other unskilled general employees are seldom employed regularly 7 days per week. Many

¹ Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

establishments have also adopted the practice of hiring extra men to relieve the regular 7-day workers 1 day each week, 1 day each 2 weeks, or some such interval. Thus, while the furnaces are operated 7 days per week, 7-day work among a majority of the employees varies with the amount of relief provided.

Table B shows that, in 1914, 53 per cent of all employees covered in that year worked 7 days per week regularly while an additional 5 per cent worked 7 days in alternate weeks. In 1915 there was practically no change, and in 1920, owing to war conditions, there was a considerable increase in 7-day work. In 1922, as the practice of relieving employees became more general, only 29 per cent worked 7 days per week regularly and 14 per cent alternated from 6 to 7 days. However, in 1924, as the hours per day were greatly decreased, the weekly turns were increased to such an extent that 45 per cent worked 7 days each week, 30 per cent two weeks out of every three, and 5 per cent in alternate weeks. In 1926 there was a slight decrease in 7-day work. The 4 per cent increase in the number who worked 7 days per week regularly in 1926 as compared with 1924 and the 1 per cent increase in the number who worked 7 days in alternate weeks were more than offset by the 8 per cent decrease in the number who worked 7 days 2 weeks in three.

A good idea of the extent of the prevailing hours in this department may be gained from Table D. The grouping of the employees in that table by hours per day show that in 1926, of the 15,329 employees covered, 8,953 had a working-day of 8 hours and only 1,321 worked as many as 12 hours per day. A total of 4,884 worked 10 hours per day. The employees covered in blast furnaces, of course, include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to members of a producing crew separate figures are shown for the occupation of keeper. Of the 344 employees who worked as keeper during the pay period, 311 worked 8 hours per day while the remaining 33 worked 12 hours regularly or its equivalent—that is, 11 hours one week and 13 hours the next. Of the total employees in the occupation 311 had a working week of 56 hours or less, 6 worked 72 hours, and 27 had a full-time week of 84 hours. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the hours of labor of employees in 1926 show large decreases as compared with former years, hourly earnings show even larger increases. In 1914 the earnings per hour of all employees covered were 20.6 cents on the average, while in 1926 employees earned an average of 51.7 cents per hour, an increase of 151 per cent. In other words, the 1926 hourly earnings were two and one-half times the earnings in 1914. The earnings were highest in 1920—57.1 cents on the average—and in 1924 they were approximately the same as in 1926. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, keepers in 1907 earned an average of 21.8 cents per hour, which increased to 23.5 cents in 1913. During 1914 and 1915 little change is noted, but in 1917 keepers received an average of 34.4 cents per hour. This increased to 56.2 cents in 1919 and to the high mark of 63.5 cents in 1920. In 1922 the hourly earnings of keepers decreased to 42 cents, but rose again to 57.9 cents in 1924 and 57.7 cents in

1926. A distribution by hourly earnings of the employees in 6 specified occupations in 1926 is given in Table F.

Average full-time earnings per week were more than twice as great in 1926 as they were in 1914. In 1914 earnings per full-time week for all employees were \$15.41 on the average, while in 1926 they had increased to \$30.92. In 1920 they were \$41.17, the highest of any year shown, and in 1924 they were approximately the same as in 1926. Weekly earnings in the various selected occupations show like increases. Keepers, for example, earned an average of \$18.34 per full-time week in 1907, \$19.28 in 1913, and \$46.45 in 1920. In the following years there was a decrease in hourly earnings as well as in hours of labor, and in 1924 keepers earned only \$32.79 per week and \$33.12 in 1926.

The 8,058 employees in the selected occupations worked an average of 115.4 hours during the 16-day pay period covered by the 1926 study, for which they received an average of \$56.89. This includes all of the hours worked and earnings received by these employees, as shown in Table C. Blowing engineers worked the most time, 131.3 hours, and bottom fillers the least, or 95 hours. Bottom fillers also earned the least money, \$40.52, while blowers, a highly skilled occupation, earned the largest amount, \$115.15. Blowing engineers received the second highest earnings, or \$86.14.

A classification of employees in 6 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of laborers 120 of the 1,600 employees worked less than 32 hours during the pay period, while 13, mostly all in the southern district, worked 192 or more hours. The largest group, 258, worked between 120 and 132 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations. Laborers earned from less than \$5 for the period to between \$90 and \$95, while blowers earned from between \$5 and \$10 to over \$160 and less than \$180. The largest group of laborers, 187, earned between \$60 and \$65.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Blast Furnaces

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—								
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84				
Stockers:																	
1907	18	824	81.4	\$0.170	\$13.83	104	89	92			2	9		13	77		
1908	18	473	79.1	.157	12.43	101	82	83		1	26		15	58			
1909	18	737	80.9	.158	12.75	104	82	85			10		30	60			
1910	32	1,445	79.9	.164	13.17	102	85	88	(1)	1	18	2	15	63			
1911	32	904	79.7	.168	13.40	102	88	89		1	12	7	16	62			
1912	34	1,069	78.8	.171	13.46	101	89	90		1	2	10	13	23	50		
1913	33	1,269	78.0	.192	15.00	100	100	100		1	3	18	12	22	45		
1914	35	1,031	74.9	.188	14.03	96	98	93		3	4	27	21	16	29		
1915	35	878	74.6	.188	13.99	96	98	93		2	5	27	22	17	27		
1917	14	441	77.4	.205	22.79	99	154	152				3	47	9	41		
1919	20	1,043	78.1	.465	36.32	100	242	242		13	(1)	6	6	8	66		
1920	27	1,624	75.5	.527	39.68	97	274	265		10	1	5	16	49	20		
1922	31	1,316	74.4	.352	26.06	95	183	174		3	1	10	40	24	22		
1924	36	1,774	60.5	.465	28.10	78	242	187		5	58	7	17		5	8	
1926	37	1,174	60.1	.465	27.95	77	242	186		1	56	11	20	3	(1)	8	
Bottom fillers:																	
1907	7	293	84.0	.160	13.40	102	95	97							100		
1908	7	194	84.0	.150	12.59	102	89	91							100		
1909	7	282	84.0	.138	11.61	102	82	84							100		
1910	14	672	84.0	.152	12.77	102	90	92							100		
1911	15	417	84.0	.149	12.50	102	89	90							100		
1912	15	468	82.2	.152	12.53	100	90	90					15		85		
1913	13	469	82.1	.168	13.88	100	100	100					16		84		
1914	13	360	82.0	.167	13.76	100	99	99					17		83		
1915	9	148	82.4	.176	14.48	100	105	104					14		86		
1917	3	56	84.0	.270	22.68	102	161	163							100		
1919	4	72	82.2	.436	35.84	100	260	258						31	69		
1920	6	249	67.1	.568	38.35	82	338	276		42			23		35		
1922	7	311	72.8	.336	24.44	89	200	176		16			53		31		
1924	6	341	54.2	.480	26.01	66	286	187		100							
1926	4	344	53.5	.426	22.79	65	254	165		100							
Top fillers:																	
1907	8	66	84.0	.177	14.86	105	93	98							100		
1908	8	44	84.0	.168	14.15	105	88	93							100		
1909	8	50	84.0	.161	13.56	105	84	89							100		
1910	13	142	82.8	.169	13.85	103	88	91		4					96		
1911	14	52	82.2	.171	13.84	102	90	91		7					93		
1912	14	96	80.0	.175	13.81	100	82	91		6			19		75		
1913	14	98	80.3	.191	15.19	100	100	100		6			16		78		
1914	13	80	80.1	.199	15.71	100	104	103		8			15		78		
1915	8	44	79.0	.213	16.44	98	112	108		14			9		77		
1917	3	22	84.0	.257	21.57	105	135	142							100		
1919	4	28	76.7	.468	35.90	96	245	236		21				21	57		
1920	6	74	71.2	.573	39.72	89	300	261		27			24		49		
1922	7	86	68.8	.388	26.02	86	203	171		27			53		20		
1924	7	111	56.8	.544	30.40	71	285	200		90		1			9		
1926	4	65	53.8	.500	26.90	67	262	177		100							
Larry men:																	
1907	11	132	84.0	.195	16.41	102	90	92							100		
1908	11	86	84.0	.184	15.48	102	85	87							100		
1909	11	135	84.0	.186	15.64	102	86	88							100		
1910	21	231	84.0	.196	16.47	102	60	93							100		
1911	21	203	82.9	.194	15.99	101	89	90					9		91		
1912	23	241	78.2	.199	15.46	95	92	87		15			14		71		
1913	23	238	82.3	.217	17.77	100	100	100					14		86		
1914	27	192	78.6	.215	16.88	96	99	95					43	4	53		
1915	27	212	78.6	.211	16.51	96	97	93					43	4	53		
1917	14	183	77.2	.327	25.14	94	151	141					55	4	41		
1919	18	286	80.4	.542	43.58	98	250	245		6			9	12	73		
1920	24	369	73.8	.586	42.65	90	270	240		17			21	36	27		
1922	27	340	75.1	.402	29.96	91	185	169		4			58	15	22		
1924	32	502	57.7	.548	31.48	70	253	177		7	82			3	7		
1926	34	422	57.9	.551	31.90	70	254	190			90			2	9		

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Blast Furnaces—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84
Larry men's helpers:														
1907	10	115	84.0	\$0.159	\$13.35	102	83	85						100
1908	10	79	84.0	.152	12.80	102	80	81						100
1909	10	135	84.0	.149	12.53	102	78	79						100
1910	19	278	84.0	.165	13.88	102	86	88						100
1911	19	294	82.6	.168	13.89	100	88	88				12		88
1912	23	359	79.6	.172	13.64	96	90	87	10			14		76
1913	23	352	82.6	.191	15.78	100	100	100				11		89
1914	27	250	78.6	.187	14.67	95	98	93				43	3	54
1915	27	275	78.3	.185	14.43	95	97	91		(1)		46	3	51
1917	12	161	79.6	.292	23.20	96	153	147				34	5	60
1919	18	310	79.3	.491	38.94	96	257	247	10			9	13	68
1920	19	517	73.9	.531	39.09	89	278	248	8		10	16	55	10
1922	24	383	74.9	.356	26.40	91	186	167	4	(1)	3	56	14	23
1924	26	627	57.1	.485	27.38	69	254	174	16	74	1		3	6
1926	26	389	56.9	.493	28.05	69	258	178		93		2		5
Skip operators:														
1907	11	86	84.0	.193	16.19	101	89	90						100
1908	11	64	84.0	.184	15.49	101	85	87						100
1909	11	94	84.0	.183	15.40	101	84	86						100
1910	19	125	84.0	.197	16.56	101	91	92						100
1911	19	124	83.8	.198	16.60	101	91	92				2		98
1912	20	138	79.3	.206	16.19	96	95	90		13		9		78
1913	22	158	82.9	.217	17.97	100	100	100				9		91
1914	28	139	79.5	.214	16.98	96	99	94				35	6	60
1915	28	152	79.4	.215	17.03	96	99	95				36	5	59
1917	13	118	77.3	.343	26.52	93	158	148				56		44
1919	19	169	80.4	.536	43.09	97	247	240	5			15	6	74
1920	22	217	73.4	.594	43.30	89	274	241	18			28	26	28
1922	25	220	75.8	.401	30.20	91	185	168	3			53	15	29
1924	30	320	57.5	.543	30.98	69	250	172	10	78			4	7
1926	32	267	58.4	.545	31.83	70	251	177		86		3		10
Blowers:														
1907	18	78	84.0	.300	25.17	102	90	93						100
1908	18	68	84.0	.283	23.74	102	85	87						100
1909	18	86	84.0	.286	24.04	102	86	88						100
1910	32	131	83.5	.296	24.74	102	89	91			2			98
1911	33	123	82.9	.305	25.21	101	92	93				9		91
1912	34	139	80.3	.315	25.01	98	95	92		6		16		78
1913	34	154	82.2	.332	27.21	100	100	100				15	5	85
1914	38	143	80.7	.333	26.74	98	100	98				1	25	69
1915	38	149	80.6	.336	26.93	98	101	99				1	26	69
1917	18	84	77.8	.485	37.50	95	146	138				49	7	44
1919	24	134	79.8	.755	60.25	97	227	221	7			10	14	68
1920	32	198	73.2	.868	62.87	89	261	231	5	15		22	34	24
1922	32	195	72.4	.678	49.00	88	204	180	11	11		62	12	15
1924	36	262	58.3	.889	51.73	71	268	190	11	71		6	2	7
1926	37	241	58.5	.902	52.77	71	272	194		80	2	5	5	8
Blowing engineers:														
1907	20	100	84.0	.242	20.30	102	93	95						100
1908	20	85	84.0	.235	19.77	102	90	93						100
1909	20	103	84.0	.230	19.35	102	88	91						100
1910	34	153	84.0	.243	20.39	102	93	96						100
1911	35	137	82.9	.244	20.15	101	94	95				9		91
1912	35	142	80.6	.249	19.93	98	96	94		4		18		77
1913	35	156	82.0	.260	21.28	100	100	100				17		85
1914	38	147	79.3	.262	20.64	97	101	97				37	6	87
1915	38	153	79.1	.262	20.64	96	101	97				39	6	86
1917	18	122	76.1	.391	29.61	93	150	139				64		36
1919	24	143	80.0	.628	50.24	98	242	236				12	10	71
1920	28	164	73.7	.720	52.50	90	277	247	16			29	25	30
1922	32	213	74.2	.483	35.49	90	185	167	7	5		62	13	19
1924	36	244	58.7	.661	38.65	72	254	182		80			3	11
1926	37	197	59.5	.658	39.15	73	253	184		83		3		15

¹ Less than 1 per cent.

² Including 1 per cent whose full-time hours per week were 91.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—**Blast Furnaces**—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—				
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72
Blowing engineers' assistants:													
1907	11	67	84.0	\$0.203	\$17.02	101	90	91					100
1908	11	51	84.0	.199	16.72	101	88	90					100
1909	11	74	84.0	.191	16.08	101	85	86					100
1910	18	94	84.0	.207	17.38	101	92	93					100
1911	18	91	83.2	.205	17.06	100	91	91			7		93
1912	18	108	86.4	.211	16.85	97	94	90	8		10		81
1913	18	94	83.2	.225	18.67	100	100	100			6		94
1914	21	99	79.0	.223	17.57	95	99	94			36	12	52
1915	21	96	78.3	.223	17.41	94	99	93			42	13	46
1919	17	130	79.1	.565	44.69	95	251	239	7		17	15	61
1920	22	189	71.7	.632	45.24	86	281	242	20		30	25	25
1922	24	213	73.5	.424	31.08	88	188	166	6		67	16	11
1924	26	307	56.2	.584	32.74	68	260	175	7	87		3	3
1926	29	231	56.6	.579	32.77	68	257	176		92	2		6
Stove tenders:													
1907	20	140	84.0	.192	16.10	103	91	93					100
1908	20	96	84.0	.185	15.52	103	88	90					100
1909	20	140	84.0	.181	15.22	103	86	88					100
1910	34	200	84.0	.193	16.21	103	91	94					100
1911	35	180	82.7	.190	15.68	101	90	91					89
1912	36	214	79.5	.195	15.38	97	92	89	8		18		74
1913	35	220	81.9	.211	17.30	100	100	100			17		83
1914	38	183	79.7	.209	16.56	97	99	96			33	7	61
1915	38	186	79.4	.208	16.46	97	99	95			35	6	58
1919	24	204	80.3	.528	42.40	98	250	245	4		14	15	67
1920	28	297	73.7	.592	43.38	90	281	251	19		21	34	26
1922	32	279	75.2	.403	30.08	92	191	174	4		61	12	23
1924	36	473	57.5	.545	31.36	70	258	181	8	82		3	3
1926	37	362	57.5	.548	31.51	70	260	181		90	2		7
Keepers:													
1907	20	146	84.0	.218	18.34	102	93	95					100
1908	20	96	84.0	.210	17.68	102	89	92					100
1909	20	141	84.0	.205	17.26	102	87	90					100
1910	34	201	84.0	.215	18.09	102	91	94					100
1911	35	184	82.7	.217	17.95	101	92	93					89
1912	36	218	79.6	.223	17.59	97	95	91	8		11		74
1913	35	230	82.0	.235	19.28	100	100	100			17		83
1914	38	184	79.6	.233	18.47	97	99	96			34	7	60
1915	38	187	79.4	.232	18.33	97	99	95			35	6	58
1917	18	162	77.4	.344	26.55	94	146	138			52	7	41
1919	24	203	80.6	.562	45.30	98	239	235	4		11	14	70
1920	28	280	78.3	.635	46.45	90	270	241	18		24	34	25
1922	32	288	75.3	.420	31.47	92	179	163	4		58	13	25
1924	36	466	57.1	.579	32.79	70	246	170	9	81		3	7
1926	37	380	57.4	.577	33.12	70	246	172		91	2		7
Keepers' helpers:													
1907	20	616	84.0	.165	13.89	102	89	91					100
1908	20	409	84.0	.160	13.41	102	86	88					100
1909	20	596	84.0	.155	13.04	102	83	85					100
1910	34	877	84.0	.168	14.13	102	90	92					100
1911	35	742	83.1	.167	13.84	101	90	90			8		92
1912	36	870	80.2	.173	13.75	98	93	90	8		14		78
1913	35	950	82.2	.186	15.31	100	100	100			15		85
1914	38	734	80.6	.185	14.83	98	99	97			28	7	66
*1915	38	727	80.1	.182	14.48	97	98	95			30	5	65
1917	18	392	77.6	.292	22.59	94	157	148			55	9	36
1919	24	650	80.2	.480	38.50	98	258	251	6		13	10	71
1920	28	1,168	74.5	.522	38.60	91	281	252	15		3	22	30
1922	32	1,178	75.3	.349	26.16	92	188	171	4		2	56	11
1924	36	1,654	58.6	.475	27.85	71	255	182	9	76		4	10
1926	37	1,516	59.1	.471	27.84	72	253	182		81	(1)	2	12

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Blast Furnaces—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—						
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84		
Iron handlers and loaders:															
1907.....	9	203	73.2	\$0.193	\$14.20	101	88	88			60		6	34	
1908.....	9	163	73.0	.190	13.95	101	86	87			60		9	32	
1909.....	9	242	73.6	.177	13.05	102	80	81			57		7	36	
1910.....	18	305	74.2	.194	14.36	102	88	89			59		6	35	
1911.....	19	308	73.0	.195	14.17	101	89	88		1	61		6	31	
1912.....	19	406	73.1	.206	15.11	101	94	94		6	49	9	4	32	
1913.....	19	446	72.5	.220	16.07	100	100	100		2	8	47	9	29	
1914.....	16	333	71.5	.222	16.09	99	101	100	5	4	11	37	8	34	
1915.....	16	323	74.0	.204	15.22	102	93	95		2	3	53	2	39	
1917.....	4	106	71.4	.243	17.44	98	110	109				85	6	9	
1919.....	4	94	72.9	.361	26.32	101	164	164		2	71		11	16	
1920.....	8	260	72.2	.443	32.00	100	201	199		3	1	60	15	21	
1922.....	8	386	70.4	.307	21.67	97	140	135		12	37	49		2	
1924.....	7	283	65.7	.345	22.67	91	157	141			95			5	
1926.....	7	181	69.2	.349	24.15	95	158	150			36	45		19	
Pig-machine men:															
1907.....	9	193	84.0	.167	14.03	103	87	89						100	
1908.....	9	157	83.9	.163	13.69	102	85	87					2	98	
1909.....	9	152	83.9	.162	13.57	102	84	86					2	98	
1910.....	16	291	83.9	.169	14.14	102	88	90		(1)	(1)			99	
1911.....	17	267	82.4	.169	13.98	101	88	89		(1)	(1)	12		87	
1912.....	17	275	81.9	.171	13.97	100	89	89		(1)	(1)	17		83	
1913.....	19	303	81.9	.192	15.72	100	100	100		(1)	(1)	17		83	
1914.....	21	259	79.2	.192	15.15	97	100	96		(1)	(1)	36	8	55	
1915.....	21	245	79.6	.190	15.07	97	99	96		(1)	(1)	1	32	60	
1917.....	10	154	77.9	.300	23.21	95	156	148				50	3	48	
1919.....	18	370	80.5	.477	38.40	98	248	244		9		4	7	80	
1920.....	21	390	72.2	.552	39.63	88	288	252		25		23	25	27	
1922.....	23	383	73.1	.380	27.73	89	198	176		12	1	58	6	23	
1924.....	26	534	57.5	.615	29.52	70	268	188	12	78	2		2	7	
1926.....	29	506	59.4	.501	29.76	73	261	189		84	(1)	1		14	
Cinder men:															
1907.....	20	262	83.6	.173	14.46	105	97	101			2		10	88	
1908.....	20	245	82.6	.156	12.88	103	87	90			8		10	82	
1909.....	20	380	82.2	.160	12.34	103	84	86		1	9		13	78	
1910.....	32	482	82.9	.163	13.56	104	91	95		(1)	7		4	89	
1911.....	32	339	81.3	.158	12.84	102	88	90			10	10	2	78	
1912.....	32	397	75.2	.164	12.20	94	92	85		17	6	11	9	(1)	
1913.....	33	380	79.9	.179	14.27	100	100	100		1	12	15	7	64	
1914.....	31	286	78.3	.176	13.78	98	98	97		3	13	27	(1)	57	
1915.....	31	254	78.6	.174	13.64	98	97	96		4	2	9	24	62	
1917.....	13	168	78.4	.286	22.31	98	160	158				44		56	
1919.....	21	295	77.2	.473	36.52	97	264	256		14		7	9	60	
1920.....	23	87	68.4	.557	37.85	86	311	265	3	34	2	24	13	25	
1922.....	24	216	71.6	.390	27.76	90	218	195		13	10	4	38	20	
1924.....	22	364	59.7	.483	28.71	75	270	201	6	53	18	21		1	
1926.....	22	183	59.2	.484	28.65	74	270	201	4	51	21	22		2	
Laborers:															
1907.....	20	957	75.8	.146	11.13	105	85	90			11	37	(1)	5	47
1908.....	20	718	72.8	.140	10.24	100	82	82			20	38		15	27
1909.....	20	757	73.0	.138	10.17	101	81	82			13	50	2	7	28
1910.....	34	1,423	74.7	.150	11.23	103	88	90			19	28	2	21	30
1911.....	35	937	73.3	.151	11.14	101	88	90			21	31	3	14	31
1912.....	35	1,049	73.1	.152	11.15	101	89	90			20	30	10	9	31
1913.....	35	1,273	72.5	.171	12.43	100	100	100		(1)	22	34	10	4	29
1914.....	37	1,096	70.8	.177	12.52	98	104	101		(1)	85	12	7	25	
1915.....	37	885	71.3	.171	12.20	98	100	98		2	29	16	19	7	26
1917.....	17	698	75.3	.281	21.23	104	164	171			16	12	22	6	44
1919.....	24	2,184	77.9	.457	35.60	107	267	286		4	8	11	5	15	57
1920.....	27	1,770	72.3	.474	34.60	100	277	278		11	8	24	7	33	17
1922.....	32	1,600	67.7	.315	21.69	93	184	174		5	29	16	34	2	13
1924.....	36	2,059	62.4	.401	25.15	86	235	202	(1)	25	17	54		1	2
1926.....	36	1,600	62.4	.389	24.34	86	227	196	(1)	15	50	33			2

¹ Less than 1 per cent.

² Including 1 per cent whose full-time hours per week were 91.

³ Including less than 1 per cent whose full-time hours per week were 91.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Blast Furnaces

District and year	Number of plants	Number of employees	Number of employees whose customary turns per week were—				Per cent of employees whose customary turns per week were—			
			6	6 and 7 alternately	6, 7, and 7 in rotation	7	6	6 and 7 alternately	6, 7, and 7 in rotation	7
Eastern:										
1914	6	1,078	354	46	-----	678	33	4	-----	63
1915	6	794	256	5	-----	533	32	1	-----	67
1920	3	642	137	-----	505	21	-----	-----	-----	79
1922	4	885	171	180	-----	534	19	20	-----	60
1924	5	1,512	180	179	10	1,173	10	12	1	78
1926	6	1,588	125	107	9	1,347	8	7	1	85
Pittsburgh:										
1914	10	3,298	1,466	405	-----	1,427	44	12	-----	43
1915	10	3,176	1,470	316	-----	1,390	46	10	-----	44
1920	8	4,916	1,550	1,473	-----	1,893	32	30	-----	39
1922	9	3,481	1,947	811	-----	723	56	23	-----	21
1924	11	4,898	519	411	2,278	1,690	11	8	47	35
1926	11	4,993	522	806	2,021	1,644	10	16	40	33
Great Lakes and Middle West:										
1914	11	3,172	1,883	3	-----	1,286	59	(1)	-----	41
1915	11	2,761	1,643	3	-----	1,115	60	(1)	-----	40
1920	9	3,871	743	648	-----	2,480	19	17	-----	64
1922	10	3,383	2,064	473	-----	846	61	14	-----	25
1924	10	5,760	1,052	132	1,454	3,122	18	2	25	54
1926	10	5,128	1,019	-----	575	3,534	20	-----	11	69
Southern:										
1914	11	1,705	198	-----	-----	1,507	12	-----	-----	88
1915	11	1,822	230	-----	-----	1,602	13	-----	-----	87
1920	8	2,741	1,104	-----	-----	1,637	40	-----	-----	60
1922	9	2,967	1,932	36	-----	999	65	1	-----	34
1924	10	3,370	1,454	73	846	997	43	2	25	30
1926	10	3,620	1,686	10	948	976	47	(1)	26	27
Total:										
1914	38	9,253	3,901	454	-----	4,898	42	5	-----	53
1915	38	8,563	3,599	324	-----	4,640	42	4	-----	54
1920	28	12,170	3,534	2,121	-----	6,515	29	17	-----	54
1922	32	10,716	6,114	1,500	-----	3,102	57	14	-----	29
1924	36	15,540	3,175	795	4,588	6,982	20	5	30	45
1926	37	15,329	3,352	923	3,553	7,501	22	6	22	49

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Blast Furnaces

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Stockers:														
Eastern.....	6	83	6.9	10.1	70.2	93	137.3	\$63.77	\$0.465	\$32.64	142.9	\$66.04	\$0.462	
Pittsburgh.....	11	424	6.6	8.9	57.8	495	114.7	55.48	.484	27.89	116.7	56.56	.484	
Great Lakes and Middle West.....	10	294	6.9	8.1	55.4	356	101.5	55.19	.544	30.14	106.2	57.71	.543	
Southern.....	10	176	6.5	10.6	68.8	230	112.9	35.46	.314	21.60	125.5	39.78	.317	
Total.....	37	977	6.7	9.1	60.1	1,174	112.1	52.13	.465	27.95	117.3	54.36	.463	
Bottom fillers:														
Great Lakes and Middle West.....	1	21	6.7	8.0	53.0	25	101.6	59.35	.584	30.95	118.2	68.89	.583	
Southern.....	3	225	6.7	8.0	53.6	319	89.2	36.75	.412	22.08	93.2	38.30	.411	
Total.....	4	246	6.7	8.0	53.5	344	90.1	38.39	.426	22.79	95.0	40.52	.427	
Top fillers:														
Great Lakes and Middle West.....	1	9	6.7	8.0	53.0	11	91.1	58.55	.643	34.08	96.9	62.15	.641	
Southern.....	3	46	6.7	8.0	54.0	54	102.3	48.53	.474	25.60	105.4	49.74	.472	
Total.....	4	55	6.7	8.0	53.8	65	100.4	50.22	.500	26.90	104.0	51.84	.499	
Larry men:														
Eastern.....	6	44	7.0	9.3	64.9	44	143.9	71.34	.496	32.19	144.4	71.63	.496	
Pittsburgh.....	11	154	6.8	8.1	55.3	160	118.7	68.74	.579	32.02	122.0	70.50	.578	
Great Lakes and Middle West.....	10	163	7.0	8.0	55.6	176	113.1	68.41	.605	33.64	117.4	70.82	.603	
Southern.....	7	38	6.7	10.4	70.0	42	141.2	47.95	.340	23.80	150.1	50.85	.339	
Total.....	34	399	6.9	8.4	57.9	422	121.2	66.81	.551	31.90	125.2	68.80	.550	
Larry men's helpers:														
Eastern.....	6	34	7.0	9.6	67.5	38	130.0	57.89	.445	30.04	139.3	62.44	.448	
Pittsburgh.....	9	146	6.8	8.0	54.7	176	96.6	49.46	.512	28.01	105.2	53.99	.513	
Great Lakes and Middle West.....	8	129	6.9	8.0	55.6	146	104.4	54.35	.521	28.97	112.3	58.48	.521	
Southern.....	3	22	6.5	9.8	64.0	29	102.6	32.30	.315	20.16	123.6	39.92	.323	
Total.....	26	331	6.9	8.3	56.9	389	103.2	50.84	.493	28.05	112.6	55.45	.493	

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Blast Furnaces—Continued

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Skip operators:														
Eastern.....	6	37	7.0	9.1	63.6	39	133.6	\$67.61	\$0.506	\$32.18	137.8	\$69.87	\$0.507	
Pittsburgh.....	10	106	6.8	8.2	55.8	112	119.2	69.54	.583	32.53	122.6	71.44	.583	
Great Lakes and Middle West.....	9	73	6.9	8.0	55.4	79	122.0	73.79	.605	33.52	122.5	74.08	.605	
Southern.....	7	32	6.7	10.3	68.3	37	126.8	45.15	.356	24.31	135.5	48.50	.358	
Total.....	32	253	6.9	8.5	58.4	267	123.2	67.13	.545	31.83	126.6	68.82	.544	
Blowers.														
Eastern.....	6	24	6.9	9.3	64.2	25	139.1	114.11	.820	52.64	140.8	115.03	.817	
Pittsburgh.....	11	77	6.8	8.4	58.5	83	117.5	112.88	.961	54.30	123.5	116.87	.946	
Great Lakes and Middle West.....	10	83	6.9	8.0	55.3	87	118.6	121.16	1.022	56.52	121.8	123.75	1.016	
Southern.....	10	44	6.6	9.8	65.0	46	140.8	93.60	.665	43.23	145.0	95.84	.661	
Total.....	37	228	6.8	8.6	58.5	241	124.6	112.31	.902	52.77	128.8	115.15	.894	
Stove tenders.														
Eastern.....	6	37	7.0	9.1	63.6	37	140.6	70.62	.502	31.93	141.3	70.93	.502	
Pittsburgh.....	11	115	6.8	8.1	55.6	123	113.1	65.33	.577	32.08	118.2	68.29	.578	
Great Lakes and Middle West.....	10	128	6.9	8.0	55.4	140	113.1	67.66	.598	33.13	118.4	70.92	.599	
Southern.....	10	54	6.7	9.3	62.5	62	123.2	52.24	.424	26.50	134.8	57.66	.428	
Total.....	37	334	6.9	8.4	57.5	362	117.7	64.53	.548	31.51	123.5	67.75	.549	
Blowing engineers:														
Eastern.....	6	24	7.0	10.0	70.0	25	152.7	83.81	.549	38.43	156.1	85.15	.546	
Pittsburgh.....	11	64	6.8	8.3	58.2	67	124.3	87.86	.707	39.73	125.4	88.55	.706	
Great Lakes and Middle West.....	10	68	6.9	8.0	55.4	71	118.9	94.13	.792	43.88	119.1	94.27	.792	
Southern.....	10	33	6.7	9.9	67.0	34	148.3	64.35	.434	29.08	150.3	65.11	.433	
Total.....	37	189	6.9	8.7	59.5	197	130.1	85.55	.658	39.15	131.3	86.14	.656	
Blowing engineers' assistants:														
Eastern.....	4	11	7.0	10.9	76.4	11	165.8	74.12	.447	34.15	165.8	74.12	.447	
Pittsburgh.....	9	88	6.8	8.0	53.9	101	108.3	64.53	.596	32.12	110.9	66.04	.596	

Great Lakes and Middle West	10	87	6.9	8.0	55.4	92	115.7	74.95	.648	35.90	120.5	78.36	.651
Southern	6	23	6.7	9.4	62.3	27	120.4	44.63	.371	23.11	132.9	49.22	.370
Total	29	209	6.8	8.3	56.6	231	115.4	66.81	.579	32.77	119.9	69.37	.579
Keepers:													
Eastern	6	40	7.0	9.0	63.0	41	136.1	70.58	.519	32.70	138.5	71.96	.520
Pittsburgh	11	121	6.8	8.1	55.5	133	113.8	71.97	.632	35.08	115.6	73.01	.632
Great Lakes and Middle West	10	135	6.9	8.0	55.4	144	112.6	70.01	.622	34.46	116.1	71.95	.620
Southern	10	54	6.7	9.3	62.5	62	123.6	50.93	.412	25.75	124.2	51.12	.411
Total	37	350	6.9	8.4	57.4	380	117.3	67.64	.577	33.12	119.7	68.93	.576
Keepers' helpers:													
Eastern	6	166	7.0	9.4	66.0	185	130.6	59.14	.453	29.90	134.8	61.05	.453
Pittsburgh	11	430	6.8	8.1	55.1	554	94.6	50.72	.536	29.53	100.7	53.89	.536
Great Lakes and Middle West	10	363	6.9	8.0	55.4	403	108.1	59.67	.552	30.58	113.5	62.56	.551
Southern	10	283	6.7	9.8	65.9	374	113.7	36.06	.317	20.89	118.5	37.80	.319
Total	37	1,242	6.8	8.6	59.1	1,516	107.3	56.51	.471	27.84	112.6	53.10	.471
Iron handlers and loaders:													
Great Lakes and Middle West	1	9	7.0	10.0	70.0	16	75.0	42.00	.560	39.20	75.5	42.33	.560
Southern	6	125	6.6	10.4	69.2	165	117.3	39.43	.336	23.25	122.8	41.08	.335
Total	7	134	6.6	10.4	69.2	181	113.6	39.65	.349	24.15	118.6	41.19	.347
Pig-machine men:													
Eastern	6	72	7.0	10.8	75.8	74	161.4	71.58	.443	33.88	163.0	72.30	.444
Pittsburgh	10	146	6.8	8.4	56.5	178	104.2	53.80	.516	29.15	108.8	56.21	.517
Great Lakes and Middle West	10	179	6.9	8.0	54.9	220	100.8	54.77	.543	29.81	108.9	59.19	.544
Southern	3	31	6.8	9.0	61.7	34	129.3	50.01	.387	23.91	131.3	50.91	.388
Total	29	428	6.8	8.7	59.4	506	112.8	56.56	.501	29.76	118.3	59.50	.503
Cinder men:													
Eastern	2	13	7.0	10.5	73.2	15	144.6	84.35	.583	42.68	144.6	84.35	.583
Pittsburgh	7	47	6.7	8.5	56.3	71	84.4	41.95	.497	27.98	86.7	43.21	.498
Great Lakes and Middle West	9	75	6.5	9.0	58.5	85	113.6	54.93	.484	28.31	114.7	55.57	.484
Southern	4	10	6.0	10.0	60.0	12	128.2	37.21	.290	17.40	131.6	38.33	.291
Total	22	145	6.6	9.0	59.2	183	105.7	51.15	.484	28.65	107.4	52.00	.484
Laborers:													
Eastern	5	105	7.0	10.4	72.3	138	114.7	43.88	.383	27.69	124.2	48.43	.390
Pittsburgh	11	409	6.5	9.7	62.8	528	103.3	45.58	.441	27.69	111.2	49.56	.446
Great Lakes and Middle West	10	343	6.4	9.4	60.4	467	95.0	43.61	.459	27.72	102.9	48.24	.469
Southern	10	345	6.1	10.1	60.9	467	101.8	26.94	.265	16.14	110.0	29.74	.270
Total	36	1,202	6.4	9.8	62.4	1,600	101.4	39.42	.389	24.34	109.8	43.29	.394

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Blast Furnaces

ALL EMPLOYEES

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	Eastern	Pittsburgh	Great Lakes and Middle West	Southern	Total
Turns per week	Hours				Turns per week	Hours									
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week						
7	12	12	12	84					84	14	16		70	100	
7	11	11	11	77					77	17	1		1	19	
7	11	10	10	75					75	1				1	
6	12	12	12	72					72				28	28	
6	12	12		72					72	2				2	
6	12	12	12	72					72	1	1			18	
6	10½	9½	9½	71½					71½	2			16	2	
7	10	10	10	70					70	200	199	246	319	964	
7	11	10	10	75					70	15				15	
7	10	9½	9½	69					69			1		1	
7	10	9	9	68					68	3	2			5	
7	10	8	8	66					66	1				1	
6	11	11		66					66	1		1	1	3	
7	10	10	5	65					65	2				2	
6	10	10		60					65	30	198		9	237	
7	10	9	5	64					64	1				1	
6	10	9		59					63½	21	54			75	
7	10	9	9	68					63	1		12	7	20	
6	10	9	9	63					62	1				1	
6	10½	9½		62					60	4	24	81	283	397	
6	10	10	10	60					60	2				2	
6	10	10	10	60					60	76	112	622	792	1,602	
6	10	9½		59½					59½	2				2	
6	10	9	10	59					59		31			31	
6	10	9		59					59	30	132		4	166	
6	9	9		54					58½	2				2	
7	9	9	9	63					57	2		2		4	
6	9½	9½		57					56		15	167	2	184	
6	8	8	8	56					54					2	
6	9	9	9	54					54	2	4	6	38	50	
6	9	9		54					50				1	1	
6	8	10		50					49½			27		27	
6	9	4½		49½					49	1				1	
7	7	7	7	49					49	1				1	
6	9	9	4	49					49	1				1	
6	9	4		49					49	1				1	
6	8	8	8	48					48		26	1	4	31	
6	8	8		48					48		30	107	16	151	
6	8	4		44					44		1	1		2	
6	8	4		44					42		1			1	
6	7	7		42					42					1	
Total.										436	847	1,274	1,598	4,155	

Group A.—Day turn only

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Blast Furnaces—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	Eastern	Pittsburgh	Great Lakes and Middle West	Southern	Total
Turns per week	Hours				Turns per week	Hours									
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week						

Group B.—Night turn only

7	14	14	14	98	98	1								1
7	13	13	13	91	91	1							2	3
7	13	13	12½	90½	90½									1
7	12	12	12	84	84	9		1					26	38
6	13	13	13	78	78			3					1	1
6	12	12	12	72	72								15	15
7	10	10	10	70	70	5	1		1			10		17
7	8	8	8	56	56									3
7	10	10	10	70	70				3					3
6	10	10	10	60	60		6		39		6			51
6	10	10	10	60	60				30		13			43
7	8	8	8	56	56				5					5
Total						16	11	78	73					178

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	34	110	84		400	594
7	11	11	11	77	7	13	13	13	91	34	188			2	190
7	10	10	10	70	7	14	14	14	98	34	52				52
7	10	10	10	70	7	13	13	13	91	30½	4				4
6	12	12	12	72	6	12	12	12	72	72		5		260	274
7	10	10	10	70	7	10	10	10	70	70	237	5	49		291
6	10	10	10	60	7	10	10	10	70	65		6			6
8	10	10	10	60	6	10	10	10	60	65	31	389			420
7	10	10	10	70	7	10	10	10	70	70					70
6	10	10	10	60	7	10	10	10	70	65		134			134
6	10	5	5	55	7	10	10	10	70	63½	6				6
7	10	5	10	65	7	9	9	9	63	63					6
7	9	9	9	63	7	9	9	9	63	63		18			18
6	10	10	10	60	6	10	10	10	60	60		116	59	185	360
6	10	10	10	60	6	10	10	10	60	60			2	7	9
6	10	10	10	60	6	10	10	10	60	60		9	32		41
6	10	9	10	59	6	10	10	10	60	59½		20			20
7	8	8	8	56	7	8	8	8	56	56	497	1,299	2,927	137	4,860
7	8	8	8	56	7	8	8	8	56	56			123		123
7	8	8	8	56	6	8	8	8	48	53½			568		568
7	8	8	8	56	6	8	8	8	48	53½					7
7	8	8	8	56	6	8	8	8	48	53½			7		7
6	8	8	8	48	7	8	8	8	56	53½	3	1,696		948	2,647
6	8	8	8	48	7	8	8	8	56	53½		325			325
7	8	8	8	56	6	8	8	8	48	52	8				8
6	8	8	8	48	7	8	8	8	56	52		25			25
6	8	8	8	48	7	8	8	8	56	52					25
7	8	8	8	56	6	8	8	8	48	50½			1		1
6	8	8	8	48	6	8	8	8	48	48			3		3
6	8	8	8	48	6	8	8	8	48	48		4	6		10
Total											1,136	4,135	3,777	1,948	10,996

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Blast Furnaces—Continued

KEEPERS, ONLY

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						
7	12	12	12	84	7	12	12	12	84	84	4	4		14	22
7	11	11	11	77	7	13	13	13	91	84	5				5
6	12	12	12	72	6	12	12	12	72	72				6	6
7	8	8	8	56	7	8	8	8	56	56	32	60	110	7	209
7	8	8	8	56	7	8	8	8	56	56			13		13
6	8	8	8	48	7	8	8	8	56	56		54		32	86
6	8	8	8	48	7	8	8	8	56	52				3	3
Total.											41	118	123	62	344

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926, by district—Blast Furnaces

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—																
				40 and under 44	48	Over 48 and under 56	56	Over 56 and under 60	60	Over 60 and under 66	66 and under 72	72	Over 72 and under 84	84 and over						
Stockers:																				
Eastern	6	93	70.2				16			6			49				4			18
Pittsburgh	11	495	57.8		10	219	62			22	169									13
G. L. and M. W.	10	356	55.4			95	247			14										
Southern	10	230	68.8			3	19			85		25	34							64
Total	37	1,174	60.1		10	317	344			127	169	74	34	4						95
Larry men:																				
Eastern	6	44	64.9				30													14
Pittsburgh	11	160	55.3			82	74													4
G. L. and M. W.	10	176	55.6			27	149													
Southern	7	42	70.0			16							8							18
Total	34	422	57.9			125	253						8							36
Blowers:																				
Eastern	6	25	64.2			8	9													8
Pittsburgh	11	83	56.5			44	21				13			5						
G. L. and M. W.	10	87	55.3			26	61													
Southern	10	46	65.0			20	3			4				7						12
Total	37	241	58.5			98	94			4	13			12						20
Keepers:																				
Eastern	6	41	63.0				31													10
Pittsburgh	11	133	55.5			70	59													4
G. L. and M. W.	10	144	55.4			34	110													
Southern	10	62	62.5			35	7							7						13
Total	37	380	57.4			139	207							7						27
Keepers' helpers:																				
Eastern	6	185	66.0				117													12
Pittsburgh	11	554	55.1			354	185													15
G. L. and M. W.	10	403	55.4			89	311			3										
Southern	10	374	65.9			169	9					32	48							116
Total	37	1,516	59.1			612	622			3		32	48	12						187
Laborers:																				
Eastern	5	138	72.3				5				7	104								22
Pittsburgh	11	528	62.8	1	2	85	12		7	109	246	66								
G. L. and M. W.	10	467	60.4			20	114			249	1	83								
Southern	10	467	60.9							441	10	8								8
Total	36	1,600	62.4	1	2	105	131		7	799	264	261								30

TABLE G.—Average and classified hours actually worked by employees in six specified occupations in pay period covered, 1926, by district—
Blast Furnaces

Occupation and district	Number of employees	Average hours worked	Number of employees who during the pay period worked hours specified																																	
			Under 32	32 and under 40	40 and under 48	48 and under 56	56 and under 64	64 and under 72	72 and under 80	80 and under 88	88 and under 96	96 and under 104	104 and under 112	112 and under 120	120 and under 132	132 and under 144	144 and under 156	156 and under 168	168 and under 180	180 and under 192	192 and over															
Stockers:																																				
Eastern	93	142.9	3	1	1	2	2	1	2	1	2	1	2	5	16	14	6	11	9	6	1	6														
Pittsburgh	495	116.7	39	1	4	6	9	5	3	7	2	2	12	20	8	72	102	1	41	2	40	54	1	4	7	4										
G. L. and M. W.	356	106.2	24	7	6	6	2	4	7	2	5	1	8	4	10	3	20	6	39	12	73	104	1	13	20	11										
Southern	230	125.5	15	4	4	5	5	5	5	1	1	1	3	5	9	3	20	1	9	18	16	6	22	5	16	8	14	13	4	5	1	11				
Total	1,174	117.3	81	13	11	16	18	14	17	11	10	16	13	22	22	46	40	61	31	168	238	8	90	7	62	8	79	23	14	5	9	21				
Larry men:																																				
Eastern	44	144.4											1			5			5		8	1					1					1	1	2		
Pittsburgh	160	122.0	1		1		1		1	2			1		2	1	4	1	14	3	51	66		5	2	1	1		7		2	1	2	1	2	
G. L. and M. W.	176	117.4	1		2		1		2	2			1		6	3	14	4	28	5	58	58	1	9		2								1	1	
Southern	42	150.1				1							2			1				3	5	6		2	1	5					2		5		1	
Total	422	125.2	2		3	3	2		3	4		5		8	5	24	5	50	8	102	136	2	16	3	4	6		9		7	3		12			
Blowers:																																				
Eastern	25	140.8							1	1					1	1		2	2	1	8													2		
Pittsburgh	83	123.5	1			1		1	1	1				1	1	1		2	2	6	13	37		4	5	2							4			
G. L. and M. W.	87	121.8	2											1		11		1	2	1	14	48		7												
Southern	46	145.0																	5	1	13	7	1		2		1					3		2	1	9
Total	241	128.8	3			1		1	2	2				2	2	13	6	11	9	48	92	1	11	7	2	1		11		4	1		11			
Keepers:																																				
Eastern	41	138.5			1										5			6	1	5	12	1												1	3	
Pittsburgh	133	115.6	5	1			1			1	1	3	1	5	2	8	2	11	4	43	35		6												2	2
G. L. and M. W.	144	116.1	2	1		1	2	2	1	1		1		3		18	1	20	3	27	58		3													4
Southern	62	124.2			7	1				1	1		1		1	2	1	2	2	17	8	1		2	1	2	2	2	1	1	2	4			4	
Total	380	119.7	7	2	8	2	3	2	1	3	2	4	2	9	3	33	4	39	10	92	113	2	9	2	1	2	4	5	1	1	5	9				
Keepers' helpers:																																				
Eastern	185	134.8			1	4		5	4	4	3	6		9	1	22		22	3	24	23		4	1	3	7	4	20	1	1	4			9		
Pittsburgh	554	100.7	65	8	5	8	5	8	12	11	6	13	6	18	6	35	15	46	10	124	117	1	18	2	3		2	1	2			3	4		4	
G. L. and M. W.	408	113.5	13	2	3	6	1	5	2	2		8	2	18	4	41	12	47	13	81	127		14	1												4
Southern	374	118.5	25	3	1	10	8	6	12	6	2	7	5	12	7	14	12	24	4	66	18	6	9	16	10	14	16	18	11	9	10			13		
Total	1,516	112.6	103	13	10	28	14	24	30	23	11	34	13	57	18	112	39	139	30	295	285	7	45	20	16	21	22	39	15	10	17	26				
Laborers:																																				
Eastern	138	124.2	9	1	3	1	1	5	5	1	3	2	5	1	8	1	10	3	8	9	19		24	3	2	2	1	5	4					2		
Pittsburgh	528	111.2	29	12	16	14	15	11	9	8	8	5	13	10	15	15	27	6	18	20	90	5	67	6	71	2	31	1	4							
G. L. and M. W.	467	102.9	40	5	9	15	14	15	9	12	6	8	3	28	17	11	16	31	14	27	42	84		26												
Southern	467	110.0	42	4	6	17	17	19	5	13	14	3	13	1	14		27	3	18	36	65	4	50	2	28	3	34	1	3	3	11			11	11	
Total	1,600	109.8	120	22	34	47	47	50	28	34	31	13	59	29	48	32	95	26	71	107	258	9	167	11	114	7	85	8	13	11	11	11	13			

BLAST FURNACES

TABLE H.—Average and classified earnings actually received by employees in six specified occupations in pay period covered, 1926, by district—**Blast Furnaces**

Occupation and district	Number of employees	Average earnings per pay period	Number of employees whose earnings during the pay period were—																														
			Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 and under \$20	\$20 and under \$25	\$25 and under \$30	\$30 and under \$35	\$35 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$55	\$55 and under \$60	\$60 and under \$65	\$65 and under \$70	\$70 and under \$75	\$75 and under \$80	\$80 and under \$85	\$85 and under \$90	\$90 and under \$95	\$95 and under \$100	\$100 and under \$110	\$110 and under \$120	\$120 and under \$130	\$130 and under \$140	\$140 and under \$150	\$150 and under \$160	\$160 and under \$180				
Stockers:																																	
Eastern	93	\$66.04	1	2	---	2	---	1	3	1	2	3	8	17	6	12	20	7	4	2	---	---	---	---	---	---	---	---	---	---			
Pittsburgh	495	56.56	27	10	2	1	7	10	10	4	14	19	32	46	143	85	57	17	7	4	---	---	---	1	---	---	---	---	---				
G. L. and M. W.	356	57.71	5	10	7	12	9	6	6	8	4	13	19	31	107	79	14	15	7	4	3	2	1	---	---	---	---	---	---				
Southern	280	39.78	7	9	---	---	---	---	13	29	31	41	29	14	12	8	5	3	4	1	---	---	---	---	---	---	---	---	---				
Total	1,174	54.36	40	31	13	27	24	24	48	44	61	64	73	106	264	181	94	43	19	10	3	2	1	1	---	---	---	---	---				
Larry men:																																	
Eastern	44	71.63	---	---	---	---	---	---	---	---	1	5	3	6	2	8	8	8	1	1	1	---	---	---	---	---	---	---	---	---			
Pittsburgh	160	70.50	---	1	---	---	---	1	1	---	1	3	3	23	55	31	24	10	4	1	1	---	1	1	1	---	---	---	---	---			
G. L. and M. W.	176	70.82	1	---	---	---	2	2	1	---	3	2	2	15	23	70	46	7	2	---	---	---	---	---	---	---	---	---	---	---			
Southern	42	50.85	---	---	1	---	---	---	2	3	4	8	10	5	3	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
Total	422	68.80	1	1	1	---	2	3	4	3	9	16	15	16	45	89	110	78	17	7	1	1	1	1	1	---	---	---	---	---			
Blowers:																																	
Eastern	25	115.03	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	3	2	2	5	9	1	1	1	---	---	---	---	---			
Pittsburgh	83	116.87	---	---	---	1	---	---	---	---	---	---	---	---	1	2	---	3	2	11	12	12	11	11	1	1	5	---	6	---			
G. L. and M. W.	87	123.75	---	1	1	---	---	---	---	---	---	---	---	---	---	---	2	2	6	12	19	15	18	7	---	---	3	1	---	2			
Southern	46	95.84	---	---	---	---	---	---	---	---	---	1	---	1	2	6	5	3	6	12	5	1	2	---	---	---	---	---	---	---			
Total	241	115.15	---	1	1	1	---	---	---	---	---	2	2	1	5	6	8	11	10	31	34	41	29	30	9	5	5	7	---	2			
Keepers:																																	
Eastern	41	71.96	---	---	---	---	1	---	---	---	---	1	6	4	5	4	13	3	---	2	1	1	---	---	---	---	---	---	---	---	---		
Pittsburgh	133	73.01	---	---	2	3	1	---	---	1	---	---	2	5	11	8	14	44	31	6	1	---	4	---	---	---	---	---	---	---	---		
G. L. and M. W.	144	71.95	---	2	---	---	---	1	2	1	2	---	6	8	18	25	56	19	3	---	---	---	---	---	---	---	---	---	---	---	---		
Southern	62	51.12	---	---	1	6	---	1	1	2	4	7	22	10	2	1	2	---	---	1	2	---	---	---	---	---	---	---	---	---	---		
Total	380	68.93	---	2	3	10	2	2	3	4	6	8	31	25	26	31	54	102	51	11	4	1	4	---	---	---	---	---	---	---	---		
Keepers' helpers:																																	
Eastern	185	61.05	---	---	---	1	3	7	5	6	13	26	24	22	11	27	24	5	5	5	1	---	---	---	---	---	---	---	---	---	---	---	
Pittsburgh	554	53.89	26	24	14	8	9	8	8	13	16	25	40	46	107	138	40	15	6	4	5	1	1	---	---	---	---	---	---	---	---		
G. L. and M. W.	403	62.56	6	3	3	2	5	3	3	5	4	9	15	50	90	140	27	35	---	1	---	---	---	---	---	---	---	---	---	---	---		
Southern	374	37.80	13	15	10	10	17	22	24	57	77	83	24	3	4	3	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Total	1,516	53.10	45	42	27	21	34	42	40	81	110	143	113	121	212	308	93	55	11	10	6	1	1	---	---	---	---	---	---	---	---	---	
Laborers:																																	
Eastern	138	48.43	2	4	5	2	3	8	10	10	23	20	24	13	3	5	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Pittsburgh	528	49.56	5	14	12	21	23	11	17	21	27	45	65	84	121	36	22	3	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---
G. L. and M. W.	467	48.24	8	17	13	14	16	4	18	34	29	40	73	68	63	41	7	10	1	---	1	---	---	---	---	---	---	---	---	---	---	---	---
Southern	467	29.74	26	22	28	31	43	47	69	98	79	19	1	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total	1,600	43.29	41	57	58	68	85	80	114	163	158	124	163	168	187	83	35	13	2	---	1	---	---	---	---	---	---	---	---	---	---	---	---

BESSEMER CONVERTERS

The study of this department covers establishments which make steel entirely by the Bessemer process or which only partially reduce the pig iron in the converters and finish the steel in open-hearth or electric furnaces. This latter method is known as the duplex process and the finished product is of course open-hearth steel. Most of the establishments do some duplexing in addition to the manufacture of the regular Bessemer product while some operate entirely on that basis. The duplex process is often used by companies to hold their crews together while awaiting orders for Bessemer steel.

The 1926 data were collected from the pay rolls of 11 Bessemer converting plants and cover 2,948 employees in all occupations. Of these 2,948 employees 1,143 were found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1907, and from 1907 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years all employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ Comparative figures are presented in Table A for employees in the specified occupations from 1907 to 1926.

In studying the figures for this department it must be kept in mind that the plants covered are located in the Pittsburgh and the Great Lakes and Middle West districts entirely. No data are included from the eastern and the southern districts, as Bessemer steel is not manufactured in sufficient quantities in those districts to warrant inclusion in the report. Thus, care should be used in comparing the wages or hours of employees in this department with those of other departments which include all four districts.

The hours of labor of Bessemer-converter employees have decreased considerably in recent years. Up until the summer of 1923 the working time of employees as a whole in this department showed very little change as compared with former years. Except for members of the cupola, vessel, and pouring crews, a majority of the employees still worked the 12-hour day and in many instances the 7-day week. A general reduction in the regular daily hours of employees, however, took place in the latter part of 1923, and a large number of the plants adopted the 8-hour day for all employees. In 1914 employees as a whole had an average full-time week of 68.4 hours which remained practically the same in 1915. War conditions were still in effect in 1920 and full-time hours per week advanced to an average of 70.3 or 6 days per week of almost 12 hours each. By 1922, however, the average had decreased to 68.7 hours and, following the 1923 decrease, was still further reduced to 52.3 hours in 1924. There was practically no change in hours per week in 1926 as compared with 1924. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1910 to 1926, for the department as a whole, are shown in Table 1, page 3.

¹ Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

Comparisons of the full-time hours per week of employees in the various selected occupations, which may be made from Table A, show like reductions. In 1907 the average full-time hours per week in all of the selected occupations combined were 69.7, and laborers, who constituted almost 50 per cent of the employees covered, had a working week of 78 hours. In 1926 working time had been so far reduced that the average was less than 60 hours per week for every occupation and the averages for 8 of the 19 occupations were less than 50 hours. Laborers worked the highest number of hours per week, 59.4, and mold cappers the lowest, 47.7.

While hours per day and per week were considerably less in 1924 and 1926 as compared with former years, the 7-day week increased to some extent when 1924 and 1926 are compared with 1922 and all other years except 1920. While this department is scarcely ever operated on Saturday night or Sunday day turn, considerable "fix-up" or repair of equipment is necessary, which is usually done while the converters are "down." Members of the crew who understand the equipment must be selected to a large extent for this repair, and 7-day work is thus provided for quite a number of the force. In 1914 and 1915, 20 per cent of all employees covered worked a week of 7 days—either 13 or 14 per cent regularly and the remainder at two or three week intervals. In 1920, owing to war conditions, 7-day work increased and 26 per cent worked 7 days each week, while an additional 15 per cent alternated or rotated regularly from 6 to 7 days. There was a decrease in continuous employment in 1922, and only 10 per cent worked a week of 7 days all the time and 9 per cent had a working week of 7 days once in two or three weeks. However, in 1924, as the hours per day were greatly decreased, the weekly turns were increased and 29 per cent of all employees worked 7 days per week—8 per cent regularly and 21 per cent at two or three week intervals. When all employees are considered as a whole, there was practically no change in 7-day work in 1926 as compared with 1924.

A good idea of the extent of the spread of hours in this department may be gained from Table D. The grouping of the employees in that table by hours per day shows that in 1926, of the 2,948 employees covered, 2,230 had a working-day of 8 hours and only 9 employees worked as many as 11 hours per day; a total of 704 employees worked 10 hours per day, 4 worked 9 hours, and 1 worked 8½ hours from Monday to Friday with 5 hours on Saturday. The employees covered in Bessemer converters, of course, include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to members of a producing crew separate figures are shown for the occupation of vessel man. Of the 29 employees who worked as vessel men during the period, 27 worked 8 hours per day and 2 worked 10 hours. The 27 employees who worked 8 hours per day had a working week of 53⅓ hours or less, and the 10-hour employees worked an average of 65 hours per week. Four of the 8-hour employees worked 6 days per week regularly, giving them a 48-hour week. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the hours of labor of employees in 1926 show large decreases as compared with former years, hourly earnings show even larger increases. In 1914 the average earnings per hour of all employees covered were 25.5 cents, while in 1926 employees earned an average

of 64.1 cents per hour, an increase of 151 per cent. In other words the 1926 hourly earnings were $2\frac{1}{2}$ times the earnings in 1914. The earnings were highest in 1920, 67.7 cents on the average, and in 1924 they were 3 per cent less than in 1926. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, vessel men in 1907 earned an average of 79.3 cents per hour, which decreased to 74.4 cents in 1913. In 1914 vessel men's earnings were lower than in any other year recorded and stood at 49.9 cents per hour. They advanced somewhat in 1915 and in 1917 the new high level of 89.4 cents per hour was reached. Earnings continued to increase in 1919 and 1920, and the hourly earnings of vessel men were \$1.114 and \$1.273, respectively, in those years. In 1922 hourly earnings in the occupation decreased to 89.7 cents but rose again to \$1.166 in 1924 and \$1.271 in 1926. A distribution by hourly earnings of the employees in 6 specified occupations in 1926 is given in Table F.

Average full-time earnings per week were almost twice as great in 1926 as they were in 1914. In 1914 earnings per full-time week for all employees were \$17.44 on the average, while in 1926 they had increased to \$33.72. In 1920 they were \$47.59, the highest of any year shown, and in 1924 they were \$32.64—a little over \$1 per week less on the average than in 1926. Weekly earnings in the various selected occupations show like increases. Vessel men, for example, earned an average of \$44.58 per full-time week in 1907, \$41.52 in 1913, and \$71 in 1920. In 1922 and 1924 there was a decrease in hourly earnings as well as in hours of labor and vessel men earned an average of \$50.59 per full-time week in 1922 and \$59.93 in 1924. In 1926 the increase in earnings per hour was sufficient to raise the weekly earnings of vessel men to \$65.84, which, however, still left the weekly earnings practically 7 per cent less than the high earnings of 1920.

The 1,143 employees in the selected occupations worked an average of 95.5 hours during the 16-day pay period covered by the 1926 study, for which they received an average of \$68.62. This includes all of the hours worked and the earnings received by these employees, as shown in Table C. Stopper makers worked the most time, 116 hours, and laborers the least, or 81.7 hours. Laborers also earned the least money, \$36.67, while blowers, a highly skilled occupation, earned the largest amount, \$143.63. Vessel men received the second highest earnings or \$137.66.

A classification of employees in 6 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of stockers 24 of the 317 employees reported worked less than 32 hours during the pay period, while 1 employee worked between 156 and 168 hours. The largest group, 45, worked "over 104 and under 112" hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations. Laborers earned from less than \$5 for the period to between \$80 and \$85, while vessel men earned from between \$80 and \$85 to "\$250 and over." The largest group of laborers, 45, earned between \$55 and \$60.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Bessemer Converters

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60 and under 72	Over 72 and under 84	84	
Stockers:														
1907	9	371	62.5	\$0.246	\$14.27	100	74	75	46	5	8	7	22	12
1908	9	260	58.3	.275	14.93	93	83	78	58	11	10	10	12	
1909	9	266	63.6	.264	15.31	102	80	80	43	6	2	12	23	15
1910	10	352	64.9	.266	16.03	104	80	84	32	9	8	19	6	26
1911	10	241	61.7	.233	13.60	99	70	71	46	6	1	24	11	12
1912	10	280	62.1	.306	17.38	99	92	91	45	9	1	6	8	15
1913	10	337	62.5	.331	19.05	100	100	100	23	21	1	9	27	13
1914	6	167	55.5	.351	18.59	89	106	98	63	6	1	22	7	6
1915	6	157	55.6	.313	16.70	89	95	88	61	5	4	1	20	8
1917	3	144	55.3	.599	31.45	88	181	165	69	—	—	31	—	—
1919	6	196	64.6	.637	41.15	103	192	216	27	—	8	65	—	—
1920	10	351	68.0	.699	47.38	109	211	248	18	2	17	46	4	13
1922	10	230	70.2	.409	28.71	112	124	151	2	3	6	14	71	3
1924	10	437	48.3	.613	29.59	77	135	155	84	8	9	—	—	—
1926	10	317	48.3	.638	31.82	77	193	167	89	3	6	2	—	—
Cupola melters:														
1907	7	15	65.2	.509	31.67	104	107	112	40	—	13	20	13	13
1908	7	15	64.7	.350	22.20	104	78	79	40	—	13	20	13	13
1909	7	15	64.7	.419	26.09	104	88	92	40	—	13	20	13	13
1910	7	16	60.6	.447	25.85	97	94	92	38	19	—	19	13	13
1911	8	17	65.2	.386	24.62	104	81	87	35	—	12	29	12	12
1912	8	18	61.6	.409	23.82	99	86	84	50	—	11	17	11	11
1913	8	19	62.4	.477	28.23	100	100	100	32	16	11	21	11	11
1914	6	15	59.5	.390	23.00	95	82	81	20	40	13	13	13	—
1915	6	15	59.3	.449	25.90	95	94	92	40	40	—	27	13	—
1917	3	7	61.7	.760	45.24	99	159	160	23	—	—	57	—	—
1919	4	9	62.2	.893	61.76	100	208	219	33	—	—	67	—	—
1920	6	22	61.7	1.063	65.85	99	223	233	—	45	—	32	23	—
1922	4	15	65.3	.674	43.31	105	141	153	—	40	—	14	33	13
1924	5	19	49.3	.856	42.12	79	179	149	53	47	—	—	—	—
1926	4	10	49.2	.888	43.69	79	186	155	40	60	—	—	—	—
Cupola tappers:														
1907	8	50	60.5	.379	22.16	102	96	100	54	—	8	18	12	8
1908	8	43	59.3	.335	19.67	100	85	88	56	—	5	30	5	5
1909	8	43	61.5	.340	19.74	103	87	89	56	—	—	12	19	14
1910	8	56	58.9	.362	20.30	99	92	91	64	—	—	13	14	9
1911	9	45	60.4	.314	18.36	102	80	83	53	—	—	33	4	9
1912	9	48	60.6	.369	20.94	102	94	94	56	—	4	10	21	8
1913	9	69	59.5	.393	22.25	100	100	100	30	26	6	23	14	—
1914	4	34	56.9	.286	16.47	96	73	74	—	71	—	29	—	—
1915	4	24	55.8	.332	18.43	94	84	83	—	75	—	25	—	—
1917	2	16	54.0	.677	34.85	91	172	157	75	—	—	25	—	—
1919	5	29	60.2	.781	47.02	101	199	211	41	—	17	41	—	—
1920	5	38	54.8	.979	53.76	92	249	242	—	68	—	18	13	—
1922	3	11	60.3	.547	32.60	101	139	147	—	55	—	27	18	—
1924	4	30	49.7	.723	36.04	84	184	162	37	63	—	—	—	—
1926	5	21	49.3	.762	37.57	83	194	169	28	71	—	—	—	—
Blowers:														
1907	9	20	65.4	.619	39.55	103	104	106	30	—	10	50	10	—
1908	9	19	68.8	.466	32.41	109	78	87	16	—	11	63	11	—
1909	9	19	68.8	.486	33.29	109	81	89	16	—	11	63	11	—
1910	9	20	69.8	.536	37.00	110	90	99	15	—	—	60	15	10
1911	10	20	72.0	.493	35.48	114	82	95	—	—	10	90	—	—
1912	10	21	69.1	.529	36.36	109	88	97	14	—	10	67	10	—
1913	10	23	63.3	.598	37.33	100	100	100	26	13	9	35	7	—
1914	12	27	64.1	.545	34.43	101	91	92	22	11	7	52	7	—
1915	12	27	64.0	.561	35.61	101	94	95	22	11	7	52	7	—
1917	8	18	64.0	.784	48.77	101	131	131	33	—	—	67	—	—
1919	8	18	63.4	1.226	77.73	100	205	203	33	—	6	50	11	—
1920	11	29	59.7	1.249	74.66	94	209	200	52	—	17	21	10	—
1922	11	33	60.7	.951	57.94	96	159	155	39	—	12	48	—	—
1924	11	36	48.9	1.274	62.25	77	213	167	75	25	—	—	—	—
1926	11	31	49.7	1.351	67.14	79	226	180	74	19	6	—	—	—

¹ Including 7 per cent whose full-time hours per week were 91.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Bessemer Converters—Continued

Occupation and year	Number of plants	Number of employ-ees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	Over 72 and under 84	84
Regulators, first:														
1907	9	26	62.3	\$0.437	\$27.28	92	97	90	46		8	31	6	8
1908	9	25	64.7	.286	17.78	96	59	59	36		16	32	8	8
1909	9	25	64.8	.344	22.97	96	76	76	36		8	40	8	8
1910	10	31	62.1	.408	25.45	92	90	84	19	29		39		13
1911	10	24	66.8	.377	24.79	99	84	82	25		17	50		8
1912	10	25	64.7	.411	26.24	96	91	87	36		16	32	8	8
1913	10	24	67.6	.451	30.28	100	100	100	25		8	33	33	
1914	11	24	63.8	.328	20.71	94	73	68	38		17	21	25	
1915	11	26	64.7	.351	22.91	96	78	76	35			35	31	
1917	8	17	66.8	.630	42.28	99	140	140	29			71	75	
1919	10	25	69.2	.864	59.79	102	192	197	16		12	52	20	
1920	11	36	61.5	1.002	61.63	91	222	204	22	19		8	14	36
1922	11	32	64.3	.650	42.50	95	144	140	25		13	56	6	
1924	11	41	50.1	.919	46.05	74	204	152	56	37	7			
1926	10	28	51.8	.949	49.16	77	210	162	43	43	7			
Regulators, second:														
1907	6	18	65.3	.427	27.81	96	108	104	33		11	33	22	
1908	6	14	73.5	.269	19.64	108	68	73			29	43	29	
1909	6	14	73.8	.365	26.80	108	93	100			14	57	29	
1910	8	22	67.5	.378	25.52	99	96	95	27		9	45		18
1911	8	21	65.0	.333	21.41	95	85	80	29		19	52		
1912	9	24	67.0	.381	25.63	98	97	96	25		17	33	25	
1913	10	28	68.3	.394	26.81	100	100	100	21		14	29	36	
1914	11	25	66.5	.289	18.90	97	73	70	24		16	28	32	
1915	11	26	66.6	.324	21.64	98	82	81	23		8	46	23	
1917	8	19	67.4	.516	34.62	99	131	129	42			58		
1919	10	35	66.3	.754	49.99	97	191	186	14	9		11	66	
1920	9	31	61.1	.966	58.84	89	245	219	42	10		10	19	
1922	9	30	66.8	.639	43.07	98	162	161	20			17	63	
1924	9	43	48.7	.926	45.39	71	235	169	77	23				
1926	8	31	48.9	.945	46.21	72	240	172	81	19				
Vessel men:														
1907	9	23	58.5	.783	44.58	101	107	107	52	13		9	17	9
1908	9	22	61.1	.528	31.27	106	71	75	41	14		18	18	9
1909	9	22	61.2	.630	37.19	106	85	90	41	14		18	18	9
1910	10	26	57.8	.685	38.18	100	92	92	46	23		15		15
1911	10	25	59.1	.580	32.45	102	78	78	48	12		24	8	8
1912	10	26	58.3	.688	38.60	101	92	93	35	35		8	15	8
1913	10	26	57.8	.744	41.52	100	100	100	23	46		15	15	
1914	12	31	55.6	.499	27.64	96	67	67	29	48		16	6	
1915	12	32	56.0	.554	30.87	97	74	74	28	47		19	6	
1917	8	30	61.9	.894	53.29	107	120	128	40			60		
1919	9	21	60.2	1.114	67.06	104	150	162	48			5	38	10
1920	11	34	56.3	1.273	71.00	97	171	171	26	56		6	12	
1922	11	39	56.5	.897	50.59	98	121	122	33	38		5	23	
1924	11	45	51.4	1.166	59.93	89	157	144	7	93				
1926	11	29	51.8	1.271	65.84	90	171	159	14	79		7		
Vessel men's helpers:														
1907	9	47	57.0	.566	31.84	101	107	109	51	19		9	17	4
1908	9	45	59.5	.376	21.65	105	71	74	40	20		18	18	4
1909	9	45	59.6	.484	28.24	106	92	97	40	20		18	18	4
1910	10	53	56.5	.506	28.22	100	96	97	45	28		15		11
1911	10	51	57.6	.421	23.48	102	80	81	47	18		24	8	4
1912	10	53	56.5	.467	25.70	100	88	88	45	28		8	15	4
1913	10	53	56.4	.528	29.15	100	100	100	34	40		8	11	
1914	12	57	54.3	.342	18.42	96	65	63	37	42		7	14	
1915	12	56	55.5	.383	21.18	98	73	73	32	43			25	
1917	8	45	56.5	.654	35.94	100	124	123	60				40	
1919	11	71	62.4	.875	54.60	111	166	187	35	6		11	38	10
1920	11	75	58.7	.984	56.86	104	186	195	24	40		16	9	11
1922	11	82	57.9	.646	37.51	103	122	129	35	32		10	23	
1924	11	86	50.6	.880	44.72	90	168	153	31	69				
1926	11	59	50.9	.897	45.66	90	170	157	41	56		3		

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Bessemer Converters—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—						
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	Over 72 and under 84	84	
Cinder pit-men:															
1907	8	118	67.9	\$.206	\$13.32	101	87	86	20			37	32	3	7
1908	8	71	65.9	.173	11.27	98	73	72	30			17	39	14	
1909	8	92	68.4	.178	11.88	102	75	76	23			25	33	11	9
1910	9	85	67.6	.211	13.69	100	89	88	7	18			54	12	9
1911	9	62	69.8	.199	13.55	104	84	87	10			26	55	10	
1912	9	99	68.1	.200	13.23	101	84	85	21				46	30	2
1913	9	113	67.3	.238	15.56	100	100	100	24				42	32	2
1914	9	52	71.9	.213	15.30	107	89	98				35	58	8	
1915	9	48	72.0	.214	15.42	107	90	99				13	79	8	
1917	5	62	72.0	.325	23.40	107	137	150					100		
1919	10	100	69.7	.578	40.29	104	243	259	8	3		3	80	6	
1920	9	144	72.8	.592	43.11	108	249	277	9		2	5	28	27	29
1922	10	137	74.1	.388	28.73	110	163	185	2				69	9	20
1924	10	180	49.4	.566	27.46	73	234	176	74	18	8				
1926	11	122	51.4	.543	27.91	76	228	179	59	17	11	13			
Bottom makers:															
1907	9	17	73.4	.386	28.10	99	101	100				12	65	24	
1908	9	17	72.4	.283	20.45	98	74	73				24	65	12	
1909	9	16	73.1	.351	25.57	99	91	91				13	69	19	
1910	10	19	73.4	.346	25.28	99	90	90					79	11	11
1911	10	19	71.8	.337	24.18	97	88	86				21	79		
1912	10	20	72.5	.345	24.96	98	90	89				20	70	10	
1913	10	20	73.8	.384	28.05	100	100	100				20	50	20	10
1914	12	22	73.0	.293	21.34	99	76	76				18	64	9	9
1915	12	22	73.0	.352	24.02	99	86	86				18	64	9	9
1917	8	16	72.0	.510	36.73	98	133	151					100		
1919	11	21	67.1	.781	52.41	91	203	187	14	10		10	62		5
1920	11	25	64.8	.911	59.57	88	237	212	20	8		28	44		
1922	11	24	66.8	.583	38.79	91	152	138	17			29	54		
1924	11	38	52.3	.777	40.59	71	202	145	63		26	11			
1926	11	27	51.3	.826	42.37	70	215	151	70		28	4			
Bottom makers' helpers:															
1907	9	30	73.5	.257	18.82	101	101	101				27	47	27	
1908	9	27	72.2	.204	14.75	99	80	79				28	67	7	
1909	9	29	73.1	.234	17.08	100	92	92				28	52	21	
1910	10	34	72.8	.235	17.10	100	92	92					88	6	6
1911	10	31	72.2	.234	16.88	99	92	91				32	65	3	
1912	10	39	72.4	.224	16.19	99	88	87				31	59	10	
1913	10	40	73.1	.255	18.59	100	100	100				30	45	20	5
1914	12	39	72.4	.225	16.29	99	88	88				31	54	10	5
1915	12	38	72.6	.239	17.30	99	94	93				16	68	11	5
1917	8	30	72.0	.377	27.13	99	148	146					100		
1919	11	49	69.6	.602	41.90	95	236	225	10	4		12	65		8
1920	11	60	66.2	.695	46.27	91	273	249	25			37	38		
1922	11	51	68.3	.455	31.26	93	178	168	16			27	57		
1924	11	71	53.4	.605	32.19	73	237	173	55		31	14			
1926	11	44	52.3	.647	33.84	72	254	182	50	14	34	2			
Ladle liners:															
1907	9	21	65.1	.454	28.95	95	110	103	29			5	10	48	10
1908	9	21	65.6	.306	19.78	95	74	70	29			5	19	38	10
1909	9	21	65.1	.392	25.22	95	95	89	29			5	10	48	10
1910	10	25	66.8	.378	25.05	97	91	89	24			4		56	8
1911	10	24	68.3	.342	22.85	99	83	81	13			4	17	67	
1912	10	24	68.9	.369	24.95	100	89	88	13			4	17	58	8
1913	10	22	68.7	.418	28.22	100	100	100	14			5	18	45	18
1914	12	25	68.6	.304	20.77	100	73	74				12	4	16	60
1915	12	26	68.8	.344	23.47	100	83	83				12	4	15	62
1917	8	15	71.2	.583	41.45	104	141	147				7		93	8
1919	11	28	69.8	.779	54.37	102	188	193	7	11			7	50	25
1920	11	31	65.0	.929	59.85	95	224	212	29			16	39	16	
1922	11	29	67.4	.617	42.49	98	148	151	17			7			
1924	11	44	49.7	.851	42.60	72	201	149	70		14				
1926	11	31	50.6	.893	45.19	74	214	160	61		29	10			

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Bessemer Converters—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84
Ladle liners' helpers:														
1907	9	39	68.2	\$0.255	\$16.65	96	103	97	15	3	26	51	5	
1908	9	31	67.5	.209	13.79	95	85	81	19	3	32	39		6
1909	9	39	68.5	.230	15.26	97	93	89	15	3	26	46	10	
1910	10	39	68.7	.236	15.73	97	96	92	15	3	67	10	5	
1911	10	34	69.1	.233	15.75	97	94	92	9	3	41	47		
1912	10	34	69.6	.228	15.43	98	92	90	9	3	41	41	6	
1913	9	38	70.9	.247	17.09	100	100	100	8	3	37	21	32	
1914	11	34	69.1	.222	15.24	97	90	89	9	3	41	41	6	
1915	11	34	69.5	.233	15.91	98	94	93	9	3	24	59	6	
1917	8	34	71.3	.365	26.03	101	148	152		6				
1919	11	76	71.7	.551	39.51	101	223	231	3	5	8	66	18	
1920	10	43	69.9	.680	47.68	99	275	279	5	7	26	49	14	
1922	10	62	71.8	.442	31.05	101	179	182			15	85		
1924	11	86	52.0	.604	31.38	73	245	170	70	6	7	17		
1926	10	54	51.2	.631	32.31	72	255	189	70	13	6	11		
Stopper makers:														
1907	9	10	72.8	.316	23.01	103	105	108		20		40	30	10
1908	9	9	72.9	.223	16.10	103	74	76				44	11	22
1909	9	9	71.6	.270	19.22	101	89	90		22	22	22	11	22
1910	10	12	73.0	.260	19.14	103	86	90		8		75		17
1911	10	10	72.0	.273	19.53	102	90	92		20		60		20
1912	10	10	70.8	.272	18.91	100	90	89		30		50		20
1913	10	10	70.6	.302	21.25	100	100	100		10	10	80		
1914	12	12	70.2	.251	17.60	99	83	83		8	33	58		
1915	12	12	69.7	.263	18.13	99	87	85		17	8	75		
1917	8	10	67.8	.433	29.15	96	143	137		20	30	50		
1919	11	15	69.6	.660	45.94	99	219	216	13	7	7	53	7	13
1920	11	12	65.0	.718	46.73	92	238	220	25	8	8	50	8	
1922	10	12	66.4	.459	30.52	94	152	144	17	25	8	42	8	
1924	11	19	56.6	.573	32.26	80	190	152	32	65	8			
1926	11	12	56.6	.594	33.62	80	197	158	33	58	8			
Stopper setters:														
1907	9	45	51.5	.630	31.79	100	114	113	87			9	4	
1908	9	40	54.3	.343	18.50	105	62	66	75			20	5	
1909	9	34	55.4	.552	29.36	107	100	105	71			24	6	
1910	10	39	52.6	.577	29.81	102	104	106	69	15		10		5
1911	10	39	55.3	.498	26.08	107	90	93	69			31		
1912	10	42	51.7	.496	25.36	100	90	91	86			10	5	
1913	10	43	51.6	.563	28.01	100	100	100	86			9	5	
1914	12	44	60.7	.376	19.03	98	68	68	20			11		
1915	12	42	51.5	.423	21.76	100	76	78	71	14		14		
1917	8	40	49.6	.815	40.03	96	147	143	90			10		
1919	11	46	53.7	1.092	58.64	104	197	209	67	9		2	15	7
1920	11	50	51.0	1.225	61.45	99	222	219	88			8	4	
1922	11	43	52.3	.786	40.98	101	142	146	84			16		
1924	11	53	48.8	.977	47.65	95	177	170	72	28				
1926	11	40	49.5	1.014	50.19	96	183	179	75	18		8		
Steel pourers:														
1907	9	29	55.4	.693	36.39	99	108	106	72			14	14	
1908	9	28	57.4	.439	24.25	103	69	71	64			21	14	
1909	9	28	57.5	.576	31.61	103	90	92	64			21	14	
1910	10	32	55.6	.617	32.74	100	96	95	66	9		13		13
1911	10	30	55.1	.535	27.91	99	84	81	70			30		
1912	10	34	55.7	.570	30.65	100	89	89	71			18	12	
1913	10	34	55.7	.640	34.39	100	100	100	71			18	12	
1914	12	37	52.5	.444	23.42	94	69	68	57	24		19		
1915	12	35	53.5	.525	27.96	96	82	81	60	17		23		
1917	8	27	52.7	.849	43.62	95	133	127	78			22		
1919	10	30	56.5	1.110	62.72	101	173	182	63			3	27	7
1920	11	38	52.9	1.326	69.30	95	207	202	79			5	5	
1922	10	35	52.9	.905	47.31	95	141	138	80			20		
1924	11	46	48.8	1.073	52.16	88	168	152	70	30				
1926	9	27	48.0	1.210	58.08	86	189	169	93	7				

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Bessemer Converters—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—						
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84		
Mold cappers:															
1907	8	48	54.5	\$0.347	\$18.02	92	96	89	75			17	8		
1908	8	39	53.7	.196	10.57	90	54	52	77			18	5		
1909	8	43	54.0	.271	14.26	91	75	70	77			14	9		
1910	9	52	57.0	.314	16.96	96	87	84	23	46		19	4	8	
1911	9	37	64.2	.282	17.36	108	78	86	32			62	5		
1912	10	52	61.5	.301	17.23	103	84	85	46		12	27	15		
1913	10	61	59.5	.360	20.28	100	100	100	54		10	23	13		
1914	10	39	60.8	.260	15.67	102	72	77	38	8		54			
1915	10	40	60.9	.294	17.53	102	82	86	38	8		45			
1917	5	29	54.6	.631	33.01	92	175	163	72			28			
1919	9	55	61.5	.688	42.31	103	191	209	29	20		36		15	
1920	9	70	58.0	.755	43.56	97	210	215	64			29		7	
1922	10	49	58.1	.572	33.16	98	159	164	61		8	24		6	
1924	9	66	48.4	.728	35.19	81	202	174	89	11					
1926	7	33	47.7	.782	37.30	80	217	184	100						
Ingot strip-															
pers:															
1907	9	29	67.4	.310	19.60	96	93	86	31		14	21	21	14	
1908	9	28	68.4	.238	16.34	96	71	72	21		21	21	36		
1909	9	28	70.2	.264	18.17	100	79	80	21		14	21	21	21	
1910	10	31	68.1	.303	19.69	97	91	86	10	19		32	19	19	
1911	10	27	70.4	.282	19.26	101	84	84		11		22	44	22	
1912	10	28	68.8	.320	20.90	98	96	92	11	11	14	29	36		
1913	10	28	69.9	.334	22.81	100	100	100		21		7	21	50	
1914	12	29	66.0	.313	20.11	94	94	89	21	10		7	28	28	
1915	12	31	66.2	.332	21.39	95	99	94	19	10			39	32	
1917	8	33	68.7	.479	31.71	98	143	139		18		64	7	12	
1919	10	36	65.3	.726	47.41	93	217	208	8	25		14	47	6	
1920	11	34	59.1	.892	52.56	85	267	230	41	24			6	29	
1922	11	39	65.5	.613	39.90	94	184	175	15	18		10	38	5	
1924	11	47	51.0	.804	40.88	73	241	179	57	43				13	
1926	8	26	50.0	.801	40.05	72	240	176	54	47					
Laborers:															
1907	9	801	78.0	.155	12.12	104	81	84			(?)	3	21	33	42
1908	9	425	78.2	.155	11.80	101	81	82			6	8	31	32	34
1909	9	564	78.9	.151	11.62	102	79	81			2	1	4	25	30
1910	10	786	77.8	.163	12.69	104	85	88				3	2	35	20
1911	10	593	74.6	.166	12.39	99	86	86				5	4	43	36
1912	10	626	75.7	.167	12.64	101	87	88			(?)	3	5	39	28
1913	10	681	75.1	.192	14.38	100	100	100				1	6	40	33
1914	12	546	74.0	.193	14.27	99	101	99			(?)	7	8	47	13
1915	12	496	74.3	.193	14.31	99	101	100				8	9	45	10
1917	8	493	73.4	.298	21.92	98	155	152				2	2	67	29
1919	11	691	70.8	.489	34.62	94	255	241			5	5	24	34	31
1920	10	726	74.9	.537	40.17	100	280	279			4	2	25	19	24
1922	11	454	70.7	.363	25.64	94	189	178			10	1	15	67	2
1924	11	593	58.0	.448	25.87	77	233	180			26	4	53	17	
1926	11	201	59.4	.443	26.31	79	231	183			18	(?)	57	25	

¹ Including 7 per cent whose full time hours per week were 91.

² Less than 1 per cent.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Bessemer Converters

District and year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—					Per cent of employees whose customary working turns per week were—						
			5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7	5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7
Pittsburgh:														
1914	7	1,500		1,061	67	75	6	291		71	4	5	(1)	19
1915	7	1,463		1,044	61	65	6	287		71	4	4	(1)	19
1920	6	1,900		1,136	42	138		584		60	2	7		31
1922	6	1,894		1,078	23	61	5	227		77	2	4	(1)	16
1924	6	1,894		1,515	140	39	24	176		80	7	2	1	9
1926	6	1,737	9	1,315	139	33	60	181	1	76	8	2	3	10
Great Lakes and Middle West:														
1914	5	767		757		4		6		99		1		1
1915	5	755		740		2		13		98		(1)		2
1920	5	1,259		714	60	192	52	241		57	5	15	4	19
1922	5	1,057		899	69		70	19		85	7		7	2
1924	5	1,563		943	104	91	336	89		60	7	6	21	6
1926	5	1,211	225	480	67	186	87	166	19	40	6	15	7	14
Total:														
1914	12	2,267		1,818	67	79	6	297		80	3	3	(1)	13
1915	12	2,218		1,784	61	67	6	300		80	3	3	(1)	14
1920	11	3,159		1,850	102	330	52	825		59	3	10	2	26
1922	11	2,451		1,977	92	61	75	246		81	4	2	3	10
1924	11	3,457		2,458	244	130	360	265		71	7	4	10	8
1926	11	2,948	234	1,795	206	219	147	347	8	61	7	7	5	12

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Bessemer Converters

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Stockers:														
Pittsburgh	5	150	5.9	8.2	48.1	208	77.9	\$50.52	\$0.649	\$31.22	88.7	\$56.27	\$0.634	
Great Lakes and Middle West	5	93	5.9	8.1	48.8	109	94.8	59.64	.629	30.70	107.3	65.81	.613	
Total	10	243	5.9	8.1	48.3	317	83.7	53.43	.638	31.82	95.1	59.33	.624	
Cupola melters:														
Pittsburgh	2	4	6.1	8.1	49.4	4	86.9	76.07	.876	43.27	86.9	76.07	.876	
Great Lakes and Middle West	2	6	6.0	8.1	49.0	6	107.0	95.70	.894	43.81	108.7	96.53	.888	
Total	4	10	6.0	8.1	49.2	10	99.0	87.85	.888	43.69	100.0	88.35	.884	
Cupola toppers:														
Pittsburgh	3	12	6.1	8.1	49.3	12	85.8	66.42	.774	38.16	109.4	81.51	.745	
Great Lakes and Middle West	2	9	6.0	8.2	49.3	9	106.7	79.83	.748	36.88	111.6	82.37	.738	
Total	5	21	6.0	8.1	49.3	21	94.8	72.17	.762	37.57	110.3	81.88	.742	
Blowers:														
Pittsburgh	6	19	6.1	8.0	48.4	19	99.6	138.49	1.391	67.32	103.2	141.43	1.370	
Great Lakes and Middle West	5	12	6.2	8.4	51.8	12	113.5	147.11	1.296	67.13	113.5	147.11	1.296	
Total	11	31	6.1	8.2	49.7	31	105.0	141.83	1.351	67.14	107.2	143.63	1.340	
Regulators, first:														
Pittsburgh	6	17	6.1	8.3	51.0	17	95.1	88.11	.926	47.23	104.1	97.03	.932	
Great Lakes and Middle West	4	11	6.3	8.4	52.9	11	103.4	101.48	.981	51.89	104.2	101.86	.978	
Total	10	28	6.2	8.3	51.8	28	98.4	93.37	.949	49.16	104.1	98.93	.950	

Regulators, second:														
Pittsburgh.....	5	18	6.0	8.0	48.0	23	74.9	70.22	.937	44.98	82.9	75.13	.906	
Great Lakes and Middle West.....	3	8	6.4	8.0	51.0	8	110.3	105.88	.960	48.96	113.4	107.76	.951	
Total.....	8	26	6.1	8.0	48.9	31	84.1	79.42	.945	46.21	90.8	83.55	.920	
Vessel men:														
Pittsburgh.....	6	17	6.3	8.0	50.8	17	99.9	137.09	1.373	69.75	105.2	139.54	1.326	
Great Lakes and Middle West.....	5	12	6.3	8.4	53.2	12	116.0	132.93	1.146	60.97	118.9	135.00	1.135	
Total.....	11	29	6.3	8.2	51.8	29	106.5	135.37	1.271	65.84	110.9	137.66	1.241	
Vessel men's helpers:														
Pittsburgh.....	6	34	6.2	8.0	49.9	38	93.2	85.96	.922	46.01	100.1	93.23	.931	
Great Lakes and Middle West.....	5	21	6.4	8.2	52.5	21	114.5	98.47	.860	45.15	115.7	99.26	.858	
Total.....	11	55	6.3	8.1	50.9	59	100.8	90.41	.897	45.66	105.7	95.38	.903	
Cinder pitmen:														
Pittsburgh.....	6	61	6.0	8.4	50.4	85	76.4	39.58	.518	26.11	92.1	47.75	.518	
Great Lakes and Middle West.....	5	34	6.4	8.3	53.2	37	107.5	62.72	.583	31.02	113.4	66.20	.584	
Total.....	11	95	6.2	8.3	51.4	122	85.8	46.60	.543	27.91	98.6	53.34	.541	
Bottom makers:														
Pittsburgh.....	6	16	6.0	8.5	51.0	17	97.7	80.50	.824	42.02	101.8	82.67	.812	
Great Lakes and Middle West.....	5	10	6.0	8.7	51.7	10	112.6	93.44	.830	42.91	113.7	94.07	.827	
Total.....	11	26	6.0	8.6	51.3	27	103.2	85.29	.826	42.37	106.2	86.89	.818	
Bottom makers' helpers:														
Pittsburgh.....	6	21	6.0	8.4	50.3	25	77.8	53.22	.684	34.41	86.0	57.82	.672	
Great Lakes and Middle West.....	5	19	6.1	9.0	54.6	19	116.0	71.32	.615	33.58	120.7	74.33	.616	
Total.....	11	40	6.0	8.7	52.3	44	94.3	61.04	.647	33.84	101.0	64.95	.643	
Ladle liners:														
Pittsburgh.....	6	18	6.0	8.3	50.0	18	92.9	82.13	.884	44.20	99.5	85.30	.857	
Great Lakes and Middle West.....	5	13	6.3	8.1	51.4	13	110.9	100.12	.902	46.36	113.5	101.54	.895	
Total.....	11	31	6.1	8.3	50.6	31	100.4	89.67	.893	45.19	105.4	92.11	.874	
Ladle liners' helpers:														
Pittsburgh.....	6	28	6.0	8.2	49.3	34	74.0	49.86	.674	33.23	86.7	57.48	.663	
Great Lakes and Middle West.....	4	16	6.3	8.6	54.5	20	92.9	51.30	.573	31.23	108.8	61.27	.563	
Total.....	10	44	6.1	8.4	51.2	54	80.5	50.85	.631	32.31	94.1	58.50	.621	
Stopper makers:														
Pittsburgh.....	6	6	6.2	10.0	61.3	6	122.1	67.85	.556	34.08	122.1	67.85	.556	
Great Lakes and Middle West.....	5	6	6.0	8.7	52.0	6	107.1	68.36	.638	33.18	110.0	70.43	.640	
Total.....	11	12	6.1	9.3	56.6	12	112.6	68.10	.594	33.62	116.0	69.14	.596	

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Bessemer Converters—Continued

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Stopper setters:														
Pittsburgh	6	23	6.0	8.0	48.3	27	83.5	\$85.49	\$1.023	\$49.41	93.6	\$92.14	\$0.984	
Great Lakes and Middle West	5	12	6.2	8.4	51.8	13	103.7	103.43	.998	51.70	106.9	105.75	.990	
Total	11	35	6.1	8.1	49.5	40	90.7	91.32	1.014	50.19	97.9	96.57	.986	
Steel pourers:														
Pittsburgh	6	17	6.0	8.0	48.3	17	95.4	116.35	1.219	58.88	100.5	118.63	1.180	
Great Lakes and Middle West	3	10	5.9	8.1	47.6	10	101.3	121.77	1.196	56.93	103.7	122.80	1.184	
Total	9	27	6.0	8.0	48.0	27	97.8	118.36	1.210	58.08	101.7	120.18	1.181	
Mold cappers:														
Pittsburgh	5	17	6.0	8.0	48.0	21	77.4	58.58	.756	36.29	89.7	65.57	.761	
Great Lakes and Middle West	2	12	5.8	8.1	47.3	12	102.2	83.48	.817	38.64	108.9	87.02	.799	
Total	7	29	5.9	8.0	47.7	33	86.4	67.64	.782	37.30	96.7	73.37	.759	
Ingot strippers:														
Pittsburgh	5	14	6.3	8.0	50.3	16	98.8	85.03	.860	43.26	101.3	86.36	.852	
Great Lakes and Middle West	3	10	6.1	8.1	49.6	10	105.2	74.84	.711	35.27	106.9	75.64	.708	
Total	8	24	6.2	8.1	50.0	26	101.3	81.11	.801	40.05	103.5	82.24	.795	
Laborers:														
Pittsburgh	6	54	6.1	9.6	58.5	114	54.1	24.17	.447	26.15	63.6	29.02	.456	
Great Lakes and Middle West	5	68	6.1	9.9	60.1	87	97.6	42.90	.439	26.38	105.5	46.68	.443	
Total	11	122	6.1	9.8	59.4	201	72.9	32.28	.443	26.31	81.7	36.67	.449	

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Bessemer Converters

ALL EMPLOYEES

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district			
Day turns					Night turns					Average hours per week	Pitts- burgh	Great Lakes and Middle West	Total
Turns per week	Hours				Turns per week	Hours							
	Mon- day to Fri- day	Sat- ur- day	Sun- day	Per week		Mon- day to Fri- day	Sat- ur- day	Sun- day	Per week				
Group A.—Day turn only													
7	10	10	10	70					70	24	33	57	
7	10	9	9½	68½					68½	2		2	
7	10	8	9½	67½					67½	9		9	
7	10	10	10	70					65		25	25	
6	10	10		60					60		25	25	
6	10	10	10	60					60	96	127	223	
7	8	8	8	56					56		11	11	
6	8	10		50					50		1	1	
6	8	8		48					48	15	47	62	
6	8½	5		42½					42½		1	1	
Total										146	270	416	
Group B.—Night turn only													
					7	10	10	10	70	70	3	3	
					6	11		11	66	66	9	9	
					6	10	10		60	60	1	1	
					6	10		10	60	60	23	26	
					6	8		8	48	48			
					6	8		8	48	48	2	3	
Total										38	4	42	
Group C.—Weekly changes from one shift to another													
7	10	10	10	70	7	10	10	10	70	70	5	23	28
7	10	10	10	70	7	10	10	10	70	70			
6	10	10	10	60	6	10	10	10	60	65	10		10
7	10	10	10	70	6	10		10	60	60			
6	10	10		60	7	10	10	10	70	65	8		8
7	10	10	10	70	6	10		10	60	65	11		11
6	10	10		60	7	10	10	10	70	65		65	65
7	10	10	10	70	6	10		10	60	63½	51		51
6	10	10		60	6	10		10	60	62½	2		2
6	10	10		60	6	10		10	60	60	2	6	8
6	10	10		60	6	10	10	10	60	60		43	43
6	10	10		60	6	10		10	60	60	104		104
6	10	10		60	6	10		10	60	60	2		2
6	10	9	10	59	6	10	10	10	60	59½		1	
7	9	9	9	63	7	9	9	9	63	58½			
6	9	9	9	54	6	9	9	9	54	58½	4		4
7	8	8	8	56	7	8	8	8	56	56	138	99	237
7	8	8	12	60	7	8	8	12	60	56		20	30
7	8	8	11	59	6	8	8		48	56			
7	8	8	8	56	6	8	8	13	48	56			6
6	8	8	8	48	6	8	8	8	48	53½	2	6	8
6	8	8	8	48	7	8	8	8	56	53½	13		13
7	8	8	8	56	6	8	8	8	48	53½		3	3
6	8	8		48	7	8	8	8	56	56			
					7	8	8	8	56	56		29	29

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Bessemer Converters—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district			
Day turns					Night turns					Average hours per week	Pitts- burgh	Great Lakes and Middle West	Total
Turns per week	Hours				Turns per week	Hours							
	Mon- day to Fri- day	Sat- ur- day	Sun- day	Per week		Mon- day to Fri- day	Sat- ur- day	Sun- day	Per week				

Group C.—Weekly changes from one shift to another—Continued

7	8	8	8	56	6	8	8	8	48	53 1/3	45	23	68
6	8	8	8	48	7	8	8	8	56	52	52	96	96
6	8	8	8	48	7	8	8	11	59	51 1/3	19		19
6	8	8	8	48	7	8	10	8	58	51 1/3	12	6	18
7	8	8	8	56	6	8	8	8	48	50 1/3		3	3
7	8	9	8	56	6	8	8	8	48	50 1/3	27	14	41
7	8	8	8	56	6	8	8	8	48	50 1/3		4	4
6	8	8	8	48	6	8	8	8	48	50 1/3		7	7
6	8	8	8	48	6	8	8	8	48	50 1/3	21	33	54
6	8	8	8	48	7	8	6	8	54	50	9		9
7	8	10	10	60	5	8	8	10	40	50		9	9
6	8	10	8	50	5	8	10	10	60	50		15	15
6	8	10	8	50	6	8	10	10	50	50		4	4
7	8	10	8	58	5	8	10	10	40	49 1/3		19	19
6	8	8	8	48	6	8	8	8	48	48	4		4
6	8	8	8	48	6	8	8	8	48	48	9		9
6	8	8	8	48	6	8	8	8	48	48	8	4	12
6	8	8	8	48	6	8	8	8	48	48	1,009	217	1,226
6	8	10	8	50	6	8	10	10	40	40 1/3		182	182
6	8	8	8	48	5	8	8	8	40	40	9		9
5	8	8	8	40	5	8	8	8	40	40	29		29
Total											1,553	937	2,490

VESSEL MEN, ONLY

6	10	10	8	60	7	10	10	10	70	65		2	2
7	8	8	8	56	7	8	8	8	56	53 1/3	3		3
6	8	8	8	48	7	8	8	8	56	53 1/3		3	3
6	8	8	8	48	7	8	8	11	59	51 1/3	3		3
6	8	8	8	48	7	8	10	8	58	51 1/3	3		3
6	8	8	8	48	7	8	8	8	48	48	2	3	5
6	8	8	8	48	7	8	6	8	54	50	3		3
7	8	10	8	58	5	8	10	10	40	40 1/3		3	3
6	8	8	8	48	6	8	8	8	48	48	3		3
6	8	8	8	48	6	8	8	8	48	48		1	1
Total											17	12	29

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926, by district—**Bessemer Converters**

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—							
				40 and under 44	44 and under 48	48	Over 48 and under 56	56	Over 56 and under 60	60	Over 60 and under 66
Stockers:											
Pittsburgh	5	208	48.1	19		172				17	
G. L. and M. W.	5	109	48.8		45	47	9			2	6
Total	10	317	48.3	19	45	219	9			19	6
Blowers:											
Pittsburgh	6	19	48.4			16	3				
G. L. and M. W.	5	12	51.8		3	4	3				2
Total	11	31	49.7		3	20	6				2
Vessel men:											
Pittsburgh	6	17	50.8			3	14				
G. L. and M. W.	5	12	53.2			1	9				2
Total	11	29	51.8			4	23				2
Cinder pitmen:											
Pittsburgh	6	85	50.4			60				13	12
G. L. and M. W.	5	37	53.2		11	1	9	12			4
Total	11	122	51.4		11	61	9	12		13	16
Steel pourers:											
Pittsburgh	6	17	48.3			15	2				
G. L. and M. W.	3	10	47.6		3	7					
Total	9	27	48.0		3	22	2				
Laborers:											
Pittsburgh	6	114	58.5			33				54	27
G. L. and M. W.	5	87	60.1			3			1	60	23
Total	11	201	59.4			36			1	114	50

TABLE F.—Average and classified earnings per hour in six specified occupations, 1926, by district—Bessemer Converters

Occupation and district	Number of employees	Average earnings per hour	Number of employees whose earnings in cents per hour were—																					
			40 and under 45	45 and under 50	50 and under 55	55 and under 60	60 and under 65	65 and under 70	70 and under 75	75 and under 80	80 and under 85	85 and under 90	90 and under 95	95 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	
Stockers:																								
Pittsburgh	208	\$0.649	3	3	101	25	14	4	16	5	10	4	6	6	10	1								
G. L. and M. W.	109	.629	3		42	18	18	3	12			1		4	4									
Total	317	.638	6	3	143	43	32	7	28	5	10	5	6	10	14	5								
Blowers:																								
Pittsburgh	19	1.391											2		2	1	7	1			1	2		3
G. L. and M. W.	12	1.296							1			1			2	2	2				3	3		
Total	31	1.351							1			1		2	2	3	9	1			4	5		3
Vessel men:																								
Pittsburgh	17	1.373										1		1		4	5			3				3
G. L. and M. W.	12	1.146									1		2			1	5		3					
Total	29	1.271									1		3		1	5	10		3	3				3
Cinder pitmen:																								
Pittsburgh	85	.518	12	13	45	12	3																	
G. L. and M. W.	37	.583		2	14	8	4		9															
Total	122	.543	12	15	59	20	7	9																
Steel pourers:																								
Pittsburgh	17	1.219										1	1			3	2	4	3			3		
G. L. and M. W.	10	1.196										1				4	2	3						
Total	27	1.210										2	1			3	6	6	6			3		
Laborers:																								
Pittsburgh	114	.447	76	5	33																			
G. L. and M. W.	87	.439	84	2	1																			
Total	201	.443	160	7	34																			

TABLE G.—Average and classified hours actually worked by employees in six specified occupations in pay period covered, 1926, by district—
Bessemer Converters

Occupation and district	Number of employees	Average hours worked	Number of employees who during the pay period worked hours specified																						
			Under 32	32 and under 40	40 and under 48	48 and under 56	56 and under 64	64 and under 72	72 and under 80	80	80 and under 88	88	Over 88 and under 96	96	Over 96 and under 104	104	Over 112 and under 112	112	Over 112 and under 120	120	Over 120 and under 132	Over 132 and under 144	Over 144 and under 156	Over 156 and under 168	
Stockers:																									
Pittsburgh	208	88.7	23	2	5	5	6	11	13	3	10	3	13	7	24	13	13	18	9	11	11	4	3	1	
G. L. and M. W.	109	107.3	1			1		1	1		5	2	4	1	12	13	32	1	12	5	15	3			
Total	317	95.1	24	2	5	6	6	12	14	3	15	5	17	8	36	26	45	19	21	16	26	7	3	1	
Blowers:																									
Pittsburgh	19	103.2							1		1		1	1	7	5	1	1		1					
G. L. and M. W.	12	113.5												2	3	1	1			1	3		1		
Total	31	107.2							1		1		1	2	9	8	2	1		2	3		1		
Vessel men:																									
Pittsburgh	17	105.2				1				1			1	1	3	1	3		5		1				
G. L. and M. W.	12	118.9												1	1	3	3		1	1	3	1	1		
Total	29	110.9				1				1			1	1	4	2	6		6	1	4	1	1		
Cinder pitmen:																									
Pittsburgh	85	92.1		1		5	6	3	2	1	1		6	2	10	5	7	1	8		5		2		
G. L. and M. W.	37	113.4	9			1			2		2	1	1	6	3	2	6	1	1	1	14	1	2		
Total	122	98.6	9	1		6	6	3	4	1	3	1	6	3	13	7	13	2	9	5	25	3	2		
Steel pourers:																									
Pittsburgh	17	100.5							1	1		1	2	1	4	4	2		1						
G. L. and M. W.	10	103.7										1	2	2	2	2	1	1			1				
Total	27	101.7							1	1		2	2	3	6	6	3	1	1		1				
Laborers:																									
Pittsburgh	114	63.6	44	4	2	4	4	4	5	1	1		6		11	1	8		3	1	12	2	1		
G. L. and M. W.	87	105.5	7	1	2	6	2	3	1						3	1	4	1	2	2	30	21	1		
Total	201	81.7	51	5	4	10	6	7	6	1	1		6		14	2	12	1	5	3	42	23	2		

43154-27-5

BESSEMER CONVERTERS

OPEN-HEARTH FURNACES

The study of this department covers the basic open-hearth process almost exclusively. In only a few instances have acid furnaces been included, and usually these have been taken in connection with others of the basic type. The 1926 figures include data covering the tilting or "Talbot" furnace, although in all previous studies only the stationary furnace was covered. The tilting type of furnace has been gradually increasing in use and is now of sufficient importance to warrant inclusion in the report. Figures are not shown separately for these furnaces, however, as the occupations are essentially the same as for stationary furnaces. Also, while the addition of plants operating the tilting type of furnace may influence the figures in certain localities to a slight extent, they have but little weight when the United States as a whole is considered. Melters' first helpers in all plants covered by the study, stationary and tilting furnaces combined, earned an average of \$1.17 per hour. In plants having only stationary furnaces the average was \$1.176. Melters' second helpers earned an average of 82.7 cents per hour in all plants combined and 83.6 cents in stationary-furnace plants alone, while averages for melters' third helpers were 63.0 cents and 65.7 cents per hour, respectively.

Data for 1926 were collected from the pay rolls of 31 open-hearth furnace establishments and cover 13,424 employees in all occupations. Of the 13,424 employees reported, 7,373 are found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1910, and from 1910 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years all employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ Comparative figures are presented in Table A for employees in the selected occupations from 1910 to 1926.

The hours of labor of open-hearth furnace employees have decreased materially in recent years. Up until the summer of 1923 this department, while showing a decrease from former years in the working time of employees as a whole, was still largely on a 12-hour basis and some employees also worked 7 days per week. A general reduction in the regular daily hours of employees, however, took place in the latter part of 1923, and a large number of the plants adopted the 8-hour day for all employees. In 1914 employees as a whole had an average full-time week of 74.5 hours or more than 6 days per week of 12 hours each. By 1922, as the practice of relieving 7-day employees became more general, the average had decreased to 70.8 hours. Following the 1923 decrease, however, full-time hours per week were reduced to such an extent that employees were asked to work but 58 hours per week regularly in 1924 and 57.1 hours in 1926. Average full-time hours per week, earnings per hour, and full-time

¹ Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

earnings per week, 1910 to 1926, for the department as a whole, are shown in Table 1, page 3.

Comparisons of the full-time hours per week of employees in the various selected occupations, which may be made from Table A, show like reductions. In 1910 the average full-time hours per week ranged from 73.7 for ingot strippers to 78.8 for stock cranemen, with an average of 76.1 hours for all occupations combined. In 1926 working time had been so far reduced that the average for each of the selected occupations was less than 60 hours per week full-time and all occupations combined averaged only 56.1 hours. The average of 59.2 hours for the occupation of laborers, which includes 1,537 employees, or the largest number reported in any occupation, was the highest weekly hours recorded and the 50.9 hours for mold cappers the lowest.

While hours per day and per week were considerably less in 1924 and 1926 as compared with former years, the 7-day week increased among employees. The open-hearth process for making steel is not necessarily a continuous operation, but practically all plants operate, to some extent at least, on Saturday night and Sunday day turns. Usually "soakers" (cold metal) are charged into the furnaces on Saturday afternoon and the gas turned down as low as possible. No attempt is made to force the "heat." Thus the Saturday night and the Sunday day crews ordinarily consist of a skeleton force who watch the steel and tap and recharge such furnaces as are necessary. However, the men must be selected from the regular producing force, and while fewer employees are needed in the various occupations than during the week one or more employees must be present for practically every occupation. This, of course, provides 7-day per week work for a considerable part of the force. Table B shows that, in 1914, 34 per cent of all employees covered in that year worked 7 days per week regularly, while an additional 27 per cent alternated or rotated from 6 to 7 days. In 1915 there was practically no change, but in 1920, owing to war conditions, there was of course a considerable increase in 7-day work. As the war rush subsided and as the practice of relieving employees also became more general, 7-day work decreased, and only 27 per cent of the employees covered worked 7 days each week in 1922, while 22 per cent worked 7 days at two or three week intervals. However, in 1924, as the hours per day were greatly decreased, the weekly turns were increased to such an extent that 52 per cent worked 7 days per week regularly, 14 per cent worked 7 days two weeks in three, 12 per cent one week in three, and 6 per cent every other week. In 1926 there was a slight decrease in 7-day work, and practically all employees who had worked 6 days, 6 days, and 7 days per week in rotation were placed on a straight 6-day per week basis.

The extent of the spread of hours in this department may be seen in Table D. A grouping of the employees in that table shows that in 1926, of the 13,424 employees covered, 10,057 had a working-day of 8 hours and only 725 worked as many as 12 hours per day or its equivalent—that is, 10 hours one week and 14 hours the next, 11 hours one week and 13 hours the next, etc. A total of 2,116 worked 10 hours per day. The employees covered in open-hearth furnaces, of course, include many miscellaneous employees not directly connected with production, and in order to present

conditions as they apply to members of the producing crew separate figures are shown for the occupation of melters' first helper. Of the 876 employees who worked as melter's first helper during the pay period, 829 worked 8 hours per day, while the remaining 47 worked 12 hours regularly or its equivalent. Of the 829 8-hour employees 565 had a working week of 56 hours, 87 had a week of $53\frac{1}{2}$ hours, 98 worked $50\frac{1}{2}$ hours per week, 19 worked 48 hours, and 60 worked $47\frac{1}{2}$ hours. The 47 12-hour employees varied from a week of 72 hours to one of 81 hours. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the hours of labor of employees in 1926 show large decreases as compared with former years, hourly earnings show even larger increases. In 1914 the earnings per hour of all employees covered were 23.7 cents on the average, while in 1926 employees earned an average of 67.7 cents per hour, an increase of 186 per cent. In other words, the 1926 hourly earnings, the highest ever recorded in this department, were nearly $2\frac{7}{8}$ times the earnings in 1914. The earnings were high in 1920, 67.1 cents per hour on the average, and in 1924 they were 63.5 cents per hour. The increase in earnings in 1926 as compared with 1924 was largely due to increased production, the tonnage rates being practically the same in both years. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, melters' first helpers in 1910 earned an average of 41.6 cents per hour, which increased to 44 cents in 1913. Earnings decreased slightly in 1914 and 1915 but began to rise again in 1917, and by 1920 they earned \$1.089 per hour, or almost $2\frac{1}{2}$ times the hourly earnings of 1913. In 1922 the hourly earnings decreased to 77.5 cents but advanced to \$1.064 in 1924. The year 1926 marked the high point of earnings in this occupation as well as in the department as a whole, and melters' first helpers received \$1.17 per hour. A distribution by average hourly earnings of the employees in 6 specified occupations in 1916 is given in Table F.

Average full-time earnings per week were more than twice as great in 1926 as they were in 1914. In 1914 earnings per full-time week for all employees were \$17.66 on the average, while in 1926 they had increased to \$38.66. In 1920 they were \$46.10, the highest of any year shown, and in 1924 they were \$36.83. The decrease in earnings in 1924 and 1926 as compared with 1920 was caused to a large extent by the reduction of full-time weekly hours, as the difference in hourly earnings was comparatively small. Weekly earnings in the various selected occupations show like increases. Melters' first helpers, for example, earned an average of \$32.27 in 1910, \$33.89 in 1913, and \$75.09 in 1920. In 1922 there was a decrease in hourly earnings and an increase in hours of labor and in 1924 earnings increased and hours decreased and melters' first helpers earned only \$55.34 and \$59.16 per week, respectively, in those years. The increase in hourly earnings in 1926 was not sufficient to offset the decrease in full-time hours, and the weekly earnings of \$64.70 in that year were still 14 per cent less than the earnings in 1920.

The 7,373 employees in the selected occupations worked an average of 105.7 hours during the 16-day pay period covered by the 1926 study, for which they received an average of \$75.78. This includes all of the hours worked and the earnings received by these employees, as shown in Table C. Charging-machine operators

worked the most time, 120.1 hours, and laborers the least, or 92.8 hours. Laborers also received the least money, \$40.81, while melters' first helpers, a highly skilled occupation, earned the largest amount, \$130.02. Charging-machine operators received the second highest earnings of \$115.29.

A classification of employees in 6 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of laborers 187 of the 1,484 employees worked less than 32 hours during the pay period, while 6 worked 192 or more hours. The hours worked by the remaining laborers were widely scattered between those limits, the only group which contained as many as 100 employees being those who worked "Over 120 and under 132" hours, and in that group there were only 133.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations in this table. Laborers earned from less than \$5 for the period to between \$85 and \$90, while melters' first helpers earned between \$5 and \$10 to between \$200 and \$250. The largest group of laborers, 201, earned between \$50 and \$55.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Open-Hearth Furnaces

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84	
Stockers:														
1910	17	448	76.8	\$0.177	\$13.69	99	90	89			13	24	34	28
1911	17	419	77.4	.172	12.73	96	87	83		3	26	24	28	19
1912	17	413	77.0	.176	13.51	99	89	88			7	25	40	28
1913	17	417	77.8	.197	15.30	100	100	100			8	22	40	31
1914	22	409	77.0	.204	15.06	99	104	102		(1)	8	21	48	23
1915	22	366	77.3	.199	15.41	99	101	101			8	21	38	30
1917	13	243	77.4	.286	22.92	99	150	150				38	33	29
1919	17	476	75.7	.506	38.30	97	257	250	10			22	50	18
1920	19	573	70.9	.573	40.18	91	281	263	26		9	17	39	10
1922	22	647	73.9	.379	28.07	96	192	183	3	4	29	19	27	18
1924	26	781	58.2	.640	31.37	75	274	205	7	78	2	2	5	3
1926	30	687	57.8	.535	30.92	74	271	202	13	71	2	4	4	7
Stock crane-men:														
1910	13	75	78.8	.223	17.60	100	94	93		1	3	16	40	40
1911	13	70	75.6	.207	15.61	96	87	83		1	23	10	43	23
1912	14	72	78.9	.228	18.02	100	96	96				11	47	42
1913	15	84	79.1	.238	18.85	100	100	100			5	10	45	40
1914	20	98	78.4	.237	18.58	99	100	99			4	12	49	35
1915	20	94	77.4	.235	19.77	98	106	105			4	23	47	26
1917	11	64	77.4	.338	26.11	98	142	139				38	34	28
1919	15	115	75.2	.556	41.81	95	234	222	10			22	55	13
1920	17	150	67.8	.686	47.02	86	288	249	35		12	11	35	7
1922	20	178	73.3	.460	33.85	83	193	180	13		2	25	38	14
1924	25	228	57.3	.647	36.97	72	272	196	86			3	7	1
1926	28	220	57.5	.682	39.22	73	287	209	9	77	(1)	2	4	4
Charging machine operators:														
1910	17	73	76.8	.294	22.52	98	88	86			8	24	27	30
1911	17	72	74.7	.287	21.37	96	86	82			25	25	33	17
1912	17	72	75.8	.312	23.67	97	93	91			14	36	25	25
1913	17	76	78.0	.335	26.12	100	100	100			13	16	32	39
1914	22	86	77.4	.307	23.66	99	92	91			5	33	33	30
1915	22	86	77.7	.330	25.55	100	99	98			5	30	33	33
1917	13	64	77.1	.467	35.91	99	139	137				44	28	28
1919	17	98	75.3	.753	56.70	97	225	217	10			24	48	17
1920	19	137	67.2	.895	59.83	86	267	229	38		4	14	42	2
1922	22	133	72.2	.625	45.09	93	187	173	16		12	31	23	19
1924	26	203	56.3	.863	48.43	72	258	185	4	88		3	2	2
1926	31	221	55.7	.951	52.97	71	284	203	10	83		3	2	2
Door operators:														
1910	15	165	75.9	.101	7.72	99	90	89			12	38	22	28
1911	15	160	75.5	.100	7.53	98	89	87			21	24	31	24
1912	15	157	76.0	.102	7.72	99	91	89			20	28	21	31
1913	15	160	76.9	.112	8.68	100	100	100			20	19	28	34
1914	19	170	77.0	.109	8.35	100	97	96			14	24	32	31
1915	19	176	76.5	.111	8.43	99	99	97			14	25	38	24
1919	15	165	73.8	.321	23.69	96	287	273	14			41	24	22
1920	15	264	66.1	.402	26.27	86	359	303	45		10	13	28	4
1922	16	288	70.1	.279	19.76	91	249	228	5	14	20	38	8	16
1924	16	346	55.0	.381	21.22	72	340	244	7	89	3			1
1926	17	222	54.9	.374	20.53	71	334	237	19	76		3		2
Melters' helpers, first:														
1910	17	341	77.7	.416	32.27	101	95	95			7	22	40	31
1911	17	338	75.3	.400	30.12	98	91	89			17	21	49	13
1912	17	347	76.5	.417	31.89	99	95	94			2	24	55	19
1913	17	364	77.1	.440	33.89	100	100	100			3	16	55	28
1914	22	404	75.6	.420	31.60	98	95	93		9		14	62	15
1915	22	422	75.5	.437	32.80	98	99	97				13	63	14
1917	13	272	76.3	.586	44.36	99	133	131				54	13	33
1919	17	402	74.9	.966	72.35	97	220	213	11			34	33	22
1920	19	620	69.4	1.089	75.09	90	248	222	33			6	60	2
1922	22	622	71.4	.775	55.34	93	176	163	15		1	46	32	5
1924	26	885	55.5	1.064	59.16	72	242	175	95			2	4	
1926	31	924	55.3	1.170	64.70	72	266	192	9	86		2	3	

¹ Less than 1 per cent.

² Including less than 1 per cent whose full-time hours per week were 89.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Open-Hearth Furnaces—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—									
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84			
Melters' helpers, second:																		
1910	17	339	76.6	\$0.272	\$20.87	100	93	93				8	38	22	13			
1911	17	335	74.5	.263	19.62	97	90	88				35	21	21	23			
1912	17	347	75.8	.274	20.77	99	94	93				20	37	14	29			
1913	17	360	76.7	.292	22.36	100	100	100				19	29	14	37			
1914	22	402	74.7	.278	20.70	97	95	93		9		15	25	29	22			
1915	22	420	74.5	.291	21.57	97	100	97		10		14	24	31	21			
1917	13	272	75.9	.397	29.93	99	136	134					54	20	26			
1919	17	410	74.4	.693	51.56	97	237	231		12			33	39	17			
1920	19	721	69.1	.781	53.80	90	267	241		34		3	7	55	1			
1922	22	704	71.2	.557	39.50	93	191	177		16		12	47	21	1			
1924	26	1,072	55.3	.758	41.98	72	260	188		2	94		2	3	2			
1926	31	923	55.0	.827	45.49	72	284	203		11	84		2	(1)	3			
Melters' helpers, third:																		
1910	17	393	76.5	.196	14.97	98	92	89				8	36	30	27			
1911	17	394	73.9	.185	13.67	95	86	82				20	37	37	8			
1912	17	414	75.4	.199	15.01	97	93	90				7	30	46	16			
1913	16	458	77.9	.214	16.64	100	100	100				1	25	38	36			
1914	21	442	77.4	.207	15.98	99	97	96					39	30	31			
1915	21	454	77.7	.212	16.44	100	99	99					38	29	33			
1917	11	268	77.5	.328	25.26	99	153	152		6			44	20	36			
1919	17	602	76.6	.532	40.75	98	249	245					30	36	28			
1920	19	970	67.8	.645	45.64	87	301	262		38		2	12	46	1			
1922	22	980	72.9	.452	31.44	94	202	189		10	2	13	35	19	21			
1924	26	1,329	55.5	.601	33.39	71	281	201		1	92		1	3	1			
1926	31	1,161	55.2	.630	34.72	71	294	209		10	83		1	3	1			
Stopper setters:																		
1910	10	30	76.2	.313	23.63	99	96	94					37	57	7			
1911	10	29	73.5	.313	23.11	95	96	92					28	21	52			
1912	10	29	75.8	.329	24.92	98	101	96						72	7			
1913	9	30	77.3	.325	25.10	100	100	100						13	60			
1914	10	32	75.0	.287	21.46	97	88	86					63	25	13			
1915	10	32	74.6	.296	21.96	97	91	88					25	38	25			
1917	8	36	75.3	.414	30.90	97	127	123					67	11	22			
1919	10	45	73.8	.684	50.48	95	210	201		16			36	27	32			
1920	12	71	68.4	.778	53.17	88	239	212		34			13	42	11			
1922	17	83	70.9	.561	39.73	92	173	158		7	13		12	33	18			
1924	21	123	55.1	.763	42.07	71	235	188		5	89			3	3			
1926	25	119	54.4	.860	46.78	70	265	186		18	79			2	2			
Steel pourers:																		
1910	14	47	75.3	.308	23.05	98	83	81					11	49	17	23		
1911	14	44	73.7	.304	22.32	96	82	78					23	27	41	9		
1912	15	50	76.5	.321	24.57	99	87	86					20	24	28	28		
1913	16	56	77.0	.370	28.46	100	100	100					4	25	46	25		
1914	21	70	76.4	.339	25.94	99	92	91					11	37	29	23		
1915	21	70	75.7	.356	26.99	98	96	95					11	43	29	17		
1917	12	48	76.0	.466	35.60	99	126	125					54	25	21			
1919	17	69	73.2	.796	58.27	95	215	205		16			32	42	10			
1920	18	112	68.0	.929	62.31	88	251	219		36			13	50	2			
1922	21	101	70.4	.645	45.48	91	174	160		4	18		9	28	26	16		
1924	25	147	56.5	.837	47.38	73	226	166		13	76			3	4	4		
1926	31	148	55.6	.889	49.43	72	240	174		16	75			3	3	3		
Mold cappers:																		
1910	8	40	76.5	.217	16.49	97	85	82					55	15	30			
1911	8	38	74.0	.215	15.78	94	84	79					21	26	42	11		
1912	9	52	79.3	.228	18.00	101	89	90					15	8	27	50		
1913	12	68	78.6	.255	20.04	100	100	100					6	12	41	41		
1914	13	70	77.7	.232	17.96	99	91	90					11	26	31	31		
1915	13	72	76.1	.254	19.24	97	100	96					11	42	28	19		
1917	6	38	76.7	.364	28.16	98	143	141					58	5	37			
1919	11	97	74.3	.588	43.69	95	231	218		11			25	60	4			
1920	7	73	70.0	.635	44.65	89	240	223		23			4	73				
1922	8	92	65.5	.460	31.33	83	180	156		14	16		12	15	42			
1924	7	86	55.0	.609	34.21	70	239	171		44	56							
1926	7	70	50.9	.620	31.56	65	243	157		59	41							

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Open-Hearth Furnaces—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—						
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84		
Ladle cranesmen:															
1910	16	90	77.2	\$0.294	\$22.76	100	86	86			9	28	31	32	
1911	16	86	74.6	.287	21.32	97	84	81			24	34	23	19	
1912	16	90	76.2	.317	24.22	99	93	92			70	32	31	27	
1913	17	90	77.2	.341	26.34	100	100	100			9	18	44	29	
1914	22	104	76.5	.305	23.34	99	89	89			6	24	47	23	
1915	22	107	76.0	.327	24.92	98	96	95			6	29	47	19	
1917	13	82	76.4	.466	35.64	99	137	135				51	24	24	
1919	17	119	75.6	.733	55.41	98	215	210		6		30	51	13	
1920	19	146	68.3	.837	56.63	88	245	215		36	3	17	42	2	
1922	21	153	72.9	.588	42.83	94	172	163		12	13	33	24	17	
1924	25	239	55.2	.822	46.06	72	244	175		5	89	2	3	1	
1926	28	239	54.9	.900	49.41	71	264	188		21	75		2	2	
Ingot strippers:															
1910	15	46	73.7	.275	19.88	99	93	91	7			22	30	17	24
1911	15	51	71.9	.256	18.06	97	86	83		6		63	20	4	7
1912	15	55	72.9	.278	19.99	98	94	92		5		69	18	7	10
1913	15	61	74.5	.286	21.85	100	100	100		5		46	30	20	20
1914	18	47	75.8	.292	21.72	102	99	99		6		30	47	17	23
1915	18	48	76.3	.303	22.76	102	102	104		6		29	42	23	25
1917	13	39	70.9	.449	30.85	95	152	141		23		36	16	26	26
1919	15	48	69.9	.749	52.36	94	253	240		33		17	46	4	4
1920	16	71	69.3	.790	54.21	93	267	248		1	34		11	32	21
1922	18	65	72.8	.559	40.61	98	189	186		15	6	26	32	20	20
1924	20	98	57.8	.726	42.11	78	245	193		8	70		2	7	7
1926	26	126	56.0	.767	42.95	75	259	197		8	85		2	3	2
Engineers, locomotive:															
1910	14	107	77.3	.244	18.92	101	83	84			6	23	45	26	8
1911	15	114	74.3	.247	18.32	97	84	81			38	19	35	8	8
1912	15	117	75.8	.262	19.86	99	89	88			14	10	67	9	10
1913	16	119	76.6	.235	22.55	100	100	100			12	19	52	17	17
1914	21	137	76.5	.281	21.51	100	95	95			10	20	48	21	21
1915	21	135	77.1	.279	21.57	101	95	96			6	21	49	24	16
1919	17	166	75.6	.668	50.35	99	226	223		4		40	40	14	14
1920	18	214	69.6	.732	50.83	91	248	225		27		22	11	37	3
1922	20	219	71.4	.527	37.62	93	179	167		19		7	42	16	16
1924	23	325	55.4	.700	38.73	72	237	172		11	82		2	2	2
1926	28	363	54.7	.712	42.23	71	262	187		20	73	(1)	3	2	1
Switchmen:															
1910	14	109	77.3	.185	14.29	101	80	81			6	22	44	28	8
1911	15	117	74.4	.186	13.85	98	81	79			38	19	34	9	9
1912	15	118	75.2	.199	14.92	99	87	85			15	19	56	10	10
1913	16	127	76.3	.230	17.55	100	100	100			13	23	49	16	16
1914	21	149	76.5	.226	17.29	100	98	99			11	23	44	22	22
1915	21	150	77.0	.225	17.33	101	98	99			5	25	45	25	15
1919	17	194	76.2	.555	42.29	100	241	241		2		7	40	39	19
1920	18	297	69.3	.617	42.84	91	268	244		27		19	11	41	2
1922	20	275	72.0	.439	31.61	94	191	180		13		11	39	19	18
1924	23	406	56.0	.586	32.80	73	255	187		12	80		2	1	1
1926	28	413	54.8	.616	33.76	72	268	192		22	71	(1)	1	2	1
Laborers:															
1910	17	1,088	74.5	.157	11.69	98	84	82		4	6	20	13	35	22
1911	17	806	73.2	.161	11.78	96	86	83		4	7	24	15	37	14
1912	17	948	74.7	.164	12.21	98	88	86		6	5	13	17	39	20
1913	17	1,109	76.2	.187	14.24	100	100	100		4	4	6	25	31	30
1914	22	805	69.5	.185	12.84	91	99	90		(1)	11	27	14	4	34
1915	22	723	70.8	.186	13.19	93	99	93		8	21	22	6	30	13
1917	13	653	74.4	.292	21.73	98	156	153				22	20	38	20
1919	17	1,266	76.2	.468	35.66	100	250	250		3	6	7	7	56	20
1920	18	1,393	68.5	.525	36.21	90	281	254		27	2	22	3	43	2
1922	21	992	67.9	.354	24.22	89	189	170		1	17	15	24	18	17
1924	25	2,037	59.0	.434	25.73	77	232	181		3	41	11	40		3
1926	30	1,537	59.2	.429	25.40	78	229	178		22	25	14	33		6

¹ Less than 1 per cent.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Open-Hearth Furnaces

District and year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—							Per cent of employees whose customary working turns per week were—													
			5	5 and 6 alternately	5, 6, and 6 in rotation	6	5 and 7 alternately	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7	5	5 and 6 alternately	5, 6, and 6 in rotation	6	5 and 7 alternately	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7			
Eastern:																							
1914	6	1,064				635				215				214									
1915	6	1,116	2	2		655			3	225				229	(1)	(1)			(1)	20		21	
1920	4	955		12		630		13		202		18		80			1			21		2	
1922	5	1,241	1			669				412		33		96	(1)					33		3	
1924	5	987				579				253		24		49						26		2	
1926	7	1,822				661			36	183		212		580						40		2	
Pittsburgh:																							
1914	6	2,149				468				852				819						(1)	40		38
1915	6	2,013				404				814				795						20			39
1920	6	3,190				670				2,049		227		244						21			7
1922	5	2,554				1,104				944		16		264						43		9	10
1924	7	4,361				269				1,177		466		413						6		27	11
1926	8	4,642			113	1,519				560				2,376		2				33		2	12
Great Lakes and Middle West:																							
1914	7	1,632				751				311				570						46			19
1915	7	1,755				846				356				553						48			20
1920	6	3,067				214				793				2,060						7			26
1922	9	3,678				1,848						153		1,565						50		3	4
1924	10	4,943				772				116		12		702						16		2	(1)
1926	12	5,660				959				216		5	1,103	3,377						17		4	(1)
Southern:																							
1914	3	570				269				38		9		254						47			7
1915	3	539				226				58		3		252						42			11
1920	3	958				655				1				302						68			(1)
1922	3	825				484				4				337						59			(1)
1924	4	1,320				258				5		435		622						20			(1)
1926	4	1,450				319				1		481		649						22			(1)
Total:																							
1914	22	5,415				2,123			10	1,416		9		1,857						39		(1)	26
1915	22	5,423	2	2		2,131			3	1,453		3		1,829	(1)	(1)				39		(1)	27
1920	19	8,170		12		2,169		13		3,045		245		2,686		(1)				27	(1)		37
1922	22	8,298	1			4,135			338	1,360		202		2,262	(1)	(1)				50		4	16
1924	26	11,611				1,878			1,375	736		1,574		6,048						16		12	6
1926	31	13,424			113	3,458			326	749		1,796		6,982			1			26		2	6

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Open-Hearth Furnaces

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)							
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations		
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour
Stockers:													
Eastern.....	6	105	6.5	9.7	62.6	119	117.9	\$56.22	\$0.477	\$29.86	120.3	\$57.38	\$0.477
Pittsburgh.....	8	208	6.7	8.2	55.0	251	98.8	54.42	.551	30.31	100.2	55.21	.551
Great Lakes and Middle West.....	12	227	6.8	8.0	54.6	251	107.6	63.99	.595	32.49	110.0	65.43	.595
Southern.....	4	58	6.9	10.3	71.7	66	131.5	52.06	.396	28.39	138.2	54.74	.396
Total.....	30	598	6.7	8.6	57.8	687	108.5	58.00	.535	30.92	110.9	59.28	.534
Stock cranimen:													
Eastern.....	6	39	6.5	10.0	64.5	43	124.5	69.18	.556	35.86	130.5	73.28	.562
Pittsburgh.....	8	77	6.7	8.3	55.4	89	107.1	74.93	.699	38.72	110.8	77.18	.696
Great Lakes and Middle West.....	11	75	6.8	8.0	54.5	81	110.1	82.97	.753	41.04	112.0	84.48	.754
Southern.....	3	7	7.0	10.3	72.0	7	149.7	83.15	.556	40.03	159.9	85.88	.537
Total.....	28	198	6.7	8.6	57.5	220	113.0	77.03	.682	39.22	116.7	79.38	.680
Charging-machine operators:													
Eastern.....	6	37	6.6	9.1	59.9	37	132.8	105.50	.794	47.56	132.8	105.50	.794
Pittsburgh.....	8	66	6.7	8.0	53.6	68	113.7	112.30	.988	52.96	114.9	113.14	.985
Great Lakes and Middle West.....	13	97	6.8	8.0	54.6	99	113.1	116.03	1.026	56.02	116.1	122.01	1.051
Southern.....	4	17	6.9	8.9	61.6	17	129.9	102.50	.789	48.60	137.0	106.12	.775
Total.....	31	217	6.7	8.3	55.7	221	117.9	112.08	.951	52.97	120.1	115.29	.960
Door operators:													
Eastern.....	1	6	6.0	12.0	72.0	7	140.2	36.77	.262	18.86	140.2	36.77	.262
Pittsburgh.....	3	24	6.8	8.0	54.0	25	110.8	35.55	.321	17.33	110.8	35.55	.321
Great Lakes and Middle West.....	10	127	6.7	8.0	53.4	150	94.8	37.72	.398	21.25	99.7	40.73	.409
Southern.....	3	28	6.9	8.6	58.9	40	84.1	29.49	.351	20.67	105.9	39.34	.372
Total.....	17	185	6.7	8.2	54.9	222	96.1	35.96	.374	20.53	103.3	39.77	.385

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—**Open-Hearth Furnaces**—Continued

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)							
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations		
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	F&N-time earnings per week	Hours worked	Earnings	Earnings per hour
Melters' helpers, first:													
Eastern.....	6	118	6.6	9.1	60.4	125	121.2	\$120.13	\$0.991	\$59.86	123.1	\$121.60	\$0.988
Pittsburgh.....	8	297	6.6	8.0	53.1	313	103.7	125.68	1.212	64.36	105.4	127.18	1.206
Great Lakes and Middle West.....	13	370	6.8	8.0	54.8	405	108.1	134.89	1.248	68.39	110.5	137.41	1.243
Southern.....	4	76	6.8	8.5	58.3	81	120.2	115.34	.959	55.91	122.9	117.06	.953
Total.....	31	861	6.7	8.2	55.3	924	109.4	128.06	1.170	64.70	111.6	130.02	1.165
Melters' helpers, second:													
Eastern.....	6	118	6.5	9.1	59.5	124	114.8	83.50	.727	43.26	120.9	88.27	.730
Pittsburgh.....	8	297	6.6	8.0	52.8	316	99.3	84.29	.849	44.83	105.9	90.33	.853
Great Lakes and Middle West.....	13	369	6.8	8.0	54.8	400	102.7	90.84	.884	48.44	109.6	96.00	.882
Southern.....	4	78	6.9	8.5	58.0	83	113.1	74.56	.659	38.22	124.1	81.41	.656
Total.....	31	862	6.7	8.2	55.0	923	104.1	86.15	.827	45.49	111.2	91.97	.827
Melters' helpers, third:													
Eastern.....	6	112	6.5	9.1	58.3	137	99.9	57.13	.572	33.35	111.5	63.87	.573
Pittsburgh.....	8	285	6.6	8.0	52.9	371	82.6	57.89	.701	37.08	90.1	63.33	.703
Great Lakes and Middle West.....	13	397	6.8	8.1	54.6	478	94.4	64.75	.689	37.46	103.6	71.17	.687
Southern.....	4	149	6.8	8.7	59.0	175	104.5	42.69	.409	24.13	113.6	47.10	.415
Total.....	31	943	6.7	8.3	55.2	1,161	92.8	58.33	.630	34.72	101.7	64.17	.631
Stopper setters:													
Eastern.....	4	17	6.5	8.5	55.5	17	120.8	110.48	.914	50.73	121.3	111.00	.915
Pittsburgh.....	6	33	6.5	8.0	51.8	34	105.7	91.72	.868	44.96	107.8	94.06	.873
Great Lakes and Middle West.....	11	52	6.8	8.0	54.5	54	112.1	99.03	.883	48.12	116.2	102.30	.880
Southern.....	4	14	6.9	8.6	58.9	14	132.2	93.79	.710	41.82	133.4	94.45	.708
Total.....	25	116	6.7	8.2	54.4	119	113.9	97.96	.860	46.78	116.5	100.27	.860
Steel pourers:													
Eastern.....	6	23	6.5	9.4	60.9	23	131.9	95.82	.727	44.27	133.3	97.20	.729

Pittsburgh	8	48	6.5	8.0	52.2	48	111.9	104.49	.934	48.75	112.2	104.68	.933
Great Lakes and Middle West	18	60	6.8	8.0	54.6	64	112.9	105.70	.936	51.11	116.2	108.37	.933
Southern	4	13	6.8	9.2	63.4	13	140.6	118.51	.843	53.45	141.2	119.06	.843
Total	31	144	6.6	8.4	55.6	148	118.0	104.90	.889	49.43	119.8	106.37	.888
Mold cappers:													
Pittsburgh	3	21	6.2	8.0	50.1	23	96.1	66.71	.694	34.77	106.2	74.81	.704
Great Lakes and Middle West	4	44	6.4	8.0	51.3	47	99.7	58.38	.585	30.01	106.8	62.93	.589
Total	7	65	6.4	8.0	50.9	70	98.5	61.11	.620	31.56	106.6	66.84	.627
Ladle cranimen:													
Eastern	6	35	6.4	8.9	57.8	36	121.4	93.78	.772	44.62	127.8	98.49	.771
Pittsburgh	7	78	6.6	8.0	52.6	80	113.4	100.19	.833	46.45	114.0	100.77	.884
Great Lakes and Middle West	14	88	6.8	8.0	54.5	101	106.5	105.71	.903	54.12	112.5	110.78	.985
Southern	4	22	6.8	8.7	59.6	22	130.8	104.21	.797	47.50	133.1	106.06	.797
Total	28	223	6.7	8.2	54.9	239	113.3	101.93	.900	49.41	117.2	105.14	.897
Ingot strippers:													
Eastern	4	15	6.7	9.7	64.0	15	144.0	105.08	.730	46.72	144.0	105.08	.730
Pittsburgh	6	36	6.6	8.0	53.0	38	111.6	96.26	.863	45.74	112.6	96.53	.862
Great Lakes and Middle West	12	49	6.8	8.0	54.7	62	98.3	72.67	.739	40.42	101.8	75.08	.738
Southern	4	11	6.9	8.7	60.4	11	137.5	91.00	.662	39.98	137.5	91.00	.662
Total	26	111	6.7	8.3	56.0	126	111.1	85.24	.767	42.95	113.0	86.51	.766
Engineers, locomotive:													
Eastern	6	41	6.6	9.1	59.7	44	125.0	116.61	.933	55.70	125.0	116.61	.933
Pittsburgh	8	133	6.4	8.1	51.8	157	97.9	75.27	.769	39.83	98.5	75.64	.768
Great Lakes and Middle West	10	112	6.8	8.0	54.7	124	108.6	81.40	.744	40.70	109.5	81.42	.743
Southern	4	36	6.8	8.7	59.5	38	127.4	86.59	.680	40.46	127.4	86.59	.680
Total	28	322	6.6	8.3	54.7	363	107.9	83.33	.772	42.23	108.5	83.73	.772
Switchmen:													
Eastern	5	29	6.3	9.6	60.3	30	126.7	69.42	.548	33.04	128.8	70.61	.548
Pittsburgh	8	135	6.4	8.0	51.6	177	86.4	54.80	.634	32.71	88.3	55.87	.633
Great Lakes and Middle West	11	131	6.8	8.0	54.4	161	96.9	61.47	.634	34.49	99.3	63.13	.636
Southern	4	39	6.8	9.2	62.9	45	115.3	64.69	.561	35.29	121.7	67.71	.556
Total	28	334	6.6	8.3	54.8	413	96.6	59.54	.616	33.76	99.2	61.06	.616
Laborers:													
Eastern	5	125	6.3	9.8	61.8	179	91.8	36.15	.383	23.67	103.3	41.02	.397
Pittsburgh	8	416	6.3	9.1	57.4	682	72.9	32.95	.452	25.94	83.8	38.65	.461
Great Lakes and Middle West	13	363	6.5	9.2	60.4	531	88.2	39.52	.443	27.06	97.1	44.60	.459
Southern	4	126	6.1	9.6	59.0	145	95.7	32.29	.337	19.88	106.8	36.82	.345
Total	30	1,030	6.4	9.3	59.2	1,537	82.6	35.41	.420	25.40	92.8	40.81	.440

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Open-Hearth Furnaces—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	Eastern	Pittsburgh	Great Lakes and Middle West	Southern	Total
Turns per week	Hours				Turns per week	Hours									
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week						
-----	-----	-----	-----	-----	7	12	12	12	84	84	-----	-----	-----	5	5
-----	-----	-----	-----	-----	6	12	12	12	72	72	4	-----	-----	4	4
-----	-----	-----	-----	-----	7	10	10	10	70	70	1	1	3	13	18
-----	-----	-----	-----	-----	6	11½	11½	-----	69	69	-----	-----	-----	3	3
-----	-----	-----	-----	-----	7	9	9	9	63	63	-----	-----	2	2	2
-----	-----	-----	-----	-----	6	10	10	-----	60	60	-----	-----	1	4	5
-----	-----	-----	-----	-----	7	9	9	9	63	63	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	9	9	-----	54	57	-----	-----	11	-----	11
-----	-----	-----	-----	-----	6	9	9	-----	54	54	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	7	8	8	8	56	56	-----	2	16	2	20
-----	-----	-----	-----	-----	7	8	8	8	56	56	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	8	8	8	48	52	-----	-----	2	-----	2
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	25	-----	25
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	1	-----	-----	1
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	4	-----	-----	4
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	-----	-----	-----
Total.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5	8	60	27	100

Group B.—Night turn only

-----	-----	-----	-----	-----	7	12	12	12	84	84	-----	-----	-----	5	5
-----	-----	-----	-----	-----	6	12	12	12	72	72	4	-----	-----	4	4
-----	-----	-----	-----	-----	7	10	10	10	70	70	1	1	3	13	18
-----	-----	-----	-----	-----	6	11½	11½	-----	69	69	-----	-----	-----	3	3
-----	-----	-----	-----	-----	7	9	9	9	63	63	-----	-----	2	2	2
-----	-----	-----	-----	-----	6	10	10	-----	60	60	-----	-----	1	4	5
-----	-----	-----	-----	-----	7	9	9	9	63	63	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	9	9	-----	54	57	-----	-----	11	-----	11
-----	-----	-----	-----	-----	6	9	9	-----	54	54	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	7	8	8	8	56	56	-----	2	16	2	20
-----	-----	-----	-----	-----	7	8	8	8	56	56	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	8	8	8	48	52	-----	-----	2	-----	2
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	25	-----	25
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	1	-----	-----	1
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	4	-----	-----	4
-----	-----	-----	-----	-----	6	8	8	8	48	48	-----	-----	-----	-----	-----
Total.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5	8	60	27	100

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	84	11	3	-----	169	183
7	11	11	11	77	7	13	13	13	91	84	-----	17	-----	15	32
7	10½	10½	10½	73½	7	13½	13½	13½	94½	84	2	-----	-----	-----	2
7	10	10	10	70	7	14	14	14	98	84	9	12	-----	-----	21
7	12	12	12	84	7	12	12	12	84	81	-----	-----	-----	-----	22
7	12	12	12	84	6	12	12	12	72	81	-----	-----	-----	22	-----
7	11	11	11	77	6	13	13	13	78	80½	4	-----	-----	-----	4
7	11	11	11	77	7	13	13	13	91	80½	-----	-----	-----	-----	-----
7	10	10	10	70	7	13	13	13	91	80½	-----	-----	8	-----	8
7	12	12	12	84	7	12	12	12	84	80	-----	-----	-----	-----	-----
7	12	12	8	80	6	12	12	12	72	80	4	-----	-----	-----	4
7	12	12	12	84	7	12	12	12	84	80	8	-----	-----	-----	8
7	12	12	12	84	6	12	12	12	72	78	127	-----	-----	-----	127
6	10	10	10	60	7	14	13	13	96	78	4	-----	-----	-----	4
6	10½	10½	11½	74½	6	13½	13½	13½	81	77½	31	-----	-----	-----	31
7	11	11	11	77	6	13	13	13	78	77½	4	-----	-----	-----	4
7	10	10	10	70	6	14	14	14	84	77	3	-----	-----	-----	3
7	10	10	10	70	7	11½	11½	11½	80½	75½	-----	-----	97	-----	97
6	11	11	-----	66	6	13	13	13	78	72	52	-----	-----	-----	52
6	10½	10½	-----	63	6	13½	13½	13½	81	72	208	-----	-----	-----	208
7	10	10	10	70	7	10	10	10	70	70	41	137	11	60	249
7	10½	8½	10	70	6	11½	11½	11½	69	69½	2	-----	-----	-----	2
6	11½	11½	-----	69	6	11½	11½	11½	69	69	7	-----	-----	-----	7
7	9½	9½	9½	68½	7	10	10	10	70	68½	-----	-----	11	-----	11
7	9	9	9	63	7	10	10	10	70	66½	-----	-----	-----	-----	1
7	10	10	10	70	7	10	10	10	70	65	-----	367	-----	-----	367
6	10	10	10	60	6	10	10	10	60	65	-----	-----	-----	-----	-----
7	10	10	10	70	6	10	10	10	60	65	-----	23	-----	-----	23
6	10	10	10	60	7	10	10	10	70	65	-----	-----	-----	-----	-----
7	10	10	10	70	6	10	10	10	60	65	-----	133	-----	-----	133
6	10	10	-----	60	7	10	10	10	70	65	-----	-----	-----	-----	-----
7	10	10	10	70	6	10	10	10	60	65	-----	4	-----	-----	4
6	10	10	10	60	7	10	10	10	70	65	2	-----	-----	-----	2
6	9½	9½	9½	57	7	10	10	10	70	63½	-----	-----	-----	-----	-----
7	9	9	9	63	7	9	9	9	63	63	-----	3	-----	6	9
6	10½	10½	-----	63	6	10½	10½	10½	63	63	9	-----	-----	-----	9

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Open-Hearth Furnaces—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	Eastern	Pittsburgh	Great Lakes and Middle West	Southern	Total
Turns per week	Hours				Turns per week	Hours									
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week						

Group C.—Weekly changes from one shift to another—Continued

7	10	8	9½	67½	7	10	8	9½	67½	62½		5			5
8	10	8	9½	57½	6	10	8	9½	57½	62½	18				18
7	10½	8		60½	6	10½		11½	63½	62		3			3
7	10	10	9½	69½	6	10	10	9½	59½	60			5	14	19
6	10	10	10	59½	6	10	10	10	59½	60			168		168
6	10	10		60	6	10	10		60	60	4	9			13
6	10	10		60	6	10	10		60	60					13
7	8	11½	8	59½	7	8	11½	8	59½	59½	3				3
6	10	5½		55½	6	10		10	60	57½	11				11
7	8	8	8	56	7	8	8	8	56	56	443	1,952	2,970	251	5,616
7	8	8	11	59	6	8	8	8	48	50			448		578
6	9	9		54	6	9	9	13	61	54	130			6	6
6	8	8		48	6	10	10		54	54				4	4
7	8	8	8	56	7	8	8	8	60	54					4
7	8	8	8	56	6	8	8	8	56	53½			421		421
7	8	8	8	56	7	8	8	8	48	53½	78				79
6	8	8	8	48	6	8	8	8	56	53½			43	492	535
6	8	8		48	7	8	8	8	56	53½			190		190
7	8	8	8	56	7	8	8	8	56	53½					190
7	8	8	8	56	6	8		8	48	52	2				2
7	8	8	8	56	6	8		8	48	50½	36	74			110
6	8	8		48	6	8		8	48	50½			135		135
6	8	8		48	6	8	8	8	48	50½					135
6	8	10		50	6	8		10	50	49½		63			63
6	8	11½		51½	6	8		8	48	49½		11			11
6	8	9		49	6	8		10½	50½	49½					6
6	8	11	8	51	6	8		8	48	49½	6				6
6	8	11	8	51	6	8	8	8	48	49		19			19
6	8	11		51	6	8		8	48	49		18			18
6	8	11		51	6	8		8	48	49		52			52
6	8	9½		49½	6	8		9½	49½	49		6			6
6	8	9	9½	50½	6	8		8	48	48¾		9			9
6	8	10½		50½	6	8		8	48	48¾		57			57
6	8	9½		49½	6	8		9	48	48¾		2			2
6	8	9		49	6	8		9½	49½	48¾		3			3
6	8	10		50	6	8		8	48	48¾		10			10
6	8	8½		48½	6	8		9½	49½	48¾		17			17
6	8	8		48	6	8		10	50	48¾		6			6
6	8	9½		49½	6	8		8	48	48¾		29			29
6	8	8½		48½	6	8		9	49	48½		3			3
6	8	9		49	6	8		8	48	48½		18			18
6	8	7		47	6	8		10	50	48½		3			3

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Open-Hearth Furnaces—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Monday to Friday	Satur-day	Sunday	Per week		Monday to Friday	Satur-day	Sunday	Per week						

Group C.—Weekly changes from one shift to another—Continued

6	8	8½	48½	6	8	8	48	48%	2	2
6	8	7	47	6	8	8	48	48½	18	18
6	8	8	48	6	8	8	48	48	91	200
6	8	8	48	6	8	8	48	48	7	7
6	8	8	48	6	8	8	48	48	47	47
6	8	8	48	6	8	8	48	48	25	25
6	8	8	48	6	8	8	48	48		2
6	8	8	48	6	8	8	48	48		6
6	8	8	48	6	8	8	48	48	112	719
6	8	8	48	6	8	8	48	48	3	3
6	8	7	47	6	8	8	48	48	2	2
6	8	7	47	6	8	8	48	47½	2	2
6	8	7	47	6	8	8	48	47½	94	94
6	8	8	48	5	8	8	40	45½	21	21
6	8	8	48	5	8	8	40	45½	92	92
Total									1,365	4,197
									4,947	1,052
										11,561

MELTERS' HELPERS, FIRST, ONLY

7	12	12	84	7	12	12	84	81		11	11
7	12	12	84	6	12	12	72				
7	11	11	77	6	13	13	78	80%	4	4	
7	11	11	77	7	13	13	91				
7	12	12	84	6	12	12	72	78	14	14	
6	10½	10½	63	6	13½	13½	81	72	18	18	
7	8	8	56	7	8	8	56	56	50	179	
7	8	8	56	7	8	8	56	56	179	246	
7	8	8	56	7	8	8	56	56	9	42	
7	8	8	56	7	8	8	56	53½		40	
7	8	8	56	7	8	8	56	53½	6	6	
6	8	8	48	6	8	8	48	56		31	
6	8	8	48	7	8	8	56	53½		10	
7	8	8	56	6	8	8	48	50%	24	74	
6	8	8	48	6	8	8	48	48		19	
6	8	7	47	6	8	8	48	47½	60	60	
Total									125	313	
									357	81	
										876	

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926, by district—Open-Hearth Furnaces

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—											
				44 and under 48	48	Over 48 and under 56	56	Over 56 and under 60	60	Over 60 and under 66	66 and under 72	72	Over 72 and under 84	84 and over	
Melters' helpers, first:															
Eastern	6	125	60.4			30	59						18	18	
Pittsburgh	8	313	53.1	60		74	179								
G. L. and M.															
W.	13	405	54.8		19	96	290								
Southern	4	81	58.3			31	39							11	
Total	31	924	55.3	60	19	231	567						18	29	
Melters' helpers, second:															
Eastern	6	124	59.5		24	6	59					17	4	14	
Pittsburgh	8	316	52.8		61	73	182								
G. L. and M.															
W.	13	400	54.8		21	94	285								
Southern	4	83	58.0			31	43							9	
Total	31	923	55.0		106	204	569					17	4	23	
Melters' helpers, third:															
Eastern	6	137	58.3		18	54	19						29	17	
Pittsburgh	8	371	52.9		79	64	228								
G. L. and M.															
W.	13	478	54.6		17	113	348								
Southern	4	175	59.0			126	9	1				8		31	
Total	31	1,161	55.2		114	357	604	1				8	29	17	31
Steel pourers:															
Eastern	6	23	60.9		3	9	3						4	4	
Pittsburgh	8	48	52.2	9	3	9	27								
G. L. and M.															
W.	13	64	54.6		9	6	49								
Southern	4	13	63.4			6	3							4	
Total	31	148	55.6	9	15	30	82						4	4	4
Ladle cramenen:															
Eastern	6	36	57.8		9	6	13						4	4	
Pittsburgh	7	80	52.6		33		47								
G. L. and M.															
W.	11	101	54.5		7	20	74								
Southern	4	22	59.6			12	6							4	
Total	28	239	54.9		49	38	140						4	4	4
Laborers:															
Eastern	5	179	61.8			13	7	58	48			53			
Pittsburgh	8	682	57.4		273		21	21	296			81		11	
G. L. and M.															
W.	13	531	60.4		67	51	98	83	84			59		89	
Southern	4	145	59.0			46			82			17			
Total	30	1,537	59.2		340	110	105	162	214	296	210		89	11	

PUDDLING MILLS

The puddling mill produces wrought iron by oxidizing and removing most of the silicon, carbon, manganese, and phosphorus contained in pig iron, the operation being conducted on the hearth of a reverberatory furnace. On account of the intense heat and the heavy labor involved in the puddling operation, fewer workmen than formerly are taking up the puddling trades. The shortage of apprentices has been mainly responsible for "level-handed" work. However, as the demand for puddled iron has also decreased in recent years the present labor force is probably sufficient to meet all requirements.

For several years experiments have been made with mechanical puddling devices with some success. The necessary equipment is quite expensive, however; and the mechanical method in many respects is not as satisfactory as the hand process. There are but few mechanical "puddlers" in use in the United States. All data collected by the bureau cover hand operations only.

Data for the 1926 study were collected from the pay rolls of 13 puddling-mill establishments and cover 2,488 employees in all occupations. Of the 2,488 employees reported, 2,020 are found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1914, and comparative figures are presented for the period 1914 to 1926.¹ As stated in the introduction and summary, no effort was made to separate the 1926 data for this department into geographical districts. Puddling-mill operations have been curtailed in some sections of the country to such an extent that a comparison of the data by districts would be misleading. However, the figures for the United States as a whole are comparable with those of other years and all figures presented for this department are for the United States only. (See Bul. 381 for district figures for former years.)

The hours of labor of employees as a whole in puddling mills have been subject to only slight variations from year to year. The working time of practically all employees is governed to a large extent by the puddling operation, which usually consists of five heats per shift, which requires somewhere between 8 and 10 hours. This has been the custom for years, and the reduction in the daily hours of labor of employees in the iron and steel industry which took place in the latter part of 1923 did not affect employees in this department. In 1914 employees as a whole had an average full-time week of 53.2 hours, or approximately 6 days of 9 hours each. This continued with only slight fluctuations to 1922 when employees customarily worked 52.1 hours per week. Average weekly hours increased to 55.7 in 1924 but decreased again in 1926 to 52.1 hours. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1914 to 1926, for the department as a whole, are shown in Table 1, page 4.

While the customary working time of employees as a whole show comparatively small changes from year to year, comparisons of the full-time hours per week of employees in some of the selected occu-

¹Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

pations, which may be made from Table A, show considerable variation. Stockers, for example, in 1914 worked an average of 57.6 hours per week full time, which gradually increased to 61.3 hours in 1920. The weekly hours of stockers decreased again in the following years to 58.9 in 1922 and 57.4 in 1924. In 1926 the extremely low average of 51.1 hours per week was reached.

Puddling mills are usually in operation six days or six days and five nights per week and very few employees work seven days. Sunday work is usually confined to "light-up" and repair. In some plants no repair work is done on Sunday. Table B shows that in 1914, 71 per cent of all employees worked more than five and less than six turns per week on the average; 15 per cent worked six turns per week; and 13 per cent worked five turns. Only 2 per cent worked a seven-day week at any time. In the following years there was a small increase in six-day per week work, and in 1926 67 per cent of the employees worked five and one-half turns per week on the average; 24 per cent worked six turns; and 5 per cent worked five turns. Three per cent had a seven-day week—2 per cent regularly and 1 per cent in biweekly periods.

The working time of employees in 1926 in this department may be seen in Table D. The grouping of the employees in that table by hours per day shows that, in 1926, of the 2,488 employees covered, 979 had a working-day of 10 hours, 574 worked 9 hours, 511 worked between 8 and 9 hours, and 173 worked 8 hours. Only 173 employees had a day of over 10 hours in length and 116 of them worked a day of 12 hours, at least a part of the time, or its equivalent—that is, 10 hours one week and 14 hours the next, 11 hours one week and 13 hours the next, etc. The employees covered in puddling mills, of course, include many miscellaneous employees not directly connected with the puddling operation, and in order to present conditions as they apply to members of a producing crew separate figures are shown for the occupation of puddlers, level-handed. The duties of the occupation of puddlers, level-handed, are the same as those of a puddler and his helper. A puddler assumes all of the responsibility for operating the furnace and is assisted by a helper, while in the case of puddlers, level-handed, two puddlers divide the work and responsibility evenly and usually have no helper. Also the puddler usually pays his helper only 30 to 40 per cent of the furnace earnings, and the puddlers, level-handed, divide the earnings equally between them. Of the 922 employees who worked as puddlers, level-handed, during the pay period, 485 worked 8½ hours per day, 362 worked 9 hours, 71 worked 10 hours, and 4 worked 8 hours. Of the total employees in that occupation, 831 had a working week of less than 50 hours and 4 of that number worked as few as 40 hours. The highest hours per week of any employees in the occupation was 58, which was worked by 7 employees. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the hours of labor of employees have changed comparatively little during the period 1914 to 1926, hourly earnings have doubled in that time. In 1914 the earnings per hour of all employees covered were 32.8 cents on the average, while in 1926 employees earned an average of 65.7 cents per hour, an increase of 100 per cent. The earnings were highest in 1920, 88.5 cents on the

average, and were also higher in 1924 (72.1 cents) than in 1926 or any other year except 1920. The tonnage rates paid in most plants of this department are based directly on the selling price of the product; that is, at the close of each two-month period tonnage rates are adjusted in accordance with the price of bar iron during that interval. Thus the rates paid in this department in most occupations are subject to wide fluctuations in a two-year study, such as the bureau makes. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, puddlers, level-handed, in 1914 earned an average of 41.6 cents per hour, which decreased to 39.2 cents in 1915. Four years later, or in 1919, they were earning \$1.101 per hour on the average and this amount increased to \$1.227 in 1920. In 1922 the puddling department had not yet recovered from the slump of 1921 and puddlers, level-handed, earned only 62.9 cents per hour in that year. In the following years earnings improved considerably and these employees averaged \$1.051 per hour in 1924 and 87.7 cents in 1926. A distribution by average hourly earnings of the employees in six specified occupations in 1926 is given in Table F.

Average full-time earnings per week followed very closely the course of average earnings per hour, as changes in full-time hours per week were very slight as compared with those in hourly earnings. In 1914 earnings per full-time week for all employees were \$17.45 on the average, while in 1926 they were increased to \$34.23, or almost double the earnings of 1914. In 1920 they were \$47.70, the highest of any year shown, and in 1924 they were \$40.16. Weekly earnings in the various selected occupations show like increases. Puddlers, level-handed, for example, earned an average of \$20.37 per full-time week in 1914, \$18.60 in 1915, \$53.73 in 1919, \$62.25 in 1920, \$29.22 in 1922, \$48.39 in 1924, and \$43.24 in 1926. The weekly earnings of employees in other selected occupations may be studied from Table A.

The 2,020 employees in the selected occupations worked an average of 77.3 hours during the 14-day pay period covered by the study, for which they received an average of \$55.99. This includes all of the hours worked and the earnings received by these employees, as shown in Table C. Roll engineers worked the most time, 118 hours, and bushelers, level-handed, the least or 59.3 hours. Laborers received the least money, \$31.05, while rollers, a skilled occupation, earned the largest amount, \$119.72. Puddlers, level-handed, received only \$59.23, as they averaged only 68 hours during the pay period.

A classification of employees in six specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of puddlers, level-handed, 85 of the 922 employees worked less than 32 hours during the pay period, while 2 employees worked between 112 and 120 hours. The largest group, 139, worked 72 and under 80 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations in this table. Laborers earned from less than \$5 for the period to \$65 and under \$70, while rollers earned from \$65 and under \$70 to \$200 and under \$250. The largest group of laborers, 27, earned \$40 and under \$45.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1914 to 1926, by occupation—Puddling Mills

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1914=100)			Per cent of employees whose average full-time hours per week were—									
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84					
Stockers:																		
1914	28	300	57.6	\$0.205	\$11.78	100	100	100	12	45	11	30	1					
1915	28	304	58.1	.204	11.85	101	100	101	10	42	12	34	1					
1919	11	141	59.9	.486	29.11	104	237	247	11	11	15	61	2					
1920	15	407	61.3	.504	31.30	106	246	266	1	12	29	55	3					
1922	13	214	58.9	.396	23.64	102	193	201	8	32	7	53	(1)					
1924	17	188	57.4	.480	27.60	100	234	233	1	59	13	27	1					
1926	13	134	51.1	.527	26.93	89	257	229	28	55	13							
Puddlers:																		
1914	13	458	54.8	.416	22.76	100	100	100	2	98								
1915	13	422	52.4	.390	20.45	96	94	90	2	98								
1919	7	176	50.9	1.126	57.31	93	271	252	31	69								
1920	8	187	49.2	1.311	64.69	90	315	284	37	63								
1922	9	203	48.5	.687	33.49	89	165	147	44	56								
1924	11	293	52.8	.912	48.10	96	219	211	3	97								
1926	8	185	53.5	.767	41.03	98	184	180	2	97								
Puddlers, level handled:																		
1914	17	896	49.3	.416	20.37	100	100	100	49	51								
1915	17	924	48.0	.392	18.60	97	94	91	65	35								
1919	9	512	48.8	1.101	53.73	99	265	264	26	74								
1920	11	860	50.8	1.227	62.25	103	295	306	23	77								
1922	12	936	47.0	.629	29.22	95	151	143	59	40								
1924	16	1,275	45.7	1.051	48.39	93	253	238	45	55								
1926	11	922	49.3	.877	43.24	100	211	212	52	47								
Puddler's helpers:																		
1914	15	475	55.2	.241	13.25	100	100	100	2	98								
1915	15	456	52.8	.224	11.78	96	93	89	2	98								
1919	9	190	50.6	.695	35.17	92	288	265	33	67								
1920	9	209	49.4	.859	42.37	89	356	320	30	70								
1922	9	153	48.7	.421	20.59	88	175	155	37	63								
1924	11	259	53.2	.590	31.28	96	245	236	4	96								
1926	8	200	53.4	.648	34.60	97	269	261	2	99								
Bushelers:																		
1914	4	18	50.4	.462	23.14	100	100	100	33	67								
1915	4	19	53.6	.413	22.03	106	89	95	16	84								
1919	4	41	46.0	.987	45.40	91	214	196	63	37								
1920	2	22	44.8	1.104	49.46	89	239	214	95	5								
1922	4	25	45.7	.818	37.46	91	177	162	96	4								
1924	4	25	46.3	1.148	53.85	92	249	233	48	52								
1926	3	13	46.4	.883	40.97	92	191	177	54	46								
Bushelers, level handed:																		
1914	6	98	47.1	.418	20.07	100	100	100	53	47								
1915	6	67	45.7	.419	19.37	97	100	97	64	36								
1919	6	197	41.4	1.573	65.12	88	376	324	99	1								
1920	4	179	41.4	1.894	77.85	88	453	388	96	4								
1922	8	206	43.4	.739	32.71	92	177	163	86	14								
1924	11	161	45.6	1.257	57.41	97	301	286	70	30								
1926	5	48	44.2	.996	44.02	94	238	219	63	38								
Busheler's helpers:																		
1914	12	112	49.0	.264	12.79	100	100	100	50	50								
1915	12	96	50.0	.246	12.09	102	93	95	42	53								
1919	5	82	42.6	.626	26.67	87	237	209	82	18		5						
1920	3	49	43.5	.754	32.76	89	286	256	98	2								
1922	6	77	44.0	.522	23.09	90	198	181	83	17								
1924	6	51	43.7	.674	29.76	89	255	233	71	29								
1926	2	13	46.5	.479	22.27	95	181	174	46	54								
Heaters:																		
1914	9	25	51.0	.709	35.28	100	100	100	48	44		8						
1915	9	27	50.9	.730	36.37	100	103	103	44	48		8						
1919	1	2	55.0	1.165	64.08	108	164	182		100								
1920	1	4	61.8	1.426	88.13	121	201	250				100						
1922	2	8	53.8	.915	48.38	105	129	137	50	50								
1924	4	11	52.8	1.349	72.36	104	180	205	9	91								
1926	4	12	54.2	1.236	66.99	106	174	190	100	100								

¹Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1914 to 1926, by occupation—Puddling Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1914=100)			Per cent of employees whose average full-time hours per week were—												
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84						
Heaters' helpers:																					
1914	8	48	52.3	\$0.311	\$15.63	100	100	100	50	29		13	8								
1915	8	52	52.3	.308	15.63	100	99	99	46	35		12	8								
1919	1	2	55.0	.577	31.74	105	186	203		100											
1920	1	18	57.0	.546	31.12	109	176	199		100											
1922	2	25	54.7	.460	23.99	105	145	153		100											
1924	4	20	54.3	.583	31.59	104	188	202	5	95											
1926	4	14	54.3	.595	32.31	104	191	207		92	7										
Bloom boys:																					
1914	25	77	54.3	.201	10.79	100	100	100	16	73	5	6									
1915	25	68	53.9	.199	10.62	99	99	98	18	68	3	12									
1919	11	26	52.9	.656	34.70	97	326	322	27	54		19									
1920	13	38	53.2	.656	34.79	98	326	322	34	53	8	5									
1922	10	32	51.0	.365	18.20	94	182	169	41	28	16	16									
1924	14	36	51.7	.525	26.34	95	261	244	22	67	8	3									
1926	9	20	51.2	.531	27.19	94	264	252	25	70	5										
Roll engineers:																					
1914	23	47	66.9	.239	15.92	100	100	100		9	11	45	32	4							
1915	23	45	66.9	.242	16.14	100	101	101		9	11	40	36	4							
1919	12	25	65.2	.535	34.88	97	224	219	12	16	4	32	12	16	8						
1920	12	24	72.5	.674	48.79	108	282	306		4	29	38	8	21							
1922	13	28	65.4	.425	27.87	98	178	175	14	7	4	54	7	14							
1924	14	31	64.7	.531	34.45	97	222	216	19	6	6	35	13	13			6				
1926	10	20	62.3	.574	35.76	93	236	225	30	10	25		15	10	10						
Rollers:																					
1914	24	66	53.1	.573	29.38	100	100	100	23	68	3	6									
1915	24	64	52.4	.583	29.89	99	102	102	25	63	3	9									
1919	12	38	47.0	1.843	86.62	89	322	295	53	47											
1920	12	31	50.8	2.197	108.15	96	383	368	29	68	3										
1922	12	33	48.4	.899	42.95	91	157	146	52	42	6										
1924	16	42	51.2	1.252	63.66	96	218	217	29	62	5	5									
1926	11	24	50.9	1.200	61.08	96	209	208	33	63	4										
Roughers:																					
1914	20	71	51.9	.436	22.17	100	100	100	39	44	3	14									
1915	20	69	51.8	.426	21.69	100	98	98	41	45	3	12									
1919	8	25	45.2	1.298	58.67	87	298	265	64	36											
1920	10	33	49.7	1.407	68.75	96	323	310	39	48	12										
1922	10	43	47.2	.587	27.69	91	135	125	47	47	7										
1924	12	45	50.4	.877	43.35	97	201	196	24	64	4	7									
1926	9	32	48.7	.748	36.43	92	172	164	41	53	6										
Catchers:																					
1914	27	91	53.4	.362	18.99	100	100	100	21	69	4	5									
1915	27	88	52.8	.363	18.89	99	100	99	22	68	5	6									
1919	12	34	48.2	1.269	61.17	90	351	322	47	53											
1920	13	42	50.7	1.291	64.07	95	387	337	33	62	5										
1922	13	55	47.9	.572	27.28	90	158	144	45	51	4										
1924	16	69	50.9	.856	42.75	95	236	225	23	67	3	7									
1926	11	41	50.9	.698	35.53	95	193	187	24	73	2										
Hook-ups:																					
1914	27	97	54.4	.251	13.58	100	100	100	19	60	4	18									
1915	27	94	53.3	.233	12.40	99	93	91	19	61	4	16									
1919	12	34	51.8	.862	44.65	95	343	329	32	50		18									
1920	13	37	56.5	.865	49.64	104	346	366	8	59	5	27									
1922	12	50	48.0	.457	21.57	88	182	159	78	18	4										
1924	16	54	51.9	.638	33.02	95	254	243	19	72	4	6									
1926	12	43	50.1	.539	27.00	91	215	199	30	67	2										
Roll hands, other:																					
1914	8	17	51.9	.286	14.75	100	100	100	18	82											
1915	8	14	53.6	.295	15.86	103	103	108	21	64		14									
1919	3	11	50.7	.624	31.64	98	218	215	45	55											
1920	6	15	51.5	.946	48.94	99	331	332	27	73											
1922	5	15	51.6	.469	24.00	99	164	163	33	40	27										
1924	5	15	53.9	.559	30.12	104	195	204		73	27										
1926	4	6	51.9	.439	22.78	100	154	154	33	33	33										

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1914 to 1926, by occupation—Puddling Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1914=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84	
Hotbed men:														
1914	26	117	54.2	\$0.245	\$13.10	100	100	100	21	59	3	16		
1915	26	112	54.2	.243	12.98	100	99	99	22	54	4	21		
1919	11	56	52.0	.655	34.06	96	267	260	27	57		16		
1920	13	81	57.0	.666	38.21	105	272	292		69	4	7		
1922	12	67	50.3	.416	20.91	93	170	160	60	30	3	7		
1924	15	84	52.5	.571	30.01	97	233	229	19	74	2	5		
1926	10	65	51.2	.539	27.60	94	220	211	23	71	6			
Shearmen:														
1914	19	43	57.3	.239	13.70	100	100	100		60	21	19		
1915	19	39	57.8	.247	14.40	101	103	105		56	18	26		
1919	11	23	57.6	.528	30.41	101	221	222	7	57	18	18		
1920	13	45	55.2	.662	36.73	96	277	268	2	71	18	9		
1922	13	38	52.4	.455	23.75	91	190	173	42	39	8	11		
1924	16	36	52.6	.570	29.80	92	238	218	28	50	6	17		
1926	12	23	52.8	.638	33.69	92	267	246	31	51	17			
Shearmen's helpers:														
1914	20	110	58.0	.192	11.23	100	100	100		60	9	31		
1915	20	109	58.1	.196	11.50	100	102	102		58	9	33		
1919	9	57	57.6	.473	27.24	99	246	243	12	53		35		
1920	10	70	60.9	.527	32.24	105	274	267		30	14	54	1	
1922	13	84	55.1	.385	21.09	95	201	188	24	42	6	29		
1924	16	96	50.5	.513	25.77	87	267	229	48	35	4	13		
1926	13	54	50.6	.588	29.75	87	306	265	52	36	13			
Laborers:														
1914	24	322	59.5	.173	10.35	100	100	100		36	42	21	1	
1915	24	303	57.5	.167	9.66	97	97	93		49	35	16		
1919	12	236	64.1	.436	27.95	108	252	270	3	22	14	56	6	
1920	15	440	65.3	.457	30.41	110	294	264		9	33	22	35	
1922	12	382	59.2	.305	18.44	99	176	178		31	35	34		
1924	17	341	59.5	.355	21.31	100	205	206		44	30	26		
1926	12	151	57.1	.357	20.38	96	206	196	3	50	44	1	2	

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by year—Puddling Mills

Year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—					Per cent of employees whose customary working turns per week were—						
			5	5, 5, and 6 in rotation	5 and 6 alternately	6	6 and 7 alternately	7	5	5, 5, and 6 in rotation	5 and 6 alternately	6	6 and 7 alternately	7
1914	29	4,606	600	365	2,889	681	26	45	13	8	63	15	1	1
1915	29	4,472	1,093	497	2,238	595	24	25	24	11	50	13	1	1
1920	15	3,363	16	430	2,015	865	2	35	(1)	13	60	26	(1)	1
1922	13	2,859	480	425	1,337	552	9	56	17	15	47	19	(1)	2
1924	17	3,428	273	67	2,127	884	16	56	8	2	62	26	(1)	2
1926	13	2,488	138		1,674	608	16	52	5		67	24	1	2

1 Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation—Puddling Mills

Occupation	Number of plants	Positions				Employees working in scheduled pay period (14 days)							
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations		
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour
Stockers.....	13	125	5.8	8.9	51.1	134	90.2	\$47.56	\$0.527	\$26.93	95.1	\$50.31	\$0.529
Puddlers.....	8	166	5.6	9.6	53.5	185	78.9	60.48	.767	41.03	84.8	64.35	.758
Puddlers, level handed.....	11	708	5.5	8.8	49.3	922	65.9	57.77	.877	43.24	68.0	59.23	.871
Puddlers' helpers.....	8	164	5.6	9.6	53.4	200	74.2	48.08	.648	34.60	75.5	48.84	.647
Bushelers.....	3	13	5.3	8.8	46.4	13	70.5	62.25	.883	40.97	78.8	67.13	.852
Bushelers, level handed.....	5	38	5.2	8.5	44.2	48	49.8	49.59	.996	44.02	59.3	57.48	.969
Bushelers' helpers.....	2	12	5.3	8.8	46.5	13	68.7	32.86	.479	22.27	74.8	36.24	.484
Heaters.....	4	10	5.6	9.8	54.2	12	84.5	104.41	1.233	66.99	89.2	108.17	1.213
Heaters' helpers.....	4	14	5.5	9.8	54.3	14	101.9	60.63	.595	32.31	105.3	63.00	.598
Bloom boys.....	9	19	5.5	9.3	51.2	20	90.0	47.75	.531	27.19	95.5	49.37	.517
Roll engineers.....	10	19	6.0	10.3	62.3	20	112.5	64.61	.574	35.76	118.0	67.19	.569
Rollers.....	11	24	5.5	9.3	50.9	24	99.8	119.72	1.200	61.08	99.8	119.72	1.200
Roughers.....	9	30	5.5	8.9	48.7	32	85.6	64.03	.748	36.43	88.9	65.56	.738
Catchers.....	11	39	5.5	9.2	50.9	41	92.5	64.50	.698	35.53	96.2	66.46	.691
Hook-ups.....	12	40	5.5	9.1	50.1	43	91.3	49.21	.539	27.00	92.2	49.61	.538
Roll hands, other.....	4	6	5.5	9.6	51.9	6	94.5	41.46	.439	22.78	97.8	43.36	.443
Hotbed men.....	16	54	5.5	9.4	51.2	65	80.4	43.39	.539	27.60	82.2	44.41	.540
Muck shearmen.....	12	21	5.6	9.4	52.8	23	82.7	52.76	.638	33.69	88.4	56.61	.640
Laborers.....	12	116	5.9	9.6	57.1	151	80.9	28.87	.357	20.38	85.0	31.05	.365
Shearmen's helpers.....	13	45	5.6	9.1	50.6	54	77.2	45.39	.588	29.75	79.1	46.11	.583

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926—Puddling Mills

ALL EMPLOYEES

Customary turns and hours worked										Average hours per week	Number of employees who worked each specified combination of customary turns and hours
Day turns					Night turns						
Turns per week	Hours				Turns per week	Hours					
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week		

Group A.—Day turn only

7	12	12	12	84					84	13
6	12	12		72					72	12
6	13	6		71					71	1
7	10	10	10	70					70	8
6	11½	11½		69					69	1
6	11½	10½		68					68	1
7	10	8	8	66					66	6
6	11	11		66					66	2
6	11	10		65					65	1
6	10	10		60					60	183
5	12			60					60	29
6	10	9		59					59	4
6	10	8		58					58	50
6	10		8	58					58	6
6	10	7		57					57	2
6	9½	9½		57					57	1
6	10	6½		56½					56½	1
6	10	6		56					56	22
6	9½	8½		56					56	2
6	10	5		55					55	63
6	9½	7½		55					55	3
6	9½	8		54½					54½	19
6	9	9		54					54	4
6	9	8		53					53	56
6	9	7½		52½					52½	2
5	10½			52½					52½	1
6	9	7		52					52	10
6	8½	8½		51					51	2
6	9	5		50					50	51
5	10			50					50	12
6	8½	5½		48					48	18
6	8	8		48					48	4
5	9½			47½					47½	17
6	8	7		47					47	1
5	10	5		45					45	6
6	8	4		44					44	10
6	6	3		33						
6	9	5		50					41½	1
5	8			40					40	26
6	6	3		33					33	18
Total										663

Group B.—Night turn only

				7	13	13	13	91	91	1
				7	12½	12½	12½	87½	87½	1
				7	12	12	12	84	84	4
				6	13		8	73	73	1
				6	12		12	72	72	23
				7	10	10	10	70	70	1
				6	10		18	68	68	10
				7	10	10	5	65	65	1
				6	10		10	60	60	8
				5	12			60	60	8
				5	10			50	50	1
				5	9			45	45	2
				5	8			40	40	1
Total										62

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926—Puddling Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Average hours per week	Number of employees who worked each specified combination of customary turns and hours
Day turns					Night turns						
Turns per week	Hours				Turns per week	Hours					
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week		

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	84	4
7	10	10	12	72	7	14	14	12	96	84	7
7	12	12	12	84	6	12	12	12	72	78	4
7	10	10	12	72	6	14	14	12	84	78	2
6	12	12	12	72	6	12	12	12	72	72	6
6	10	10	12	60	6	12	12	12	72	66	2
7	10	10	8	68	6	10	12	8	58	63	10
6	11	11	12	66	5	11	12	12	55	60½	3
6	10	10	10	60	6	10	10	10	60	60	2
6	10	10	10	60	5	12	12	12	60	60	3
6	11	9	12	64	5	11	12	12	55	59½	10
6	11	8½	12	63½	5	11	12	12	55	59½	33
7	8	8	8	56	7	8	8	8	56	56	6
6	10	10	12	60	5	10	12	12	50	55	68
6	10	8	12	58	5	10	12	12	50	54	228
6	10	6	12	56	5	10	12	12	50	53	276
6	10	5	12	55	5	10	12	12	50	52½	17
6	9½	8	12	54½	5	9½	12	12	46½	50½	5
6	9½	7½	12	55	5	9	12	12	45	50	4
6	9	9	12	54	5	9	12	12	45	49½	330
6	9	7½	12	52½	5	9	12	12	45	48½	119
7	8	8	8	56	5	8	8	8	40	48	3
6	8½	8½	12	51	6	8½	12	12	48	46½	487
7	8	8	10	58	5	8	8	8	40	46	3
6	8	7	12	47	5	8	12	12	40	46	4
6	8	8	12	48	5	9	12	12	45	44	62
6	8	8	12	47	5	8	12	12	40	43½	2
6	8	7½	12	47½	5	8	12	12	40	43½	20
6	8	7	12	47	5	8	12	12	39	40½	4
6	7½	4½	12	42	6	6½	6½	6½	40	40	35
5	8	8	12	40	5	8	8	8	40	40	4
6	6½	4	12	36½	6	6½	6½	6½	39	37½	
Total											1,763

PUDDLERS, LEVEL HANDED, ONLY

6	10	8	12	58	5	10	12	12	50	58	7
6	10	8	12	58	5	10	12	12	50	54	36
6	10	6	12	56	5	10	12	12	50	53	28
6	9	8	12	53	5	9	12	12	45	53	20
6	9	9	12	54	5	9	12	12	45	49½	272
6	9	7½	12	52½	5	9	12	12	45	48½	70
6	8½	8½	12	51	5	8½	12	12	42½	46½	485
5	8	8	12	40	5	8	8	8	40	40	4
Total											922

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926—**Puddling Mills**

Occupation	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—						
				40 and under 44	44 and under 48	Over 48 and under 56	Over 56 and under 60	60	66 and under 72	72
Puddlers.....	8	185	53.5	3	---	170	12	---	---	---
Puddlers, level handed.....	11	922	49.3	4	485	426	7	---	---	---
Puddlers' helpers.....	8	200	53.4	4	---	185	11	---	---	---
Bushelers, level handed.....	5	48	44.2	30	---	18	---	---	---	---
Rollers.....	11	24	50.9	2	6	11	4	1	---	---
Laborers.....	12	151	57.1	---	5	62	14	66	1	3

TABLE H.—Average and classified earnings actually received by employees in six specified occupations in pay period covered, 1926—
Puddling Mills

Occupation	Number of employees	Average earnings per pay period	Number of employees whose earnings during the pay period were—																											
			Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 and under \$20	\$20 and under \$25	\$25 and under \$30	\$30 and under \$35	\$35 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$55	\$55 and under \$60	\$60 and under \$65	\$65 and under \$70	\$70 and under \$75	\$75 and under \$80	\$80 and under \$85	\$85 and under \$90	\$90 and under \$95	\$95 and under \$100	\$100 and under \$110	\$110 and under \$120	\$120 and under \$150	\$150 and under \$160	\$160 and under \$180	\$180 and under \$200	\$200 and under \$250	
Puddlers.....	185	\$64.35	---	6	---	3	3	1	6	2	5	8	3	13	21	21	33	28	29	---	2	1	---	---	---	---	---	---	---	
Puddlers, level handed.....	922	59.23	2	16	20	13	21	29	20	42	45	39	81	77	98	76	118	87	109	16	9	4	---	---	---	---	---	---	---	
Puddlers' helpers.....	200	48.84	9	6	8	8	4	12	17	18	30	24	44	14	5	---	1	---	---	---	---	---	---	---	---	---	---	---	---	
Bushelers, level handed.....	48	57.48	2	1	---	1	2	1	4	4	1	---	2	2	2	---	1	4	8	---	1	4	2	---	---	---	---	---	---	
Rollers.....	24	119.72	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3	1	2	---	---	---	---	---	---	---	---	---	---	
Laborers.....	151	31.05	13	15	7	9	12	12	15	12	27	10	10	2	2	---	3	1	2	---	1	1	2	2	2	1	1	---	---	---

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PUDDLING MILLS

BLOOMING MILLS

Data for 1926 were collected from the pay rolls of 26 blooming-mill establishments and cover 6,188 employees in all occupations. Of the 6,188 employees reported, 1,670 were found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1910, and from 1910 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years all employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ Comparative figures are presented for employees in the selected occupations from 1910 to 1926.

The hours of labor of blooming-mill employees have decreased materially in recent years. Up until the summer of 1923 this department, while showing a small gradual decrease from former years in the working time of employees as a whole, was still largely on a 12-hour basis and some employees also worked 7 days per week. A general reduction in the regular daily hours of employees, however, took place in the latter part of 1923, and a large number of the plants adopted the 8-hour day for all employees. In 1914 employees as a whole had an average full-time week of 70.5 hours or almost 6 days per week of 12 hours each. By 1922 the average had decreased to 68 hours per week, but following the 1923 decrease employees were asked to work but 54.6 hours per week regularly in 1924 and 54.2 hours in 1926. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1913 to 1926, for the department as a whole, are shown in Table 1, page 4.

Comparisons of the full-time hours per week of employees in the various selected occupations, which may be made from Table A, show like reductions. In 1910 the average full-time hours per week in all of the selected occupations combined were 71.9 and employees in only 4 of the 12 occupations had a full-time week of less than 70 hours. Laborers, who comprised more than 40 per cent of the employees in the selected occupations, worked 74.1 hours per week full-time. In 1926, however, working time had been so far reduced that the average of 56.3 hours per week for laborers was the highest of any of the occupations and rollers averaged but 52.0 hours per week. The average for all of the 12 occupations combined was only 54.2 hours per week.

While hours per day and per week were considerably less in 1924 and 1926 as compared with former years, the 7-day week increased to some extent among employees. This department is seldom operated on Sunday but "light-up" and repair work furnishes 7-day per week work for a part of the force. Table B shows that, in 1914, 74 per cent of all employees covered worked 6 days per week regularly while 11 per cent were on a 7-day per week basis. In addition 10 per cent of the employees alternated or rotated from 6 to 7 days.

¹ Data were not obtained in 1916, 1918, 1921, 1923, and 1925.

In 1915 there was practically no change and in 1920, owing to war conditions, there was an increase in 7-day work. This increase continued in 1922 when 56 per cent of the employees worked 6 days per week regularly and 18 per cent worked 7 days. An additional 21 per cent worked 7 days at least as often as once in three weeks. In 1924, as the hours per day were greatly decreased, the weekly turns were still further increased until only 38 per cent worked 6 days each week, 21 per cent worked 7 days, and 35 per cent either alternated or rotated from 6 to 7 days. In 1926, 7-day work decreased somewhat and 43 per cent had a 7-day week—20 per cent regularly and 23 per cent in two to three week intervals.

A good idea of the working time of employees in 1926 in this department may be gained from Table D. By grouping the employees according to hours per day in that table it may be seen that in 1926, of the 6,188 employees covered, 4,338 had a working-day of 8 hours and only 175 worked as many as 12 hours per day regularly or its equivalent—that is, 10 hours one week and 14 hours the next, 11 hours one week and 13 hours the next, etc. A total of 1,476 worked a day of 10 hours. The employees covered in blooming mills, of course, include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to members of the producing crew separate figures are shown for the occupation of roller. Of the 78 employees who worked as roller during the pay period, 61 worked 8 hours per day, 15 worked 10 hours, and the remaining 2 employees worked 12 hours. Of the total employees in that occupation 41 had a working week of between 40 and 50 hours, 23 between 50 and 60 hours, 12 between 60 and 70 hours, and the two 12-hour employees had a week of between 70 and 80 hours. One of the 12-hour workers alternated weekly from 6 to 7 days. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the trend in the hours of labor of employees has been downward in recent years the trend in hourly earnings has been decidedly upward. In 1914 the earnings per hour of all employees covered were 26.9 cents on the average, while in 1926 employees earned an average of 62.7 cents per hour, an increase of 133 per cent. In other words the 1926 hourly earnings were two and one-third times the earnings in 1914. The earnings were highest in 1920, 65.9 cents on the average, and in 1924 they were almost as high as in 1926. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, rollers in 1910 earned an average of 60.5 cents per hour which increased to 70.1 cents in 1913. During 1914 and 1915 hourly earnings decreased slightly but in 1917 rollers received an average of 91.2 cents per hour. This average increased to \$1.389 in 1919 and to \$1.473 in 1920. In 1922 the hourly earnings of rollers decreased to \$1.175 but rose again to \$1.400 in 1924 and to \$1.498 in 1926. A distribution by average hourly earnings of the employees in 6 specified occupations in 1926 is given in Table F.

Average full-time earnings per week show a large increase in 1926 as compared with 1914 and 1915 and were higher in 1926 than in any other year except 1920. In 1914 earnings per full-time week for all employees were \$18.96 on the average, while in 1926 they had increased to \$33.98. In 1920 they were \$44.48, the highest of any

year shown, and in 1924 they were only slightly less than in 1926. Weekly earnings in the various selected occupations show like increases. Rollers, for example, earned an average of \$40 per week in 1910, \$44.98 in 1913, and \$86.95 in 1919. In 1920, while the hourly earnings of rollers increased as compared with 1919, there was a decrease in full-time weekly hours in that occupation which brought the weekly earnings down to \$84.73. In the following years there was a decrease in either or both the hours of labor or earnings per hour and weekly earnings dropped to \$71.31 in 1922, \$72.99 in 1924, and \$77.90 in 1926.

The 1,670 employees in the selected occupations worked an average of 106.1 hours during the 16-day pay period covered by the 1926 study, for which they received an average of \$81.40. This includes all of the hours worked and the earnings received by these employees, as shown in Table C. Roll engineers worked the most time, 116.1 hours, and table men the least, or 95.8 hours. Laborers earned the least money, \$47.45, while rollers, a highly skilled occupation, earned the largest amount, \$164.44. Shearmen's helpers received the second lowest earnings, or \$59.20.

A classification of employees in 6 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of laborers 36 of the 414 employees worked less than 32 hours during the pay period, while 1 man in the Pittsburgh district worked as much as 192 hours. The largest group, 53, worked 104 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations in this table. Laborers earned from less than \$5 for the period to between \$90 and \$95, while rollers earned from \$95 and under \$100 to \$250 and over, except 2, whose earnings were under \$25. The largest group of laborers, 89, earned between \$50 and \$55.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Blooming Mills

Occupation and year	Number of plants	Number of employ-ees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84	
Pit cranimen:														
1910	18	99	69.6	\$0.315	\$21.41	100	85	84	18	11	51	4	16	
1911	18	95	68.8	.309	21.01	99	84	83	19	15	49	6	11	
1912	18	97	68.7	.328	22.33	99	89	88	19	19	46	6	10	
1913	19	115	69.3	.369	25.39	100	100	100	16	12	52	16	4	
1914	23	124	66.6	.357	23.29	96	97	92	5	17	3	11	44	
1915	23	119	66.7	.375	24.44	96	102	96	5	20	3	5	44	
1917	12	71	66.0	.546	35.02	95	148	138	21	9	5	56	14	
1919	19	138	67.2	.816	54.84	97	221	216	6	24	1	46	17	
1920	20	138	62.4	.871	54.07	90	236	213	12	36	6	33	14	
1922	24	156	68.6	.811	42.00	99	166	165	25	3	10	18	37	
1924	25	189	54.8	.603	43.89	79	218	173	22	55	5	12	1	
1926	27	201	54.3	.855	46.43	78	275	217	24	59	12	1	2	
Heaters:														
1910	19	51	73.4	.521	37.88	103	88	90	6	4	61	8	22	
1911	19	49	73.3	.512	37.50	103	86	90	6	2	8	51	12	
1912	19	55	72.9	.552	40.14	102	93	96	5	2	7	60	7	
1913	19	79	71.2	.594	41.86	100	100	100	19	5	38	23	15	
1914	23	89	63.9	.542	37.03	97	91	88	24	2	1	46	16	
1915	23	84	69.9	.584	40.06	98	98	96	21	2	1	42	24	
1917	12	47	65.7	.756	49.85	92	127	119	19	13	5	59	9	
1919	18	94	68.7	1.191	81.82	96	201	195	11	15	6	49	15	
1920	20	106	64.8	1.271	81.92	91	214	196	7	29	1	33	23	
1922	24	115	68.9	.904	62.18	97	152	149	23	23	12	32	28	
1924	25	139	55.2	1.192	65.66	78	201	157	7	78	8	1	5	
1926	27	122	54.4	1.244	67.67	74	239	180	11	76	10	1	1	
Heaters' help-ers:														
1910	11	34	73.4	.344	24.62	114	96	108	9	12	35	26	18	
1911	11	34	73.5	.363	26.71	114	101	117	9	12	35	18	26	
1912	11	50	67.9	.352	23.63	105	98	104	30	8	32	12	18	
1913	10	52	64.6	.359	22.76	100	100	100	40	8	19	31	2	
1914	10	43	64.0	.337	20.95	99	94	92	7	35	9	14	33	
1915	10	39	62.1	.369	22.48	96	103	99	46	10	26	15	3	
1917	3	15	59.2	.611	37.66	92	170	165	60	5	13	27	2	
1919	13	62	64.1	.818	52.43	99	228	230	5	37	5	40	6	
1920	14	77	60.3	.828	49.37	93	231	217	5	51	8	10	26	
1922	17	90	65.6	.654	43.51	102	182	191	42	2	4	17	29	
1924	17	108	55.2	.827	45.76	85	230	201	9	76	4	5	6	
1926	18	81	54.9	.864	47.43	75	251	193	7	78	2	7	5	
Bottom mak-ers:														
1910	16	60	70.5	.335	23.26	98	91	88	10	3	80	7	7	
1911	16	55	70.8	.331	23.24	98	90	88	11	5	67	9	7	
1912	16	58	70.9	.347	24.44	99	95	93	10	5	69	9	7	
1913	15	62	71.9	.367	26.32	100	100	100	10	6	48	26	5	
1914	20	79	63.6	.370	24.68	95	101	94	4	19	5	39	28	
1915	20	76	68.5	.359	25.77	95	106	98	4	20	3	38	33	
1917	11	38	70.8	.497	34.59	98	135	131	16	10	5	53	26	
1919	16	104	69.4	.833	57.81	97	227	220	8	10	2	63	14	
1920	17	122	63.2	.890	56.50	88	243	215	16	25	16	25	20	
1922	21	119	66.6	.692	40.22	93	164	153	7	24	2	11	29	
1924	23	162	53.3	.769	40.99	74	210	156	28	55	3	10	3	
1926	25	128	53.9	.791	42.63	76	236	140	26	54	3	15	5	
Bottom mak-ers' help-ers:														
1910	12	47	70.3	.251	17.23	98	95	92	13	79	11	4	9	
1911	12	46	70.3	.243	16.83	98	92	90	13	7	65	11	4	
1912	13	50	70.6	.257	17.95	98	98	96	12	60	24	4	9	
1913	13	65	72.0	.263	18.72	100	100	100	9	51	31	9	9	
1914	17	70	69.8	.273	18.45	97	104	99	9	9	44	34	4	
1915	17	76	70.5	.289	18.46	98	102	99	8	8	1	38	39	
1917	9	44	71.3	.384	26.74	99	146	143	14	59	18	9	13	
1919	13	112	68.8	.659	45.34	96	251	242	9	18	43	17	8	
1920	14	135	64.6	.664	43.05	90	249	230	13	21	9	28	29	
1922	21	188	69.6	.653	32.33	97	176	173	9	19	3	4	40	
1924	20	231	53.3	.632	33.69	74	240	180	32	48	3	14	3	
1926	21	171	54.4	.634	34.49	77	253	200	28	45	23	4	4	

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—**Blooming Mills**—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84	
Roll engineers:														
1910.....	18	42	70.9	\$0.392	\$27.12	104	83	88	7	7	10	45	17	14
1911.....	18	40	70.9	.385	26.66	104	82	86	8	8	13	38	20	15
1912.....	19	46	68.4	.437	28.79	100	93	93	13	12	9	24	33	9
1913.....	19	52	68.5	.471	30.96	100	100	100	12	12	8	37	29	4
1914.....	23	60	65.6	.447	28.30	96	95	91	20	10	3	43	17	3
1915.....	23	59	65.4	.471	29.81	95	100	96	20	10	3	46	15	3
1917.....	12	37	63.8	.678	41.20	93	144	133	32	8	2	38	22	—
1919.....	19	60	64.1	.971	62.24	94	206	201	18	23	3	37	12	7
1920.....	20	63	60.9	1.077	61.68	89	216	199	5	49	3	3	22	17
1922.....	23	78	63.3	.751	47.72	92	159	154	4	35	15	12	18	13
1924.....	23	76	55.2	.928	51.60	81	197	167	9	71	5	12	3	4
1926.....	25	76	54.6	.978	53.40	77	249	160	12	68	3	16	1	—
Rollers:														
1910.....	18	46	67.6	.605	40.00	102	86	89	13	7	11	63	—	7
1911.....	18	41	66.6	.585	38.49	101	83	86	7	15	15	59	5	—
1912.....	19	46	65.9	.632	40.53	100	90	90	13	13	13	52	9	—
1913.....	19	46	66.2	.701	44.98	100	100	100	13	13	13	48	13	—
1914.....	23	54	63.6	.684	42.44	96	98	94	17	17	4	6	57	—
1915.....	23	53	63.5	.697	43.26	96	99	96	17	17	4	4	58	—
1917.....	12	34	62.4	.912	55.64	94	130	124	35	9	—	44	12	—
1919.....	18	51	62.6	1.389	86.95	95	198	193	29	14	4	45	4	4
1920.....	20	65	57.9	1.473	84.73	87	210	188	38	17	5	3	28	9
1922.....	24	71	60.9	1.175	71.31	92	168	159	7	41	7	11	18	15
1924.....	25	90	52.1	1.400	72.99	79	200	162	26	57	8	8	2	—
1926.....	27	78	52.0	1.498	77.90	79	214	173	32	50	13	3	3	—
Manipulators:														
1910.....	19	52	68.4	.365	24.21	105	85	90	12	6	13	56	6	8
1911.....	19	48	67.9	.350	23.26	104	81	87	6	13	17	50	10	4
1912.....	19	49	66.8	.388	24.92	102	90	93	12	12	17	49	10	4
1913.....	19	60	65.3	.431	26.86	100	100	100	10	20	13	42	15	—
1914.....	23	62	62.4	.394	23.95	96	91	89	19	19	3	5	53	—
1915.....	23	60	63.4	.420	25.81	97	97	96	15	20	3	3	58	—
1917.....	12	34	62.4	.639	37.75	96	148	141	35	9	—	44	12	—
1919.....	19	65	62.4	.935	58.34	96	217	217	26	18	3	43	6	3
1920.....	20	82	58.7	.926	53.80	90	215	200	32	16	6	2	39	5
1922.....	24	88	61.6	.692	42.58	94	161	159	7	39	5	9	33	8
1924.....	25	102	52.9	.842	44.57	81	195	166	23	53	14	9	2	—
1926.....	27	87	52.6	.901	47.39	81	209	176	29	47	20	3	1	—
Table men:														
1910.....	13	36	69.3	.271	18.03	102	86	86	8	8	11	56	6	11
1911.....	13	35	68.7	.254	17.05	101	80	81	—	17	17	49	11	6
1912.....	13	35	68.7	.285	19.00	101	90	91	—	17	17	49	11	6
1913.....	12	31	68.0	.316	20.95	100	100	100	—	19	19	55	13	—
1914.....	14	36	63.6	.314	19.36	94	99	92	17	17	6	3	58	—
1915.....	14	34	63.1	.327	19.94	93	103	95	18	18	6	3	56	—
1917.....	4	13	63.1	.414	25.51	93	131	122	—	46	—	38	15	—
1919.....	9	33	62.3	.663	41.30	92	210	197	24	21	—	6	42	6
1920.....	14	53	59.1	.687	40.31	87	217	192	34	13	6	4	36	8
1922.....	15	57	61.1	.505	31.56	90	160	151	7	39	5	7	21	21
1924.....	14	58	51.6	.659	34.31	76	209	164	24	69	—	3	3	—
1926.....	14	45	52.6	.643	33.82	77	203	161	33	53	—	4	9	—
Shearmen:														
1910.....	19	48	70.0	.303	20.85	104	82	86	6	6	8	58	13	8
1911.....	19	46	69.4	.306	20.96	103	83	87	7	7	13	61	9	4
1912.....	19	52	69.8	.319	21.93	104	86	91	6	6	12	65	8	4
1913.....	19	56	67.2	.370	24.23	100	100	100	16	5	11	50	18	—
1914.....	23	65	65.0	.345	21.84	97	93	90	14	14	3	8	62	—
1915.....	23	62	65.9	.362	23.09	98	98	95	10	15	3	6	66	—
1917.....	12	30	65.9	.523	33.41	98	141	138	20	10	—	57	13	—
1919.....	19	59	64.9	.816	52.96	97	221	219	24	10	—	3	53	7
1920.....	20	78	59.4	.813	48.27	88	220	199	31	21	3	5	28	3
1922.....	24	90	62.8	.599	37.89	93	162	156	13	23	4	14	29	16
1924.....	24	96	51.7	.777	40.23	77	210	166	36	48	10	3	2	—
1926.....	26	84	51.5	.812	41.82	77	219	173	36	49	14	1	—	—

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—**Blooming Mills**—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—						
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84
Shearmen's helpers:															
1910.....	18	100	70.9	\$0.218	\$15.15	102	82	83	3	9	---	8	56	10	14
1911.....	18	96	69.5	.217	14.90	100	81	82	3	9	---	15	58	13	2
1912.....	18	99	70.2	.230	15.93	101	86	88	---	9	---	14	65	10	2
1913.....	18	111	69.5	.267	18.17	100	100	100	5	8	---	9	56	22	---
1914.....	20	113	68.4	.256	17.23	98	96	95	3	11	5	2	80	---	---
1915.....	20	114	68.5	.258	17.35	99	97	95	3	11	5	2	78	2	---
1917.....	10	29	68.1	.412	27.60	98	154	152	10	10	---	---	66	14	---
1919.....	19	159	68.8	.610	41.97	99	228	231	8	10	---	7	65	6	5
1920.....	19	168	62.7	.619	38.95	90	232	214	16	18	2	7	48	8	---
1922.....	23	218	64.6	.459	29.76	93	172	164	2	26	4	20	30	18	---
1924.....	23	254	52.5	.590	30.57	76	221	168	43	37	10	8	2	---	---
1926.....	23	168	52.2	.601	31.37	75	225	173	37	39	19	2	3	---	---
Labors:															
1910.....	19	449	74.1	.162	11.97	101	88	88	---	1	2	13	54	6	24
1911.....	19	363	73.7	.163	12.02	100	89	89	---	1	4	9	59	9	18
1912.....	19	396	73.8	.164	12.13	101	89	90	---	1	3	10	57	11	18
1913.....	19	352	73.4	.184	13.53	100	100	100	---	1	3	16	54	12	14
1914.....	22	267	71.7	.187	13.39	98	102	999	(1)	---	4	17	69	5	4
1915.....	22	290	72.3	.287	13.49	99	102	100	(1)	---	2	16	66	13	3
1917.....	11	388	74.3	.287	21.28	101	156	157	---	---	5	---	66	28	1
1919.....	19	440	70.0	.469	32.83	95	255	243	13	3	1	14	43	16	11
1920.....	18	439	71.1	.511	36.43	97	278	269	12	(1)	3	10	38	22	15
1922.....	23	682	70.7	.350	24.84	96	190	184	1	10	14	5	35	34	1
1924.....	24	742	57.4	.462	26.51	78	251	196	30	22	27	19	2	---	---
1926.....	22	429	56.3	.451	25.39	77	245	188	39	16	27	14	4	---	---

¹ Less than 1 per cent.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Blooming Mills

District and year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—							Per cent of employees whose customary working turns per week were—								
			5	5 and 6 alternately	5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7	5	5 and 6 alternately	5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7
Eastern:																		
1914	3	248	42	50	-----	128	-----	10	-----	18	17	20	-----	52	-----	4	-----	7
1915	3	239	52	38	-----	118	-----	11	-----	20	22	16	-----	49	-----	5	-----	8
1920	3	248	40	8	-----	155	-----	29	-----	16	16	3	-----	63	-----	12	-----	6
1922	5	630	1	41	-----	346	-----	156	-----	86	(¹)	7	-----	55	-----	25	-----	14
1924	5	603	-----	48	-----	289	-----	125	29	112	8	8	-----	48	-----	21	5	19
1926	5	743	-----	36	6	351	-----	220	-----	130	-----	5	1	47	-----	30	-----	17
Pittsburgh:																		
1914	10	1,216	-----	-----	-----	879	69	129	3	136	-----	-----	-----	72	6	11	(¹)	11
1915	10	1,364	-----	-----	-----	966	69	193	3	133	-----	-----	-----	71	5	14	(¹)	10
1920	8	1,750	1	9	-----	1,154	21	397	-----	163	(¹)	-----	-----	66	1	23	-----	10
1922	8	1,716	3	184	-----	883	78	287	9	272	(¹)	11	-----	51	5	17	-----	16
1924	8	2,650	-----	309	-----	1,133	643	28	61	476	-----	12	-----	43	24	1	2	18
1926	9	2,788	3	-----	600	1,375	265	133	64	288	(¹)	-----	24	49	10	5	2	10
Great Lakes and Middle West:																		
1914	7	744	-----	-----	-----	652	6	28	7	51	-----	-----	-----	88	1	4	1	7
1915	7	792	-----	-----	-----	672	12	34	18	56	-----	-----	-----	85	2	4	2	7
1920	6	1,266	-----	-----	-----	811	27	81	19	328	-----	-----	-----	64	2	6	2	26
1922	8	1,610	-----	-----	-----	870	70	254	56	360	-----	-----	-----	54	4	16	3	22
1924	9	1,959	-----	-----	-----	630	419	37	467	406	-----	-----	-----	32	21	2	24	21
1926	9	2,056	-----	-----	-----	838	200	41	319	658	-----	-----	-----	41	10	2	16	32
Southern:																		
1914	3	268	-----	-----	-----	184	-----	5	-----	79	-----	-----	-----	69	-----	2	-----	29
1915	3	264	-----	-----	-----	174	-----	5	-----	85	-----	-----	-----	66	-----	2	-----	32
1920	3	388	-----	-----	-----	333	16	8	-----	31	-----	-----	-----	86	4	-----	-----	8
1922	3	455	-----	-----	-----	354	-----	43	-----	58	-----	-----	-----	78	-----	9	-----	19
1924	3	437	-----	-----	-----	122	-----	37	108	170	-----	-----	-----	28	-----	-----	-----	36
1926	4	601	-----	-----	-----	282	-----	19	109	191	-----	-----	-----	47	-----	3	-----	32
Total:																		
1914	23	2,476	42	50	-----	1,843	75	172	10	284	2	2	-----	74	3	7	(¹)	11
1915	23	2,659	52	38	-----	1,930	81	243	21	264	2	1	-----	73	3	9	1	11
1920	20	3,652	41	17	-----	2,453	64	515	19	543	1	(¹)	-----	67	2	14	1	15
1922	24	4,411	4	225	-----	2,453	143	740	65	776	(¹)	5	-----	56	3	17	1	18
1924	25	5,649	-----	357	-----	2,174	1,062	227	665	1,164	-----	6	-----	38	19	4	12	21
1926	27	6,188	3	36	668	2,846	465	413	492	1,267	(¹)	1	11	46	8	7	8	20

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—**Blooming Mills**

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Pit cranemen:														
Eastern.....	5	32	6.3	10.4	65.7	33	139.8	\$104.34	\$0.746	\$49.01	140.7	\$105.15	\$0.747	
Pittsburgh.....	9	57	6.1	8.0	49.1	64	98.6	86.51	.877	43.06	100.1	87.60	.875	
Great Lakes and Middle West.....	9	71	6.5	8.0	51.8	82	98.5	88.33	.897	46.46	100.0	89.31	.893	
Southern.....	4	20	7.0	8.6	60.2	22	117.4	101.03	.861	51.83	117.4	101.03	.861	
Total.....	27	180	6.4	8.5	54.3	201	107.4	91.77	.855	46.43	108.6	92.65	.853	
Heaters:														
Eastern.....	5	16	6.4	10.5	66.7	16	139.6	176.10	1.262	84.18	139.6	176.10	1.262	
Pittsburgh.....	9	42	6.3	8.0	50.1	44	103.9	133.90	1.283	64.53	104.5	134.62	1.288	
Great Lakes and Middle West.....	9	48	6.6	8.0	52.9	51	105.8	130.61	1.234	65.28	107.7	132.26	1.228	
Southern.....	4	11	6.9	8.7	60.0	11	131.2	146.71	1.118	67.08	131.2	146.71	1.118	
Total.....	27	117	6.5	8.4	54.4	122	111.9	139.21	1.244	67.67	112.9	140.16	1.242	
Heaters' helpers:														
Eastern.....	5	16	6.2	10.5	65.3	16	123.5	89.92	.728	47.54	138.0	103.03	.747	
Pittsburgh.....	4	21	6.2	8.0	49.6	22	95.2	83.40	.876	43.45	97.7	86.08	.881	
Great Lakes and Middle West.....	6	31	6.6	8.0	52.6	31	107.1	94.82	.886	46.60	115.3	103.02	.893	
Southern.....	3	12	7.0	8.0	56.0	12	116.8	114.82	.983	55.05	121.0	120.07	.992	
Total.....	18	80	6.5	8.5	54.9	81	108.5	93.71	.864	47.43	115.9	100.95	.871	
Bottom makers:														
Eastern.....	4	18	6.7	9.9	66.1	22	114.1	63.84	.559	36.95	120.4	66.67	.554	
Pittsburgh.....	9	50	6.1	8.0	49.2	54	95.3	88.72	.931	45.81	99.0	92.79	.937	
Great Lakes and Middle West.....	8	29	6.4	8.1	52.3	35	91.5	73.99	.808	42.26	97.5	79.22	.813	
Southern.....	4	17	6.8	8.5	57.6	17	116.4	80.26	.690	39.74	123.1	87.54	.711	
Total.....	25	114	6.4	8.4	53.9	128	100.3	79.29	.791	42.63	105.5	83.89	.795	

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—**Blooming Mills**—Continued

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)							
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations		
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour
Bottom makers' helpers:													
Eastern.....	2	26	6.3	10.0	63.5	28	127.3	\$76.64	\$0.602	\$38.23	131.0	\$79.01	\$0.603
Pittsburgh.....	8	49	6.1	8.0	48.6	64	78.6	54.87	.688	33.92	85.6	59.90	.700
Great Lakes and Middle West.....	8	51	6.4	8.2	52.5	61	91.5	61.00	.667	35.02	96.7	64.78	.670
Southern.....	3	15	6.7	9.6	63.7	18	109.6	47.52	.434	27.65	132.3	61.84	.467
Total.....	21	141	6.3	8.6	54.4	171	94.5	59.85	.634	34.49	101.9	64.97	.638
Roll engineers:													
Eastern.....	4	10	6.4	9.9	63.1	10	136.4	131.22	.962	60.70	136.4	131.22	.962
Pittsburgh.....	9	27	6.3	8.0	50.1	28	106.4	106.80	1.004	50.30	106.4	106.80	1.004
Great Lakes and Middle West.....	8	28	6.5	8.4	54.8	30	115.4	112.38	.974	53.38	115.4	112.38	.974
Southern.....	4	8	6.6	8.9	58.8	8	126.8	119.48	.942	55.39	126.8	119.48	.942
Total.....	25	73	6.4	8.5	54.6	76	116.1	113.55	.978	53.40	116.1	113.55	.978
Rollers:													
Eastern.....	5	12	6.0	10.1	60.1	12	126.5	186.65	1.476	88.71	126.5	186.65	1.476
Pittsburgh.....	9	27	6.0	8.1	48.2	28	100.7	147.97	1.470	70.85	100.9	148.12	1.467
Great Lakes and Middle West.....	9	28	6.3	8.1	51.1	29	107.4	169.07	1.575	80.48	107.6	169.30	1.574
Southern.....	4	8	6.3	9.0	56.0	9	119.5	164.49	1.376	77.06	125.6	169.98	1.353
Total.....	27	75	6.1	8.5	52.0	78	109.3	163.67	1.498	77.90	110.2	164.44	1.493
Manipulators:													
Eastern.....	5	18	6.0	9.9	59.3	19	113.1	96.29	.852	50.52	116.6	99.11	.850
Pittsburgh.....	9	27	6.0	8.1	48.2	29	93.6	87.46	.934	45.02	95.8	89.15	.930
Great Lakes and Middle West.....	9	29	6.3	8.3	51.6	31	106.8	96.21	.901	46.49	111.1	99.72	.897
Southern.....	4	8	6.3	9.0	56.0	8	120.8	111.19	.920	51.52	137.3	124.40	.906
Total.....	27	82	6.1	8.6	52.6	87	105.0	94.70	.901	47.39	109.6	98.33	.897

Table men:														
Eastern.....	3	8	5.9	9.8	58.4	8	105.4	58.09	.551	32.18	111.2	60.67	.546	
Pittsburgh.....	4	14	6.0	8.0	48.6	17	79.4	59.82	.754	36.64	84.1	63.61	.756	
Great Lakes and Middle West.....	4	11	6.1	9.4	48.4	12	90.4	58.87	.652	31.56	92.2	59.80	.649	
Southern.....	3	7	6.3	9.7	60.6	8	99.6	53.88	.541	32.78	110.9	58.65	.529	
Total.....	14	40	6.1	9.1	52.6	45	90.5	58.20	.643	33.82	95.8	61.19	.638	
Shearmen:														
Eastern.....	5	12	5.9	10.0	58.9	13	114.6	89.30	.779	45.88	122.0	96.52	.791	
Pittsburgh.....	9	27	6.0	8.0	48.1	29	93.7	74.84	.798	38.38	97.7	77.74	.796	
Great Lakes and Middle West.....	8	29	6.3	8.0	50.5	33	93.8	80.61	.859	43.38	98.6	85.32	.865	
Southern.....	4	8	6.3	9.0	56.0	9	102.4	76.16	.743	41.61	122.1	89.27	.731	
Total.....	26	76	6.1	8.4	51.5	84	97.9	79.49	.812	41.82	104.4	84.86	.813	
Shearmen's helpers:														
Eastern.....	5	37	5.9	10.0	59.3	42	110.9	66.53	.600	35.58	111.7	67.11	.601	
Pittsburgh.....	9	68	5.9	8.1	47.9	83	78.8	47.98	.609	29.17	85.2	51.85	.608	
Great Lakes and Middle West.....	6	28	6.3	8.0	50.6	29	100.9	66.12	.655	33.14	112.4	74.05	.659	
Southern.....	3	12	6.3	9.3	58.7	14	89.1	38.81	.435	25.53	112.7	48.25	.428	
Total.....	23	145	6.0	8.6	52.2	168	91.5	54.98	.601	31.37	98.8	59.20	.599	
Laborers:														
Eastern.....	5	40	6.0	10.0	59.8	47	100.0	38.15	.382	22.84	102.9	39.43	.383	
Pittsburgh.....	9	178	6.2	9.0	55.4	224	94.2	43.66	.463	25.65	100.4	47.18	.470	
Great Lakes and Middle West.....	5	98	6.4	8.4	53.8	113	98.9	50.79	.514	27.65	105.3	54.66	.519	
Southern.....	3	36	6.2	10.3	63.6	45	105.6	33.60	.318	20.22	122.0	39.06	.320	
Total.....	22	352	6.2	9.1	56.3	429	97.3	43.88	.451	25.39	104.2	47.45	.455	

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—**Blooming Mills**

ALL EMPLOYEES

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						

Group A.—Day turn only

7	12	12	12	84						84					13	13
7	12	12	6	78						78					11	11
7	11	11	12	78						78	1					1
7	11	10	9	74						74	1					1
6	12	12		72						72					50	50
6	12	11		71						71	4					4
7	10	10	10	70						70	22	9	78	17		126
7	10	10	9½	69½						69½		2				2
7	10	10	9	69						69		1				1
7	10	9	10	69						69			10			10
7	10	8	8	66						66	4					4
6	11	11		66						66	2				2	2
7	10	10	10	70						70						
6	10	10	10	60						60						
6	10	10		60						60						
7	10	10	10	70						70	1					1
6	10	9		59						59						
7	10	10	9	69						69		5				5
6	10½	10		62½						62½	1					1
6	10	10		60						60						
6	10	13		63						61½		4				4
6	10	10	10	60						60		1	1	8		10
6	10	10		60						60	24	27	174	67		292
6	10		10	60						60		1				1
6	10	9		59						59		5	1			6
6	10	8		58						58	5	2				7
6	9½	9½		57						57				1		1
7	8	8	8	56						56		2	24			26
6	10	5¼		55¼						55¼	43					43
6	10	5		55						55	1					1
6	10	4		54						54		1				1
6	9	9		54						54		1		19		20
7	8	8	8	56						52			1			1
6	8	8		48						48						
6	8	8		48						48		94	80			174
6	8	4		44						44		1	3			4
5	8			40						40		3				3
7	5			35						35		6				6
Total											111	165	372	188		836

Group B.—Night turn only

					7	12	12	12	84	84					5	5
					7	11	11	11	77	77			1			1
					6	12		12	72	72					1	2
					7	10	10	10	70	70	2			1		3
					6	10	10	10	60	60				4	1	5
					6	10	10	10	60	60				1	2	3
					6	10		10	60	60	1		1			3
					7	8	8	8	56	56		2	8			10
					6	10		5	55	55		1				1
					6	8		8	48	48		5				5
					6	8		8	48	48		7	2			9
Total											4	17	17	9		47

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—**Blooming Mills**—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked									Number of employees who worked each specified combination of customary turns and hours, by district						
Turns per week	Day turns				Turns per week	Night turns				Average hours per week	East-ern	Pitts-burgh	Great Lakes and Mid-dle West	South-ern	Total
	Hours					Hours									
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	84	6			4	10
7	11	11	11	77	7	13	13	13	91	84				1	1
7	12	12	12	84	6	12		12	72	78	19			9	28
7	11	11	12	78	6	13		13	78	78	8				8
6	12	12		72	7	12	12	12	84	78					6
7	12	12	12	84	6	12	12	12	72	78	15			6	6
7	11	11	11	77	6	13		13	78	77½	15				15
7	11	10	9	74	6	13		13	78	76	4				4
6	12	12		72	6	12		12	72	72	2				2
6	11	11		66	6	13		13	78	72				8	8
7	10	10	10	70	7	10	10	10	70	70	57	72	20	6	155
7	12	12	12	84	6	12		12	72	72	69				8
6	10	10		60	6	10		10	60	60	8				8
6	11½	11½		69	6	11½		11½	69	69	1				1
7	10	10	7	67	7	10	7	10	67	67	2				2
7	10	8	8	66	6	11		11	66	66	84				84
6	11	11		66	6	11		11	66	66	10				10
7	10	10	6	66	7	10	5	10	65	65½	2				2
7	10	10	5	65	7	10	6	10	66	65½	9				9
7	10	10	10	70	6	10		10	60	65		112			112
6	10	10		60	7	10	10	10	70	60			15		15
7	10	10	10	70	6	10		10	60	65	80	2			82
6	10	10	10	60	6	10		10	60	65	2	5			7
7	10	10	10	70	7	10	10	10	70	65	4		1		5
6	10	10	9	59	6	10	10	9	59	64		2			2
7	10	10	9	69	6	10	10	9	69	63	1				1
7	10	8	8	66	6	10	9	10	60	63			1		1
7	10	9	9	63	7	9	9	9	63	63					1
6	10½	10½		63	6	10½	10½		63	63	1				1
7	10	10	5	65	6	10		10	60	62½			14		14
6	10	10		60	6	10		10	60	62½	2				2
7	10	10	10	70	6	10		10	60	62½					2
6	10	10		60	6	10		10	60	62½	21				21
6	10	10	10	60	7	10	10	10	70	62½					2
7	10	10	10	70	6	10		10	60	62½	2				2
7	10	10	5	65	6	10		10	60	61¼					9
6	10	10		60	6	10		10	60	60	9				9
6	10	10	10	60	6	10	10	10	60	60				56	56
6	10	10	10	60	6	10		10	60	60		19			19
6	10	10		60	6	10	10	10	60	60			15	13	28
6	10	10		60	6	10	10		60	60		4	44		48
6	10	10		60	6	10	10		60	60	175	81	2	34	292
6	10	9		59	6	10	10		60	59½			32		32
6	10	5¼		55¼	6	10¾		10	63¾	59½	6				6
6	10	5¾		58	6	10		10	60	59	28				28
6	10	5¾		55¼	6	10¾		7	60¾	58	2				2
7	9	8	8	62	6	9	8	8	53	57½			2		2
6	10	5¾		55¼	6	10¾		6	59¾	57½	2				2
6	10	5		55	6	10		10	60	57½					2
6	9	9		54	7	9	9	9	54	57					3
6	9	9		54	7	9	9	9	53	57		3			3
7	8	8	8	56	7	8	8	8	56	56	24	193	516	134	867
7	8½	8½	8½	59½	6	8½		8½	51	55¼				2	2
6	10	5¼		55¼	5	10¾			53¾	54¾	36				36
6	9	9		54	6	9	9		54	54			12		12
6	9	9		54	6	9	9		54	54				2	2
7	8	8	8	56	7	8	8	8	56	56			39		39

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—**Blooming Mills**—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked									Number of employees who worked each specified combination of customary turns and hours, by district				
Day turns				Night turns				Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours			Turns per week	Hours								
	Mon-day to Fri-day	Sat-ur-day	Sun-day		Per week	Mon-day to Fri-day	Sat-ur-day						

Group C.—Weekly changes from one shift to another—Continued

7	8	8	8	56	7	8	8	8	56	53½		12			12
7	8	8	8	56	6	8	8	8	48	53½			17		17
6	8	8	8	48	7	8	8	8	56	53½			7		7
6	8	8		48	7	8	8	8	56	53½	22	256	109		387
7	8	8	8	56	7	8	8	8	48	53½	30				30
7	8	8	8	56	6	8	8	8	48	52	7	5			12
6	8	8		48	6	8	8	8	48	52		3			3
7	8	8	8	56	6	8	8	8	48	52			2		2
6	8	8		48	6	8	8	8	48	51½			15		15
7	8	8	8	56	7	8	8	10½	58½	51½			2		2
6	8	8		48	6	8	8	10	58	51½	6				6
7	8	8	8	56	6	8	8	8	48	50½		66			66
7	8	8	8	56	6	8	8	8	48	50½	72	16			88
6	8	8		48	6	8	8	8	48	50½	3				3
6	8	8		48	6	8	8	8	48	50½	6	13			19
6	8	8		48	7	8	8	8	56	50½	71	55			126
6	8	8		48	6	8	8	8	48	50½		104			104
7	8	8	3	51	6	8	8	8	48	49			24		24
6	8	11		51	6	8	8	8	48	49		26			26
7	8	8	2	50	6	8	8	8	48	48½			9		9
6	8	8		48	6	8	8	10	50	48½	8				8
6	8	8		48	6	8	8	8	48	48½		21			21
6	8	8		48	6	8	10		50	48½	18				18
6	8	8		48	6	8	8	10	50	48½	3				3
6	8	9		49	6	8	8	10	50	48½	3				3
6	8	9		49	6	8	8	8	48	48½		20			20
6	8	8	8	48	6	8	8	8	48	48½	13				13
6	8	8		48	6	8	8	9	49	48½	3				3
6	8	8		48	6	8	8	8	48	48½	12				12
6	8	8		48	6	8	8	8	48	48½	3				3
6	8	8	8	48	6	8	8	8	48	48	11				11
6	8	8		48	6	8	8	8	48	48	2				2
6	8	8		48	6	8	8	8	48	48	41				41
6	8	8		48	6	8	8	8	48	48	3	358			361

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—**Blooming Mills**—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						

Group C.—Weekly changes from one shift to another—Continued

6	8	8	48	6	8	8	48	48	38	38			
6	8	8	48	6	8	8	48	48	934	67	18	1,019	
6	8	8	48	6	8	10	50	46	1			1	
6	8	8	48	6	8	8	48	45½	1			1	
6	8	8	48	5	8	8	40	45½	6	658		664	
6	8	8	48	6	8	8	48						
Total									628	2,606	1,667	404	5,305

ROLLERS, ONLY

7	12	12	84	6	12	12	72	78	1			1	
6	12	12	72					72				1	
6	10	10	60	6	10	10	60	61½	2			2	
7	10	5	65	6	10	10	60	60	6			8	
6	10	10	60	6	10	10	60	60			2	2	
6	10	8	58	6	10	10	60	60	1			1	
6	10	8	58	7	8	8	56	56	2		2	2	
6	8	8	48	5	10½	8	53½	54½					
6	8	8	48	7	8	8	56	53½		6	3	9	
6	8	8	48	7	8	8	56	56					
6	8	8	48	6	8	8	48	48		3		3	
7	8	8	56	6	8	10	58	51½					
6	8	8	48	6	8	8	48	60%		3		3	
6	8	8	48	7	8	8	55	50½		3		3	
7	8	8	51	6	8	8	48	48			3	3	
6	8	11	51	6	8	8	48	49			3	3	
6	8	8	48	6	8	8	48	49		3		3	
6	8	8	48	6	8	8	48	48					
6	8	8	48	6	8	10	48	48½			4	4	
6	8	9	49	6	8	8	50	48½					
6	8	8	48	6	8	8	48	48½			3	3	
6	8	8	48	6	8	8	48	48			1	1	
6	8	8	48	6	8	8	48	48			3	3	
6	8	8	48	6	8	8	48	48			5	5	
6	8	8	48	6	8	8	48	48		9		9	
6	8	8	48	6	8	8	48	48		10		10	
6	8	8	48	6	8	8	48	45½					
Total									12	28	29	9	78

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1928, by district—**Blooming Mills**

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—													
				44 and under 48	48	Over 48 and under 56	56	Over 56 and under 60	60	Over 60 and under 66	66 and under 72	72	Over 72 and under 84	84 and over			
Pit cranemen:																	
Eastern.....	5	33	65.7			2		2		21	4				4		
Pittsburgh.....	9	64	49.1	16	18	30											
G. L. and M.																	
W.....	9	82	51.8		15	60	7										
Southern.....	4	22	60.2				18										4
Total.....	27	201	54.3	16	33	92	25	2	21	4				4			4
Heaters:																	
Eastern.....	5	16	66.7					2		8	4						2
Pittsburgh.....	9	44	50.1	10	3	31											
G. L. and M.																	
W.....	9	51	52.9			48	3										
Southern.....	4	11	60.0				9							1			1
Total.....	27	122	54.4	10	3	79	12	2	8	4	1	2	1				1
Bottom makers:																	
Eastern.....	4	22	66.1							17							5
Pittsburgh.....	9	54	49.2	8	18	28											
G. L. and M.																	
W.....	8	35	52.3		7	23	3			2							
Southern.....	4	17	57.6			6	9										2
Total.....	25	128	53.9	8	25	57	12			19							7
Roll engineers:																	
Eastern.....	4	10	63.1			2		2		2	4						
Pittsburgh.....	9	28	50.1	3	3	19	3										
G. L. and M.																	
W.....	8	30	54.8		3	13	6	2		6							
Southern.....	4	8	58.8			2	3		2								1
Total.....	25	76	54.6	3	6	36	12	4	2	8	4						1
Rollers:																	
Eastern.....	5	12	60.1			2		1	6	2				1			
Pittsburgh.....	9	28	48.2	10	6	12											
G. L. and M.																	
W.....	9	29	51.1		6	19	2		2								
Southern.....	4	9	56.0		3	3			2					1			
Total.....	27	78	52.0	10	15	36	2	1	10	2				2			
Laborers:																	
Eastern.....	5	47	59.8			1		3	42	1							
Pittsburgh.....	9	224	55.4	1	124			2	47	21	29						
G. L. and M.																	
W.....	5	113	53.8		41		49		23								
Southern.....	3	45	63.6			15			3		9	18					
Total.....	22	429	56.3	1	165	16	49	5	115	22	38	18					

TABLE F.—Average and classified earnings per hour in six specified occupations, 1926, by district—**Bloming Mills**

Occupation and district	Number of employees	Average earnings per hour	Number of employees whose earnings in cents per hour were—																									
			20 and under 25	30 and under 35	35 and under 40	40 and under 45	45 and under 50	50 and under 55	55 and under 60	60 and under 65	65 and under 70	70 and under 75	75 and under 80	80 and under 85	85 and under 90	90 and under 95	95 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200	
Pit cranemen:																												
Eastern.....	33	\$0.746			1	3			2	4	5		1	6	3	3	1	3	1									
Pittsburgh.....	64	.877							6	1	6	2	5	9	8	13	1	3	10									
G. L. and M. W.....	82	.897							9	5	4	1	3	9	9	12	10	10	9	1								
Southern.....	22	.861						3				1	3	6	1	2	6											
Total.....	201	.855			1	3		3	17	10	15	3	10	27	26	29	14	22	20	1								
Heaters:																												
Eastern.....	16	1.262									2					1	2	3				1	2	3	2			
Pittsburgh.....	44	1.288															2	9	16	7	10							
G. L. and M. W.....	51	1.234										1	5				5	11	13	2	8	3		1	2			
Southern.....	11	1.118								1		1				1		6						2				
Total.....	122	1.244								1	2	1	6			2	2	10	26	29	9	19	5	5	3	2		
Bottom makers:																												
Eastern.....	22	.559		1	4		1	8	2		4	2																
Pittsburgh.....	54	.931							1				3	2	13	6	6	16	2									
G. L. and M. W.....	35	.808						2		6	6	5	1	6	3		4		1	1								
Southern.....	17	.690			2					1	2	6	2	1	3													
Total.....	128	.791		1	6		1	10	3	7	12	18	5	4	22	9	6	20	2	1	1							
Roll engineers:																												
Eastern.....	10	.962								1	1		1	1	1		2	1	2	1								
Pittsburgh.....	28	1.004											3	3	3	2	4	3	6	2	1		1					
G. L. and M. W.....	30	.974						1	4	2	1	1	2	3	2	1	2	4	3	3	1	1						
Southern.....	8	.942						1				1	1	1				1	1	1	1							
Total.....	76	.978						1	1	5	5	1	5	7	8	4	5	7	11	8	5	2	1					
Rollers:																												
Eastern.....	12	1.476											1						1	2	1	1			3	1	2	
Pittsburgh.....	28	1.470																3	2	7	5	3		3	3	2		
G. L. and M. W.....	29	1.575													1	1	1		4	4	3	5	3	5	3	2		
Southern.....	9	1.376															1	2		1	2		1	1	1			
Total.....	78	1.498											1		1	1	1	4	3	8	9	11	8	10	7	9		
Laborers:																												
Eastern.....	47	.382		1	38		1																					
Pittsburgh.....	224	.463				97	1	126																				
G. L. and M. W.....	113	.514				23	19	21	49	1																		
Southern.....	45	.318	21	5	4	15																						
Total.....	429	.451	21	6	42	142	21	147	49	1																		

43154-27-8

BLOOMING MILLS

PLATE MILLS

Data for 1926 were collected from the pay rolls of 17 plate-mill establishments and cover 4,202 employees in all occupations. Of the 4,202 employees reported, 1,680 were found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1910, and from 1910 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years all employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ Comparative figures are presented for employees in the selected occupations from 1910 to 1926.

The hours of labor of plate-mill employees have decreased considerably in recent years. Up until the summer of 1923 this department, while showing a small gradual decrease from former years in the working time of employees as a whole, was still largely on a 12-hour basis and some employees also worked 7 days per week. A general reduction in the regular daily hours of employees, however, took place in the latter part of 1923, and few employees now work more than 10 hours per day. A large number of plants adopted the 8-hour day for all employees. In 1914, employees as a whole had an average full-time week of 69.0 hours or almost 6 days per week of 12 hours each. This average continued, with only slight variations, to 1922 when employees worked 66.2 hours per week. Following the 1923 decrease, however, full-time hours per week were reduced to such an extent that employees were asked to work but 57.2 hours per week regularly in 1924 and 55.8 hours in 1926. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1913 to 1926, for the department as a whole, are shown in Table 1, page 4.

Comparisons of the full-time hours per week of employees in the various selected occupations, which may be made from Table A, show like reductions. In 1910 the average full-time hours per week varied from 66.8 for laborers to 71.6 for charging-machine operators, the average for all of the occupations combined being 68.3. In 1926 working time had been so far reduced that the average of 63 hours per week for roll engineers was the highest of any occupation and the average for all 16 occupations combined was only 56.3 hours.

While hours per day and per week were considerably less in 1924 and 1926 as compared with former years, turns per week increased slightly among employees. This increase was not uniform in each district, however, as turns per week in 1924 increased in the Pittsburgh district to a much greater extent than in either of the other districts. The 7-day week is not so significant in this department as in some of the others. Plate mills are seldom operated more than 6 days per week although "light-up" and repair work furnish Sunday work for some of the force. Table B shows that, in 1914, 57 per cent of the employees covered in that year worked 6 days per week

¹ Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

regularly, while 34 per cent worked 5 days one week and 6 days the next. In addition, 6 per cent worked 7 days per week—3 per cent regularly and 3 per cent in biweekly periods. In 1915 there was very little change, but in 1920, 78 per cent worked 6 days per week; 18 per cent alternated weekly from 5 to 6 days; 6 per cent worked 7 days; and 1 per cent worked 6 days one week and 7 days the next. In 1922 turns decreased slightly but increased again in 1924 when 66 per cent of the employees worked 6 days per week regularly; 12 per cent worked 5 and 6 days alternately; 11 per cent worked 7 days; 8 per cent worked 6 and 7 days in consecutive weeks; and 3 per cent worked one week of 6 days and two weeks of 7 days in each three-week period. The number of turns per week decreased in 1926 as compared with 1924, due largely to the introduction of the working arrangement "5 turns, 6 turns, and 6 turns per week in rotation" in the Pittsburgh district. A total of 48 per cent of the employees in that district worked on that basis in 1926.

A good idea of the working time of employees in 1926 in this department may be gained from Table D. By grouping the employees according to hours per day in that table shows that in 1926, of the 4,202 employees covered, 1,846 had a working-day of 8 hours and only 453 worked as many as 12 hours per day. A total of 1,695 worked 10 hours per day. The employees covered in plate mills, of course, include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to members of the producing crew separate figures are shown for the occupation of screw men, sheared-plate mills. Of the 26 employees who worked as screw men during the pay period, 12 worked 8 hours per day, 12 worked 10 hours, and 2 worked the equivalent of 12 hours each day—that is, 11½ hours one week and 12½ hours the next. Only 2 of the employees had any 7-day work and they worked 6 and 7 days in alternate weeks. The full-time hours per week in the occupation varied from 45½ for 3 employees in the Pittsburgh district to 65¼ for 2 employees in the Eastern district. Eleven of the screw men had a full-time week of over 60 hours. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the trend in the hours of labor of employees has been downward in recent years, the trend in hourly earnings has been decidedly upward. In 1914 the earnings per hour of all employees covered were 25.8 cents on the average, while in 1926 employees earned an average of 60.6 cents per hour, an increase of 135 per cent. In other words, the 1926 hourly earnings were 2½ times the earnings in 1914. The earnings were highest in 1920, 67.1 cents on the average, and in 1924 they were approximately 5 cents per hour less than in 1926. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, screw men in 1910 earned an average of 42.1 cents per hour, which increased to 48.2 cents in 1913. During 1914 and 1915 hourly earnings decreased slightly but in 1917 increased to 70.2 cents per hour. This increase continued in 1919 to \$1.117, the highest hourly earnings in this occupation of any year reported. The average was approximately the same in 1920 as in 1919, but decreased to 86.3 cents per hour in 1922. Earnings rose again to \$1.052 in 1924 and \$1.088 in 1926. A distribution by hourly earn-

ings of the employees in 6 specified occupations in 1926 is given in Table F.

Average full-time earnings per week were almost twice as great in 1926 as they were in 1914. In 1914 earnings per full-time week for all employees were \$17.80 on the average, while in 1926 they had increased to \$33.81. In 1920 they were \$46.16, the highest of any year shown, and in 1924 they were \$32.15. Weekly earnings in the various selected occupations show like increases; screw men, for example, earned an average of \$28.75 in 1910, \$33.36 in 1913, and \$79.64 in 1919. In the following years there was a decrease in either hourly earnings or in the hours of labor, or both, and weekly earnings decreased to \$56.42 in 1922 and \$59.84 in 1926.

The 1,680 employees in the selected occupations worked an average of 90.7 hours during the 16-day pay period covered by the 1926 study, for which they received an average of \$60.72. This includes all the hours worked and the earnings received by these employees, as shown in Table C. Roll engineers worked the most time, 126.1 hours, and laborers the least or 58.1 hours. Laborers also earned the least money, \$24.95, while rollers, universal mills, a highly skilled occupation, earned the largest amount or \$157.85. Shearmen's helpers, which includes the largest number of employees reported for any occupation, worked 90.8 hours during the pay period and received \$52.15.

A classification of employees in 6 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupations of shearmen's helpers 68 of the 674 employees worked less than 32 hours during the pay period, while 2 employees in the Eastern district worked between 180 and 192 hours. The largest group, 99, worked 72 and under 80 hours. A total of 80 employees worked between 120 and 132 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations in this table. Laborers earned from under \$5 to \$65 and under \$70, while rollers earned from \$10 and under \$15 to \$200 and under \$250. Shearmen's helpers earned from under \$5 to \$130 and under \$140. The largest group of shearmen's helpers, 72, earned \$50 and under \$55.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Plate Mills

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—				
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under 60	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84
Charging-crane and charging-machine operators:													
1910	9	41	71.6	\$0.303	\$21.85	101	89	91			34	56	10
1911	9	39	69.4	.283	19.70	98	83	82	3	5	33	56	3
1912	10	42	69.6	.315	21.98	98	93	91		5	33	33	29
1913	10	46	70.7	.339	24.07	100	100	100			35	39	26
1914	12	52	70.2	.306	21.69	99	90	90			42	31	27
1915	12	54	70.3	.329	23.39	99	97	97			41	30	30
1917	7	30	70.4	.480	33.85	100	142	141			20	80	
1919	11	71	71.5	.799	57.13	101	236	237			18	76	6
1920	10	63	70.0	.798	56.18	99	235	233	6		38	19	37
1922	12	72	66.9	.563	37.88	95	168	157	19	17	32	3	29
1924	13	87	57.1	.679	37.79	81	200	157	44	14	43		
1926	16	88	56.4	.711	40.10	79	235	187	23	26	17	34	
Heaters:													
1910	11	56	71.0	.508	36.35	99	90	90			39	54	7
1911	11	55	69.1	.468	32.46	96	83	80	2	4	38	55	2
1912	11	55	69.9	.513	36.02	97	91	89		4	36	33	27
1913	11	54	71.7	.562	40.59	100	100	100			39	28	35
1914	13	64	70.5	.529	37.63	98	94	93			48	23	22
1915	13	61	70.6	.557	39.73	98	99	98			49	21	23
1917	7	30	70.4	.771	54.35	98	137	134			20	80	
1919	11	66	70.7	1.202	84.98	99	214	209			27	70	3
1920	11	84	68.5	1.186	81.55	96	212	201	4		60	26	11
1922	12	75	67.6	.852	57.03	94	152	141	5		55	15	25
1924	13	90	56.5	.961	52.52	79	171	129		66	34		
1926	17	85	55.5	1.103	61.22	78	196	151	14	54	4	28	
Heaters' helpers:													
1910	10	111	69.5	.243	16.98	101	96	97			67	28	5
1911	10	108	67.3	.227	15.31	98	90	87	4		66	30	1
1912	10	113	68.7	.243	16.74	100	96	96		3	61	25	8
1913	10	107	68.7	.252	17.50	100	100	100			64	23	12
1914	12	112	67.7	.247	16.68	99	98	95			76	9	15
1915	12	109	67.6	.264	18.04	98	105	103			76	8	16
1917	6	36	67.4	.469	31.67	98	186	181			56	44	
1919	10	129	71.1	.601	42.73	103	238	244			23	74	3
1920	10	140	68.9	.620	42.74	100	246	244		1	73	17	9
1922	11	132	67.3	.503	34.36	98	200	196	7	6	52		5
1924	12	126	61.6	.538	32.84	90	213	188	2	37	46		30
1926	15	118	62.4	.580	36.19	91	252	226	3	25	29	26	16
Roll engineers:													
1910	11	36	71.5	.300	21.45	98	97	95			28	61	11
1911	11	35	70.8	.290	20.55	97	94	91		6	34	37	17
1912	11	37	72.5	.287	20.93	100	93	92		5	32	27	22
1913	11	36	72.8	.309	22.63	100	100	100			33	31	22
1914	13	38	70.2	.307	21.55	96	99	95			45	34	16
1915	13	39	69.7	.309	21.58	96	100	95			51	28	15
1917	7	20	70.9	.444	31.63	97	144	140			30	60	10
1919	11	43	72.7	.744	54.09	100	241	239			19	67	14
1920	11	39	71.6	.774	55.98	98	250	247			31	33	23
1922	12	46	69.6	.538	37.74	96	174	167		26	26	13	17
1924	12	46	63.3	.614	38.99	87	199	172		37	13	41	9
1926	14	35	63.0	.651	41.01	87	211	181	9	17	23	37	14

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Plate Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—									
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60 and under 72	72	Over 72 and under 84	84				
Rollers, sheared-plate mills:																		
1910	9	28	68.4	\$0.712	\$48.18	100	99	98										
1911	9	28	68.1	.607	41.46	99	85	84		4		54	43					
1912	9	27	68.7	.711	48.93	100	99	99				48	52					
1913	9	26	68.5	.718	49.21	100	100	100				50	50					
1914	11	28	68.0	.703	47.94	99	98	97				57	43					
1915	11	28	67.9	.734	49.89	99	102	101				57	43					
1917	7	18	69.4	1.011	70.32	101	141	143				33	67					
1919	9	30	70.8	1.530	108.32	103	213	220				23	77					
1920	10	35	68.1	1.558	106.60	99	217	217			6	51	34			9		
1922	10	33	66.5	1.126	74.43	97	157	151		21	6	39	15			18		
1924	10	34	56.5	1.300	71.62	82	181	146		21	24	21	35					
1926	13	30	57.0	1.364	77.75	83	190	158		30	10	10	50					
Screw men, sheared-plate mills:																		
1910	9	28	68.6	.421	28.75	99	87	86				64	36					
1911	9	28	68.6	.393	26.95	99	82	81		4		46	50					
1912	9	29	69.0	.435	30.00	100	90	90		3		41	55					
1913	9	29	69.0	.482	33.36	100	100	100				45	55					
1914	10	28	68.7	.434	30.08	100	90	90				50	50					
1915	10	26	68.3	.474	32.61	99	98	98				54	46					
1917	7	22	69.9	.702	49.15	101	146	147				27	73					
1919	9	32	71.3	1.117	79.64	103	232	239				16	84					
1919	9	39	68.4	1.115	76.23	99	231	229			5	51	44					
1922	8	29	66.2	.863	56.42	96	179	169		28		31	21			21		
1924	8	33	54.7	1.052	56.78	79	218	170		33	15	18	33					
1926	10	26	55.0	1.088	59.84	80	226	180		46	12		42					
Table operators, sheared-plate mills:																		
1910	9	26	68.4	.318	21.64	100	88	87				69	31					
1911	9	28	68.1	.300	20.44	100	83	82				57	43					
1912	9	30	68.3	.334	22.85	100	92	92				53	47					
1913	9	31	68.2	.363	24.87	100	100	100				55	45					
1914	11	31	67.6	.317	21.73	99	87	87				61	39					
1915	11	32	67.5	.332	22.63	99	91	91				63	38					
1917	6	20	68.5	.510	35.02	100	140	141				40	60					
1919	9	45	70.6	.825	58.25	104	227	234				29	71					
1920	10	42	67.6	.870	58.80	99	240	236				5	55			40		
1922	10	36	65.6	.635	42.25	96	175	170		22	8	31	28			11		
1924	10	40	56.5	.730	39.48	83	201	159		28	20	25	28					
1926	12	32	56.1	.804	45.10	82	221	181		38	16	6	41					
Hook men, sheared-plate mills:																		
1910	9	73	68.3	.262	17.88	100	84	83				68	32					
1911	9	72	68.1	.240	16.81	100	79	78				58	42					
1912	9	72	68.5	.276	18.90	100	88	88				53	47					
1913	9	76	68.4	.313	21.55	100	100	100				57	43					
1914	11	74	68.2	.294	20.27	100	94	94				57	43					
1915	11	76	68.0	.314	21.57	99	100	100				58	42					
1917	6	49	69.6	.476	33.25	102	152	154				29	71					
1919	9	89	71.0	.780	55.38	104	249	257				22	78					
1920	10	100	67.6	.813	55.02	99	260	255			8	55	37					
1922	10	80	65.8	.585	38.20	96	187	177			20	9	35			6		
1924	10	105	56.0	.644	35.05	82	206	163		30	13	27	30					
1926	12	83	56.1	.698	38.88	82	221	180		36	12	11	41					

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Plate Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—									
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60 and over 72	Over 72 and under 84	84					
Roll hands, other, sheared plate mills:																		
1910.....	6	14	68.0	\$0.263	\$17.71	98	99	97				71	29					
1911.....	6	14	68.9	.242	16.64	100	91	91				43	57					
1912.....	6	16	69.3	.269	18.54	100	102	101				38	63					
1913.....	7	20	69.1	.265	18.28	100	100	100				50	50					
1914.....	9	24	67.4	.257	17.42	98	97	95				67	33					
1915.....	9	24	67.4	.268	18.12	98	101	99				58	42					
1917.....	5	16	69.1	.401	27.74	100	151	152				37	63					
1919.....	8	28	71.0	.676	48.00	103	255	263				21	79					
1920.....	8	35	68.3	.668	45.76	99	252	250				6	64					
1922.....	10	56	65.5	.490	31.70	95	181	173		10	9	43	30					
1924.....	10	61	58.4	.553	31.08	85	209	170		15	15	36	34					
1926.....	10	36	55.5	.725	40.24	80	274	220		33	6	25	36					
Rollers, universal mills:																		
1910.....	4	8	69.5	.636	44.22	100	95	92					50	50				
1911.....	4	7	68.4	.584	40.31	98	87	84			14	29	57					
1912.....	4	6	67.8	.581	39.78	97	86	83			17	33	50					
1913.....	4	6	69.8	.672	47.81	100	100	100				33	67					
1914.....	5	8	68.8	.590	41.08	99	88	86				22	50					
1915.....	5	8	68.8	.676	47.10	99	101	99				50	50					
1919.....	5	9	70.7	1.371	96.93	101	204	203				22	78					
1920.....	4	9	70.0	1.372	98.32	100	204	206				56	22	22				
1922.....	5	11	64.8	1.187	75.26	93	177	157		18	18	36	27					
1924.....	6	13	56.4	1.251	70.34	81	186	147		15	23	31	31					
1926.....	5	13	50.3	1.383	77.86	81	206	163		31	23	15	31					
Screw men, main rolls, universal mills:																		
1910.....	4	8	69.5	.470	32.75	99	102	100					50	50				
1911.....	4	7	66.6	.421	28.23	95	92	86			29	29	43					
1912.....	4	7	66.6	.407	27.38	95	88	84			29	29	43					
1913.....	4	7	70.1	.460	32.66	100	100	100				29	71					
1914.....	5	9	69.2	.386	26.96	99	84	83				44	56					
1915.....	5	9	69.2	.451	31.51	99	98	96				44	56					
1919.....	5	11	70.9	1.015	71.96	101	221	220				18	82					
1920.....	4	9	69.4	1.174	83.35	99	255	255				22	78					
1922.....	5	11	64.0	.813	50.80	91	177	156		18	27	36	18					
1924.....	6	15	56.0	.846	48.45	80	183	148		13	20	40	27					
1926.....	6	17	57.1	.937	53.50	81	204	164		18	18	41	24					
Screw men, side rolls, universal mills:																		
1910.....	4	10	69.2	.314	21.77	101	107	106					60	40				
1911.....	4	9	66.3	.296	19.80	97	101	96				22	44	33				
1912.....	4	9	66.3	.271	18.21	97	92	88				22	44	33				
1913.....	4	8	68.6	.294	20.56	100	100	100				22	50	50				
1914.....	5	10	68.1	.271	18.69	99	92	91				22	60	40				
1915.....	5	10	68.1	.332	22.83	99	113	111				22	60	40				
1919.....	5	10	70.8	.713	50.48	103	243	246				22	80	20				
1920.....	4	13	69.6	.738	57.38	101	251	279				46	54					
1922.....	5	12	65.3	.606	39.04	95	206	190		17	17	50	17					
1924.....	6	17	56.6	.642	37.31	83	218	181		12	18	29	41					
1926.....	6	18	57.5	.709	40.77	84	241	198		22	17	28	33					

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Plate Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—							
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84	
Roll hands, other, universal mills:																
1910.....	2	6	70.0	\$0.299	\$20.93	100	115	113	-----	-----	33	67	-----	-----		
1911.....	2	4	72.0	.299	21.55	102	115	116	-----	-----	-----	100	-----	-----		
1912.....	3	5	69.6	.277	19.41	99	106	105	-----	20	-----	80	-----	-----		
1913.....	3	8	70.3	.261	18.50	100	100	100	-----	-----	25	75	-----	-----		
1914.....	5	10	69.5	.266	18.48	99	102	100	-----	-----	40	60	-----	-----		
1915.....	5	9	69.2	.310	21.46	98	119	116	-----	-----	44	56	-----	-----		
1919.....	5	19	71.4	.605	43.20	102	232	234	-----	-----	11	89	-----	-----		
1920.....	4	10	69.5	.687	48.41	99	263	262	-----	-----	40	60	-----	-----		
1922.....	5	17	65.5	.502	32.18	93	192	174	-----	12	24	24	41	-----		
1924.....	6	19	56.7	.555	32.27	81	213	174	-----	11	16	53	21	-----		
1926.....	5	20	58.2	.601	34.98	83	230	189	-----	15	-----	60	25	-----		
Shearmen:																
1910.....	11	70	67.5	.378	25.69	98	91	89	-----	-----	3	64	33	-----		
1911.....	11	66	68.0	.356	24.45	99	86	85	-----	-----	6	42	52	-----		
1912.....	11	69	68.3	.384	26.48	99	93	92	-----	-----	7	38	55	-----		
1913.....	11	69	68.8	.415	28.81	100	100	100	-----	1	-----	39	59	-----		
1914.....	13	73	68.4	.406	27.97	99	98	97	-----	-----	4	45	53	-----		
1915.....	13	73	68.2	.436	29.68	99	105	103	-----	1	3	44	52	-----		
1917.....	7	42	69.7	.638	44.74	101	154	155	-----	-----	24	10	67	-----		
1919.....	11	97	70.8	.977	69.17	103	235	240	-----	1	-----	21	78	-----		
1920.....	11	92	68.0	1.016	69.44	99	245	241	-----	-----	8	45	47	-----		
1922.....	12	106	64.1	.666	43.10	93	160	150	-----	-----	27	10	29	33		
1924.....	13	108	55.8	.793	43.15	81	191	150	-----	35	18	30	18	-----		
1926.....	17	101	56.3	.836	47.07	82	201	163	-----	29	22	40	10	-----		
Shearmen's helpers:																
1910.....	11	460	68.4	.215	14.71	100	86	85	-----	-----	2	57	42	-----		
1911.....	11	429	68.4	.206	14.20	100	82	82	-----	-----	4	41	56	-----		
1912.....	11	432	68.6	.223	15.42	100	89	89	-----	-----	3	39	58	-----		
1913.....	11	425	68.7	.250	17.25	100	100	100	-----	(1)	-----	42	57	-----		
1914.....	13	408	68.2	.243	16.71	99	97	97	-----	(1)	-----	48	52	-----		
1915.....	13	406	68.4	.260	17.89	100	104	104	-----	(1)	-----	1	46	50		
1917.....	7	248	69.0	.400	27.60	100	160	160	-----	-----	20	10	70	-----		
1919.....	11	630	71.1	.630	44.79	103	252	260	-----	-----	20	80	(1)	-----		
1920.....	11	623	68.2	.665	45.56	99	266	264	-----	(1)	3	44	52	-----		
1922.....	12	678	64.9	.455	29.73	94	182	172	-----	-----	23	7	25	45		
1924.....	13	767	55.5	.529	28.85	81	212	167	-----	34	20	32	15	-----		
1926.....	17	674	55.1	.579	31.90	80	232	185	-----	32	18	44	7	-----		
Laborers:																
1910.....	11	355	66.8	.159	10.68	96	88	85	-----	-----	25	58	10	1	6	
1911.....	11	274	66.2	.158	10.51	96	87	83	-----	-----	26	52	18	3	1	
1912.....	11	339	68.9	.161	11.17	99	89	89	-----	-----	22	36	31	6	15	
1913.....	11	349	69.3	.181	12.62	100	100	100	-----	-----	22	36	32	3	17	
1914.....	12	216	67.6	.174	11.85	98	96	94	-----	6	21	30	27	13	3	
1915.....	12	208	66.7	.174	11.66	96	96	92	-----	-----	17	19	29	19	13	
1917.....	5	197	70.3	.294	20.67	101	162	164	-----	3	10	-----	87	-----		
1919.....	10	587	69.5	.450	31.28	100	249	248	-----	-----	12	2	21	62	1	
1920.....	8	348	67.9	.498	34.66	98	275	275	-----	8	12	4	66	10	-----	
1922.....	10	493	64.0	.336	21.65	92	186	172	-----	-----	20	43	4	29	3	
1924.....	11	640	56.8	.432	24.20	82	239	192	-----	35	23	32	10	-----		
1926.....	16	304	56.1	.425	23.84	81	235	189	-----	41	14	28	16	2	-----	

¹ Less than 1 per cent.

² Including 3 per cent whose full-time hours per week were 91.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Plate Mills

District and year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—							Per cent of employees whose customary working turns per week were—								
			5	5 and 6 alternately	5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7	5	5 and 6 alternately	5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7
Eastern:																		
1914.....	3	707		475		184			2	46		67		26			(1)	7
1915.....	3	699	3	516		131			2	47	(1)	74		19			(1)	7
1920.....	3	937		278		561				68		30		63				7
1922.....	4	1,218		344		680		44		150		28		56		4		12
1924.....	4	1,130		371		531		68		160		33		47				14
1926.....	6	1,094		229		615		94		156		21		56		9		14
Pittsburgh:																		
1914.....	6	1,139		172		817		71		79		15		72		7		7
1915.....	6	1,121		174		807		59		81		16		72		5		7
1920.....	5	1,572		128	1,397		18			29		8		89		1		2
1922.....	4	1,496		576		778		33		111		38		52		2		7
1924.....	5	2,118			1,625		149	97		247				77		7	5	12
1926.....	6	1,845		2	879	707	43	102	6	106		(1)	48	38	2	6	(1)	6
Great Lakes and Middle West:																		
1914.....	4	455		130		306		10	3	6		29		67		2	1	1
1915.....	4	425		106		294		18	3	4		25		69		4	1	1
1920.....	3	721		180		537				4		15		74				1
1922.....	4	1,050	1	148		799		18		84	(1)	14		76		2		8
1924.....	4	986	1	148		623		106	39	69	(1)	15		63		11	4	7
1926.....	5	1,263		135		749	68	73	231	7		11		59	5	6	18	1
Total:																		
1914.....	13	2,301		777		1,307		81	5	131		34		57		3	(1)	3
1915.....	13	2,245	3	796		1,232		77	5	132	(1)	35		55		3	(1)	9
1920.....	11	3,230		586		2,525		18		101		18		78		1		6
1922.....	12	3,766	1	1,068		2,257		95		345	(1)	28		60		3		9
1924.....	13	4,234	1	519		2,779		323	136	476	(1)	12		66		8	3	11
1926.....	17	4,202		366	879	2,071	111	269	237	269		9	21	49	3	6	6	6

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Plate Mills

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)							
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations		
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour
Charging-crane and charging-machine operators:													
Eastern.....	5	21	6.1	10.4	63.5	27	104.2	\$49.38	\$0.474	\$30.10	110.6	\$52.33	\$0.473
Pittsburgh.....	6	28	5.9	8.8	52.4	31	91.7	82.75	.902	47.26	94.0	84.13	.895
Great Lakes and Middle West.....	5	26	6.3	8.7	54.9	30	94.4	71.13	.754	41.39	97.9	73.22	.748
Total.....	16	75	6.1	9.2	56.4	88	96.4	68.55	.711	40.10	100.4	70.65	.704
Heaters:													
Eastern.....	6	25	6.0	10.4	62.9	27	113.6	84.61	.745	46.86	115.8	85.55	.739
Pittsburgh.....	6	27	6.2	8.2	50.7	27	98.1	137.11	1.398	70.88	98.1	137.11	1.398
Great Lakes and Middle West.....	5	31	6.4	8.4	53.8	31	110.4	132.22	1.197	64.40	110.4	132.22	1.197
Total.....	17	83	6.2	8.9	55.5	85	107.5	118.65	1.103	61.22	108.2	118.95	1.099
Heaters' helpers:													
Eastern.....	6	48	6.1	11.2	68.0	55	114.4	50.61	.443	30.12	126.5	56.82	.449
Pittsburgh.....	6	25	6.3	8.8	55.1	28	92.9	70.08	.755	41.60	93.1	70.30	.755
Great Lakes and Middle West.....	3	25	5.8	10.2	59.1	35	75.7	55.51	.734	43.38	80.3	60.22	.750
Total.....	15	98	6.1	10.3	62.4	118	97.8	56.68	.580	36.19	104.8	61.03	.582
Roll engineers:													
Eastern.....	6	12	6.2	11.4	71.2	13	147.0	71.49	.486	34.60	154.4	74.18	.480
Pittsburgh.....	6	14	6.3	8.9	56.0	14	113.4	84.27	.743	41.61	113.4	84.27	.743
Great Lakes and Middle West.....	2	6	6.0	10.5	62.8	8	99.8	85.85	.860	54.01	102.3	87.64	.857
Total.....	14	32	6.2	10.1	63.0	35	122.8	79.88	.651	41.01	126.1	81.29	.645
Rollers, sheared-plate mills:													
Eastern.....	5	10	6.1	10.5	63.5	11	107.8	97.34	.903	57.34	121.0	105.55	.872

Pittsburgh.....	5	11	5.9	8.9	53.0	12	94.6	165.29	1.747	92.59	99.8	171.24	1.716
Great Lakes and Middle West..	3	7	5.9	9.3	54.1	7	111.2	167.65	1.507	81.53	111.2	167.65	1.507
Total.....	13	28	6.0	9.6	57.0	30	103.3	140.92	1.364	77.75	110.2	146.31	1.327
Screw men, sheared-plate mills:													
Eastern.....	3	7	6.2	10.3	63.4	7	106.8	65.04	.609	38.61	128.0	74.71	.533
Pittsburgh.....	5	11	5.9	8.9	53.0	11	97.0	126.79	1.306	69.22	97.8	128.24	1.312
Great Lakes and Middle West..	2	8	5.9	8.6	50.4	8	80.8	103.60	1.283	64.66	81.8	105.21	1.287
Total.....	10	26	6.0	9.2	55.0	26	94.7	103.03	1.088	59.84	101.0	106.74	1.057
Table operators, sheared-plate mills:													
Eastern.....	5	11	6.1	10.4	63.2	11	108.8	58.86	.541	34.19	117.8	63.24	.537
Pittsburgh.....	5	11	5.9	8.9	53.0	11	101.6	102.84	1.012	53.64	101.6	102.84	1.012
Great Lakes and Middle West..	2	10	5.8	9.0	51.8	10	85.8	77.20	.900	46.62	86.6	78.28	.904
Total.....	12	32	5.9	9.5	56.1	32	99.2	79.71	.804	45.10	102.5	81.55	.796
Hook men, sheared-plate mills:													
Eastern.....	5	28	6.1	10.5	63.6	34	98.5	45.60	.463	29.45	116.8	54.56	.467
Pittsburgh.....	5	23	5.8	9.0	52.8	24	96.6	84.63	.876	46.25	96.9	85.14	.878
Great Lakes and Middle West..	2	24	5.9	8.6	50.4	25	75.1	65.98	.878	44.25	77.0	67.65	.878
Total.....	12	75	5.9	9.5	56.1	83	90.9	63.02	.693	38.88	99.1	67.34	.680
Roll hands, other, sheared-plate mills:													
Eastern.....	4	10	6.2	10.2	62.4	14	66.2	30.79	.465	29.02	94.7	45.31	.478
Pittsburgh.....	4	12	5.8	9.1	53.3	14	84.4	57.59	.682	36.35	85.7	58.62	.684
Great Lakes and Middle West..	2	8	5.9	8.6	50.4	8	86.8	99.29	1.145	57.71	95.8	107.05	1.118
Total.....	10	30	5.9	9.3	55.5	36	77.9	56.44	.725	40.24	91.4	64.20	.702
Rollers, universal mills:													
Eastern.....	2	4	6.0	10.8	64.1	4	152.8	134.17	.878	56.28	152.8	134.17	.878
Pittsburgh.....	1	3	5.7	8.2	46.3	4	70.8	141.41	2.000	92.60	77.3	150.65	1.950
Great Lakes and Middle West..	2	5	6.4	8.8	56.0	5	108.4	176.65	1.630	91.28	112.4	182.56	1.624
Total.....	5	12	6.1	9.3	56.3	13	110.5	152.75	1.383	77.86	114.0	157.85	1.385
Screw men, main rolls, universal mills:													
Eastern.....	2	4	6.0	10.8	64.1	4	152.8	93.51	.612	39.23	152.8	93.51	.612
Pittsburgh.....	1	3	5.7	8.1	45.7	3	83.3	113.40	1.361	62.20	94.0	123.02	1.309
Great Lakes and Middle West..	3	9	6.2	9.3	57.8	10	99.2	102.20	1.030	59.53	102.2	105.14	1.029
Total.....	6	16	6.1	9.5	57.1	17	109.0	102.13	.937	53.50	112.6	105.56	.937

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Plate Mills—Continued

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Screw men, side rolls, universal mills:														
Eastern.....	2	6	6.2	10.4	63.8	6	\$145.8	\$76.29	\$0.523	\$33.37	\$150.5	\$77.69	\$0.516	
Pittsburgh.....	1	3	5.7	8.1	45.7	4	57.5	55.11	.958	43.78	93.3	79.95	.857	
Great Lakes and Middle West.....	3	7	6.3	9.1	57.1	8	93.8	79.60	.848	43.42	97.3	82.31	.851	
Total.....	6	18	6.1	9.4	57.5	18	103.1	73.05	.709	40.77	114.1	80.47	.705	
Roll hands, other, universal mills:														
Eastern.....	2	4	6.0	10.8	64.1	5	110.8	56.10	.506	32.43	116.8	58.87	.504	
Pittsburgh.....	1	3	5.7	8.1	45.7	3	76.3	54.07	.708	32.36	95.0	66.13	.696	
Great Lakes and Middle West.....	2	8	6.0	10.0	60.0	12	54.8	35.27	.643	38.58	78.9	48.96	.621	
Total.....	5	15	5.9	9.8	58.2	20	72.1	43.30	.601	34.98	90.8	54.01	.595	
Shearmen:														
Eastern.....	6	27	5.9	10.5	61.6	28	122.3	64.06	.524	32.28	130.4	67.56	.518	
Pittsburgh.....	6	34	6.0	9.2	53.3	38	91.3	102.70	1.125	59.96	93.2	103.90	1.115	
Great Lakes and Middle West.....	5	34	6.1	9.1	55.0	35	99.6	85.07	.854	46.97	101.5	86.05	.848	
Total.....	17	95	6.0	9.5	56.3	101	102.7	85.88	.836	47.07	106.4	87.64	.824	
Shearmen's helpers:														
Eastern.....	6	148	5.9	10.3	61.0	181	93.8	37.55	.400	24.40	102.9	41.13	.400	
Pittsburgh.....	6	233	5.8	8.8	51.3	295	80.1	55.94	.698	35.81	83.0	57.72	.695	
Great Lakes and Middle West.....	5	168	6.5	9.4	55.2	198	88.5	52.43	.592	32.68	91.3	53.93	.591	
Total.....	17	549	6.0	9.4	55.1	674	86.3	49.97	.579	31.90	90.8	52.15	.575	
Laborers:														
Eastern.....	6	41	6.0	9.9	59.5	73	63.2	21.16	.335	19.93	75.2	25.91	.344	
Pittsburgh.....	6	66	6.0	8.6	52.1	180	40.0	18.78	.469	24.43	42.4	20.18	.476	
Great Lakes and Middle West.....	4	37	6.0	9.9	59.4	51	83.1	36.37	.438	26.02	89.1	39.71	.446	
Total.....	16	144	6.0	9.3	56.1	304	52.8	22.42	.425	23.84	58.1	24.95	.429	

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Plate Mills

ALL EMPLOYEES

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Hours					Hours										
Turns per week	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week	Turns per week	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						

Group A.—Day turn only

7	12	12	12	84					84	22				22
7	12	12	12	80½					80½	1				1
7	12	12	6	78					78	1				1
7	11	11	12	78					78			1		1
7	11	11	11	77					77	1				1
6	12	12		73					72	3				3
7	10½	9½	9½	71½					71½					2
7	10	10	10	70					70	30	1		5	36
7	10	10	9	69					69			1		1
7	10	9	10	69					69		4			4
6	11½	11½		69					69			1		1
6	11½	10½		68					68	5				5
6	11½	9½		67					67	3				3
6	12	6		66					66	42				42
6	11½			65½					65½	3				3
6	10	10	10	70					65		6		2	8
6	10	10		60					63½	7				7
6	11½	6		63½					62½	3				3
6	11½	5		62½					60			15		15
6	10	10	10	60					60	32	14		98	144
6	10	10	9	60					59		64			64
6	10½	5		57½					57½	1				1
6	8	8	8	56					56		1			1
6	10	5		55					55	43				43
6	9	9		54					54	1		1		1
6	8	8		50					50					1
6	8	8		48					48		84		6	90
6	6	5		30					30	2				2
Total.										200	178	128		506

Group B.—Night turn only

				6	12½		12½	75	75	1				1
				6	12		12	72	72					1
				7	10	10	10	70	70	1				2
				5	12½			62½	62½			1		1
				6	10	10	10	60	60			5		5
				6	10	10		60	60			4		4
				6	10		10	60	60	1		2		4
				6	8	8	8	48	48		1			1
				6	8	8		48	48		1	1		2
				5	8			40	40		1			1
Total.										4	4	14		22

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Plate Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Turns per week	Day turns				Turns per week	Night turns				Average hours per week	Eastern	Pittsburgh	Great Lakes and Middle West	Southern	Total
	Hours					Hours									
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week						

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	84	30				30
7	11	11	11	77	7	13	13	13	91	84	32				32
7	12	12	12	84	6	12		12	72	78	28		11		39
7	11	11	11	77	7	11	11	11	77	77	3				3
7	11½	11½	8½	77½	6	12½		12½	75	76¼	2				2
6	12	12	12	72	6	12		12	72	72	1		17		18
7	11½	10½	12½	80½	5	12½			62½	71½	9				9
7	11½	10½	10½	78½	5	12½			62½	70½	6				6
7	10½	10½	10	73	5	13½			87½	70¼			5		5
7	10	10	10	70	7	10	10	10	70	70	32	16			48
7	11	11	6	72	5	13			65	68½			4		4
7	11½	10½	3	71	5	12½			62½	66¼	7				7
6	11	11		66	6	11		11	66	66		2			2
7	10	10	5	65	6	11			66	65½			2		2
6	11½	10½		68	5	12½			62½	65¼	228				228
7	10	10	10	70	7	10	10	10	70	65		47			47
6	10	10		60	6	10		10	60	60					60
7	10	10	10	70	6	10		10	60	65	2	42			44
6	11½	10		67½	5	12½			62½	65	1				1
6	10	10		60	7	10	10	10	70	65		2			2
6	10	8		58	6	12		12	72	65	11				11
7	10	8	10	68	6	10		10	60	64	1				1
7	10	10	10	70	6	10	10	10	60	60			3		3
6	10	10		60	6	10		10	60	62½					60
7	10	10	10	70	6	10		10	60	62½		11			11
6	10	10		60	6	10		10	60	62½					60
7	10	10	6	66	6	10		10	60	63					60
7	10	10	5	65	6	10		10	60	62½	5				40
6	10	10		60	6	10	10	10	70	60					5
6	10	10		60	6	10	10	10	60	62½			8		8
7	10	10		60	6	10		10	60	62		5			5
7	8	4		64	6	10		10	60	62	16				16
6	10	13		63	6	10		10	60	62		8			8
6	10	13		63	6	10		10	60	61½					60
6	10	10		60	6	10		10	60	60¼		4			4
7	10	10	5	65	5	11			55	60			1		1
6	10	10	10	60	6	10	10	10	60	60			4		4
6	10	10		60	6	10	10	10	60	60			31		31
6	10	10		60	6	10	10	10	60	60			249		249
6	10	10		60	6	10		10	60	60	326	342	88		756
6	10	9		59	6	10		10	60	59½		2			2
6	10	8		58	6	10		10	60	59	97				97
6	10	11½		61½	5	11		11	55	58¼			12		12
6	10	10		60	7	8	8	8	56	58			3		3
6	10	10		60	5	11		11	55	57½				122	122
7	8	8	8	56	7	7	8	8	56	56		81			81
7	8	8	8	56	7	7	8	8	56	56					56
7	8	8	8	56	6	7	8	8	48	53½			17		17
7	8	8	8	56	6	7	8	8	48	53½		6	1		7
6	8	8		48	7	7	8	8	48	53½			213		213
6	8	8		48	7	7	8	8	56	52			38		38
6	8	8		48	7	7	8	10	58	51½		3			3
6	8	8	8	48	7	8	8	8	48	56				13	13
6	8	8	8	48	6	8	8	8	48	50½					48
6	8	8	8	48	7	8	8	8	56	50½			16		16
6	8	8	8	48	7	8	8	8	48	56					48
6	8	8	8	48	6	8	8	8	56	50½			6		6

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Plate Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Mid-dle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						

Group C.—Weekly changes from one shift to another—Continued

6	8	8	48	7	8	8	8	56	40%		9	30		39
6	8	8	48	7	8	8	8	56	50%		20			20
7	8	8	56	6	8	8	8	48	50		6			6
6	8	8	48	6	8	8	8	48	49%	7				7
6	8	10	50	6	8	8	10	50	48%			3		3
6	8	10	8	6	8	8	8	48	48%					3
6	8	8	48	6	8	8	9	49	48%		16			16
6	8	8	48	6	8	8	9	49	48%		30			30
6	8	8	48	6	8	8	8	48	48		7			7
6	8	8	48	6	8	8	8	48	48		4			4
6	8	8	48	6	8	8	8	48	48		2			2
6	8	8	48	6	8	8	8	48	48			165		165
6	8	8	48	6	8	8	8	48	48			50		56
6	8	8	48	6	8	8	8	48	48		72			72
6	8	8	48	6	8	8	8	48	48		3			3
6	8	8	48	6	8	8	8	48	48		31	3		34
6	8	8	48	6	8	8	5	45	47%		3			3
6	8	8	48	6	8	8	10	50	47%		2			2
6	8	8	48	6	8	8	9	49	47		8			8
6	8	8	48	6	8	8	5	45	46%		19			19
6	8	12	52	5	8	8	8	40	46%		4			4
6	8	10	50	5	8	8	9	49	46%		20			20
6	8	8	48	5	8	8	10	50	46%		6			6
6	8	8	48	5	8	8	8	40	45%		33			33
6	8	8	48	5	8	8	9	49	45%		1			1
6	8	8	48	5	8	8	8	40	45%		794			794
6	8	8	48	5	8	8	8	40	44		2			2
7	5	5	35	7	5	5	5	35	35	4				4
6	5	5	30	6	5	5	5	30	30	2				2
Total										890	1,663	1,121		3,674

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Plate Mills—Continued

SCREW MEN, ONLY

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district								
Day turns				Night turns				Average hours per week	East-ern						Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours			Turns per week	Hours													
	Mon-day to Fri-day	Sat-ur-day	Sun-day		Per week	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week									
6	11½	10½	---	68	5	12½	---	62½	65¼	2	---	---	---	2				
7	10	10	6	66	6	10	10	60	63	3	---	---	---	3				
7	10	8	6	64	6	10	10	60	62	2	---	---	---	2				
7	10	10	4	64	6	10	10	60	62	---	2	---	---	2				
6	10	13	---	63	6	10	10	60	61½	---	2	---	---	2				
6	10	9	---	59	---	---	---	---	59	---	1	---	---	1				
6	10	10	---	60	5	11	---	55	57½	---	---	2	---	2				
6	8	8	---	48	6	8	8	48	48	---	---	6	---	6				
					6	8	8	48										
6	8	12	---	52	5	8	---	40	46⅔	---	3	---	---	3				
					6	8	8	48										
6	8	8	---	48	5	8	---	40	45⅔	---	3	---	---	3				
					6	8	8	49										
Total.	---	---	---	---	---	---	---	---	---	7	11	8	---	26				

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926, by district—Plate Mills

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—						
				44 and under 48	48	Over 48 and under 56	Over 56 and under 60	60	Over 60 and under 66	66 and under 72
Heaters:										
Eastern	6	27	62.9			7	1	3	4	12
Pittsburgh	6	27	50.7		12	12	1		2	
G. L. and M. W.	5	31	53.8			25			6	
Total	17	85	55.5		12	44	2	3	12	12
Rollers, sheared-plate mills:										
Eastern	5	11	63.5					1	9	1
Pittsburgh	5	12	53.0	6			1		5	
G. L. and M. W.	3	7	54.1		3		2	2		
Total	13	30	57.0	6	3		3	3	14	1
Hook men, sheared-plate mills:										
Eastern	5	34	63.6					4	22	8
Pittsburgh	5	24	52.8	12			3	5	4	
G. L. and M. W.	2	25	50.4		18		7			
Total	12	83	56.1	12	18		10	9	26	8
Shearmen:										
Eastern	6	28	61.6				3	15	9	1
Pittsburgh	6	38	53.3	18	2		2	16		
G. L. and M. W.	5	35	55.0		9	9	8	9		
Total	17	101	56.3	18	11	9	13	40	9	1
Shearmen's helpers:										
Eastern	6	181	61.0				24	112	44	1
Pittsburgh	6	295	51.3	157	2		22	114		
G. L. and M. W.	5	198	55.2		55	18	56	69		
Total	17	674	55.1	157	57	18	102	295	44	1
Laborers:										
Eastern	6	73	50.5			17	21	32		
Pittsburgh	6	180	52.1	80	45	1	1	5	48	1
G. L. and M. W.	4	51	59.4		1	1		49		
Total	16	304	56.1	80	46	19	22	86	48	1

STANDARD RAIL MILLS

Data for 1926 were collected from the pay rolls of 7 rail-mill establishments and cover 3,280 employees in all occupations. Of the 3,280 employees reported, 1,603 were found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1910, and from 1910 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years all employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ As stated in the introduction and summary on page 1 comparative figures are presented for employees in the selected occupations for 1924 and 1926 only. The majority of the plants covered in those years were new and in some instances were located in sections of the country not heretofore included in this department; hence any comparison made between the 1924 and 1926 occupational figures and those for earlier years might be more or less misleading. The figures for all employees, however, are comparable from year to year and therefore figures for all occupations are shown for all years covered. No effort was made to group the plants into geographical districts in 1924 and 1926, hence all figures shown in this department are for the United States only. (See Bul. 353 for data prior to 1924.)

The hours of labor of employees in 1926 are less than in any other year for which data are reported. As compared with 1914 and 1915 the full-time hours in 1926 have decreased considerably, but in comparison with other years the decrease is not so marked. The 1923 decrease in the daily hours of labor of employees in this department was largely offset by the increase in the number of turns per week and full-time hours were affected to only a comparatively small extent. In 1914 employees as a whole had an average full-time week of 70.1 hours, or almost 6 days per week of 12 hours each. There was scarcely any change in working time in 1915, but in 1920 hours had been reduced to 61.2 per week. Not much change was shown in 1922, but the decrease continued to 57.4 hours in 1924 and 55.5 hours in 1926. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1913 to 1926, for the department as a whole, are shown in Table 1, page 4.

Comparison of the full-time hours per week of the employees in 1924 and 1926 in the various selected occupations may be made from Table A. In 1924 the full-time hours per week varied from 53.7 for straighteners to 63.6 for laborers. In 1926 the range was 53 hours for straighteners to 58.3 for table men. Laborers worked 56.6 hours.

While hours per day were considerably less in 1924 and 1926 as compared with former years, the 7-day week increased among employees. Table B shows that, in 1914, 88 per cent of all employees covered in that year worked 6 days per week regularly and 7 per cent worked 5 days one week and 6 days the next. Five per cent of the employees

¹ Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

had a 7-day week, of which 4 per cent worked every Sunday. In 1922, 86 per cent of the employees worked 6 days per week and 14 per cent worked 7 days—11 per cent each week and 3 per cent in two and three week periods. In 1924, however, as the hours per day were greatly decreased the weekly turns were increased to such an extent that only 44 per cent worked 6 days each week, while 56 per cent worked 7 days per week—10 per cent every week, 29 per cent twice in three weeks, and 17 per cent once in two weeks. The number of turns per week changed only to a slight extent in 1926 and 51 per cent were on a regular 6-day basis while 49 per cent worked 7 days per week—6 per cent regularly and 43 per cent at least as often as twice in 3 weeks.

A good idea of the working time of the employees in 1926 in this department may be gained from Table D. The grouping of the employees by hours per day in that table shows that, in 1926, 1,999 of the 3,280 employees covered had a working-day of 8 hours, 1,272 worked 10 hours, and 9 worked 9 hours. No employees were reported as having worked more than 10 hours per day. The employees covered in rail mills of course include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to members of the producing crew separate figures are shown for the occupation of table lever men. Of the 66 employees who worked as table lever men during the pay period, 50 worked 8 hours per day and 16 worked 10 hours. The 8-hour employees all worked 56 hours per week or less and the 10-hour employees had a week of 60 to 65 hours. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the trend of the hours of labor of employees has been downward in recent years, the trend in hourly earnings has been decidedly upward. In 1914 the earnings per hour of all employees covered were 25.2 cents on the average, while in 1926 employees earned an average of 59.5 cents per hour, an increase of 136 per cent. In other words, the 1926 hourly earnings were $2\frac{1}{3}$ times the earnings in 1914. The earnings were highest in 1920, 63.2 cents on the average, and in 1924 they were only slightly less than in 1926. A distribution by average hourly earnings of the employees in 5 specified occupations in 1926 is given in Table F.

Average full-time earnings per week were almost twice as great in 1926 as they were in 1914. In 1914 earnings per full-time week for all employees were \$17.67 on the average, while in 1926 they had increased to \$33.02. In 1920 they were \$38.68, the highest of any year shown, and in 1924 they were approximately the same as in 1926.

The 1,603 employees in the selected occupations worked an average of 99.1 hours during the 16-day pay period covered by the 1926 study, for which they received an average of \$65.73. This includes all the hours worked and the earnings received by these employees, as shown in Table C. Roll engineers worked the most time, 126.3 hours, and charging-machine operators the least or 57.6 hours. Cold-saw helpers received the least money, \$35.59, while rollers, a highly skilled occupation, earned the largest amount, \$214.71. Laborers worked 90.6 hours and received \$39.40.

A classification of employees in 5 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of laborers 18 of the 234 employees worked less than 32 hours during the pay period, while 8 worked between 144 and 156 hours. The largest group, 34, worked over 120 and under 132 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations in this table. Laborers earned from less than \$5 for the period to \$90 and under \$95, while straighteners earned from under \$5 to \$250 and over. The largest group of laborers, 39, earned \$45 and under \$50.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, 1924 and 1926, by occupation—Standard Rail Mills

Occupation	Year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Per cent of employees whose average full-time hours per week were—					
							48 and under	Over 48 and under 60	60	Over 60 and under 72	Over 72 and under 84	84
Charging-machine operators	1924	3	23	54.8	\$0.595	\$32.61	61	---	---	39	---	---
	1926	2	20	54.8	.713	39.07	75	---	---	25	---	---
Reheaters	1924	3	10	59.0	.897	52.95	50	30	---	---	20	---
	1926	3	9	53.1	1.034	54.91	44	33	---	22	---	---
Reheaters' helpers	1924	2	8	54.8	.521	28.56	75	---	---	25	---	---
	1926	3	14	53.6	.627	33.61	50	36	7	7	---	---
Roll engineers	1924	6	24	57.0	.747	42.57	25	29	---	46	---	---
	1926	5	19	57.4	.757	43.45	32	26	---	42	---	---
Rollers	1924	5	12	55.3	1.783	99.49	---	67	---	33	---	---
	1926	5	11	54.2	1.888	102.33	27	45	9	18	---	---
Assistant rollers	1924	6	18	56.5	.882	55.49	---	67	11	22	---	---
	1926	6	14	55.3	1.015	56.13	29	35	21	17	---	---
Table lever men	1924	7	83	54.8	.750	41.09	---	73	---	27	---	---
	1926	7	66	53.5	.747	39.96	33	42	15	9	---	---
Tablemen	1924	4	30	59.6	.650	38.76	---	47	---	53	---	---
	1926	3	21	58.3	.687	40.05	14	38	---	48	---	---
Guide setters	1924	7	37	57.1	.810	46.27	---	54	24	22	---	---
	1926	7	31	56.9	.836	47.57	10	45	26	19	---	---
Hot-saw men	1924	7	27	55.7	.636	35.45	15	41	26	19	---	---
	1926	7	22	54.5	.696	37.93	27	37	27	9	---	---
Hot-saw helpers	1924	6	88	55.9	.511	28.54	13	45	15	27	---	---
	1926	6	56	56.6	.509	28.81	11	38	30	22	---	---
Hotbed lever men	1924	7	64	54.3	.595	32.28	13	52	16	20	---	---
	1926	7	51	54.1	.564	30.51	29	43	16	12	---	---
Hotbed men	1924	6	64	54.2	.467	25.33	9	64	19	8	---	---
	1926	6	78	54.1	.518	28.02	15	64	14	6	---	---
Straighteners, gag press	1924	7	158	53.7	1.142	61.33	23	56	16	6	---	---
	1926	7	138	53.0	1.233	65.35	28	55	17	---	---	---
Straighteners' helpers	1924	7	300	56.9	.556	31.65	21	38	9	4	28	---
	1926	7	214	53.7	.590	31.68	38	40	13	9	---	---
Chippers	1924	7	193	54.9	.689	37.82	20	48	21	11	---	---
	1926	7	145	55.3	.695	38.43	25	37	25	14	---	---
Drillers and punchers	1924	7	347	57.5	.595	34.21	20	41	18	8	13	---
	1926	7	233	55.4	.675	37.40	22	40	25	13	---	---
Cold-saw men	1924	7	24	55.5	.497	27.59	50	---	33	---	17	---
	1926	7	20	53.2	.540	28.73	65	---	25	10	---	---
Cold-saw helpers	1924	6	141	55.7	.443	24.69	45	---	43	4	8	---
	1926	6	122	54.6	.447	24.41	56	1	32	11	---	---
Inspectors	1924	7	95	57.9	.530	30.71	33	14	31	11	---	---
	1926	7	85	55.2	.591	32.62	15	49	26	9	---	---
Laborers	1924	7	404	63.6	.385	24.51	24	4	40	9	23	---
	1926	6	234	56.6	.421	23.83	34	(¹)	55	10	---	---

¹ Less than 1 per cent.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by year—Standard Ball Mills

Year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—							Per cent of employees whose customary working turns per week were—						
			5 and 6 alternately	5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7	5 and 6 alternately	5, 6, and 6 in rotation	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7
1914.....	7	1,725	117	9	1,519	-----	14	-----	66	7	1	88	-----	1	-----	4
1915.....	7	1,945	89	18	1,714	-----	22	-----	102	5	1	88	-----	1	-----	5
1920.....	4	1,349	-----	-----	1,247	-----	7	-----	60	-----	-----	92	-----	1	-----	4
1922.....	4	1,308	-----	-----	1,120	-----	9	-----	149	-----	-----	86	-----	1	-----	11
1924.....	7	3,382	-----	-----	1,496	-----	2	-----	569	981	334	-----	44	(1)	17	29
1926.....	7	3,280	-----	-----	1,682	-----	-----	-----	390	1,001	207	-----	51	-----	12	31

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation—Standard Rail Mills

Occupation	Number of plants	Positions				Employees working in scheduled pay period (16 days)							
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations		
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour
Charging-machine operators	2	10	6.2	8.8	54.8	20	57.6	\$41.04	\$0.713	\$39.07	57.6	\$41.04	\$0.713
Reheaters	3	8	6.4	8.3	53.1	9	103.8	107.36	1.034	54.91	103.8	107.36	1.034
Reheaters' helpers	3	10	6.4	8.4	53.6	14	77.8	48.82	.627	33.61	88.3	56.10	.635
Roll engineers	5	19	6.4	8.9	57.4	19	126.3	95.56	.757	43.45	126.3	95.56	.757
Rollers	5	11	6.3	8.6	54.2	11	113.7	214.71	1.888	102.33	113.7	214.71	1.888
Assistant rollers	6	14	6.3	8.7	55.3	14	112.2	113.89	1.015	56.13	119.2	126.33	1.060
Table lever men	7	61	6.3	8.5	53.5	66	105.7	78.94	.747	39.96	109.9	81.82	.745
Tablemen	3	21	6.5	9.0	58.3	21	100.3	68.90	.687	40.05	119.4	81.49	.683
Guide setters	7	31	6.4	8.9	56.9	31	116.6	97.48	.836	47.57	120.9	101.60	.840
Hot-saw men	7	20	6.2	10.0	54.5	22	106.5	45.74	.696	37.93	118.4	82.01	.693
Hot-saw helpers	6	44	6.4	8.9	56.6	56	89.9	75.47	.509	28.81	97.2	49.50	.509
Hotbed lever men	7	49	6.3	8.6	54.1	51	105.8	59.66	.564	30.51	113.9	65.41	.574
Hotbed men	6	66	6.4	8.4	54.1	78	90.7	46.97	.518	28.02	97.5	50.24	.515
Straighteners	7	126	6.4	8.4	53.0	138	91.8	112.98	1.233	65.35	97.8	116.66	1.193
Straighteners' helpers	7	166	6.3	8.5	53.7	214	83.8	49.45	.590	31.68	91.8	54.35	.592
Chippers	7	133	6.3	8.8	55.3	145	97.5	67.81	.695	38.43	105.3	72.08	.685
Drillers and punchers	7	207	6.3	8.8	55.4	233	97.6	65.89	.675	37.40	103.2	68.54	.664
Cold-saw men	7	18	6.1	8.8	53.2	20	101.4	54.77	.540	28.73	107.3	58.51	.545
Cold-saw helpers	6	80	6.1	9.0	54.6	122	67.1	29.96	.447	24.41	78.5	35.59	.454
Inspectors	7	81	6.4	8.7	55.2	85	111.4	65.85	.591	32.62	116.5	69.02	.593
Laborers	6	163	6.1	9.3	56.6	234	74.9	31.56	.421	23.83	90.6	39.40	.435

STANDARD RAIL MILLS

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TABLE D.—Customary full-time turns per week and hours per turn and per week, 1920—Standard Rail Mills

ALL EMPLOYEES

Customary turns and hours worked										Average hours per week	Number of employees who worked each specified combination of customary turns and hours
Day turns					Night turns						
Turns per week	Hours				Turns per week	Hours					
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week		
Group A.—Day turns only											
7	10	10	10	70	-----	-----	-----	-----	-----	70	35
6	10	10	6	66	-----	-----	-----	-----	-----	66	1
6	10	10	-----	60	-----	-----	-----	-----	-----	65	3
7	10	10	10	70	-----	-----	-----	-----	-----	60	70
6	10	10	10	60	-----	-----	-----	-----	-----	60	408
6	10	10	-----	60	-----	-----	-----	-----	-----	63	1
7	9	9	9	63	-----	-----	-----	-----	-----	56	34
7	8	8	8	56	-----	-----	-----	-----	-----	50	1
6	9	5	-----	50	-----	-----	-----	-----	-----	48	28
6	8	8	-----	48	-----	-----	-----	-----	-----	-----	581
Total	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Group B.—Night turns only											
-----	-----	-----	-----	-----	6	10	10	10	60	60	3
-----	-----	-----	-----	-----	6	10	10	-----	60	60	23
-----	-----	-----	-----	-----	7	8	8	-----	56	56	12
-----	-----	-----	-----	-----	6	8	-----	8	48	48	2
-----	-----	-----	-----	-----	6	8	-----	8	48	48	-----
Total	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	40
Group C.—Weekly changes from one shift to another											
7	10	10	10	70	7	10	10	10	70	70	19
7	10	10	10	70	7	10	10	10	70	66 2/3	46
7	9	9	9	63	6	10	10	-----	60	66	1
7	10	10	10	70	7	9	15	9	69	65	28
6	10	10	-----	60	6	10	10	10	60	65	299
7	9	9	9	63	7	9	9	9	63	63	2
7	9	9	13	67	6	9	9	-----	54	60 1/2	2
6	10	10	10	60	6	10	10	10	60	60	59
6	10	10	-----	60	6	10	10	-----	60	60	276
6	10	10	-----	60	6	10	10	10	60	60	2
7	8	8	8	56	7	8	14	8	62	59	1
7	9	9	8	62	6	9	8	-----	53	57 1/2	2
7	8	8	11	59	6	8	8	-----	48	56	12
7	8	8	8	56	7	8	8	13	61	-----	-----
7	8	8	8	56	7	8	8	8	56	56	85
7	8	8	8	56	7	8	8	8	56	56	17
7	8	8	8	56	6	8	14	8	54	55	3
6	8	8	-----	48	7	8	8	8	56	56	-----
7	8	8	8	56	7	8	8	8	56	53 1/4	943
6	8	8	8	48	6	8	8	8	56	52	53
6	8	8	-----	48	6	8	14	-----	54	51	16
6	8	8	-----	48	6	8	8	-----	48	48	210
6	8	8	-----	48	6	8	8	8	48	48	583
6	8	8	-----	48	6	8	-----	8	48	48	-----
Total	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2,659

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926—Standard Rail Mills—Continued

TABLE LEVER MEN, ONLY

Customary turns and hours worked										Average hours per week	Number of employees who worked each specified combination of customary turns and hours
Day turns					Night turns						
Turns per week	Hours				Turns per week	Hours					
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week		
7	10	10	10	70	6	10	10	-----	60	65	1
6	10	10	-----	60	7	10	10	10	70	65	4
6	10	10	-----	60	6	10	10	-----	60	60	3
6	10	10	-----	60	-----	-----	-----	-----	60	60	8
7	8	8	8	56	7	8	8	8	56	56	1
					7	8	8	8	56		
6	8	8	-----	48	7	8	8	8	56	53½	22
6	8	8	-----	48	7	8	8	8	56		
6	8	8	-----	48	6	8	14	-----	54	51	5
6	8	8	-----	48	6	8	-----	8	48		
6	8	8	-----	48	6	8	-----	8	48	48	22
Total	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	66

TABLE E.—Average and classified full-time hours per week in five specified occupations, 1926—Standard Rail Mills

Occupation	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—					
				48	Over 48 and under 56	56	60	Over 60 and under 66	66 and under 72
Table lever men.....	7	66	53.5	22	28	-----	10	6	-----
Guide setters.....	7	31	56.9	3	14	-----	8	-----	6
Straighteners.....	7	138	53.0	38	76	-----	24	-----	-----
Drillers and punchers.....	7	233	55.4	51	93	-----	59	30	-----
Laborers.....	6	234	56.6	80	-----	1	129	24	-----

TABLE F.—Average and classified earnings per hour in five specified occupations, 1926—Standard Rail Mills

Occupation	Number of employees	Average earnings per hour	Number of employees whose earnings in cents per hour were—																									
			25 and under 30	35 and under 40	40 and under 45	45 and under 50	50 and under 55	55 and under 60	60 and under 65	65 and under 70	70 and under 75	75 and under 80	80 and under 85	85 and under 90	90 and under 95	95 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	190 and under 200	200 and under 225	225 and under 250	
Table lever men.....	66	\$0.747		1			7	5	6	7	9	10	4		2	2	4											
Guide setters.....	31	.836							1	4	3	5	5	8		2	2											
Straighteners.....	138	1.233												10	14	26	14	15	4									
Drillers and punchers.....	233	.675			21	29	16	20	25	24	18	20	30	17	3	2	1									7	5	
Laborers.....	234	.421	1	73	75	10	73																					

TABLE G.—Average and classified hours actually worked by employees in five specified occupations in pay period covered, 1926—Standard Rail Mills

Occupation	Number of employees	Average hours worked	Number of employees who during the pay period worked hours specified																						
			Under 32	32 and under 40	40 and under 48	48 and under 56	56 and under 64	64 and under 72	72 and under 80	80	80 and under 88	88	Over 88 and under 96	96	Over 96 and under 104	104	Over 104 and under 112	112	Over 112 and under 120	120	Over 120 and under 132	132	Over 132 and under 144	Over 144 and under 156	Over 156 and under 168
Table lever men.....	66	109.9	3			1	1		2		2				6	14		13	1	8			6	4	1
Guide setters.....	31	120.9						2						1	4		6	5		5	1		7	2	1
Straighteners.....	138	97.8	3	1		5	1	2	11		10	1	17	5	28	6	10	9	15	1	8		4	1	
Drillers and punchers.....	233	103.2	6	3	2	2	5	2	10		8		9	10	42	11	32	12	41	3	21		11	2	1
Laborers.....	234	90.6	18	3	12	17	11	15	20	6	6		8	7	7	8	16		14	5	34		19	8	

TABLE H.—Average and classified earnings actually received in five specified occupations in pay period covered, 1926—Standard Rail Mills

Occupation	Number of employees	Average earnings per pay period	Number of employees whose earnings during the pay period were—																													
			Under \$5	\$5 and under \$10	\$10 and under \$15	\$15 and under \$20	\$20 and under \$25	\$25 and under \$30	\$30 and under \$35	\$35 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$55	\$55 and under \$60	\$60 and under \$65	\$65 and under \$70	\$70 and under \$75	\$75 and under \$80	\$80 and under \$85	\$85 and under \$90	\$90 and under \$95	\$95 and under \$100	\$100 and under \$110	\$110 and under \$120	\$120 and under \$130	\$130 and under \$140	\$140 and under \$150	\$150 and under \$160	\$160 and under \$180	\$180 and under \$200	\$200 and under \$250	\$250 and over
Table lever men.....	66	\$81.82	1	1			1			2	1	1	1		3	5	9	5	11	6	3	4	4	1	3	2	2					
Guide setters.....	31	101.60											2	2	1				3	3	3	3	9	4	1							
Straighteners.....	138	116.66	1	1			1						2	4	2	2	8	1	3	8	12	10	14	13	18	8	9	8	2	1	6	4
Drillers and punchers.....	233	68.54	1	2	3	2	1	4	3	6	11	18	19	16	11	15	16	23	28	23	10	7	7	7								
Laborers.....	234	39.40	4	9	6	10	21	18	26	16	20	39	32	23	7				1	1												

BAR MILLS

Data for 1926 were collected from the pay rolls of 35 bar-mill establishments and cover 7,605 employees in all occupations. Of the 7,605 employees reported, 5,095 were found in the selected occupations for which separate figures are given. Comparable data were first obtained from this department in 1907, and from 1907 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years all employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ Comparative figures are presented for employees in the selected occupations from 1907 to 1926.

The hours of labor of bar-mill employees have decreased somewhat in recent years. Until the summer of 1923, a large number of the employees in this department were still on a 12-hour basis and some employees also worked 7 days per week. A general reduction in the regular daily hours of employees however, took place in the latter part of 1923, and a large number of plants adopted the 8 or the 10 hour day for all employees. In 1914 employees as a whole had an average full-time week of 61.7 hours. This average remained practically unchanged until 1924 when, following the 1923 decrease in daily hours, employees worked but 55.6 hours per week. The decrease continued to 54.7 hours in 1926. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1913 to 1926, for the department as a whole, are shown in Table 1, page 4.

Comparisons of the full-time hours per week of employees in the various selected occupations, which may be made from Table A, show like reductions. In 1907 the average full-time hours per week varied from 59.5 for stranders to 72.3 for roll engineers. The average for all of the 15 occupations combined was 64.6 hours. In 1926 working time had been so far reduced that the average of 58.0 hours per week for roll engineers was the highest of any of the occupations, and the average for all occupations combined was only 53.6 hours per week. The average for bundlers, 49.7 hours, was the lowest working week for any occupation shown.

The increase or decrease in the full-time hours per week of employees in this department has been caused almost entirely by the changes in the daily hours of labor, as the average number of turns per week have remained practically the same throughout the period. Table B shows that, in both 1914 and 1926, 94 per cent of the employees worked from 5 to 6 turns per week. There has been some slight variation in some of the groups during the period but as a whole the number of turns per week has changed but very little.

The working week of the employees in 1926 in this department may be seen in Table D. The grouping of the employees by hours per day in that table shows that in 1926 of the 7,605 employees covered 2,635 had a working day of 8 hours, 2,944 worked 10 hours, and 1,144

¹ Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

worked 12 hours or its equivalent—that is, 10 hours one week and 14 hours the next, 11 hours one week and 13 hours the next, etc. The employees covered in bar mills, of course, include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to members of the producing crew separate figures are shown for the occupation of rougher. Of the 259 employees who worked as roughers during the pay period, 105 worked 10 hours per day and 80 worked 8 hours, while only 32 worked as many as 12 hours. Of the total employees in that occupation, 174 had a working week of less than 60 hours and none of the employees worked more than 61 hours per week. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the trend in the hours of labor of employees has been downward in recent years, the trend in the hourly earnings has been decidedly upward. In 1914 the earnings per hour of all employees covered were 27.8 cents on the average, while in 1926 employees earned an average of 59.1 cents per hour, an increase of 113 per cent. In other words, the 1926 hourly earnings were more than double the earnings in 1914. The earnings were highest in 1920, 71.3 cents on the average, and in 1924 they were only slightly under the earnings for 1926. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, roughers in 1907 earned an average of 43.4 cents per hour. The average decreased somewhat in the following years but increased again to 43.6 cents in 1913. There was practically no change in 1914 and 1915, but in 1919 earnings per hour increased to 93.3 cents on the average. This increase continued to the high mark of \$1.034 in 1920, but roughers earned only 70.9 cents in 1922. Earnings increased again in 1924 and 1926 to 81 cents and 84.7 cents, respectively. A distribution by average hourly earnings of the employees in 6 specified occupations in 1926 is given in Table F.

Average full-time earnings per week were far greater in 1926 than in 1914. In 1914 earnings per full-time week for all employees were \$17.15 on the average, while in 1926 they had increased to \$32.33. In 1920 they were \$44.06, the highest of any shown, and in 1924 they were slightly more than in 1926. Weekly earnings in the various selected occupations show like increases. Roughers, for example, earned an average of \$26.28 per week in 1907, \$26.00 in 1913, and \$59.46 in 1920. In the following years there was a decrease in hourly earnings as well as in the hours of labor, and roughers earned only \$44.61 per week in 1924 and \$45.06 in 1926.

The 5,095 employees in the selected occupations worked an average of 88.2 hours during the 16-day pay period covered by the 1926 study for which they received \$56.91. This includes all of the hours worked and the earnings received by these employees, as shown in Table C. Roll engineers worked the most time, 98.5 hours, and shearmen's helpers the least or 79.2 hours. Laborers earned the least money, \$33.28, while rollers, the highest skilled occupation, earned the largest amount, or \$163.76. Shearmen's helpers earned \$41.23 on the average during the period.

A classification of employees in 6 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of laborers 183 of the 854 em-

employees worked less than 32 hours during the pay period, while 1 employee worked 192 or more hours. The 183 employees represent the largest number in any single group, the next largest being 73 employees, who worked between 120 and 132 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the different occupations in this table. Laborers earned from less than \$5 for the period to \$85 and under \$90, while rollers earned from \$10 and under \$15 to \$250 and over. The largest group of laborers, 100, earned \$50 and under \$55.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Bar Mills

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84	
Stockers:														
1907	8	93	64.4	\$0.178	\$11.43	107	82	89	9	9	70	9	4	
1908	8	90	64.1	.167	10.72	106	77	83	11	9	66	14		
1909	8	88	64.2	.168	10.79	107	78	84	9	9	78	3		
1910	13	170	59.0	.250	14.24	98	116	110	16	25	4	51	5	
1911	15	211	60.9	.217	12.94	101	100	100	13	19	21	34	13	
1912	15	217	60.9	.231	13.79	101	107	107	12	17	27	31	13	
1913	31	374	60.2	.216	12.89	100	100	100	4	25	34	36	1	
1914	41	603	60.4	.199	12.00	100	92	93	2	33	18	43	4	
1915	41	582	60.2	.193	11.91	100	92	92	1	46	9	39	4	
1919	15	298	63.7	.624	33.38	106	243	259	1	9	31	51	9	
1920	22	458	61.5	.512	37.69	102	283	292	7	26	7	51	8	
1922	22	352	59.2	.420	24.90	98	194	193	11	40	5	34	10	
1924	25	298	56.0	.502	28.20	93	232	219	22	41	17	18	2	
1926	28	305	54.2	.519	28.13	90	240	210	27	36	34	3		
Heaters:														
1907	15	121	63.9	.508	32.35	107	86	93	2	13	2	70	10	2
1908	15	112	63.9	.467	29.66	107	79	85	3	18	2	61	15	2
1909	15	112	64.0	.488	31.06	107	83	89	3	18	2	70	4	2
1910	25	217	62.9	.507	31.73	105	86	91	8	13	7	58	10	2
1911	26	184	62.7	.510	31.87	105	86	92	10	17	1	60	9	1
1912	26	199	62.4	.482	29.84	105	82	86	9	22	1	57	9	1
1913	44	295	59.7	.590	34.74	100	100	100	10	37	1	46	3	1
1914	57	409	59.9	.548	32.49	100	93	94	9	34	(1)	52	2	(1)
1915	57	392	60.1	.662	33.50	101	95	96	9	35	(1)	52	3	1
1919	23	209	61.7	1.147	70.77	103	194	204	13	1	17	60	8	
1920	24	213	60.1	1.176	70.73	101	199	204	13	27	2	52	2	5
1922	23	169	59.9	.759	45.50	100	129	131	9	34		51	4	2
1924	28	181	55.3	.949	53.03	93	161	153	31	25	12	31		
1926	33	181	54.4	.957	52.06	91	164	150	39	14	27	20		
Heaters' helpers:														
1907	14	167	65.3	.246	15.77	108	91	97	2	12	2	65	16	4
1908	14	153	65.1	.227	14.50	108	84	89	2	16	3	56	21	3
1909	14	151	65.0	.234	14.87	107	87	92	2	16	3	74	1	4
1910	24	295	62.6	.273	16.77	103	101	103	16	11	8	52	11	1
1911	25	293	62.7	.259	15.94	104	96	98	16	13	2	55	10	3
1912	25	319	62.2	.260	16.01	103	97	99	14	23	2	50	9	1
1913	42	467	60.5	.269	16.21	100	100	100	8	42	2	44	4	(1)
1914	54	582	60.9	.265	16.09	101	99	99	6	36	1	52	5	(1)
1915	54	570	60.3	.272	16.37	100	101	101	11	32	(1)	50	5	(1)
1919	21	323	60.7	.655	39.76	100	243	245	24	1	17	46	10	1
1920	23	435	59.5	.744	44.16	98	277	272	14	30	5	46	2	3
1922	25	326	59.1	.517	30.56	98	192	189	6	52		38	3	
1924	28	312	54.7	.630	34.86	90	234	215	29	38	21	12	1	
1926	33	273	54.3	.632	34.32	90	235	200	36	29	25	10		

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—**Bar Mills**—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84	
Chargers and helpers:														
1907	12	104	65.5	\$0.173	\$11.34	105	77	81	10	5	68	15	2	---
1908	12	102	65.6	.161	10.56	105	71	75	10	5	66	20	---	---
1909	12	107	65.9	.161	10.60	105	71	76	9	4	75	7	5	---
1910	18	179	65.3	.192	12.40	104	85	89	7	8	7	59	20	---
1911	19	185	64.8	.184	11.90	104	81	85	6	14	3	59	18	---
1912	19	182	65.0	.192	12.45	104	85	89	5	13	3	61	18	---
1913	31	262	62.5	.226	14.00	100	100	100	4	27	2	63	3	1
1914	41	346	61.9	.219	13.47	99	97	96	4	32	1	62	1	1
1915	41	333	61.7	.222	13.56	99	98	97	9	27	(1)	62	2	1
1919	14	189	62.4	.561	35.01	100	248	250	17	10	5	55	10	3
1920	19	328	61.9	.636	39.45	99	281	282	5	28	2	60	5	---
1922	21	293	61.2	.427	26.24	98	189	187	6	36	2	33	18	---
1924	26	295	54.9	.540	29.58	88	239	211	32	22	34	12	---	---
1926	28	234	53.5	.551	29.48	86	244	211	38	31	25	5	---	---
Drag-downs:														
1907	11	86	64.4	.271	17.31	106	96	102	---	19	---	60	19	2
1908	11	82	63.9	.246	15.58	105	87	92	---	24	---	52	23	---
1909	11	83	64.0	.250	15.93	105	89	94	---	24	---	70	4	2
1910	19	132	65.1	.269	17.44	107	95	103	---	18	3	57	19	3
1911	20	127	64.7	.262	16.78	106	93	99	---	24	---	55	20	2
1912	20	130	64.3	.253	16.12	106	90	95	---	25	---	54	19	2
1913	33	186	60.8	.282	16.98	100	100	100	9	33	1	44	7	2
1914	45	265	60.7	.277	16.58	100	98	98	6	38	---	49	6	1
1915	45	256	61.1	.280	16.96	100	99	100	5	36	---	51	7	1
1919	18	131	64.9	.696	45.17	107	247	266	3	11	62	21	---	---
1920	20	205	60.6	.725	43.33	100	257	255	17	16	2	59	6	---
1922	20	161	59.7	.470	27.98	98	167	165	7	52	---	32	8	---
1924	26	187	55.2	.560	31.12	91	199	183	32	20	36	13	---	---
1926	27	142	55.3	.593	32.79	91	210	193	30	25	42	4	---	---
Roll engineers:														
1907	13	58	72.3	.226	16.29	104	91	95	---	---	---	53	9	31
1908	13	56	71.4	.221	15.76	103	89	92	---	---	---	50	18	29
1909	13	56	71.5	.217	15.52	103	88	91	---	---	---	54	11	32
1910	22	99	72.0	.229	16.46	104	93	96	---	3	---	40	26	23
1911	22	95	70.4	.223	16.07	102	92	94	---	3	---	57	14	24
1912	22	97	70.0	.229	16.05	101	93	94	---	4	1	53	12	28
1913	41	153	69.2	.247	17.06	100	100	100	---	7	6	45	16	22
1914	52	183	68.8	.247	16.97	99	100	99	---	6	5	47	26	11
1915	52	178	68.9	.246	16.77	99	100	98	---	6	4	49	27	12
1919	21	94	70.2	.558	39.17	101	226	230	2	---	15	31	35	2
1920	22	109	69.7	.657	45.65	101	266	268	3	2	3	39	12	39
1922	22	100	69.1	.478	32.75	100	194	192	2	10	---	43	23	19
1924	24	106	60.9	.569	34.55	88	230	203	13	31	3	42	8	---
1926	26	112	58.0	.581	33.70	84	235	198	31	17	18	39	---	---
Rollers:														
1907	13	65	65.5	1.013	66.88	110	103	114	---	17	17	43	18	5
1908	13	63	65.7	.878	57.88	111	89	98	---	19	13	44	19	5
1909	13	63	65.5	.917	60.40	110	93	103	---	19	13	52	16	---
1910	22	124	62.4	.928	58.21	105	94	99	12	16	13	47	12	---
1911	23	120	62.0	.873	54.65	105	89	93	13	22	8	43	15	---
1912	24	128	61.6	.863	53.60	104	88	91	12	26	9	38	16	---
1913	42	173	59.3	.985	58.85	100	100	100	---	56	---	43	1	---
1914	56	216	59.6	.936	56.13	101	95	95	---	49	---	51	---	---
1915	56	215	59.4	.944	56.75	100	96	96	---	51	---	49	---	---
1919	23	108	61.3	1.821	111.62	103	185	190	22	4	21	42	8	2
1920	25	141	59.5	1.949	116.13	100	198	197	11	26	16	37	11	---
1922	25	119	58.4	1.416	82.35	98	144	140	5	61	3	25	5	---
1924	30	126	53.9	1.577	85.28	91	160	145	30	42	21	7	---	---
1926	35	134	53.2	1.699	90.39	90	172	154	40	36	21	3	---	---

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—**Bar Mills**—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—									
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	Over 72 and under 84	84				
Roughers:																		
1907	15	252	61.5	\$0.434	\$26.28	103	100	101	13	20	5	44	17					
1908	15	242	62.5	.343	21.35	105	79	82	10	23	5	40	22					
1909	15	243	62.4	.368	22.72	104	84	87	10	23	5	57	6					
1910	25	425	61.0	.402	24.51	102	92	94	17	20	8	46	9					
1911	26	403	60.5	.377	22.68	101	86	87	18	24	3	46	9					
1912	26	408	60.2	.389	23.36	101	89	90	18	25	3	45	9					
1913	26	407	59.8	.436	26.00	100	100	100	6	46	1	43	4					
1914	57	385	58.8	.436	25.41	98	100	98	2	65		32						
1915	57	386	58.9	.438	25.76	98	100	99	2	62		36						
1919	23	202	60.7	.933	56.63	102	214	218	21	10	10	46	13					
1920	25	319	57.8	1.034	59.46	97	237	229	16	44	1	36	3					
1922	25	288	57.3	.709	40.41	96	163	155	9	58		27	6					
1924	31	283	54.7	.810	44.61	91	186	172	22	46	25	7						
1926	35	259	53.2	.847	45.06	89	194	173	30	38	31	2						
Catchers:																		
1907	11	69	62.5	.442	27.68	108	99	108		42	1	36	20					
1908	11	70	62.0	.381	23.57	107	86	92		46		34	20					
1909	11	70	61.9	.400	24.93	107	90	97		46		54						
1910	20	115	60.2	.419	25.45	104	94	99	13	35	5	40	7					
1911	20	111	59.9	.392	23.70	103	88	92	14	39		41	7					
1912	20	110	59.7	.399	23.92	103	90	93	14	39		40	7					
1913	44	222	58.1	.445	25.73	100	100	100	3	63		33	1					
1914	57	293	58.6	.430	25.03	101	97	97	2	60		38						
1915	57	296	58.8	.432	25.35	101	97	99	2	60		38						
1919	23	187	60.6	.936	56.72	104	210	220	23	11	7	46	13					
1920	25	217	57.9	1.022	58.68	100	230	228	19	38	1	38	4					
1922	25	191	57.2	.725	41.33	98	163	161	10	59		22	9					
1924	31	215	54.8	.818	45.12	94	184	175	22	46	27	6						
1926	35	208	53.3	.865	46.10	92	194	179	33	36	30	1						
Stranders:																		
1907	13	175	59.5	.334	19.45	102	97	97	22	17	11	34	15					
1908	13	174	59.7	.277	16.25	102	80	81	22	17	11	32	17					
1909	13	174	59.7	.297	17.34	102	86	86	22	17	11	42	7					
1910	21	272	60.6	.301	17.85	104	87	89	18	16	14	40	13					
1911	22	262	59.8	.272	16.03	103	79	80	18	27	8	34	13					
1912	22	266	59.6	.283	16.62	102	82	82	18	28	8	33	13					
1913	42	491	58.3	.345	20.15	100	100	100		64		35	1					
1914	56	635	58.4	.318	18.57	100	92	92		57	11	31	(1)					
1915	56	615	58.1	.326	18.99	100	94	94		77		23	(1)					
1919	23	381	59.5	.762	45.34	102	221	225	26	13	8	44	9					
1920	25	525	57.6	.849	48.79	99	246	242	14	46	1	36	3					
1922	25	474	56.6	.577	32.31	97	167	160	9	65		20	6					
1924	29	427	53.0	.700	36.92	91	203	183	34	42	16	7						
1926	33	389	51.8	.741	38.38	89	215	190	44	35	19	1						
Finishers:																		
1907	10	65	65.9	.309	20.45	111	88	98		12	14	48	26					
1908	10	63	66.4	.279	18.53	111	80	89		13	11	49	27					
1909	10	63	66.2	.300	19.85	111	86	96		13	10	63	10					
1910	17	111	64.0	.323	20.48	107	92	99	14	7	9	55	15					
1911	19	121	62.8	.313	19.60	105	89	94	12	20	7	45	17					
1912	21	137	62.0	.328	20.29	104	94	98	11	31	7	38	13					
1913	40	182	59.6	.350	20.77	100	100	100		63		35	2					
1914	54	223	60.0	.341	20.42	101	97	98		43	1	55						
1915	54	222	59.8	.352	20.95	100	101	101		48	1	51						
1919	22	123	61.6	.766	47.19	103	219	227	16	13	13	46	11					
1920	24	177	60.0	.866	52.05	101	247	251	9	34	5	44	7					
1922	25	165	57.9	.638	36.56	97	182	176	10	56	1	25	9					
1924	30	185	54.0	.749	40.35	91	214	194	25	47	23	5						
1926	33	159	53.0	.848	44.94	89	242	216	38	38	21	2						

1 Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—**Bar Mills**—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84	
Hook-ups:														
1907	12	92	63.9	\$0.268	\$17.30	107	92	100	10	3	9	52	26	
1908	12	84	65.3	.225	14.70	110	77	85	4	5	17	42	33	
1909	12	82	65.7	.241	15.82	110	83	91	4	5	10	47	24	
1910	20	174	63.2	.272	17.13	106	93	99	16	6	11	43	25	
1911	21	154	63.0	.250	15.66	106	86	90	14	14	6	44	23	
1912	22	177	61.9	.254	15.74	104	87	91	12	24	8	36	20	
1913	36	227	58.6	.291	17.32	100	100	100	46	—	—	5		
1914	47	262	58.8	.288	16.03	100	92	93	48	—	—	52		
1915	47	245	60.3	.270	16.03	101	93	94	41	—	—	59		
1919	21	156	59.6	.641	16.25	100	220	221	22	30	13	32	13	
1920	24	277	57.7	.771	38.20	97	265	253	18	35	1	37	9	
1922	25	213	59.0	.516	43.83	99	177	174	15	46	—	28	12	
1924	29	317	54.8	.601	33.30	92	207	192	41	31	4	—		
1926	29	207	54.8	.623	34.14	92	214	197	23	30	41	1		
Roll hands, other:														
1907	9	97	66.8	.278	18.53	106	88	93	6	4	4	40	45	
1908	9	94	67.0	.255	16.97	106	81	85	6	4	4	40	45	
1909	9	94	66.8	.266	17.65	106	84	88	6	4	4	40	45	
1910	18	180	62.8	.295	18.35	99	93	92	22	10	4	44	20	
1911	18	177	62.5	.273	16.97	99	86	85	22	13	2	42	20	
1912	18	176	62.7	.287	17.97	99	91	90	20	13	2	44	20	
1913	24	199	63.2	.316	20.02	100	100	100	—	24	—	76	—	
1914	37	240	63.2	.285	17.92	100	90	90	—	21	—	79	—	
1915	37	235	62.6	.291	18.23	99	92	91	—	26	—	74	—	
1919	18	174	62.1	.684	42.48	98	216	212	17	10	2	60	11	
1920	20	352	60.7	.758	45.99	96	240	230	5	41	(¹)	45	9	
1922	20	353	59.5	.545	32.36	94	172	162	13	46	—	30	12	
1924	24	304	53.2	.702	37.52	84	222	187	41	27	28	4		
1926	25	230	52.9	.683	36.13	84	216	180	44	23	31	2		
Hotbed men:														
1907	15	302	63.3	.189	11.98	105	87	92	4	21	14	43	19	
1908	15	299	63.2	.174	10.93	105	80	84	4	21	19	35	21	
1909	15	286	63.3	.180	11.00	105	83	84	4	22	15	44	5	
1910	25	500	62.9	.200	12.46	104	92	95	11	16	14	43	12	
1911	26	450	61.9	.188	11.61	103	87	89	12	24	6	48	9	
1912	26	461	61.7	.192	11.80	102	88	90	12	26	5	45	11	
1913	43	600	60.3	.217	13.06	100	100	100	7	43	2	45	4	
1914	56	714	60.3	.213	12.77	100	98	98	5	42	2	47	4	
1915	56	721	60.0	.216	12.83	100	100	98	14	34	—	43	8	
1919	23	497	59.4	.545	32.37	99	251	248	27	15	8	41	9	
1920	24	727	58.8	.618	36.46	98	285	279	9	45	(¹)	41	4	
1922	25	755	58.3	.439	25.48	97	202	195	7	56	—	28	8	
1924	30	679	53.8	.538	28.97	89	248	222	30	42	23	5		
1926	33	532	53.0	.564	20.89	88	260	229	39	36	21	4		
Shearmen:														
1907	15	94	64.8	.249	16.20	108	89	97	—	15	16	51	18	
1908	15	92	65.1	.216	14.10	108	77	84	—	15	18	46	21	
1909	15	93	65.3	.225	14.72	108	80	88	—	15	18	59	3	
1910	25	156	63.3	.264	16.40	105	94	98	10	16	14	46	10	
1911	25	151	62.5	.254	15.55	104	90	93	10	23	12	45	11	
1912	24	156	62.4	.251	15.40	104	89	92	10	24	10	43	12	
1913	41	218	60.2	.281	16.74	100	100	100	5	42	9	41	2	
1914	54	263	60.5	.280	16.78	100	100	100	4	38	9	46	3	
1915	54	264	60.5	.293	17.56	100	104	105	11	31	6	47	5	
1919	22	145	60.9	.634	38.61	101	226	231	15	23	8	46	8	
1920	25	216	58.2	.752	43.99	97	268	263	14	42	4	37	3	
1922	24	178	59.2	.526	30.79	98	187	184	4	58	—	25	10	
1924	28	181	53.4	.631	34.10	89	225	204	33	35	25	7		
1926	32	176	52.4	.616	32.28	87	219	193	44	32	22	2		

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1907 to 1926, by occupation—Bar Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—					
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under 60	Over 48 and under 72	Over 72 and under 84	84		
													60	72
Shearmen's helpers:														
1907	15	201	65.9	\$0.174	\$11.46	105	83	88	6	10	62	20	1	---
1908	15	172	66.2	.168	11.07	106	80	85	7	13	59	17	5	---
1909	15	185	67.3	.169	11.32	107	81	87	6	14	59	4	16	---
1910	23	355	64.7	.187	12.02	103	89	93	13	3	12	45	22	6
1911	23	359	63.8	.178	11.28	102	85	87	13	8	10	50	18	---
1912	23	358	63.9	.184	11.74	102	88	90	13	9	10	46	18	3
1913	35	418	62.7	.209	12.98	100	100	100	4	24	6	61	3	2
1914	48	487	62.7	.201	12.57	100	96	97	3	24	6	63	5	---
1915	48	471	62.3	.203	12.66	99	97	98	10	20	4	60	7	---
1919	19	399	62.3	.513	31.96	99	245	246	17	9	6	55	12	1
1920	22	507	60.8	.615	37.39	97	294	288	7	40	3	48	1	(1)
1922	23	610	60.8	.415	25.27	97	199	195	6	47	---	35	10	3
1924	27	500	52.9	.524	27.92	84	251	215	33	32	30	5	---	---
1926	31	601	52.3	.522	27.30	83	250	210	42	21	34	2	---	---
Bundlers:														
1907	5	41	66.9	.202	13.53	109	93	101	---	---	---	76	24	---
1908	5	41	66.9	.174	11.68	109	80	87	---	---	---	76	24	---
1909	5	41	66.8	.186	12.42	109	85	93	---	---	---	100	---	---
1910	6	77	66.1	.207	13.69	108	95	102	---	---	---	100	---	---
1911	7	131	62.0	.197	12.20	101	90	91	---	---	---	65	34	---
1912	7	132	62.0	.193	11.94	101	89	89	---	---	---	66	35	---
1913	12	178	61.4	.218	13.38	100	100	100	---	---	---	71	2	27
1914	13	178	63.9	.203	12.97	104	93	97	---	---	---	43	2	55
1915	13	210	64.4	.208	13.38	105	95	100	---	---	---	37	1	58
1919	6	115	68.8	.529	36.40	112	243	272	---	---	---	2	4	37
1920	10	151	60.9	.555	33.80	99	265	253	---	---	---	2	65	6
1922	10	161	57.8	.382	22.29	94	175	167	---	---	---	68	1	28
1924	11	184	45.9	.526	24.16	75	241	181	---	---	---	89	6	4
1926	14	99	49.7	.552	27.43	81	253	205	---	---	---	61	29	9
Laborers:														
1907	10	296	68.3	.153	10.44	109	91	98	(1)	17	47	25	8	2
1908	10	227	64.8	.153	9.93	104	91	93	---	1	41	48	8	2
1909	10	324	67.8	.150	10.17	108	89	95	---	1	23	42	27	4
1910	15	511	67.8	.160	10.86	108	95	102	---	2	29	25	36	5
1911	17	390	65.5	.159	10.40	105	94	98	---	9	27	45	18	1
1912	21	536	65.0	.160	10.38	104	95	97	---	23	15	43	18	1
1913	42	891	62.5	.169	10.66	100	100	100	(1)	26	33	33	2	5
1914	54	1,039	63.3	.173	11.00	101	102	103	---	1	18	31	42	7
1915	54	1,029	62.9	.173	10.91	101	102	102	---	1	22	27	41	8
1919	21	1,058	66.1	.443	29.28	106	262	275	---	2	9	18	45	18
1920	20	816	65.1	.506	33.12	104	299	311	---	6	20	11	35	27
1922	23	806	64.5	.316	21.54	103	187	202	---	2	29	13	31	23
1924	30	936	57.5	.392	23.06	92	232	216	---	15	37	39	5	3
1926	34	854	55.0	.411	22.61	88	243	212	---	36	28	24	11	---

¹ Less than 1 per cent.

² 1 per cent whose full-time hours per week were 84½ and less than 1 per cent whose full-time hours per week were 91.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Bar Mills

District and year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—							Per cent of employees whose customary working turns per week were—														
			5	5, 5, and 6 in rotation	5 and 6 alternately	5, 6, and 6 in rotation	6	5 and 7 alternately	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7	5	5, 5, and 6 in rotation	5 and 6 alternately	5, 6, and 6 in rotation	6	5 and 7 alternately	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7		
Eastern:																								
1914	15	1,851	69	1,207	3	554			11		7	4		65	(1)	30				1		(1)		
1915	15	1,876	70	1,211		573			12		10	4		65		31				1		(1)	1	
1920	6	950	133	425		287			5			14	11	45		30				1		(1)		
1922	6	968	9	112		292					2	1	12	30		57						(1)		
1924	5	704	6	97		262						1	14	37		48						(1)		
1926	6	1,153	462	111		540	2		8		30	40	10			47	(1)			1			3	
Pittsburgh:																								
1914	14	3,250	162	42	1,461		1,128	4	349	64	12	28	5	1	45		35	(1)		11	2	(1)	1	
1915	14	3,366	122	42	1,549	4	1,562	4	12	56		15	4	1	46	(1)	46	(1)		(1)	15	2	(1)	(1)
1920	7	3,167	69		958		1,458	11	460	153	38	20	2		30		46	(1)			5	5	1	1
1922	7	2,624	22		1,057		949		477	75	16	28	1		40		36			18	3	3	1	1
1924	9	2,686	89	257	506		374	1,313	14	21	76	6	30	3	10	19	14	49		1	1	3	(1)	1
1926	10	2,804	82	199	65		837	1,480		16	54	6	41	3	7	2	30	53		1	2	2	1	1
Great Lakes and Middle West:																								
1914	19	2,694	77	120	1,284	49	1,085	6	10	15		48	3	4	48	2	40	(1)	(1)	(1)	1	1		2
1915	19	2,484	76	70	1,246	49	989	6	10	15		23	3	3	50	2	40	(1)	(1)	(1)	1	1		1
1920	7	2,079	13	200	759	233	846			22		6	1	10	37	11	41						(1)	1
1922	7	2,218	6		829	230	1,035	17		73	3	25	(1)		37	10	47			1	3	(1)		2
1924	10	2,135	205		841	217	749	10	1	15	25	72	10		39	10	35			(1)	1	1	1	3
1926	11	2,576	190	112	812	147	1,388	9		25	147	46	7	4	20	6	54		(1)		1	6		2
Southern:																								
1914	9	1,007	215		219		558					15	21		22		55							1
1915	9	1,006	229		172		581					14	23		17		59							1
1920	5	787	21		147		606			2		11	3		19		77				(1)			1
1922	5	907	50		179		651			9		18	6		20		72				1			3
1924	7	1,039	207		47		758			2		25	20		5		73							2
1926	8	1,072	288		53		701			2		28	27		5		65			(1)				2
All districts:																								
1914	57	8,802	523	162	4,171	52	3,325	10	359	90	12	98	6	2	47	1	38	(1)		4	1	(1)		1
1915	57	8,732	497	112	4,178	53	3,715	10	22	83		62	6	1	48	1	43	(1)			1			1
1920	25	6,983	236	300	2,289	233	3,197	11	460	182	38	37	3	4	33	3	46	(1)		7	3	1		1
1922	25	6,717	87	112	2,357	230	3,188	17	477	157	19	73	1	2	35	3	47	(1)		7	2	(1)		1
1924	31	6,564	507	354	1,656	591	3,159	24	22	93	31	127	8	5	25	9	48	(1)		(1)	1	(1)		2
1926	35	7,605	1,022	422	630	984	4,109	11	16	89	177	145	13	6	8	13	54	(1)		(1)	1			2

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Bar Mills

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Stockers														
Eastern.....	4	68	5.3	10.6	55.8	88	71.1	\$36.75	\$0.517	\$28.85	72.1	\$37.07	\$0.515	
Pittsburgh.....	8	57	5.8	9.0	50.5	65	86.1	48.00	.557	28.13	86.4	49.14	.557	
Great Lakes and Middle West.....	8	77	5.6	9.6	53.7	88	94.1	57.94	.616	33.08	98.6	60.29	.611	
Southern.....	8	54	5.7	10.0	56.9	64	97.0	34.88	.360	20.48	97.4	34.99	.360	
Total.....	28	256	5.6	9.8	54.2	305	86.4	44.87	.519	28.13	88.0	45.69	.519	
Heaters:														
Eastern.....	6	45	5.3	10.6	56.1	51	76.9	65.88	.856	48.02	77.6	66.18	.853	
Pittsburgh.....	10	57	5.8	9.0	52.1	61	98.4	105.99	1.077	56.11	99.5	106.47	1.070	
Great Lakes and Middle West.....	9	36	5.9	8.6	51.3	36	102.6	103.40	1.008	51.71	104.6	104.34	.998	
Southern.....	8	32	5.4	11.1	50.6	33	111.3	91.23	.819	48.81	111.3	91.23	.819	
Total.....	33	170	5.6	9.7	54.4	181	95.5	91.48	.957	52.06	96.5	91.92	.953	
Heaters' helpers:														
Eastern.....	6	62	5.4	10.4	55.4	74	68.1	40.61	.596	33.02	72.8	42.96	.590	
Pittsburgh.....	10	107	5.9	9.1	53.5	122	95.5	62.17	.651	34.83	98.0	63.59	.649	
Great Lakes and Middle West.....	9	51	5.9	8.8	52.3	56	97.2	66.91	.689	36.03	100.4	68.72	.684	
Southern.....	8	20	5.8	10.4	59.9	21	104.9	50.18	.479	28.69	106.9	50.91	.476	
Total.....	33	240	5.8	9.5	54.3	273	89.1	56.38	.632	34.32	92.3	68.08	.629	
Chargers and helpers:														
Eastern.....	4	10	5.9	8.9	55.8	14	68.3	33.06	.484	27.01	78.1	37.61	.482	
Pittsburgh.....	10	83	5.8	9.1	51.8	96	90.1	50.55	.561	29.06	94.4	52.77	.559	
Great Lakes and Middle West.....	10	86	5.8	9.2	53.6	102	90.9	52.71	.580	31.09	96.4	55.86	.580	
Southern.....	4	21	5.7	10.2	58.7	22	106.5	45.94	.431	25.30	110.0	47.48	.432	
Total.....	28	200	5.8	9.3	53.5	234	90.7	50.01	.551	29.48	95.7	62.72	.551	

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Bar Mills—Continued

Occupation and district	Number of plants	Positions				Employees working in scheduled pay period (16 days)								
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Drag-downs:														
Eastern.....	5	28	5.2	10.8	55.8	32	67.9	\$39.38	\$0.580	\$32.36	71.4	\$41.32	\$0.579	
Pittsburgh.....	7	34	5.8	9.3	54.2	40	88.8	53.73	.605	32.79	95.5	57.28	.600	
Great Lakes and Middle West.....	7	28	5.6	9.3	52.2	40	73.6	52.38	.712	37.17	75.8	53.48	.705	
Southern.....	8	25	5.6	10.6	59.6	30	96.1	44.78	.466	27.77	99.4	46.52	.468	
Total.....	27	115	5.6	9.9	55.3	142	81.3	48.22	.593	32.79	85.3	50.33	.590	
Roll engineers:														
Eastern.....	6	17	5.5	11.4	63.5	17	120.2	58.06	.483	30.67	121.5	58.67	.483	
Pittsburgh.....	9	45	6.0	9.2	55.4	59	84.8	50.01	.589	32.63	84.8	50.01	.589	
Great Lakes and Middle West.....	8	29	6.1	9.8	59.4	32	113.2	69.53	.614	36.47	114.4	70.24	.614	
Southern.....	3	4	5.8	9.5	54.7	4	75.3	54.01	.718	39.27	75.3	54.01	.718	
Total.....	26	95	5.9	9.8	58.0	112	98.0	56.95	.581	33.70	98.5	57.25	.581	
Rollers:														
Eastern.....	6	21	5.5	10.1	55.9	22	85.4	117.80	1.379	77.09	87.4	119.31	1.366	
Pittsburgh.....	10	51	5.7	8.8	51.0	53	97.5	171.26	1.756	89.56	100.4	174.26	1.735	
Great Lakes and Middle West.....	11	35	5.8	8.8	52.9	40	96.8	177.40	1.832	96.91	96.8	177.40	1.832	
Southern.....	8	17	5.6	10.3	57.2	19	98.9	157.21	1.589	90.89	98.9	157.21	1.589	
Total.....	35	124	5.7	9.3	53.2	134	95.5	162.32	1.699	90.39	97.0	163.76	1.688	
Roughers:														
Eastern.....	6	40	5.5	10.1	55.3	43	78.2	61.24	.783	43.30	81.4	62.94	.773	
Pittsburgh.....	10	84	5.8	9.1	52.8	92	95.0	82.26	.865	45.67	99.8	85.06	.851	
Great Lakes and Middle West.....	11	67	5.9	9.1	52.5	74	96.7	96.87	1.002	52.61	98.1	97.99	.999	
Southern.....	8	44	5.5	10.6	55.7	50	101.5	64.79	.639	35.59	102.3	65.31	.638	
Total.....	35	237	5.6	9.5	53.2	259	94.0	79.57	.847	45.06	96.7	81.27	.840	

Catchers:														
Eastern.....	6	28	5.6	9.8	55.2	31	73.2	52.06	.711	39.25	78.6	54.81	.697	
Pittsburgh.....	10	68	5.7	9.0	51.9	71	93.1	84.52	.908	47.13	96.9	87.54	.903	
Great Lakes and Middle West.....	11	68	5.8	9.1	52.7	77	91.3	87.89	.962	50.70	94.2	89.82	.954	
Southern.....	8	23	5.6	10.1	56.7	29	84.0	51.62	.615	34.87	84.6	51.83	.613	
Total.....	35	187	5.7	9.3	53.3	205	88.2	76.34	.865	46.10	91.5	78.53	.859	
Stranders:														
Eastern.....	6	52	5.5	9.9	54.3	59	78.6	49.03	.623	33.83	86.6	52.62	.608	
Pittsburgh.....	10	136	5.7	8.7	49.8	158	82.7	60.15	.727	36.20	89.0	64.20	.721	
Great Lakes and Middle West.....	10	112	5.8	8.9	51.5	130	89.5	78.48	.877	45.17	93.0	81.41	.875	
Southern.....	7	33	5.7	10.1	57.0	42	85.3	42.74	.501	28.56	87.1	43.44	.499	
Total.....	33	333	5.7	9.1	51.8	389	84.6	62.71	.741	38.38	89.8	65.95	.734	
Finishers:														
Eastern.....	6	18	5.4	10.3	55.3	20	72.9	49.72	.669	37.00	78.9	51.64	.655	
Pittsburgh.....	9	55	5.7	8.8	50.6	60	77.0	75.44	.980	49.59	81.0	79.99	.988	
Great Lakes and Middle West.....	11	57	5.8	9.1	52.8	53	105.6	96.96	.918	48.87	107.6	98.72	.917	
Southern.....	7	19	5.7	10.3	58.3	21	101.4	48.85	.482	28.10	102.3	49.56	.484	
Total.....	33	149	5.7	9.3	53.0	159	90.1	76.42	.848	44.94	93.3	79.24	.850	
Hookups:														
Eastern.....	6	36	5.3	10.4	55.8	40	65.8	35.39	.538	30.02	73.6	38.78	.527	
Pittsburgh.....	8	53	5.9	9.5	56.1	64	86.0	52.70	.613	34.39	89.6	56.08	.615	
Great Lakes and Middle West.....	9	59	5.7	9.1	51.8	69	90.2	65.75	.729	37.76	97.1	70.29	.724	
Southern.....	6	27	5.7	10.1	57.8	34	90.6	45.42	.501	28.96	93.6	47.21	.504	
Total.....	29	175	5.7	9.6	54.8	207	84.2	52.51	.623	34.14	89.7	55.71	.621	
Roll hands, other:														
Eastern.....	3	5	5.4	10.9	58.3	5	93.5	47.83	.512	29.85	94.6	48.37	.512	
Pittsburgh.....	8	82	5.8	8.6	49.9	100	74.8	64.04	.856	42.71	83.7	69.67	.833	
Great Lakes and Middle West.....	8	62	5.9	9.2	53.6	77	84.5	55.92	.662	35.48	95.9	62.71	.654	
Southern.....	6	33	5.4	10.8	57.9	48	77.8	30.78	.396	22.93	80.3	33.43	.416	
Total.....	25	182	5.7	9.3	52.9	230	79.1	54.03	.683	36.13	87.3	59.31	.679	
Hotbed men:														
Eastern.....	5	46	5.6	10.1	57.1	53	71.6	34.30	.479	27.35	78.9	37.42	.475	
Pittsburgh.....	9	166	5.7	8.9	51.4	210	78.8	44.65	.567	29.14	85.8	48.61	.567	
Great Lakes and Middle West.....	11	167	5.8	9.0	51.9	200	88.1	53.69	.609	31.61	94.1	57.00	.606	
Southern.....	8	55	5.7	10.2	58.1	69	87.6	41.89	.478	27.77	90.2	43.08	.478	
Total.....	33	434	5.7	9.3	53.0	532	82.7	46.66	.564	29.89	88.8	49.93	.562	

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Bar Mills—Continued

Occupation and district	Number of plants	Positions			Employees working in scheduled pay period (16 days)								
		Number	Average customary full-time of employees in the positions		Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn		Hours per week	Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour
Shearmen:													
Eastern.....	5	29	5.4	10.4	56.0	31	76.4	\$38.61	\$0.506	\$28.34	80.7	\$40.67	\$0.504
Pittsburgh.....	8	53	5.7	8.8	50.3	56	96.5	65.91	.683	34.35	98.5	67.08	.681
Great Lakes and Middle West.....	11	62	5.9	8.8	51.2	67	100.2	66.72	.666	34.10	102.4	67.74	.661
Southern.....	8	19	5.6	10.1	56.5	22	99.4	41.57	.418	23.62	100.1	41.91	.419
Total.....	32	163	5.7	9.2	52.4	176	94.7	58.37	.616	32.28	97.1	59.53	.613
Shearmen's helpers:													
Eastern.....	5	25	5.4	10.0	53.7	34	59.6	29.49	.494	26.53	66.3	32.27	.487
Pittsburgh.....	9	206	5.8	8.9	51.3	314	67.4	36.34	.539	27.65	72.7	39.19	.539
Great Lakes and Middle West.....	9	154	5.8	8.9	51.8	201	82.3	45.26	.550	28.49	87.4	47.66	.545
Southern.....	8	43	5.6	10.5	57.9	52	94.2	33.84	.359	20.79	95.5	34.57	.362
Total.....	31	428	5.7	9.1	52.3	601	74.2	38.72	.522	27.30	79.2	41.23	.520
Bundlers:													
Eastern.....	3	7	5.9	9.7	56.6	8	78.1	33.23	.425	24.06	80.3	34.02	.424
Pittsburgh.....	5	42	6.0	8.1	46.0	53	70.9	40.51	.572	28.31	78.0	42.93	.550
Great Lakes and Middle West.....	6	32	6.0	8.9	53.0	38	90.5	50.09	.553	29.31	100.0	55.51	.555
Total.....	14	81	6.0	8.6	49.7	99	79.0	43.60	.552	27.43	86.6	47.04	.543
Laborers:													
Eastern.....	6	71	5.4	10.8	57.5	118	61.1	22.66	.371	21.33	62.8	23.35	.372
Pittsburgh.....	10	265	6.0	8.7	52.7	377	70.1	32.63	.466	24.56	73.9	34.76	.470
Great Lakes and Middle West.....	10	161	5.8	9.6	55.3	217	82.9	37.74	.455	25.16	90.4	41.52	.459
Southern.....	8	119	5.9	9.9	58.3	142	93.9	24.65	.263	15.33	94.8	25.01	.264
Total.....	34	616	5.9	9.4	55.0	854	76.1	31.22	.411	22.61	80.0	33.28	.416

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Bar Mills

ALL EMPLOYEES

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						

Group A.—Day turn only

7	12	12	84	84	3	1	8	12
6	13	10	75	75	1			1
7	10	13	73	73	1			1
6	12	12	72	72	5	1	50	58
7	10	10	70	70	7	5		14
7	10	8	70	70	4			4
6	12	10	70	70			5	5
6	11½	11½	69	69			1	1
7	10	10	68	68	2			2
7	10	8	68	68				3
6	12	8	68	68				3
6	11½	9½	67	67			118	127
7	9½	9½	66½	66½				7
6	12	6	66	66	12		1	1
6	11	11	66	66				13
6	12	5½	65½	65½	1		1	1
6	11	10	65	65				1
6	10	15	65	65		1		1
6	10	10	60	65			1	1
7	10	10	70	65		29		29
6	11	9	64	64				16
6	11½	6	63½	63½	5			5
6	11	8	63	63				1
6	10½	10½	63	63		3		3
6	11	7	62	62	2			2
6	10½	9½	62	62		2		2
6	11	6	61	61				24
6	10½	8½	61	61	3			27
6	10	11	61	61		1		1
6	10½	6½	60½	60½	2			2
6	11	5	60	60		2		3
6	10	10	60	60			1	1
6	10	10	60	60	7	135	97	355
5	12		60	60	166		187	389
7	10½	5	59½	59½	4			4
6	10½	7	59½	59½		1		1
6	10	9½	59½	59½		1		1
6	10½	6½	59	59		4		4
6	10	9	59	59		52	8	60
6	10	8½	58½	58½		3	16	21
6	10	8	58	58	23	1	168	256
6	10	7	57	58			3	3
6	10	9	59	57				
6	10½	5	57½	57½	19			19
5	11½		57½	57½	3			3
6	10	7	57	57			1	4
7	9½	9½	57	57			21	21
6	8	8	56	56			4	4
6	10	6	56	56	5	40	1	91
6	9½	8½	56	56		34		34
6	10	5½	55½	55½		24		24
6	10	5½	55½	55½	59			59
6	10	5	55	55	307	93	33	495
5	11		55	55	1			17
6	9½	8	54½	54½	1			25
6	9	9	54	54			19	19
6	9½	5	53½	54½		61		61
6	9½	5	52½	52½	22		1	32
7	8	8	56	52				
6	8	8	48	52			1	1

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Bar Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked									Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns				Average hours per week	Eastern	Pittsburgh	Great Lakes and Middle West	Southern	Total
Turns per week	Hours				Turns per week	Hours								
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday						
6	9½	4½		52					52		2			2
6	8½	8½		51					51					1
5	10			50					50	33	61		23	117
6	8	8		48					48		2			2
6	8	8		48					48		121		45	167
6	8½	4½		47					47		10			1
6	8	4		44					44		1		5	15
5	8¾			43¾					43¾				36	36
Total										747	637	794	540	2,718

Group A.—Day turn only—Continued

6	9½	4½		52					52		2			2
6	8½	8½		51					51					1
5	10			50					50	33	61		23	117
6	8	8		48					48		2			2
6	8	8		48					48		121		45	167
6	8½	4½		47					47		10			1
6	8	4		44					44		1		5	15
5	8¾			43¾					43¾				36	36
Total										747	637	794	540	2,718

Group B.—Night turn only

					7	13	13	13	91	91				1
					7	12	12	12	84	84				1
					6	14	12	14	84	84	2	2		12
					6	13		13	78	78				1
					7	10½	10½	10½	73½	73½	1			1
					6	12	12	12	72	72				2
					6	12		12	72	72				1
					7	10	10	10	70	70	4		1	37
					6	12	6		66	66	1			1
					5	13			65	65		1		7
					5	12½			62½	62½	4			4
					6	10	10		60	60		3	15	18
					6	10	10		60	60		25		3
					5	12			60	60	5			4
					7	8	8	8	56	56		2	7	9
					5	10			50	50		10	3	14
					6	8	8	8	48	48		29	3	32
					6	8		8	48	48		29		29
					5	8			40	40		11		11
					6	8		8	48	48				
					5	8½			42½	42½		1		1
					5	8			40	40		4		4
Total											17	122	31	95

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	84	18	17	4		39
7	12	12	12	84	6	12	12	12	72	78	8				8
7	11	11		72	7	12	12	12	84	78				2	2
6	12	12		73	6	12½	12½	12½	75	74					4
7	11	11	7	72	6	12	12		72	72			4		5
6	12	12		78	5	12½			62½	70¼				4	2
7	10	10	12	70	6	10	10	10	70	70			2		2
7	11½	11½		69	7	11½	11½		69	69		3			3
7	12	12	5	77	5	12			60	68½	2				2
7	10½	10½	12	75	5	12			60	67½			2		2
7	10½	9½	10	72	6	10½	10½		63	67½		2			2
6	12	12		72	5	12			60	66			4		4
6	12	6		66	6	12	6		66	66				2	2
7	10	10	10	70	6	10	10		60	65			8		8
6	10	10		60	7	10	10	10	70	65			5		5
7	10	9	10	69	6	10	10	10	60	64½		11			11
7	10	9	9	68	6	10		10	60	64		12			12
6	11½	10½		68	5	12			60	64			3		3

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Bar Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Monday to Friday	Sat-ur-day	Sun-day	Per week		Monday to Friday	Sat-ur-day	Sun-day	Per week						

Group C.—Weekly changes from one shift to another—Continued

6	10½	10½		63	6	10½		10½	63	63		12			12	
6	11	10		65	5	12			60	62½			4		4	
6	10½	9½		62	6	10½		10½	63	62½		4			4	
7	9½	9½	12	69	5	11			55	62			5		5	
6	10½	10½		63	5	12			60	61½					2	
6	10	10		60	6	10	10		60	60					433	
6	10	10		60	6	10		10	60	60		293			293	
6	10	10		60	5	12			60	60			1		1	
6	10		10	60	6	10		10	60	60		2			2	
5	12			60	5	12			60	60				126	126	
5	11½			57½	5	12½			62½	60		244			244	
5	11			55	5	13			65	60		6			6	
6	10	9		59	6	10		10	60	59½		400			400	
6	9½	9½		57	5	12			60	58½			5		5	
5	11			55	5	12			60	57½				8	8	
7	8	8	12	60	6	8	8		48	56			7		7	
7	8	8	8	56	7	8	8	12	60	56			9	22	34	
6	9½	9½		57	5	11			55	56				371	371	
6	10	10		60	5	10			50	55		8			8	
6	10	9		59	5	10			50	54½			72		72	
6	10	8		58	5	10			50	54		17	6	2	25	
6	10	7		57	5	10			50	53½			44		44	
7	8	8	8	56	7	8	8	8	48	53¼		30			30	
6	8	8		48	6	8	8	8	48	53¼			140		140	
6	10	5		55	5	10			50	52½				24	24	
7	8	8	8	56	6	8	8	8	48	52			1		1	
6	8	8	8	48	7	8	8	8	48	52			6		6	
7	8	9	8	57	6	8	8	8	48	51		13			13	
6	8	8		48	7	8	8	8	48	50½		3			3	
6	9½	5		52½	5	9½			47½	50				27	27	
6	8	8		48	6	8	8		48	48½		27			27	
6	8	8		48	6	8	8	9	48	48½			1		1	
6	8	8		48	6	8	8	9	48	48½			17		17	
6	8	8½		48½	6	8	8	8	48	48½			59		59	
6	8	8	8	48	6	8	8	8	48	48				488	495	
6	8	8		48	6	8	8	8	48	48				7	495	
6	8	8		48	6	8	8	8	48	48		40	5		45	
6	8	8		48	6	8	8	8	48	48			70	7	77	
6	8½	8½		51	5	8½			42½	46¾		29			29	
6	8	8		48	5	8			40	46		5			5	
6	8	8		48	6	8	10		50	46					5	
6	8	8		48	5	8	8		48	45½			147		147	
6	8	8		48	5	8	8		40	45½					482	
6	8	9		49	6	8	8	8	48	45½		832			832	
6	8	8		48	5	8			40	43			9		9	
6	8	8		48	5	8	8		40	42½					3	
6	8	8		48	5	8	8		40	42½		111	196	103	410	
6	8	8		48	5	8	8		40	42½					410	
Total												389	2,045	1,751	437	4,622

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Bar Mills—Continued

ROUGHERS, ONLY

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district					
Day turns					Night turns					Average hours per week	East-ern	Pitts-burgh	Great Lakes and Middle West	South-ern	Total
Turns per week	Hours				Turns per week	Hours									
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week						
6	11	6	---	61	---	---	---	---	61	---	---	---	---	2	2
6	10½	8½	---	61	---	---	---	---	61	---	---	---	---	2	2
6	10	10	---	60	6	10	10	---	60	---	---	4	---	13	17
6	10	10	---	60	6	10	---	10	60	---	17	---	---	---	17
6	10	10	---	60	---	---	---	---	60	---	2	---	---	---	2
5	12	---	---	60	---	---	12	---	60	---	---	---	---	18	18
5	12	---	---	60	---	---	---	---	60	---	---	---	---	3	14
5	11½	---	---	57½	5	12½	---	---	62½	6	---	5	---	---	13
6	10	9	---	59	6	10½	---	10	60	59½	13	---	---	---	28
6	10	9	---	59	---	---	---	---	59	---	28	---	---	---	1
6	10	8	---	58	---	---	---	---	58	---	1	---	8	---	10
6	10	6	---	58	---	---	---	---	56	---	2	---	---	---	2
6	9½	9½	---	57	5	11	---	---	55	---	---	1	---	---	7
6	9½	8½	---	56	---	---	---	---	56	---	---	---	---	---	1
6	10	5½	---	55½	---	---	---	---	55½	5	---	---	---	---	5
6	10	5	---	55	---	---	---	---	55	8	---	---	---	---	8
6	10	9	---	59	5	10	---	---	50	54½	---	---	7	---	7
6	9¼	8	---	54¼	---	---	---	---	54¼	---	---	---	---	4	4
6	10	8	---	58	5	10	---	---	50	54	---	---	3	---	3
6	8	8	---	48	7	8	8	8	56	53½	---	---	9	---	9
6	9½	5	---	53½	---	---	---	---	53½	5	---	---	---	---	5
6	9½	5	---	52½	---	---	---	---	52½	---	---	---	---	4	4
5	10	---	---	50	---	---	---	---	50	---	5	---	---	---	5
6	8	8	---	48	6	8	8	---	48	48	---	18	---	---	18
6	8	8	---	48	6	8	8	---	48	48	---	4	---	---	4
6	8½	8½	---	51	5	8½	---	---	42½	46¼	---	2	---	---	2
6	8	8	---	48	5	8	---	---	40	45½	26	5	---	---	31
5	8¾	---	---	43¾	5	8	---	---	40	43¾	---	---	2	---	2
6	8	8	---	48	5	8	---	---	40	42¾	6	8	4	---	18
Total	---	---	---	---	---	---	---	---	---	---	43	92	74	50	259

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926, by district—Bar Mills

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—									
				40 and under 44	44 and under 48	48	Over 48 and under 56	56	Over 56 and under 60	60	Over 60 and under 66	66 and under 72	72
Heaters:													
Eastern.....	6	51	56.1	16							25	7	3
Pittsburgh.....	10	61	52.1	6	27		3	4	5	2	14	4	
G. L. and M. W.....	9	36	51.3	3		17	12				2	2	2
Southern.....	8	33	59.6	2			2			21	4	4	4
Total.....	33	181	54.4	27	27	17	17	4	5	48	27	9	
Rollers:													
Eastern.....	6	22	55.9	3			5		7	5	2		
Pittsburgh.....	10	53	51.0	5	16	8	3	2	21	8			
G. L. and M. W.....	11	40	52.9	2	3	16	3	8	4	4			
Southern.....	8	19	57.2	1			4		1	11	2		
Total.....	35	134	53.2	11	19	24	15	10	23	28	4		
Roughers:													
Eastern.....	6	43	55.3	6			18				19		
Pittsburgh.....	10	92	52.8	8	28		5	3	29	19			
G. L. and M. W.....	11	74	52.5	4	5	22	19	7	8	9			
Southern.....	8	50	55.7	2			8		2	34	4		
Total.....	35	259	53.2	20	33	22	50	10	39	81	4		
Stranders:													
Eastern.....	6	59	54.3	9			29			21			
Pittsburgh.....	10	158	49.8	29	72		4	2	32	19			
G. L. and M. W.....	10	130	51.5	20	9	33	30	15	9	14			
Southern.....	7	42	57.0	2			7		8	22	3		
Total.....	33	389	51.8	60	81	33	70	17	49	76	3		
Hotbed men:													
Eastern.....	5	53	57.1				29			24			
Pittsburgh.....	9	210	51.4	20	91		9	5	48	37			
G. L. and M. W.....	11	200	51.9	8	29	55	22	42	16	11		17	
Southern.....	8	69	58.1	2			14		8	39	6		
Total.....	33	532	53.0	30	120	55	74	47	72	111	6	17	
Laborers:													
Eastern.....	6	118	57.5				50		14	52			2
Pittsburgh.....	10	377	52.7		42	184	47	4	22	49	29		3
G. L. and M. W.....	10	217	55.3	2	3	82	7	6	9	70	3	32	
Southern.....	8	142	58.3				48	17	18	33			26
Total.....	34	854	55.0	2	45	266	152	27	63	204	32	32	31

TABLE G.—Average and classified hours actually worked by employees in six specified occupations in pay period covered, 1923, by district—
Bar Mills

Occupation and district	Number of employees	Average hours worked	Number of employees who during the pay period worked hours specified																																		
			Under 32	32 and under 40	40 and under 48	48 and under 56	56 and under 64	64 and under 72	72 and under 80	80	80 and under 88	88	Over 88 and under 96	96	Over 96 and under 104	104	Over 104 and under 112	112	Over 112 and under 120	120	Over 120 and under 132	132	Over 132 and under 144	144	Over 144 and under 156	156	Over 156 and under 168	168	Over 168 and under 180	180	Over 180 and under 192	192	Over 192 and over				
Heaters:																																					
Eastern	51	77.6	5	2	2	3	4	1	6	2	2	6	10			2		3		3		7	1	4		5		1									
Pittsburgh	61	99.5	3			1	1	3	1	2	11	2	13	3				2		1	4																
G. L. and M. W.	36	104.6			1				1	2	1	2	1	4	5	3	5	1	3	2	2	2	1	1		1		1									
Southern	33	111.3		1				1			4	1		3	2			3	9	8	1																
Total	181	96.5	8	3	3	4	6	4	8	6	7	19	4	27	11	3	10	1	11	11	20	2	5		6		2										
Rollers:																																					
Eastern	22	87.4		1	2	1	1		1	2	2	3	1	2	4		1	1	2																		
Pittsburgh	53	100.4	1			4		2		4	3	7	5	3	4	5	2			10		3															
G. L. and M. W.	40	96.8	5							2	2	4	1	11	1	5	4			3																	
Southern	19	98.9	1							2	2	1	1	2					1	3	2																
Total	134	97.0	7	1	2	6	1	3	1	7	4	9	9	10	15	11	6	9	3	15		3	2														
Roughers:																																					
Eastern	43	81.4		2	2	4	3	1	4	4	3	4	1	5	7		3																				
Pittsburgh	92	99.8	3		2	4	3	4		3	3	8	11	9	3		3			5	8	7		16													
G. L. and M. W.	74	98.1	4	1	1	1			2	6	4	1	8	5	9	7	10	5		5		5															
Southern	50	102.3	4			2			2	1	4		2			4		2	21	6																	
Total	259	96.7	11	3	5	11	6	5	8	14	10	16	15	22	17	9	17	10	12	29	18		16	5													
Stranders:																																					
Eastern	59	86.6	3	2	2	5		2	1	4	6	4	2	8	10		9																				
Pittsburgh	158	89.0	13		3	5	5	6	6	7	6	18	21	22	3		8		10	3	13		1	9													
G. L. and M. W.	130	93.0	14	1		2	4	2	2	15	5	1	9	3	19	6	16	10	1	14	1	3	2														
Southern	42	87.1	6	2			1	1	1	2	5		4		5		4		1	4	6																
Total	389	89.8	36	5	5	12	10	11	10	28	17	27	28	39	21	19	27	16	21	8	33	1	13	2													
Hotbed men:																																					
Eastern	53	78.9	5	4	2	3	2	2	3		2		8	6	6		9		1																		
Pittsburgh	210	85.8	22	2	6	7	15	6	9	10	6	20	10	25	12	4	10			7																	
G. L. and M. W.	200	94.1	11	4	5	7	5	7	4	7	2	18	3	21	12	18	21	14		7	4	18	1	4													
Southern	69	90.2	11			1	3	3		2	6	1	5	3	2		6		3	13	10																
Total	532	88.8	49	10	13	18	25	18	16	19	16	39	26	55	32	22	46	14	23	23	35	1	24	4	3												
Laborers:																																					
Eastern	118	62.8	29	13	8	6	9	11	4		5	1	5	2	6	1	7		3	3	3	1	1														
Pittsburgh	377	73.9	110	6	9	10	13	9	14	11	7	16	10	21	21	7	14	8	30	33		13															
G. L. and M. W.	217	90.4	33	1	6	3	4	9	6	7	8	6	1	7	6	29	12	13	9	4	28	4	10														
Southern	142	94.8	11	4	3	7	4	3	5	6	11	1	14	1	15		21	1	12	8	9	2	1	2													
Total	854	80.0	183	24	26	26	27	36	24	27	35	15	36	20	48	51	47	28	32	45	73	7	25	2	8	1	4	2	1								

43154°-27-11

SHEET MILLS

Data for 1926 were collected from the pay rolls of 14 sheet-mill establishments and cover 10,753 employees in all occupations. Of the 10,753 employees reported, 5,697 were found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1910, and from 1910 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ Comparative figures are presented for employees in the selected occupations from 1910 to 1926.

The hours of labor of employees in sheet mills are subject to only slight variations from year to year. Long ago the 8-hour turn had been found to be more desirable for both the employer and the employee on account of the speeding up of production made possible by the shorter working hours, and except for certain employees, mostly laborers, this department has operated on a three-shift basis for many years. In 1914 employees as a whole had an average full-time week of 52.3 hours, which decreased to 50.3 hours in 1920. Working time changed but little in 1922 and 1924, but in 1926 the average dropped to 48.9 hours. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1913 to 1926, for the department as a whole, are shown in Table 1, page 4.

Comparisons of the full-time hours per week in the various selected occupations may be made from Table A. The average full-time hours per week of employees in the "hot-mill" occupations have varied but little during the period 1910 to 1926, but the average for laborers has decreased considerably. In 1910 laborers worked an average of 63.1 hours per week, which increased to 64.9 hours in 1913. In 1920 the average dropped to 59.5 hours but increased in 1922 to 65.2 hours. In 1924 the average was 64.6 hours but in 1926 laborers worked only 56.6 hours.

The increases or decreases in full-time hours per week of employees in this department have been caused almost entirely by the changes in the daily hours of labor, as the average number of turns per week have remained practically the same throughout the period. Table B shows that, in 1914, 95 per cent of the employees reported worked either 6 turns per week or alternated or rotated regularly from 5 to 6 turns. In 1926, 94 per cent of the employees worked from 5 to 6 turns per week. There has been some slight variation in some of the groups during the period 1914 to 1926, but as a whole the number of turns per week has changed very little.

The working time in 1926 of the employees in this department may be seen in Table D. A grouping of the employees by hours per day in that table shows that, in 1926, 7,532 of the 10,753 employees covered had a working-day of 8 hours and only 373 worked as many as 12 hours per day. A total of 2,286 worked 10 hours per day.

¹ Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

The employees covered in sheet mills, of course, include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to members of the producing crew separate figures are shown for the occupation of rollers. Of the 492 employees who worked as rollers during the pay period, all worked 8 hours per day. A total of 376 worked 5 turns, 5 turns, and 6 turns per week in rotation, and 116 worked 5 turns, 6 turns, and 6 turns per week in rotation—that is, 376 employees had an average week of $42\frac{2}{3}$ hours and the remaining 116 had a week of $45\frac{1}{3}$ hours. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the trend in the hours of labor of employees has been downward in recent years, the trend in hourly earnings has been decidedly upward. In 1914 the earnings per week of all employees covered was 48.8 cents on the average, while in 1926 employees earned an average of 75.9 cents per hour, an increase of 56 per cent; in other words, the 1926 hourly earnings were $1\frac{1}{2}$ times the earnings in 1914. The earnings were highest in 1920, \$1.039 on the average, and in 1924 they were 5 cents per hour greater than in 1926. Most of the tonnage rates paid in sheet mills are based directly on the selling price of the product—that is, at the close of each two-month period tonnage rates are adjusted in accordance with the price of bar iron during that interval. Thus the rates paid in this department in a large number of occupations are subject to wide fluctuations in a two-year study such as the bureau makes. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, rollers in 1910 earned an average of \$1.242 per hour, which increased to \$1.476 in 1913. Earnings decreased somewhat in 1914 and 1915 but in 1917 rollers received \$2.591 per hour. Following a slight decrease in earnings in 1919, The high mark of \$2.976 per hour was reached in this occupation in 1920. Earnings decreased considerably in 1922, increased again in 1924, and decreased again in 1926 to \$1.956 per hour. A distribution by average hourly earnings of the employees in 6 specified occupations in 1926 is given in Table F.

As the increase in hourly earnings was more than enough to compensate for the slight reduction in full-time hours, average full-time earnings per week increased considerably in 1926 as compared with 1914. In 1914 earnings per full-time week for all employees were \$25.52 on the average, while in 1926 they had increased to \$37.12. In 1920 they were \$52.26, the highest of any year shown, and in 1924 they were \$40.61. Weekly earnings in the various selected occupations show like increases. The rollers, for example, earned an average of \$52.98 per week in 1910, \$63.21 in 1913, and \$129.10 in 1920. In the following years there was a decrease in hourly earnings and in 1924 rollers earned \$93.35 per week and \$84.69 in 1926.

The 5,697 employees in the selected occupations worked an average of 74.4 hours during the 16-day pay period covered by the 1926 study for which they received an average of \$70.88. This includes all of the hours worked and the earnings received by these employees, as shown in Table C. Picklers worked the most time, 100.4 hours, and openers, level handed, the least or 65.6 hours. Openers, level handed, also earned the least money, \$42.43, and rollers, a highly

skilled occupation, earned the largest amount, \$140.14. Laborers worked 95.5 hours during the period and received \$45.53.

A classification of employees in 6 specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of laborers 62 of the 493 employees worked less than 32 hours during the pay period, while 1 employee worked between 180 and 192 hours. The largest group, 73, worked between 120 and 132 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the occupations classified in this table. Laborers earned from less than \$5 to \$110 and under \$120, while rollers earned from \$5 and under \$10 to \$250 and over. The largest group of laborers, 63, earned \$50 and under \$55.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Sheet Mills

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—				
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84
Pair heaters:													
1910.....	9	210	42.7	\$0.466	\$19.89	100	86	86	100				
1911.....	9	255	42.7	.502	21.42	100	92	92	100				
1912.....	9	249	42.7	.517	22.06	100	95	95	100				
1913.....	13	336	42.8	.543	23.23	100	100	100	100				
1914.....	15	399	42.8	.540	23.10	100	99	99	100				
1915.....	15	354	42.8	.518	22.17	100	95	95	100				
1917.....	8	276	43.7	1.038	45.48	102	191	195	100				
1919.....	11	382	43.4	1.046	45.40	101	193	195	100				
1920.....	13	521	43.4	1.386	60.13	101	255	259	100				
1922.....	14	576	43.3	.880	37.84	101	162	163	100				
1924.....	14	536	43.4	1.027	44.50	101	189	192	100				
1926.....	13	478	43.3	.925	40.05	101	170	172	100				
Rollers:													
1910.....	9	215	42.7	1.242	52.98	100	84	84	100				
1911.....	9	259	42.7	1.380	58.89	100	93	93	100				
1912.....	9	252	42.7	1.416	60.41	100	96	96	100				
1913.....	13	335	42.8	1.476	63.21	100	100	100	100				
1914.....	15	394	42.8	1.431	61.20	100	97	97	100				
1915.....	15	348	42.9	1.280	54.80	100	87	87	100				
1917.....	8	276	43.7	2.591	113.47	102	175	180	100				
1919.....	11	342	43.5	2.536	110.32	102	172	175	100				
1920.....	13	464	43.4	2.976	129.10	101	202	204	100				
1922.....	14	501	43.3	1.893	82.01	101	128	130	100				
1924.....	14	478	43.4	2.148	93.35	101	146	148	100				
1926.....	14	492	43.3	1.956	84.69	101	133	134	100				
Rollers, level handed:													
1920.....	5	44	42.7	1.516	64.73				100				
1922.....	3	39	44.5	1.069	42.57				100				
1924.....	7	114	42.9	1.945	77.69				100				
1926.....	4	27	43.3	1.162	50.31				100				
Rollers' helpers or finishers:													
1912.....	6	115	42.7	.474	20.21	100	94	94	100				
1913.....	8	171	42.7	.503	21.48	100	100	100	100				
1914.....	10	264	42.9	.555	23.77	100	110	111	100				
1915.....	10	233	42.9	.461	19.77	100	92	92	100				
1919.....	10	271	43.0	1.010	43.43	101	201	202	100				
1920.....	11	437	42.8	1.092	46.80	100	217	218	100				
1922.....	11	487	42.9	.721	30.90	100	143	144	100				
1924.....	11	437	43.0	.865	37.78	101	172	174	100				
1926.....	12	392	43.0	.787	33.84	101	151	158	100				

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Sheet Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—									
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84					
Roughers:																		
1910	9	215	42.7	\$0.558	\$23.82	100	87	87	100									
1911	9	255	42.7	.603	25.71	100	94	94	100									
1912	9	252	42.7	.616	26.29	100	96	96	100									
1913	13	336	42.8	.642	27.49	100	100	100	100									
1914	15	399	42.8	.648	27.73	100	101	101	100									
1915	15	353	42.8	.619	26.51	100	96	96	100									
1917	8	276	43.7	1.285	56.27	102	200	205	100									
1919	11	367	43.5	1.289	56.07	102	201	204	100									
1920	13	528	43.4	1.584	68.69	101	247	250	100									
1922	14	590	43.3	.994	42.83	101	155	156	100									
1924	14	533	43.4	1.150	49.94	101	179	182	100									
1926	14	510	43.3	1.037	44.90	101	162	163	100									
Catchers:																		
1910	9	215	42.7	.544	23.19	100	87	86	100									
1911	9	258	42.7	.587	25.03	100	93	93	100									
1912	9	252	42.7	.603	25.71	100	96	96	100									
1913	13	336	42.8	.629	26.92	100	100	100	100									
1914	15	399	42.8	.636	27.23	100	101	101	100									
1915	15	350	42.8	.595	25.49	100	95	95	100									
1917	8	276	43.7	1.256	54.92	102	200	204	100									
1919	11	407	43.6	1.199	52.28	102	101	194	100									
1920	13	552	43.4	1.532	66.43	101	244	247	100									
1922	14	589	43.3	.961	41.54	101	153	154	100									
1924	14	570	43.4	1.099	47.70	101	175	177	100									
1926	14	527	43.3	.969	42.82	101	157	160	100									
Matchers:																		
1910	9	210	42.7	.387	16.53	100	86	86	100									
1911	9	255	42.7	.418	17.83	100	93	93	100									
1912	9	249	42.7	.429	18.30	100	96	96	100									
1913	13	336	42.8	.448	19.16	100	100	100	100									
1914	15	399	42.8	.454	20.70	100	108	108	100									
1915	15	354	42.8	.475	20.34	100	106	106	100									
1917	8	276	43.7	.946	41.39	102	211	216	100									
1919	11	393	43.5	.961	42.67	102	219	223	100									
1920	13	642	43.4	1.225	53.12	101	273	277	100									
1922	14	743	43.3	.791	34.04	101	177	178	100									
1924	14	639	43.4	.932	40.42	101	208	211	100									
1926	10	400	43.5	.829	36.06	102	185	193	100									
Doublers:																		
1910	9	210	42.7	.372	15.86	100	87	86	100									
1911	9	252	42.7	.401	17.10	100	93	93	100									
1912	9	246	42.7	.412	17.58	100	96	96	100									
1913	13	336	42.8	.429	18.34	100	100	100	100									
1914	15	399	42.8	.462	19.75	100	108	108	100									
1915	15	354	42.8	.453	19.42	100	106	106	100									
1917	9	276	43.7	.906	39.57	102	211	216	100									
1919	11	437	43.4	.921	39.97	101	215	218	100									
1920	13	658	43.4	1.206	52.32	101	281	285	100									
1922	14	731	43.3	.775	33.42	101	181	182	100									
1924	14	661	43.4	.909	39.42	101	212	215	100									
1926	10	422	43.5	.804	34.97	102	187	191	100									
Sheet heaters:																		
1910	9	215	42.7	.883	37.68	100	89	89	100									
1911	9	259	42.7	.911	38.88	100	92	91	100									
1912	9	253	42.7	.949	40.51	100	96	95	100									
1913	12	307	42.8	.993	42.50	100	100	100	100									
1914	14	364	42.8	.966	41.34	100	97	97	100									
1915	14	324	42.9	.868	37.19	100	87	88	100									
1917	8	276	43.7	1.879	82.36	102	189	194	100									
1919	11	332	43.5	1.849	80.43	102	186	189	100									
1920	13	424	43.4	2.151	93.29	101	217	220	100									
1922	14	499	43.3	1.381	59.26	101	139	139	100									
1924	14	470	43.4	1.559	67.68	101	157	159	100									
1926	14	478	43.3	1.404	60.79	101	151	143	100									

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Sheet Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—									
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84					
Sheet heaters, level handed:																		
1913.....	2	14	42.7	\$0.707	\$30.17	100	100	100										
1914.....	2	56	42.7	.762	32.65	100	108	108										
1915.....	2	34	42.7	.686	29.27	100	97	97										
1919.....	3	15	42.7	1.316	56.19	100	186	186										
1920.....	8	94	43.0	1.661	71.45	101	235	237										
1922.....	7	90	43.3	.995	41.33	101	141	137										
1924.....	7	115	42.9	1.088	46.29	100	154	153										
1926.....	7	48	43.2	.978	42.25	101	138	140										
Sheet heaters' helpers:																		
1910.....	8	174	42.7	.377	16.07	100	78	78										
1911.....	8	215	42.7	.436	18.59	100	90	90										
1912.....	8	208	42.7	.439	18.71	100	91	90										
1913.....	10	230	42.9	.483	20.70	100	100	100										
1914.....	13	309	42.8	.485	20.73	100	100	100										
1915.....	13	275	42.9	.458	19.60	100	95	95										
1917.....	6	216	43.2	.859	37.21	101	177	180										
1919.....	11	286	43.1	.926	39.91	100	192	193										
1920.....	12	367	42.7	1.140	48.68	100	236	235										
1922.....	13	454	42.8	.727	31.13	100	151	150										
1924.....	13	408	42.9	.894	38.51	100	185	186										
1926.....	13	422	42.9	.803	34.45	100	166	166										
Shearmen:																		
1910.....	7	85	46.0	.689	30.79	107	85	88	86									
1911.....	7	104	44.9	.722	32.86	105	89	94	90									
1912.....	7	105	44.9	.768	34.67	105	94	99	90									
1913.....	8	114	42.9	.814	34.90	100	100	100	100									
1914.....	10	136	42.9	.860	36.84	100	106	106	100									
1915.....	10	115	43.0	.827	35.48	100	102	102	100									
1917.....	7	149	43.5	1.399	60.90	101	172	175	100									
1919.....	11	221	43.3	1.463	63.35	101	180	182	100									
1920.....	8	122	43.5	1.891	82.22	101	232	236	100									
1922.....	12	190	43.3	1.175	50.90	101	144	146	100									
1924.....	10	159	43.7	1.289	56.26	102	158	161	100									
1926.....	12	198	43.6	1.222	53.28	102	150	152	99	1								
Shearmen's helpers:																		
1910.....	6	62	46.4	.261	11.90	108	104	111	84									
1911.....	6	83	44.9	.308	13.59	105	123	126	90									
1912.....	6	77	45.1	.290	12.88	105	116	120	90									
1913.....	7	111	42.9	.251	10.77	100	100	100	100									
1914.....	9	128	42.9	.282	12.09	100	112	112	100									
1915.....	9	146	43.8	.242	10.59	102	96	98	95	2								
1917.....	6	120	43.2	.533	23.06	101	220	214	100									
1919.....	11	196	43.7	.682	29.80	102	272	277	98									
1920.....	7	155	43.7	.983	42.91	102	392	398	100									
1922.....	12	265	43.4	.642	27.69	101	256	257	100									
1924.....	8	203	43.8	.736	32.11	102	293	298	100									
1926.....	12	207	43.6	.683	29.78	102	272	277	100	(1)								
Openers:																		
1910.....	7	138	46.0	.274	12.57	101	98	100	86									
1911.....	7	167	45.2	.275	12.35	100	99	98	89									
1912.....	7	180	45.8	.289	13.04	101	104	104	87									
1913.....	6	168	45.4	.279	12.56	100	100	100	88									
1914.....	9	200	42.8	.282	12.06	94	101	96	100									
1915.....	9	180	43.6	.273	11.93	96	98	95	96	2								
1917.....	6	175	43.3	.662	28.70	95	237	229	100									
1919.....	10	266	43.6	.656	28.60	96	235	228	99									
1920.....	6	198	44.0	1.188	52.13	97	426	415	100									
1922.....	11	415	43.5	.732	31.27	96	262	249	100									
1924.....	9	284	43.5	.806	34.99	96	289	279	100									
1926.....	11	287	43.5	.741	32.23	96	266	257	100									

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Sheet Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100)			Per cent of employees whose average full-time hours per week were—										
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84				
Openers, level handed:																			
1920	1	40	42.7	\$1.114	\$47.57				100										
1922	4	45	42.7	.607	25.30				100										
1924	4	52	42.7	.629	26.86				100										
1926	5	96	44.0	.651	28.64				100										
Picklers:																			
1910	4	50	70.8	.181	12.75	104	84	88			10			90					
1911	5	58	71.2	.177	12.54	105	82	87			9	16		69					7
1912	5	39	71.7	.186	13.23	105	86	91			13	15		56					15
1913	8	71	68.1	.216	14.49	100	100	100	11		7	8		73					
1914	9	121	69.6	.211	14.55	102	98	100	7		4	8		81					
1915	9	126	69.8	.209	14.44	102	97	100	6		3	6		84					
1919	7	67	68.3	.600	40.98	100	278	283		6	24			70					
1920	7	65	51.5	.792	41.13	76	367	284	77		5	17		2					
1922	11	106	65.9	.508	33.51	97	235	231	8	8	7	42		5					31
1924	12	150	63.6	.555	35.48	93	257	245	7	13	31	21		25					3
1926	11	127	56.9	.631	35.90	84	292	248	20	24	34	17		4					
Feeders:																			
1920	5	41	56.8	.704	39.39				41		20	39							
1922	8	119	61.4	.500	30.64				32	7	10	30		9	12				
1924	8	101	53.1	.578	30.72				59	9	2	3		27					
1926	8	93	45.3	.647	29.31				95					5					
Laborers:																			
1910	9	347	63.1	.164	10.35	97	86	84			4	64	13	16	1	3			
1911	9	361	63.6	.166	10.54	98	87	86			5	53	25	16					2
1912	9	354	63.5	.169	10.72	98	89	87			4	54	26	15	1				
1913	13	351	64.9	.190	12.28	100	100	100			17	37	13	28	4	1			
1914	15	378	65.9	.188	12.37	102	99	101			10	26	32	26	3	2			
1915	15	394	65.0	.188	12.21	100	99	99			10	32	30	18	8	1			
1917	8	656	61.8	.331	20.46	95	174	167				73	26	2					
1919	9	270	64.5	.462	29.80	99	243	243			8	51	13	28					
1920	11	866	59.5	.536	32.01	92	282	261	32		10	20	11	22	5				
1922	13	808	65.2	.356	23.06	100	187	188			29	31	8	32					
1924	13	757	64.6	.420	27.15	100	221	221	3	20	34	13	30	30					
1926	14	493	56.6	.475	26.89	87	250	219	31	27	22	13	5	2					

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Sheet Mills

District and year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—							Per cent of employees whose customary working turns per week were—						
			5	5, 5, and 6 in rotation	5 and 6 alternately	5, 6, and 6 in rotation	6	6 and 7 alternately	7	5	5, 5, and 6 in rotation	5 and 6 alternately	5, 6, and 6 in rotation	6	6 and 7 alternately	7
Pittsburgh:																
1914.....	10	4, 150	3	2, 521	110	-----	1, 282	-----	234	(1)	61	3	-----	31	-----	6
1915.....	10	3, 808	20	2, 179	144	-----	1, 208	-----	237	1	57	4	-----	32	-----	6
1920.....	9	5, 410	40	2, 483	193	847	1, 669	68	110	1	46	4	16	31	1	2
1922.....	9	5, 798	120	2, 674	97	877	1, 732	34	264	2	46	2	15	30	1	5
1924.....	9	5, 787	64	2, 713	253	862	1, 697	20	178	1	47	4	15	29	(1)	3
1926.....	9	6, 054	46	2, 932	252	790	1, 858	11	165	1	48	4	13	31	(1)	3
Great Lakes and Middle West:																
1914.....	5	2, 154	12	1, 144	9	216	705	57	11	1	53	(1)	10	33	3	1
1915.....	5	1, 928	12	994	6	252	625	31	8	1	52	(1)	13	32	2	(1)
1920.....	4	3, 328	12	1, 342	51	519	1, 252	-----	152	(1)	40	2	16	38	-----	5
1922.....	5	3, 863	33	1, 670	143	552	1, 261	38	166	1	43	4	14	33	1	4
1924.....	5	3, 903	1	1, 738	90	575	1, 242	26	171	(1)	46	2	15	32	1	4
1926.....	5	4, 699	61	2, 063	45	918	1, 205	61	346	1	44	1	20	26	1	7
Total:																
1914.....	15	6, 304	15	3, 665	119	214	1, 987	57	245	(1)	58	2	3	32	1	4
1915.....	15	5, 736	32	3, 173	150	252	1, 833	51	245	1	55	3	4	32	1	4
1920.....	13	8, 738	52	3, 825	244	1, 366	2, 921	68	262	1	44	3	16	33	1	3
1922.....	14	9, 661	153	4, 344	240	1, 423	2, 993	72	430	(1)	45	2	15	31	1	4
1924.....	14	9, 660	65	4, 511	343	1, 437	2, 939	46	349	(1)	47	4	15	30	(1)	4
1926.....	14	10, 753	107	4, 995	297	1, 708	3, 063	72	511	1	46	3	16	28	1	5

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Sheet Mills

Occupation and district	Number of plants	Positions				Employees working in schedule pay period (16 days)								
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Pair heaters:														
Pittsburgh	8	218	5.4	8.0	43.4	243	72.1	\$68.87	\$0.955	\$41.45	74.9	\$71.23	\$0.951	
Great Lakes and Middle West	5	207	5.4	8.0	43.3	235	65.0	57.89	.891	38.58	69.2	60.46	.874	
Total	13	425	5.4	8.0	43.4	478	68.6	63.47	.925	40.05	72.1	65.93	.914	
Rollers:														
Pittsburgh	9	261	5.4	8.0	43.3	284	70.1	142.36	2.029	87.86	71.4	143.73	2.012	
Great Lakes and Middle West	5	199	5.4	8.0	43.3	208	70.3	130.50	1.856	80.36	74.9	135.23	1.805	
Total	14	460	5.4	8.0	43.3	492	70.2	137.34	1.956	84.69	72.9	140.14	1.922	
Rollers, level handed:														
Pittsburgh	1	2	5.4	8.0	42.7	2	72.0	94.90	1.318	56.28	72.0	94.90	1.318	
Great Lakes and Middle West	3	24	5.4	8.0	43.3	25	69.1	79.43	1.150	49.80	73.3	85.90	1.182	
Total	4	26	5.4	8.0	43.3	27	69.3	80.57	1.162	50.31	73.2	86.57	1.182	
Rollers, helpers and finishers:														
Pittsburgh	8	184	5.3	8.0	42.7	206	63.5	52.19	.822	35.10	67.1	55.78	.831	
Great Lakes and Middle West	4	174	5.4	8.0	43.3	186	67.8	50.91	.751	32.52	71.9	54.01	.751	
Total	12	358	5.4	8.0	43.0	392	65.5	51.58	.787	33.84	69.4	54.94	.792	
Roughers:														
Pittsburgh	9	263	5.4	8.0	43.3	290	67.9	73.93	1.089	47.15	71.7	78.58	1.096	
Great Lakes and Middle West	5	204	5.4	8.0	43.3	220	69.2	67.18	.971	42.04	74.3	70.86	.954	
Total	14	467	5.4	8.0	43.3	510	68.5	71.02	1.037	44.90	72.8	75.25	1.033	

Catchers:															
Pittsburgh	9	263	5.4	8.0	43.3	299	65.8	66.59	1.013	43.86	69.3	69.70	1.005		
Great Lakes and Middle West	5	204	5.4	8.0	43.3	228	65.3	62.58	.959	41.52	70.6	66.12	.937		
Total	14	467	5.4	8.0	43.3	527	65.5	64.85	.989	42.82	69.9	68.15	.975		
Matchers:															
Pittsburgh	6	184	5.4	8.0	43.5	204	69.5	59.08	.850	36.98	73.8	62.39	.846		
Great Lakes and Middle West	4	174	5.4	8.0	43.4	196	66.5	53.72	.807	35.02	72.7	57.44	.791		
Total	10	358	5.4	8.0	43.5	400	68.1	56.45	.829	36.06	73.2	59.96	.820		
Doublers:															
Pittsburgh	6	183	5.3	8.0	43.5	215	66.8	54.84	.821	35.71	72.0	59.04	.820		
Great Lakes and Middle West	4	174	5.4	8.0	43.4	207	63.1	49.48	.784	34.03	71.6	55.24	.772		
Total	10	357	5.4	8.0	43.5	422	65.0	52.21	.804	34.97	71.8	57.17	.796		
Sheet heaters:															
Pittsburgh	9	252	5.4	8.0	43.3	265	71.8	103.56	1.442	62.44	73.1	104.57	1.431		
Great Lakes and Middle West	5	201	5.4	8.0	43.2	213	69.0	93.49	1.355	58.54	73.6	96.76	1.315		
Total	14	453	5.4	8.0	43.3	478	70.6	99.07	1.404	60.79	73.3	101.09	1.379		
Sheet heaters, level handed:															
Pittsburgh	4	21	5.3	8.0	42.7	23	72.0	78.83	1.095	46.76	73.4	80.34	1.095		
Great Lakes and Middle West	3	24	5.5	8.0	43.7	25	74.9	65.58	.875	38.24	81.6	73.49	.901		
Total	7	45	5.4	8.0	43.2	48	73.5	71.93	.978	42.25	77.6	76.78	.989		
Sheet heaters' helpers:															
Pittsburgh	8	192	5.3	8.0	42.7	216	63.9	54.57	.853	36.42	67.4	57.76	.857		
Great Lakes and Middle West	5	190	5.4	8.0	43.1	206	64.5	48.48	.751	32.37	69.3	51.28	.740		
Total	13	382	5.4	8.0	42.9	422	64.2	51.60	.803	34.45	68.3	54.60	.799		
Shearmen:															
Pittsburgh	8	114	5.4	8.0	43.6	122	73.9	91.05	1.232	53.72	75.0	91.65	1.222		
Great Lakes and Middle West	4	68	5.5	8.0	43.6	76	70.9	85.44	1.205	52.54	73.8	87.52	1.186		
Total	12	182	5.4	8.0	43.6	198	72.7	88.90	1.222	53.28	74.6	90.06	1.208		
Shearmen's helpers:															
Pittsburgh	8	106	5.4	8.0	43.6	121	68.6	48.12	.701	30.56	70.4	49.55	.704		
Great Lakes and Middle West	4	77	5.5	8.0	43.6	86	67.5	44.27	.656	23.00	69.9	45.96	.657		
Total	12	183	5.4	8.0	43.6	207	68.1	46.52	.683	29.78	70.2	48.06	.684		

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Sheet Mills—Continued

Occupation and district	Number of plants	Positions				Employees working in schedule pay period (16 days)								
		Number	Average customary full-time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Openers, male:														
Pittsburgh.....	8	192	5.4	8.0	43.6	225	66.3	\$51.11	\$0.771	\$33.62	69.5	\$52.94	\$0.762	
Great Lakes and Middle West.....	3	56	5.4	8.0	43.2	62	68.8	44.02	.640	27.65	77.0	48.90	.635	
Total.....	11	248	5.4	8.0	43.5	287	66.9	49.58	.741	32.23	71.1	52.07	.732	
Openers, level handed:														
Pittsburgh.....	3	16	5.3	8.0	42.7	20	52.5	18.89	.360	15.37	59.0	21.78	.369	
Great Lakes and Middle West.....	2	69	5.5	8.0	44.3	76	65.8	46.84	.712	31.54	67.3	47.86	.711	
Total.....	5	85	5.5	8.0	44.0	96	63.0	41.01	.651	28.64	65.6	42.43	.647	
Pickers:														
Pittsburgh.....	6	56	5.8	10.4	60.5	63	101.9	56.59	.555	33.58	104.3	57.81	.554	
Great Lakes and Middle West.....	5	60	6.0	8.9	53.5	64	94.9	67.50	.711	38.04	96.7	68.54	.709	
Total.....	11	116	5.9	9.6	56.9	127	98.4	62.09	.631	35.90	100.4	63.21	.629	
Feeders:														
Pittsburgh.....	4	30	5.4	8.7	47.6	36	73.8	48.63	.659	31.37	86.6	55.53	.642	
Great Lakes and Middle West.....	4	46	5.5	8.0	43.9	57	67.4	43.09	.640	28.10	76.8	48.36	.630	
Total.....	8	76	5.5	8.2	45.3	93	69.9	45.23	.647	29.31	80.5	51.13	.635	
Laborers:														
Pittsburgh.....	9	145	6.1	10.4	63.1	177	100.1	43.18	.431	27.20	108.5	47.62	.439	
Great Lakes and Middle West.....	5	236	6.0	8.7	52.7	316	85.0	42.78	.503	26.51	88.3	44.37	.502	
Total.....	14	381	6.1	9.3	56.6	493	90.4	42.92	.475	26.89	95.5	45.53	.477	

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Sheet Mills

ALL EMPLOYEES

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district						
Day turns					Night turns								Average hours per week	Pittsburgh	Great Lakes and Middle West	Total
Turns per week	Hours				Turns per week	Hours										
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week							
6	13	13		78					78	1		1				
7	11	11	11	77					77	4		4				
6	12	12		72					72	42	2	44				
7	10	10	10	70					70	20	1	21				
7	10	9	9	68					68	11		11				
6	11	11		66					66	2		2				
7	10	10	5	65					65	8		8				
6	12	5		65					65		1	1				
7	10	8	5	63					63	1		1				
7	9	9	9	63					63		109	109				
6	10	10		60					60	262	324	586				
6	10	9		59					59	531		531				
6	10	8		58					58	66		66				
6	10½	5		57½					57½		34	34				
7	9	9	9	63												
6	9	9		54					57		3	3				
6	9	9		54												
7	8	8	8	56					56		31	31				
6	10	6		56					56		2	2				
6	10	5½		55½					55½	28		28				
6	10	5		55					55	69	26	95				
6	10		5	55					55		1	1				
6	9½	7½		55					55	4		4				
6	9	9		54					54	3	79	82				
6	9	8		53					53	46		46				
6	8	8		48					48	12	19	31				
6	8		8	48					48		3	3				
6	10	5		45					45		1	1				
Total										1,110	636	1,746				

Group B.—Night turn only

				7	13	13	13	91	91	1		1
				6	13½	13½		81	81		2	2
				6	12		12	72	72	1		1
				7	10	10	10	70	70		2	2
				7	8	8	16	64	64	2		2
				7	9	9	9	63	63		42	42
				6	11	8		63	63		2	2
				6	10		10	60	60	10	16	26
				5	12			60	60	39	14	53
				6	8	8	8	56	56		19	19
				6	10		6	56	56	1		1
				6	9	9		54	54		4	4
				6	9		9	54	54		1	1
				6	9		8	53	53	1		1
				5	10			50	50	7		7
				6	8	8		48	48	1		1
				6	8		8	48	48	4	1	5
Total										67	103	170

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Sheet Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district						
Day turns					Night turns								Average hours per week	Pittsburgh	Great Lakes and Middle West	Total
Turns per week	Hours				Turns per week	Hours										
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week							

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	84	4		4
7	12	12	12	72	7	12	12	12	84	80		2	2
6	12	12	12	72	7	12	12	12	84	78	1		1
6	12	12	12	72	6	12	12	12	72	72	44	2	46
6	11	11	11	66	6	13	13	13	78	72	84		84
6	10	10	10	60	6	14	14	14	84	72	17		17
7	10	10	10	70	7	10	10	10	70	70	11		11
6	12	12	12	72	6	12	6	6	66	69		2	2
6	10	10	10	60	6	13	13	13	78	69		1	1
6	12	12	12	72	5	12	12	12	60	66		20	20
6	11	11	11	66	6	11	11	11	66	66	56		20
7	9	9	9	63	7	9	9	9	63	63		21	21
6	11	11	11	66	6	10	10	10	60	63		13	13
6	10	10	10	60	6	11	11	11	66	63		29	29
6	10	10	10	60	7	10	5	10	65	62½	2		2
6	10	10	10	60	6	10	10	10	60	60		5	5
6	10	10	10	60	6	10	10	10	60	60	118	393	511
6	10	10	10	60	5	12	12	12	60	60		34	34
6	10	10	10	60	5	12	12	12	60	60		40	40
6	10	9	9	59	6	10	10	10	60	59½		57	57
6	10	9	9	59	6	10	9	9	59	59	6		6
6	10	8	8	58	6	10	10	10	60	59	6		6
7	8	8	8	56	7	8	8	12	60	60		2	2
6	10	9	9	59	6	10	10	10	60	58½	2		2
6	10	9	9	59	6	10	10	10	60	58	106		106
6	10	10	10	60	6	10	10	10	60	57¾	23		23
6	10	10	10	60	6	10	5	10	55	57½		2	2
6	10	5	5	55	6	10	10	10	60	57½	7		7
6	9½	9½	9½	57	6	9½	9½	9½	57	57	28		28
7	8	8	8	56	7	8	8	12	60	56	3		3
7	8	8	8	56	6	8	8	8	48		55	107	162
7	8	8	8	56	7	8	8	8	56	56		40	40
6	10	10	10	60	5	10	10	10	50	55	4		4
6	10	10	10	60	5	10	10	10	50	55	137	13	150
5	10	10	10	50	6	10	10	10	60	55		9	9
6	10	10	10	60	6	8	8	8	48	54	1		1
6	9	9	9	54	6	9	9	9	54	54	51		51
7	8	8	8	56	6	8	8	8	48		3	3	6
6	8	8	8	48	7	8	8	8	56	53½		9	9
7	8	8	10	53	7	8	8	8	56	53	2		2
6	9	8	8	53	6	9	8	8	53	53	6		6
7	8	8	8	56	6	8	8	8	48	56	3	53	56
7	8	8	8	56	6	8	8	8	48	50½		3	3
6	12	12	12	72	5	8	8	8	40	50½	19		19
6	8	8	8	48	6	8	8	8	48	50½		3	3
7	8	8	5	53	6	8	8	8	48	49½		2	2
6	9	9	9	54	5	9	9	9	45	48	3		3
6	8	8	8	48	6	8	8	8	48	48	4	5	9
6	8	8	8	48	6	8	8	8	48	48	23	124	147
6	8	8	8	48	6	8	8	8	48	48	5		5

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Sheet Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district		
Day turns					Night turns							
Turns per week	Hours				Turns per week	Hours						
	Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week		Mon-day to Fri-day	Sat-ur-day	Sun-day	Per week			
										Pitts-burgh	Great Lakes and Middle West	Total

Group C.—Weekly changes from one shift to another—Continued

6	8	8	-----	48	{	6	8	-----	8	48	}	48	29	88	117
6	8	8	-----	48	{	6	8	-----	8	48		48	98	6	104
6	8	8	8	48	{	6	8	-----	8	48	48	3	-----	3	
6	8	8	-----	48	{	6	8	8	-----	48	}	45½	790	856	1,646
6	8	6	-----	46	{	5	8	-----	8	40		44¾	-----	62	62
6	8	8	-----	48	{	6	8	-----	8	48	}	44	37	3	40
6	8	8	-----	48	{	5	8	-----	8	40		42¾	2,910	1,318	4,228
5	8	-----	-----	40	{	5	8	-----	8	40	}	42¾	-----	745	745
5	8	-----	-----	40	{	5	8	-----	8	40		40	-----	46	46
Total.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4,877	3,960	8,837	

ROLLERS, ONLY

6	8	8	-----	48	{	6	8	8	-----	48	}	45½	67	49	116
6	8	8	-----	48	{	5	8	-----	8	40		42¾	217	159	376
Total.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	284	208	492	

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926, by district—Sheet Mills

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—																
				40 and under 44	44 and under 48	Over 48 and under 56	56	Over 56 and under 60	60	Over 60 and under 66	66 and under 72	72	Over 72 and under 84							
Rollers:																				
Pittsburgh	9	284	43.3	217	67															
G. L. and M. W.	5	208	43.3	159	49															
Total	14	492	43.3	376	116															
Roughers:																				
Pittsburgh	9	290	43.3	223	67															
G. L. and M. W.	5	220	43.3	168	52															
Total	14	510	43.3	391	119															
Matchers:																				
Pittsburgh	6	204	43.5	138	66															
G. L. and M. W.	4	196	43.4	134	62															
Total	10	400	43.5	272	128															
Sheet heaters:																				
Pittsburgh	9	265	43.3	203	62															
G. L. and M. W.	5	213	43.2	167	46															
Total	14	478	43.3	370	108															
Sheet heaters' helpers:																				
Pittsburgh	8	216	42.7	216																
G. L. and M. W.	5	206	43.1	168	38															
Total	13	422	42.9	384	38															
Laborers:																				
Pittsburgh	9	177	63.1					84	34									25	23	11
G. L. and M. W.	5	316	52.7	47	102	15	36		76	36							4			
Total	14	493	56.6	47	102	15	36	84	110	36	29	23	11							

TIN-PLATE MILLS

Data for 1926 were collected from the pay rolls of 8 establishments and cover 8,892 employees in all occupations. Of the 8,892 employees reported, 4,430 were found in the selected occupations for which separate figures are given. Comparable data were first obtained for this department in 1910, and from 1910 to 1914 employees in the selected occupations only were covered. In 1914 and all subsequent years employees in all occupations were included, and figures for all employees cover the period 1914 to 1926.¹ Comparative figures are presented for employees in the selected occupations from 1910 to 1926.

The hours of labor of employees in tin-plate mills are subject to only slight variations from year to year. The 8-hour turn had been found to be more desirable for both the employer and the employee on account of the speeding up of production made possible by the shorter working hours, and except for laborers and other unskilled or semiskilled general employees this department has operated on a three-shift basis for many years. The average full-time hours of all employees in 1914 were abnormally low, and when the 1926 hours are compared with those for 1914 an increase in working time is shown. In 1914 employees as a whole had a full-time week of 46.0 hours, which increased to 50.4 hours in 1915. Working time in 1920 and 1922 changed very little, but in 1924 the average full-time hours per week dropped to 48.8 hours. The decrease continued to 48.1 hours in 1926. Average full-time hours per week, earnings per hour, and full-time earnings per week, 1913 to 1926, for the department, are shown in Table 1, page 4.

Comparisons of the full-time hours per week in the various selected occupations may be made from Table A. While the 1923 decrease in the daily hours of labor of employees in the iron and steel industry did not affect employees in the "hot-mill" occupations, the hours of employees in some of the other occupations were decreased considerably. For example, branners in 1910 worked an average of 67.8 hours per week, which decreased to 63.7 hours in 1913. In 1920 they had a full-time week of 62.4 hours, which increased to 65.1 hours in 1922. However, in 1924, following the general decrease in daily hours, branners worked but 52.2 hours per week regularly. There was no change in working time in this occupation during the next two years.

The decrease in full-time hours per week of employees in this department in 1926 as compared with 1915 and later years has been largely due to changes in the daily hours of labor, as the average number of turns per week have not been changed to any great extent throughout the period. Table B shows that, in 1915, 97 per cent of the employees worked 6 turns per week regularly, or some average combination of 5 and 6 turns. In 1926, 94 per cent of the employees worked from 5 to 6 turns per week. There has been some slight variation in some of the groups during the period 1915 to

¹Data were not obtained for the years 1916, 1918, 1921, 1923, and 1925.

1926, but as a whole the number of turns per week has changed but very little.

A good idea of the working time of the employees in 1926 in this department may be gained from Table D. A grouping of the employees by hours per day in that table shows that in 1926, of the 8,892 employees covered, 6,237 had a working-day of 8 hours and only 62 employees worked as many as 12 hours per day. A total of 2,144 worked 10 hours per day. The employees in tin-plate mills, of course, include many miscellaneous employees not directly connected with production, and in order to present conditions as they apply to employees of the producing crew separate figures are shown for the occupation of rollers. Of the 371 employees who worked as rollers during the pay period, all worked 8 hours per day and $42\frac{2}{3}$ hours per week. The table also shows the number of turns worked and the full-time hours per week for all employees.

While the trend in the hours of labor of employees has been downward in recent years, the trend in hourly earnings has been decidedly upward. In 1914 the earnings per hour of all employees covered were 42.5 cents on the average, while in 1926 employees earned an average of 70.4 cents per hour—an increase of 66 per cent. In other words, the 1926 hourly earnings were more than one and one-half times the earnings in 1914. The earnings were highest in 1920, 94.9 cents on the average, and in 1924 they were almost 10 cents per hour more than in 1926. Most of the tonnage rates paid in tin-plate mills are based directly on the selling price of the product—that is, at the close of each two-month period tonnage rates are adjusted in accordance with the price of bar iron during that interval. Thus the rates paid in this department in a large number of occupations are subject to wide fluctuations in a two-year study such as the bureau makes. The hourly earnings of employees in the various selected occupations are shown in Table A. For example, rollers in 1910 earned an average of \$1.025 per hour, which increased to \$1.139 in 1913. Earnings decreased slightly in 1914 and 1915, but increased to \$2.248 per hour in 1919. The high mark of \$2.542 per hour was reached in 1920, but rollers received only \$1.701 in 1922. Earnings increased again in 1924 to \$2.099 per hour on the average and decreased in 1926 to \$1.635. A distribution by average hourly earnings of the employees in six specified occupations in 1926 is given in Table F.

In 1914 earnings per full-time week for all employees were \$19.55 on the average, while in 1926 they had increased to \$33.86. In 1920 they were \$48.02, the highest of any year shown, and in 1924 they were \$38.80, or approximately \$5 per week more than in 1926. Weekly earnings in the various selected occupations show similar increases. Rollers, for example, earned an average of \$43.73 per week in 1910, \$48.59 in 1913, and \$108.54 in 1920. In the following years there was a decrease in hourly earnings and in 1924 rollers earned \$89.36 per week and \$69.81 in 1926.

The 4,430 employees in the selected occupations worked an average of 80.4 hours during the 16-day period covered by the 1926 study for which they received \$65.84. This includes all of the hours worked and the earnings received by these employees, as shown in Table C. Laborers worked the most time, 117.7 hours, and risers the least, or 73.2 hours. Assorters, female, one of the very few female occupations in the iron and steel industry, earned the least money, \$30.89, and

rollers, a highly skilled occupation, earned the largest amount, \$126.36. Laborers earned an average of \$50.67 during the pay period.

A classification of employees in six specified occupations according to hours actually worked in 1926 is made in Table G. This table shows that in the occupation of laborers 9 of the 188 employees worked less than 32 hours during the pay period, while 7 employees worked between 156 and 168 hours. The largest group, 72, worked between 120 and 132 hours.

A like classification of earnings is made in Table H. Considerable variation is shown in the earnings of employees in the occupations shown in this table. Laborers earned from less than \$5 to \$80 and under \$85, while rollers earned from \$5 and under \$10 to \$250 and over. The largest group of laborers, 51, earned \$55 and under \$60.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Tin-Plate Mills

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index number (1913=100)			Per cent of employees whose average full-time hours per week were—				
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84
Rollers:													
1910.....	5	174	42.7	\$1.025	\$43.73	100	90	90	100				
1911.....	6	201	42.7	1.109	47.33	100	97	97	100				
1912.....	6	229	42.7	1.097	46.82	100	95	96	100				
1913.....	9	356	42.7	1.139	48.59	100	100	100	100				
1914.....	10	345	42.7	1.115	47.59	100	98	98	100				
1915.....	10	349	42.7	1.106	47.17	100	97	97	100				
1919.....	9	410	42.7	2.248	95.99	100	197	198	100				
1920.....	9	476	42.7	2.542	108.54	100	223	223	100				
1922.....	9	400	42.7	1.701	72.56	100	149	149	100				
1924.....	9	414	42.7	2.099	89.36	100	184	184	100				
1926.....	8	371	42.7	1.635	69.81	100	144	144	100				
Rollers, level handed:													
1919.....	7	46	42.7	1.362	58.16				100				
1920.....	7	212	42.7	1.599	68.29				100				
1922.....	3	138	42.7	.924	38.62				100				
1924.....	6	166	42.7	1.080	46.16				100				
1926.....	4	35	42.7	.952	40.65				100				
Roughers:													
1910.....	5	174	42.7	.425	18.14	100	80	80	100				
1911.....	6	196	42.7	1.507	21.63	100	95	95	100				
1912.....	6	216	42.7	.513	21.89	100	96	96	100				
1913.....	10	380	42.7	.533	22.73	100	100	100	100				
1914.....	11	367	42.7	.560	23.87	100	105	105	100				
1915.....	11	366	42.7	.562	23.96	100	105	105	100				
1919.....	9	447	42.7	1.193	50.94	100	224	224	100				
1920.....	9	502	42.7	1.363	58.21	100	256	256	100				
1922.....	9	429	42.7	.893	38.08	100	168	168	100				
1924.....	9	465	42.7	1.150	49.11	100	216	216	100				
1926.....	8	383	42.7	.902	38.52	100	169	170	100				
Catchers:													
1910.....	5	174	42.7	.427	18.23	100	92	92	100				
1911.....	6	196	42.7	.487	20.79	100	105	105	100				
1912.....	6	239	42.7	.403	17.20	100	87	87	100				
1913.....	10	354	42.7	.463	19.74	100	100	100	100				
1914.....	11	347	42.7	.468	19.95	100	101	101	100				
1915.....	11	361	42.7	.489	20.87	100	106	106	100				
1919.....	9	507	42.7	1.014	43.30	100	219	219	100				
1920.....	9	541	42.7	1.217	51.95	100	263	263	100				
1922.....	9	456	42.7	.817	34.83	100	176	176	100				
1924.....	9	465	42.7	1.003	42.83	100	217	217	100				
1926.....	8	398	42.7	.806	34.42	100	174	176	100				

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers thereof, 1910 to 1926, by occupation—Tin-Plate Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index number (1913=100)			Per cent of employees whose average full-time hours per week were—				
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under 60	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84
Screw boys:													
1910	5	174	42.7	\$0.308	\$13.15	100	84	84	100				
1911	6	198	42.7	.345	14.72	100	94	94	100				
1912	6	221	42.7	.352	15.03	100	96	96	100				
1913	10	387	42.7	.396	15.64	100	100	100	100				
1914	11	384	42.7	.385	16.43	100	105	105	100				
1915	11	372	42.7	.389	16.59	100	106	106	100				
1919	9	466	42.7	.818	34.93	100	223	223	100				
1920	9	585	42.7	.973	41.54	100	266	266	100				
1922	9	476	42.7	.676	28.65	100	185	183	100				
1924	9	484	42.7	.840	36.15	100	230	231	100				
1926	8	412	42.7	.633	27.03	100	173	173	100				
Doublers:													
1910	5	174	42.7	.632	26.97	100	85	85	100				
1911	6	205	42.7	.706	30.13	100	95	95	100				
1912	6	247	42.7	.677	28.90	100	91	92	100				
1913	10	341	42.7	.740	31.58	100	100	100	100				
1914	10	324	42.7	.734	31.32	100	99	99	100				
1915	10	322	42.7	.718	30.63	100	97	97	100				
1919	8	352	42.7	1.408	60.12	100	190	190	100				
1920	9	330	42.7	1.655	70.69	100	224	224	100				
1922	9	322	42.7	1.046	44.80	100	141	142	100				
1924	8	345	42.7	1.243	53.07	100	168	168	100				
1926	8	332	42.7	.787	33.60	100	106	107	100				
Doublers, level handed:													
1913	4	46	42.7	.567	24.20	100	100	100	100				
1914	5	54	42.7	.559	23.84	100	99	99	100				
1915	5	62	42.7	.561	23.92	100	99	99	100				
1919	5	84	42.7	1.114	47.57	100	196	197	100				
1920	8	382	42.7	1.290	55.09	100	228	228	100				
1922	7	284	42.7	.866	36.81	100	153	152	100				
1924	7	303	42.7	1.133	48.38	100	200	200	100				
1926	5	116	42.7	.800	34.16	100	141	141	100				
Doublers' helpers:													
1910	5	174	42.7	.324	13.82	100	90	90	100				
1911	6	191	42.7	.351	14.97	100	97	97	100				
1912	6	193	42.7	.370	15.81	100	102	102	100				
1913	10	344	42.7	.362	15.43	100	100	100	100				
1914	10	330	42.7	.387	16.49	100	107	107	100				
1915	10	324	42.7	.402	17.17	100	111	111	100				
1919	9	406	42.7	.888	37.92	100	245	246	100				
1920	9	384	42.7	1.014	43.28	100	280	280	100				
1922	8	345	42.7	.686	28.94	100	190	188	100				
1924	9	337	42.7	.855	36.45	100	236	236	100				
1926	8	324	42.7	.663	28.31	100	183	183	100				
Heaters:													
1910	5	174	42.7	.648	27.63	100	95	95	100				
1911	6	215	42.7	.714	30.47	100	105	105	100				
1912	6	314	42.7	.675	28.78	100	99	99	100				
1913	6	312	42.7	.679	28.99	100	100	100	100				
1914	9	142	42.7	.752	32.10	100	111	111	100				
1915	9	211	42.7	.725	30.95	100	107	107	100				
1919	9	288	42.7	1.458	62.26	100	215	215	100				
1920	8	182	42.7	1.722	73.51	100	254	254	100				
1922	8	149	42.7	1.170	49.84	100	172	172	100				
1924	8	152	42.7	1.449	61.80	100	213	213	100				
1926	6	113	42.7	1.046	44.66	100	154	154	100				
Heaters, level handed:													
1913	6	414	42.7	.595	25.38	100	100	100	100				
1914	6	430	42.7	.622	26.53	100	105	105	100				
1915	6	294	42.7	.611	26.08	100	103	103	100				
1919	7	272	42.7	1.273	54.36	100	214	214	100				
1920	9	756	42.7	1.465	62.57	100	246	247	100				
1922	9	656	42.7	1.001	42.70	100	168	168	100				
1924	9	720	42.7	1.229	52.46	100	207	207	100				
1926	8	588	42.7	.917	39.16	100	154	154	100				

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Tin-Plate Mills—Continued

Occupation and year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index number (1913=100)			Per cent of employees whose average full-time hours per week were—				
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	Over 60 and under 72	Over 72 and under 84	84
Heaters' helpers:													
1910	4	165	42.7	\$0.348	\$14.84	100	81	81	100				
1911	5	166	42.7	.436	18.60	100	101	101	100				
1912	5	109	42.7	.396	16.92	100	92	92	100				
1913	8	147	42.7	.430	18.36	100	100	100	100				
1914	8	127	42.7	.476	20.32	100	111	111	100				
1915	8	202	42.7	.455	19.43	100	106	106	100				
1919	8	241	42.7	1.052	44.92	100	245	245	100				
1920	8	230	42.7	1.174	50.14	100	273	273	100				
1922	8	135	42.7	.847	36.02	100	197	196	100				
1924	8	252	42.7	.981	41.88	100	228	228	100				
1926	6	196	42.7	.772	32.96	100	180	180	100				
Shearmen:													
1910	5	58	52.7	.497	25.68	93	102	94	53	12	34		
1911	6	65	52.8	.555	28.72	93	114	105	54	11	35		
1912	6	72	51.8	.573	29.00	92	118	106	60	10	31		
1913	9	126	56.5	.485	27.34	100	100	100	6	82	13		
1914	9	116	56.9	.486	27.61	101	100	101	3	84	14		
1915	8	112	57.3	.514	29.55	101	106	108		86	14		
1919	6	140	48.3	1.368	66.07	85	282	242	56	44			
1920	6	103	44.1	1.280	56.52	78	264	207	80	20			
1922	8	118	44.6	.915	40.52	79	189	148	83	17			
1924	8	123	43.4	1.137	49.35	77	234	181	100				
1926	7	111	43.1	1.024	44.13	76	201	161	100				
Shearmen's helpers:													
1910	2	25	61.8	.118	7.31	111	72	80		80	20		
1911	2	31	59.7	.118	7.02	107	72	77		26	74		
1912	3	35	57.6	.136	7.71	103	82	84	14	20	63		3
1913	4	43	55.8	.165	9.13	100	100	100	19	51	14	16	
1914	4	42	55.3	.168	9.18	99	102	101	17	52	14	17	
1915	3	33	56.5	.150	8.51	101	91	93		67	15	18	
1919	2	29	53.9	.539	29.05	97	327	318	31	69			
1920	1	22	49.5	.731	36.18	89	443	396		100			
1922	2	33	49.4	.413	20.40	89	250	223	27	73			
1924	2	26	45.5	.469	21.34	82	284	234	100				
1926	3	26	58.3	.510	29.73	104	309	326		88	12		
Openers, male:													
1910	3	94	57.5	.221	12.72	101	81	82		100			
1911	4	84	57.3	.266	15.24	101	97	98		100			
1912	5	93	56.9	.296	16.86	100	108	108	4	96			
1913	7	210	56.9	.274	15.58	100	100	100		100			
1914	7	201	56.8	.266	15.11	103	97	97		100			
1915	7	227	57.2	.247	14.13	101	90	91		93	7		
1919	5	235	52.3	.800	31.01	92	292	269	23	77			
1920	4	204	56.2	.728	40.55	99	266	260		100			
1922	6	186	49.0	.631	29.08	86	230	187	36	64			
1924	6	224	55.3	.721	39.87	97	263	256	11	80	8		
1926	6	239	51.8	.795	41.18	91	290	264	31	69			
Tinners:													
1910	4	224	42.9	.402	17.27	98	93	92	98	2			
1911	5	283	43.0	.429	18.48	99	99	98	98	2			
1912	5	294	43.4	.444	19.28	100	103	102	94	6			
1913	8	484	43.6	.433	18.84	100	100	100	95	5	(1)		
1914	8	486	43.5	.442	19.22	100	102	102	95	5	(1)		
1915	8	487	43.3	.442	19.13	99	102	102	97	3	(1)		
1919	8	683	43.0	.977	42.01	99	226	223	97	3			
1920	9	702	42.9	1.114	47.85	98	257	254	100				
1922	6	410	43.3	.795	34.20	99	184	182	100				
1924	6	361	43.4	.976	42.39	100	225	225	100				
1926	5	225	43.5	.840	36.54	100	194	200	100				

¹ Less than 1 per cent.

TABLE A.—Average customary full-time hours per week, earnings per hour, and full-time earnings per week, and index numbers therefor, 1910 to 1926, by occupation—Tin-Plate Mills—Continued

Occupation and year	Number of plants	Number of employ-ees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index number (1913=100)			Per cent of employees whose average full-time hours per week were—						
						Full-time hours per week	Earnings per hour	Full-time earnings per week	48 and under	Over 48 and under 60	60	Over 60 and under 72	72	Over 72 and under 84	84
Redippers:															
1910	1	14	46.2	\$0.570	\$26.56	87	106	95	71	29					
1911	1	17	47.2	.619	29.32	89	115	105	71	29					
1912	1	10	55.0	.592	32.58	104	110	116	100						
1913	3	26	53.0	.536	28.03	100	100	100	42	54	4				
1914	3	23	53.0	.538	28.55	100	100	102	43	52	4				
1915	3	19	51.4	.563	28.81	97	105	103	58	37	5				
1919	2	29	46.9	1.272	59.66	88	237	213	55	45					
1920	3	27	43.1	1.538	66.26	81	287	236	100						
1922	2	33	43.1	1.027	44.26	81	192	158	100						
1924	2	38	43.0	1.235	53.11	81	230	189	100						
1926	2	25	42.9	1.154	49.51	81	215	177	100						
Risers:															
1910	2	34	44.1	.262	11.51	98	94	91	88	12					
1911	3	42	44.8	.275	12.30	99	99	98	86	14					
1912	3	30	50.1	.239	11.98	111	86	95	40	60					
1913	3	34	45.1	.279	12.59	100	100	100	100						
1914	4	48	51.3	.268	13.70	114	96	109	52	46	2				
1915	4	41	49.5	.288	14.16	110	103	112	66	32	2				
1919	3	46	47.4	.642	30.43	105	230	242	50	50					
1920	3	41	43.2	.791	34.12	96	284	271	100						
1922	2	54	42.9	.528	22.65	95	189	180	100						
1924	2	39	42.9	.703	30.16	95	252	240	100						
1926	2	34	42.9	.638	27.37	95	229	217	100						
Branners:															
1910	2	12	67.8	.170	11.52	106	89	95				100			
1911	2	20	67.7	.170	11.50	106	89	95				100			
1912	2	16	67.7	.170	11.51	106	89	95				100			
1913	4	37	63.7	.190	12.14	100	100	100		43		46			
1914	4	41	64.1	.198	12.69	101	104	105		39		51	10		
1915	4	34	65.4	.203	13.22	103	107	109		24		76			
1919	6	60	61.3	.452	27.71	96	238	228	23		30	27	13		7
1920	6	48	62.4	.624	38.68	98	328	319	23	10		35	31		
1922	6	32	65.1	.455	28.98	102	239	239	31	6		38		25	
1924	6	73	52.2	.533	27.83	82	282	229	74	3		16	7		
1926	5	64	52.2	.505	26.36	82	266	136	65	3		31			
Assorters, female:															
1910	4	101	49.7	.128	6.41	93	79	73	46	54					
1911	5	120	50.7	.138	7.03	94	85	80	38	62					
1912	5	127	51.4	.145	7.39	96	89	84	37	63					
1913	6	171	53.7	.163	8.75	100	100	100	25	75					
1914	6	172	53.3	.153	8.26	99	94	94	27	73					
1915	6	203	55.4	.162	8.98	103	99	103	23	77					
1919	6	279	48.5	.417	20.22	90	256	231	44	56					
1920	7	295	46.9	.465	21.83	87	285	249	43	57					
1922	6	230	43.3	.365	15.84	81	224	181	98		2				
1924	6	291	43.6	.422	18.40	81	259	210	98		2				
1926	4	250	43.4	.384	16.67	81	236	191	100						
Laborers:															
1910	4	191	60.6	.165	9.97	98	87	86		53	24	23			
1911	5	233	61.0	.164	10.01	99	87	86		37	38	24	1		
1912	6	276	61.6	.167	10.32	100	88	89		30	43	25	(¹)	1	(¹)
1913	9	575	61.6	.189	11.64	100	100	100		24	18	58	(¹)		
1914	9	469	62.4	.189	11.78	101	100	101		12	16	72			(¹)
1915	9	444	61.6	.190	11.72	100	101	101		33	16	51		(¹)	
1919	6	418	64.3	.461	29.64	104	244	255	1	13	36	32	12	2	3
1920	8	271	60.5	.533	32.19	98	282	277		62	13	21	5		
1922	9	231	59.4	.359	21.28	96	190	183		72	19	9			
1924	9	197	56.9	.439	24.99	92	232	215	7	29	55	9	1		
1926	8	188	60.3	.426	25.69	98	225	221		50	31	19			

¹ Less than 1 per cent.

TABLE B.—Number and per cent of employees who customarily worked each specified number of turns per week, 1914 to 1926, by district and year—Tin-Plate Mills

District and year	Number of plants	Number of employees	Number of employees whose customary working turns per week were—							Per cent of employees whose customary working turns per week were—								
			5	5, 5, and 6 in rotation	5 and 6 alternately	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7	5	5, 5, and 6 in rotation	5 and 6 alternately	6	6, 6, and 7 in rotation	6 and 7 alternately	6, 7, and 7 in rotation	7
Pittsburgh:																		
1914	6	3,518	2	2,030	210	1,238				38	(1)	58	6	35				1
1915	6	3,485	3	1,984	181	1,277		6		34	(1)	57	5	37				1
1920	6	7,266		4,125	417	2,682		30		12		57	6	37				(1)
1922	6	6,073	46	3,446	370	2,154		26		31	1	56	6	35				1
1924	6	7,173	21	3,814	186	2,904		129		119	(1)	53	3	40		2		2
1926	6	6,242	51	3,563	113	2,293	56	20		146	1	57	2	37	1	(1)		2
Great Lakes and Middle West:																		
1914	5	2,515	2	1,458	4	1,007		16		28	(1)	58	(1)	40		1		1
1915	5	2,662		1,548		1,002		14		98		58		38		1		4
1920	3	3,257	65	1,702	61	1,299		20		110	2	52	2	40		3		3
1922	3	3,093	50	1,534	69	1,332		82		26	2	49	2	43		1		1
1924	3	3,376		1,531	4	1,731		69		41		45	(1)	51		2		1
1926	2	2,650	5	1,356	93	895	66	140	52	43	(1)	51	4	34	2	5	2	2
Total:																		
1914	11	6,033	4	3,488	214	2,245		16		66	(1)	58	4	37				1
1915	11	6,147	3	3,532	181	2,279		20		132	(1)	57	3	37				2
1920	9	10,523	65	5,827	478	3,981		50		122	1	55	5	38				1
1922	9	9,166	96	4,980	439	3,486		108		57	1	54	5	38		2		1
1924	9	10,549	21	5,345	190	4,635		198		160	(1)	51	2	44		2		2
1926	8	8,892	56	4,919	206	3,188	122	160	52	189	1	55	2	36	1	2	1	2

¹ Less than 1 per cent.

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—Tin-Plate Mills

Occupation and district	Number of plants	Position				Employees working in scheduled pay period (16 days)								
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Heaters:														
Pittsburgh.....	4	76	5.9	7.4	42.7	82	73.3	\$75.45	\$1.070	\$43.98	80.6	\$81.42	\$1.011	
Great Lakes and Middle West...	2	27	5.3	8.0	42.7	31	69.4	75.67	1.090	46.54	74.8	79.55	1.063	
Total.....	6	103	5.7	7.6	42.7	113	72.2	75.51	1.046	44.66	79.0	80.91	1.024	
Heaters, level handed:														
Pittsburgh.....	6	415	5.3	8.0	42.7	450	74.6	67.83	.910	38.86	77.4	69.78	.902	
Great Lakes and Middle West...	2	132	5.3	8.0	42.7	138	73.2	69.01	.942	40.22	78.8	72.64	.922	
Total.....	8	547	5.3	8.0	42.7	588	74.3	68.10	.917	39.16	77.7	70.41	.906	
Heaters' helpers:														
Pittsburgh.....	4	99	5.3	8.0	42.7	112	69.9	53.43	.765	32.67	75.8	57.58	.760	
Great Lakes and Middle West...	2	78	5.3	8.0	42.7	84	75.3	58.81	.781	33.35	82.1	62.97	.767	
Total.....	6	177	5.3	8.0	42.7	196	72.2	55.73	.772	32.96	78.5	59.88	.763	
Rollers:														
Pittsburgh.....	6	267	5.3	8.0	42.7	283	76.3	125.25	1.641	70.07	78.5	127.54	1.626	
Great Lakes and Middle West...	2	83	5.2	8.0	42.7	88	73.3	118.39	1.614	68.92	78.1	122.59	1.570	
Total.....	8	350	5.3	8.0	42.7	371	75.6	123.62	1.635	69.81	78.4	126.36	1.613	
Rollers, level handed:														
Pittsburgh.....	2	7	5.3	8.0	42.7	8	62.0	59.39	.958	40.91	84.0	79.67	.948	
Great Lakes and Middle West...	2	24	5.3	8.0	42.7	27	75.0	71.31	.950	40.57	79.8	77.89	.976	
Total.....	4	31	5.3	8.0	42.7	35	72.1	68.58	.952	40.65	80.7	78.30	.970	

TIN-PLATE MILLS

TABLE C.—Average customary working time of employees per day and per week and average hours actually worked and earnings received per employee in pay period covered, 1926, by occupation and district—**Tin-Plate Mills**—Continued

Occupation and district	Number of plants	Position				Employees working in scheduled pay period (16 days)								
		Number	Average customary full time of employees in the positions			Number	Averages for specified occupations only				Averages for specified and any other occupations			
			Turns per week	Hours per turn	Hours per week		Hours worked	Earnings	Earnings per hour	Full-time earnings per week	Hours worked	Earnings	Earnings per hour	
Roughers:														
Pittsburgh.....	6	267	5.3	8.0	42.7	285	74.3	\$67.80	\$0.913	\$38.99	79.2	\$71.99	\$0.909	
Great Lakes and Middle West.....	2	92	5.3	8.0	42.7	98	76.2	66.53	.873	37.28	78.9	66.08	.863	
Total.....	8	359	5.3	8.0	42.7	383	74.8	67.48	.902	38.52	79.1	70.99	.897	
Catchers:														
Pittsburgh.....	6	267	5.3	8.0	42.7	301	72.7	58.14	.800	34.16	76.9	60.64	.788	
Great Lakes and Middle West.....	2	91	5.3	8.0	42.7	97	74.1	61.04	.824	35.18	78.1	62.93	.805	
Total.....	8	358	5.3	8.0	42.7	398	73.0	58.85	.806	34.42	77.2	61.20	.792	
Screw boys:														
Pittsburgh.....	6	270	5.3	8.0	42.7	313	71.0	44.74	.630	26.90	75.3	46.60	.619	
Great Lakes and Middle West.....	2	92	5.3	8.0	42.7	99	71.9	46.02	.640	27.33	76.9	48.00	.624	
Total.....	8	362	5.3	8.0	42.7	412	71.2	45.05	.633	27.03	75.7	46.94	.620	
Doublers:														
Pittsburgh.....	6	240	5.3	8.0	42.7	263	76.0	55.45	.730	31.17	80.5	57.55	.715	
Great Lakes and Middle West.....	2	66	5.3	8.0	42.7	69	71.9	73.29	1.020	43.55	74.5	74.74	1.003	
Total.....	8	306	5.3	8.0	42.7	332	75.1	59.16	.787	33.60	79.3	61.12	.771	
Doublers, level handed:														
Pittsburgh.....	4	104	5.3	8.0	42.7	112	72.2	57.53	.796	33.99	75.4	60.15	.797	
Great Lakes and Middle West.....	1	4	5.3	8.0	42.7	4	74.0	67.45	.911	38.90	74.0	67.45	.911	
Total.....	5	108	5.3	8.0	42.7	116	72.3	57.87	.800	34.16	75.4	60.40	.801	
Doublers' helpers:														
Pittsburgh.....	6	219	5.3	8.0	42.7	252	71.8	47.77	.666	28.44	74.4	49.15	.661	
Great Lakes and Middle West.....	2	66	5.3	8.0	42.7	72	72	47.46	.656	28.01	74.8	48.27	.645	
Total.....	8	285	5.3	8.0	42.7	324		.70	.663	28.31	74.5	48.96	.657	

Shearmen:													
Pittsburgh.....	5	62	5.3	8.0	42.7	68	78.9	81.76	1.036	44.24	79.0	81.80	1.036
Great Lakes and Middle West..	2	41	5.7	7.8	48.8	43	76.2	76.47	1.004	43.98	76.2	76.47	1.004
Total.....	7	103	5.5	7.9	43.1	111	77.9	79.71	1.024	44.13	77.9	70.74	1.024
Shearmen's helpers:													
Pittsburgh.....	2	8	6.0	9.8	58.8	9	104.3	54.81	.526	30.93	117.3	60.79	.518
Great Lakes and Middle West..	1	16	6.0	9.7	58.0	17	81.2	40.58	.500	29.00	113.7	53.80	.473
Total.....	3	24	6.0	9.7	58.3	26	89.2	45.50	.510	29.73	114.9	56.22	.489
Openers, male:													
Pittsburgh.....	4	113	5.9	9.0	53.3	119	88.1	72.57	.824	43.92	91.1	74.00	.812
Great Lakes and Middle West..	2	117	6.0	8.4	50.4	120	81.5	62.18	.763	38.46	82.3	62.77	.763
Total.....	6	230	6.0	8.7	51.8	239	84.8	67.36	.795	41.18	86.7	68.36	.789
Tinners:													
Pittsburgh.....	4	190	5.4	8.1	43.6	199	80.3	65.84	.819	35.71	81.2	66.25	.816
Great Lakes and Middle West..	1	25	5.3	8.0	42.7	26	74.5	75.34	1.012	43.21	74.5	75.34	1.012
Total.....	5	215	5.3	8.1	43.5	225	79.7	66.94	.840	36.54	80.4	67.30	.837
Redippers:													
Pittsburgh.....	2	23	5.3	8.0	42.9	25	79.4	91.60	1.154	49.51	80.1	91.97	1.148
Risers:													
Pittsburgh.....	2	29	5.3	8.0	42.9	34	72.2	46.03	.638	27.37	73.2	46.43	.635
Branners:													
Pittsburgh.....	3	45	5.8	8.7	51.3	53	79.6	41.76	.525	26.93	80.9	42.44	.525
Great Lakes and Middle West..	2	10	6.0	9.5	56.4	11	98.3	42.13	.429	24.20	106.1	48.53	.458
Total.....	5	55	5.9	8.9	52.2	64	82.8	41.83	.505	26.36	85.2	43.48	.510
Assorters, female:													
Pittsburgh.....	3	187	5.7	7.6	42.9	195	78.6	30.26	.385	16.52	78.6	30.26	.385
Great Lakes and Middle West..	1	54	6.0	7.5	45.0	55	87.2	33.15	.380	17.10	87.2	33.15	.380
Total.....	4	241	5.8	7.5	43.4	250	80.5	30.89	.384	16.67	80.5	30.89	.384
Laborers:													
Pittsburgh.....	6	73	6.1	9.8	60.1	87	103.3	45.03	.436	26.20	111.9	49.25	.440
Great Lakes and Middle West..	2	92	6.3	9.6	60.4	101	117.8	49.35	.419	25.31	122.6	51.89	.423
Total.....	8	165	6.2	9.7	60.3	188	111.1	47.35	.426	25.69	117.7	50.67	.431

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Tin-Plate Mills

ALL EMPLOYEES

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district				
Day turns				Night turns				Average hours per week	Pitts- burgh				Great Lakes and Middle West	Total
Turns per week	Hours			Turns per week	Hours									
	Mon- day to Fri- day	Sat- ur- day	Sun- day		Per week	Mon- day to Fri- day	Sat- ur- day	Sun- day	Per week					
7	12	12	12	84					84		2	2		
7	11½	11½	11½	80½					80½	1		1		
6	12	12	12	72					78		1	1		
7	12	12	12	84						11		11		
6	12	12	12	72					72	6		12		
7	10	10	10	70					70		2	2		
7	10	9	9	69					69	11		11		
7	10	9	9	68					68					
6	10	10	10	60										
7	10	10	10	70					66½		2	2		
7	10	10	10	70										
7	10	9	9	59					65		25	25		
7	10	9	9	68										
7	10	9	9	68										
6	10	10	10	60					65		86	86		
7	10	10	10	70										
7	10	9	9	59										
7	10	9	9	68					63½		3	3		
7	10	9	9	68						4		4		
7	10	9	9	63					63	390	128	518		
6	10	10	10	60					60	1		1		
6	10	10	10	60					60		1	1		
5	12			60					60					
6	10	9½		59½					59½	1		1		
6	10	9		59					59	85	62	147		
6	10	8½		58½					58½					
6	10	8		58					58	186	110	296		
6	10	7½		57½					57½	2		2		
6	10	7		57					57	122		122		
6	10	9½		57					57	8		8		
7	10	8	8	56					56		1	1		
6	10	6	8	56					56	68	101	169		
6	10	5½		55½					55½	1		1		
6	10	5		55					55	157	4	161		
6	10	4		54					54	2		2		
6	9	9		54					54	91	25	116		
6	8	8		48										
7	8	8	8	56					53½		6	6		
7	8	8	8	56										
6	8	8	8	53					53	21		21		
6	8	8	8	48							29	29		
6	8	8	8	56										
7	8	6	8	51					51	1		1		
7	8	8	8	56										
6	8	8	8	48				50½			11	11		
6	8	8	8	48										
6	8	8	8	56										
6	8	8	8	48				50			9	9		
6	8	8	8	48										
6	8	8	8	48										
6	8	8	8	48										
6	8	5		50					50	22	9	31		
5	10			50						1		1		
6	8	8	8	48					48	70	75	145		
6	8	6	5	46					46	2	1	3		
6	8	8	8	45					45	107	188	295		
5	9			45					45		4	4		
5	8			40					40		1	1		
Total										1,373	891	2,284		

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Tin-Plate Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district						
Day turns					Night turns								Average hours per week	Pittsburgh	Great Lakes and Middle West	Total
Turns per week	Hours				Turns per week	Hours										
	Monday to Friday	Saturday	Sunday	Per week		Monday to Friday	Saturday	Sunday	Per week							
					6	12	12		72	78		1	1			
					7	12	12	12	84							
					6	12	12		72	72		1	1			
					7	10	10	10	70	70		2	2			
					6	10	10		60	60		2	2			
					6	10	10	10	60	60	4	2	6			
					5	12	12		60	60	2		2			
					5	12			60	60	23		23			
					7	8		8	56	56		1	1			
					6	8	8	8	48	53½						
					7	8	8	8	56			2	2			
					7	8	8	8	56	52						
					7	8	8	8	56			6	6			
					6	8	8	8	48	50						
					5	10			50			1	1			
					6	8		8	48	48		1	1			
					6	8		8	48	48		3	3			
					6	8			48	48		1	1			
					5	8			40	40						
Total											34	18	52			

Group B.—Night turn only

Group C.—Weekly changes from one shift to another

7	12	12	12	84	7	12	12	12	84	84	2		2
6	12	12	12	84	6	12	12	12	72	75		3	3
6	12	12	12	72	6	12	12	12	72				
6	11	11	11	66	7	11	11	11	77	74½		2	2
7	11	11	11	77	7	11	11	11	77				
6	12	12	12	72	6	12	12	12	72	72		2	2
6	12	9		69	6	12	12	12	72	70½		4	4
7	10	10	10	70	7	10	10	10	70	70	13	6	19
6	11½	11½		69	6	11½	11½	11½	69	69	7		7
6	10	10		60	7	10	10	10	70	67½		8	8
7	10	10	10	70	7	10	10	10	70				
6	11	11		66	6	11	11	11	66	66	2		2
7	10	10	10	70	6	10	10	10	60	65		11	11
7	10	10	10	70	6	10	10	10	60	65	20		20
6	12	9		69	5	12			60	64½		9	9
6	11½	11½		69	5	11½			57½	63½	3		3
6	11	11		66	5	11			55	60½	36		36
6	10	10		60	6	10	10	10	60	60		8	8
6	10	10		60	6	10		10	60	60	177	44	221
6	10	9		59	6	10		10	60	59½	37		37
6	10	8		58	6	10		10	60	59	12	18	30
6	10	7½		57½	6	10		10	60	58½	3		3
6	10	7		57	6	10		10	60	58½	3		3
6	10	6		56	6	10		10	60	58	59		59
6	10	5½		55½	6	10		10	60	57½	2		2
6	10	5		55	6	10		10	60	57½	2		2
6	9	9		54	6	10		10	60	57	50		50
7	8	8	8	56	7	8	8	8	56	56	109	13	122
6	10	10		60	5	10		10	50			7	5
5	10			50	6	10		10	60	55	51		51
6	10			58	5	10		10	50	54		44	44
6	9	9		54	6	9	9	9	54	54	18		18
6	9	9		54	6	9	9	9	54	54	21		21
7	8	8	8	56	7	8	8	8	56	53½		17	17
6	10	6		56	5	10		10	50			6	17

TABLE D.—Customary full-time turns per week and hours per turn and per week, 1926, by district—Tin-Plate Mills—Continued

ALL EMPLOYEES—Continued

Customary turns and hours worked										Number of employees who worked each specified combination of customary turns and hours, by district						
Day turns					Night turns								Average hours per week	Pitts- burgh	Great Lakes and Middle West	Total
Turns per week	Hours				Turns per week	Hours										
	Mon- day to Fri- day	Sat- ur- day	Sun- day	Per week		Mon- day to Fri- day	Sat- ur- day	Sun- day	Per week							

Group C.—Weekly changes from one shift to another—Continued

6	10	5	55	5	10			50	52½	7	4	11
7	8	8	56	6	8		8	48	52		3	3
7	8	8	56	6	8	8		48	50½		11	11
7	8	8	56	6	8	8	8	48	50½	3		3
7	8	8	56	6	8	8	8	48	50½	3		3
6	8	8	48	7	8	8	8	56	50½		33	33
6	8	8	48	7	8	8	8	56	50½	50		50
6	10	10	60	5	10			40	50	3		3
5	10		50	5	10			50	50	6		6
6	8	8	48	6	8	8	8	48	49½		11	11
6	8	9	49	6	8	8	4	48	48½	8		8
6	8	8	48	6	8	8	8	48	48		36	36
6	8	8	48	6	8	8	8	48	48	3		3
6	8	8	48	6	8	8	8	48	48	524	24	548
6	8	8	48	6	8	8	6	46	47		38	38
6	8	8	48	5	8	8		40	44		14	14
6	8	11	51	5	8	8		40	43½	144		144
6	8	9	49	5	8	8		40	43	64		64
6	8	8	48	5	8	8	8	40	42½	1,235		1,235
6	8	8	48	5	8	8	8	40	42½	2,008	1,338	3,346
5	8		40	5	8	8		40	42		18	18
6	7	7	42	5	8	8		40	40½	112		112
5	8		40	5	8	8	8	40	40	2		2
5	8		40	5	8	8	7	39	39½	14		14
Total										4,835	1,741	6,576

ROLLERS, ONLY

6	8	8	48	5	8			40	42½	155	88	243
6	8	8	48	5	8	8	8	40	42½	128		128
Total										283	88	371

TABLE E.—Average and classified full-time hours per week in six specified occupations, 1926, by district—Tin-Plate Mills

Occupation and district	Number of establishments	Number of employees	Average full-time hours per week	Number of employees whose full-time hours per week were—							
				40 and under 44	44 and under 48	48	Over 48 and under 56	Over 56 and under 60	60	Over 60 and under 66	66 and under 72
Rollers:											
Pittsburgh	6	283	42.7	263							
G. L. and M. W.	2	88	42.7	88							
Total	8	371	42.7	371							
Doublers:											
Pittsburgh	6	263	42.7	263							
G. L. and M. W.	2	69	42.7	69							
Total	8	332	42.7	332							
Heaters, level handed:											
Pittsburgh	6	450	42.7	450							
G. L. and M. W.	2	138	42.7	138							
Total	8	588	42.7	588							
Tinners:											
Pittsburgh	4	199	43.6	193		6					
G. L. and M. W.	1	26	42.7	26							
Total	5	225	43.5	219		6					
Assorters (female):											
Pittsburgh	3	195	42.9	96	99						
G. L. and M. W.	1	55	45.0		55						
Total	4	250	43.4	96	154						
Laborers:											
Pittsburgh	6	87	60.1				1	20	56		10
G. L. and M. W.	2	101	60.4					73	2	26	
Total	8	188	60.3				1	93	58	26	10

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TABLE G.—Average and classified hours actually worked by employees in six specified occupations in pay period covered, 1926, by district—
Tin-Plate Mills

Occupation and district	Number of employees	Average hours worked	Number of employees who during the pay period worked hours specified																					
			Under 32	32 and under 40	40 and under 48	48 and under 56	56 and under 64	64 and under 72	72 and under 80	80 and under 88	88	Over 88 and under 96	96	Over 96 and under 104	104	Over 104 and under 112	112	Over 112 and under 120	Over 120 and under 132	132	Over 132 and under 144	Over 144 and under 156	Over 156 and under 168	
Heaters, level handed:																								
Pittsburgh	450	77.4	16	5	5	5	9	31	61	112	9	176	1	19	1									
G. L. and M. W.	138	78.8	3		1		2	4	29	52	1	45		1										
Total	588	77.7	19	5	6	5	11	35	90	164	10	221	1	20	1									
Rollers:																								
Pittsburgh	283	78.5	5		6	3	10	14	31	95	10	97	9	3										
G. L. and M. W.	88	78.1				1	5	9	15	33		24		1										
Total	371	78.4	5		6	4	15	23	46	128	10	121	9	3	1									
Doublers:																								
Pittsburgh	263	80.5	3	3	3	1	3	11	32	78	8	163	3	12		1	1	1						
G. L. and M. W.	69	74.5			2	1	5	4	19	32	1	5												
Total	332	79.3	3	3	5	2	8	15	51	110	9	108	3	12		1	1	1						
Timners:																								
Pittsburgh	199	81.2	7	2		1	4	7	18	7	89	19	40	1	4									
G. L. and M. W.	26	74.5	1					3	7	11		4												
Total	225	80.4	8	2		1	4	10	25	18	89	23	40	1	4									
Assorters, female:																								
Pittsburgh	195	78.6	2	1	4	2	4	21	66	8	50	7	20	3	5		1				1			
G. L. and M. W.	55	87.2				1	1	2	4		20		25		2									
Total	250	80.5	2	1	4	3	5	23	70	8	70	7	45	3	7		1				1			
Laborers:																								
Pittsburgh	87	111.9	8			2		4	1		4		1		1		9		4	33	1	10	4	5
G. L. and M. W.	101	122.6	1	2	1		1	2	1				4		3		3	1	14	39		10	17	2
Total	188	117.7	9	2	1	2	1	6	2		4		5		4		12	1	18	72	1	20	21	7

TIN-PLATE MILLS

LIST OF BULLETINS OF THE BUREAU OF LABOR STATISTICS

The following is a list of all bulletins of the Bureau of Labor Statistics published since July, 1912, except that in the case of bulletins giving the results of periodic reports of the bureau, only the latest bulletin on any one subject is here listed.

*A complete list of the reports and bulletins issued prior to July, 1912, as well as the bulletins published since that date, will be furnished on application. Bulletins marked thus * are out of print.*

Wholesale Prices.

No. 284. Index numbers of wholesale prices in the United States and foreign countries. [1921.]

No. 440. Wholesale prices, 1890 to 1926.

Retail Prices and Cost of Living.

*No. 121. Sugar prices, from refiner to consumer. [1913.]

*No. 130. Wheat and flour prices, from farmer to consumer. [1913.]

*No. 164. Butter prices, from producer to consumer. [1914.]

No. 170. Foreign food prices as affected by the war. [1915.]

No. 357. Cost of living in the United States. [1924.]

No. 369. The cost of cost-of-living figures in wage adjustments. [1925.]

No. 418. Retail prices, 1890 to 1925.

Wages and Hours of Labor.

*No. 146. Wages and regularity of employment and standardization of piece rates in the dress and waist industry of New York City. [1914.]

*No. 147. Wages and regularity of employment in the cloak, suit, and skirt industry. [1914.]

No. 161. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913.

No. 163. Wages and hours of labor in the building and repairing of steam-railroad cars, 1907 to 1913.

*No. 190. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914.

No. 204. Street-railway employment in the United States. [1917.]

No. 225. Wages and hours of labor in the lumber, millwork, and furniture industries, 1915.

No. 265. Industrial survey in selected industries in the United States, 1919.

No. 297. Wages and hours of labor in the petroleum industry, 1920.

No. 348. Wages and hours of labor in the automobile industry, 1922.

No. 356. Productivity costs in the common-brick industry. [1924.]

No. 358. Wages and hours of labor in the automobile-tire industry, 1923.

No. 360. Time and labor costs in manufacturing 100 pairs of shoes. [1924.]

No. 365. Wages and hours of labor in the paper and pulp industry, 1923.

No. 371. Wages and hours of labor in cotton-goods manufacturing, 1924.

No. 374. Wages and hours of labor in the boot and shoe industry, 1907 to 1924.

No. 376. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1924.

No. 377. Wages and hours of labor in woolen and worsted goods manufacturing, 1924.

No. 381. Wages and hours of labor in the iron and steel industry, 1907 to 1924.

No. 394. Wages and hours of labor in metalliferous mines, 1924.

No. 407. Labor cost of production and wages and hours of labor in the paper box-board industry. [1925.]

No. 412. Wages, hours, and productivity in the pottery industry, 1925.

No. 413. Wages and hours of labor in the lumber industry in the United States, 1925.

No. 416. Hours and earnings in anthracite and bituminous coal mining, 1922 and 1924.

No. 421. Wages and hours of labor in the slaughtering and meat-packing industry, 1925.

No. 422. Wages and hours of labor in foundries and machine shops, 1925.

No. 431. Union scale of wages and hours of labor, May 15, 1926.

No. 435. Wages and hours of labor in the men's clothing industry, 1911 to 1926.

No. 438. Wages and hours of labor in the motor vehicle industry, 1925. (In press.)

Employment and Unemployment.

*No. 109. Statistics of unemployment and the work of employment offices in the United States. [1913.]

No. 172. Unemployment in New York City, N. Y. [1915.]

*No. 183. Regularity of employment in the women's ready-to-wear garment industries. [1915.]

*No. 195. Unemployment in the United States. [1916.]

No. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, Minn., January, 1916.

*No. 202. Proceedings of the conference of Employment Managers' Association of Boston, Mass., held May 10, 1916.

No. 206. The British system of labor exchanges. [1916.]

*No. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.

No. 235. Employment system of the Lake Carriers' Association. [1918.]

*No. 241. Public employment offices in the United States. [1918.]

No. 247. Proceedings of Employment Managers' Conference, Rochester, N. Y., May 9-11, 1918.

No. 310. Industrial unemployment: A statistical study of its extent and causes. [1922.]

No. 409. Unemployment in Columbus, Ohio, 1921 to 1925.

Proceedings of Annual Meetings of International Association of Public Employment Services.

- No. 192. First, Chicago, December 19 and 20, 1913; Second, Indianapolis, September 24 and 25, 1914; Third, Detroit, July 1 and 2, 1915.
No. 220. Fourth, Buffalo, N. Y., July 20 and 21, 1916.
No. 311. Ninth, Buffalo, N. Y., September 7-9, 1921.
No. 337. Tenth, Washington, D. C., September 11-13, 1922.
No. 355. Eleventh, Toronto, Canada, September 4-7, 1923.
No. 400. Twelfth, Chicago, Ill., May 19-23, 1924.
No. 414. Thirteenth, Rochester, N. Y., September 15-17, 1925.

Women and Children in Industry.

- No. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. [1913.]
*No. 117. Prohibition of night work of young persons. [1913.]
*No. 118. Ten-hour maximum working-day for women and young persons. [1913.]
*No. 119. Working hours of women in the pea canneries of Wisconsin. [1913.]
*No. 122. Employment of women in power laundries in Milwaukee. [1913.]
No. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. [1914.]
*No. 167. Minimum-wage legislation in the United States and foreign countries. [1915.]
*No. 175. Summary of the report on conditions of women and child wage earners in the United States. [1915.]
*No. 176. Effect of minimum-wage determinations in Oregon. [1915.]
*No. 180. The boot and shoe industry in Massachusetts as a vocation for women. [1915.]
*No. 182. Unemployment among women in department and other retail stores of Boston, Mass. [1916.]
No. 193. Dressmaking as a trade for women in Massachusetts. [1916.]
No. 215. Industrial experience of trade-school girls in Massachusetts. [1917.]
*No. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children. [1918.]
No. 223. Employment of women and juveniles in Great Britain during the war. [1917.]
No. 253. Women in lead industries. [1919.]

Workmen's Insurance and Compensation (including laws relating thereto).

- *No. 101. Care of tuberculous wage earners in Germany. [1912.]
*No. 102. British national insurance act. 1911.
*No. 103. Sickness and accident insurance law of Switzerland. [1912.]
No. 107. Law relating to insurance of salaried employees in Germany. [1913.]
*No. 155. Compensation for accidents to employees of the United States. [1914.]
No. 212. Proceedings of the conference on social insurance called by the International Association of Industrial Accident Boards and Commissions, Washington, D. C., December 5-9, 1916.
No. 243. Workmen's compensation legislation in the United States and foreign countries, 1917 and 1918.
No. 301. Comparison of workmen's compensation insurance and administration. [1922.]
No. 312. National health insurance in Great Britain, 1911 to 1920.
No. 379. Comparison of workmen's compensation laws of the United States as of January 1, 1925.
No. 423. Workmen's compensation legislation of the United States and Canada. [1926.]

Proceedings of Annual Meetings of the International Association of Industrial Accident Boards and Commissions.

- *No. 210. Third, Columbus, Ohio, April 25-28, 1916.
No. 248. Fourth, Boston, Mass., August 21-25, 1917.
No. 264. Fifth, Madison, Wis., September 24-27, 1918.
*No. 273. Sixth, Toronto, Canada, September 23-26, 1919.
No. 281. Seventh, San Francisco, Calif., September 20-24, 1920.
No. 304. Eighth, Chicago, Ill., September 19-23, 1921.
No. 333. Ninth, Baltimore, Md., October 9-13, 1922.
No. 359. Tenth, St. Paul, Minn., September 24-26, 1923.
No. 385. Eleventh, Halifax, Nova Scotia, August 26-28, 1924.
No. 395. Index to proceedings, 1914-1924.
No. 403. Twelfth, Salt Lake City, Utah, August 17-20, 1925.
No. 432. Thirteenth, Hartford, Conn., September 14-17, 1926.

Industrial Accidents and Hygiene.

- *No. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. [1912.]
- No. 120. Hygiene in the painters' trade. [1913.]
- *No. 127. Dangers to workers from dusts and fumes, and methods of protection. [1913.]
- *No. 141. Lead poisoning in the smelting and refining of lead. [1914.]
- *No. 157. Industrial accident statistics. [1915.]
- *No. 165. Lead poisoning in the manufacture of storage batteries. [1914.]
- *No. 179. Industrial poisons used in the rubber industry. [1915.]
- No. 188. Report of British departmental committee on the danger in the use of lead in the painting of buildings. [1916.]
- *No. 201. Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. [1916.]
- *No. 207. Causes of death by occupation. [1917.]
- *No. 209. Hygiene of the printing trade. [1917.]
- No. 219. Industrial poisons used or produced in the manufacture of explosives. [1917.]
- No. 221. Hours, fatigue, and health in British munition factories. [1917.]
- No. 230. Industrial efficiency and fatigue in British munition factories. [1917.]
- *No. 231. Mortality from respiratory diseases in dusty trades (inorganic dusts). [1918.]
- No. 234. Safety movement in the iron and steel industry, 1907 to 1917.
- *No. 236. Effect of the air hammer on the hands of stonecutters. [1918.]
- No. 249. Industrial health and efficiency. Final report of British Health of Munition Workers Committee. [1919.]
- *No. 251. Preventable death in the cotton-manufacturing industry. [1919.]
- No. 256. Accidents and accident prevention in machine building. [1919.]
- No. 267. Anthrax as an occupational disease. [1920.]
- No. 276. Standardization of industrial accident statistics. [1920.]
- No. 280. Industrial poisoning in making coal-tar dyes and dye intermediates. [1921.]
- No. 291. Carbon monoxide poisoning. [1921.]
- No. 293. The problem of dust phthisis in the granite-stone industry. [1922.]
- No. 298. Causes and prevention of accidents in the iron and steel industry, 1916 to 1919.
- No. 306. Occupational hazards and diagnostic signs: A guide to impairments to be looked for in hazardous occupations. [1922.]
- No. 339. Statistics of industrial accidents in the United States. [1923.]
- No. 392. Survey of hygienic conditions in the printing trades. [1925.]
- No. 405. Phosphorus necrosis in the manufacture of fireworks and the preparation of phosphorus. [1926.]
- No. 425. Record of industrial accidents in the United States to 1925.
- No. 426. Deaths from lead poisoning. [1926.]
- No. 427. Health survey in the printing trades, 1922 to 1925.
- No. 428. Proceedings of the Industrial Accident Prevention Conference, held at Washington, D. C., July 14-16, 1926.

Conciliation and Arbitration (including strikes and lockouts).

- *No. 124. Conciliation and arbitration in the building trades of Greater New York. [1913.]
- *No. 133. Report of the industrial council of the British Board of Trade in its inquiry into industrial agreements. [1913.]
- *No. 139. Michigan copper district strike. [1914.]
- No. 144. Industrial court of the cloak, suit, and skirt industry of New York City. [1914.]
- No. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City. [1914.]
- *No. 191. Collective bargaining in the anthracite coal industry. [1916.]
- *No. 198. Collective agreements in the men's clothing industry. [1916.]
- No. 233. Operation of the industrial disputes investigation act of Canada. [1918.]
- No. 255. Joint industrial councils of Great Britain. [1919.]
- No. 283. History of the Shipbuilding Labor Adjustment Board, 1917 to 1919.
- No. 287. National War Labor Board: History of its formation, activities, etc. [1921.]
- No. 303. Use of Federal power in settlement of railway labor disputes. [1922.]
- No. 341. Trade agreement in the silk-ribbon industry of New York City. [1923.]
- No. 402. Collective bargaining by actors. [1926.]
- No. 419. Trade agreements, 1925..

Labor Laws of the United States (including decisions of courts relating to labor).

- No. 211. Labor laws and their administration in the Pacific States. [1917.]
- No. 229. Wage payment legislation in the United States. [1917.]
- No. 285. Minimum-wage legislation in the United States. [1921.]
- No. 331. Labor laws that have been declared unconstitutional. [1922.]
- No. 322. Kansas Court of Industrial Relations. [1923.]
- No. 343. Laws providing for bureaus of labor statistics, etc. [1923.]
- No. 370. Labor laws of the United States, with decisions of courts relating thereto. [1925.]
- No. 408. Labor laws relating to payment of wages. [1926.]
- No. 417. Decisions of courts and opinions affecting labor, 1925.
- No. 434. Labor legislation of 1926.

Foreign Labor Laws.

- *No. 142. Administration of labor laws and factory inspection in certain European countries. [1914.]

Vocational and Workers' Education.

- *No. 159. Short-unit courses for wage earners, and a factory school experiment. [1915.]
- *No. 162. Vocational education survey of Richmond, Va. [1915.]
- No. 199. Vocational education survey of Minneapolis, Minn. [1916.]
- No. 271. Adult working-class education in Great Britain and the United States. [1920.]

Safety Codes.

- No. 331. Code of lighting factories, mills, and other work places.
- No. 336. Safety code for the protection of industrial workers in foundries.
- No. 338. Safety code for the use, care, and protection of abrasive wheels.
- No. 350. Specifications of laboratory tests for approval of electric headlighting devices for motor vehicles.
- No. 351. Safety code for the construction, care, and use of ladders.
- No. 364. Safety code for mechanical power-transmission apparatus.
- No. 375. Safety code for laundry machinery and operation.
- No. 378. Safety code for woodworking plants.
- No. 382. Code of lighting school buildings.
- No. 410. Safety code for paper and pulp mills.
- No. 430. Safety code for power presses and foot and hand presses.
- No. 433. Safety codes for the prevention of dust explosions.
- No. 436. Safety code for the use, care, and protection of abrasive wheels.

Industrial Relations and Labor Conditions.

- No. 237. Industrial unrest in Great Britain. [1917.]
- No. 340. Chinese migration, with special reference to labor conditions. [1923.]
- No. 349. Industrial relations in the West Coast lumber industry. [1923.]
- No. 361. Labor relations in the Fairmont (W. Va.) bituminous coal field. [1924.]
- No. 380. Postwar labor conditions in Germany.
- No. 383. Works council movement in Germany. [1925.]
- No. 384. Labor conditions in the shoe industry in Massachusetts, 1920 to 1924.
- No. 399. Labor relations in the lace and lace-curtain industries in the United States. [1925.]

Welfare Work.

- *No. 123. Employer's welfare work. [1923.]
- No. 222. Welfare work in British munitions factories. [1917.]
- *No. 250. Welfare work for employees in industrial establishments in the United States. [1919.]

Cooperation.

- No. 313. Consumers' cooperative societies in the United States in 1920.
- No. 314. Cooperative credit societies in America and in foreign countries. [1922.]
- No. 437. Cooperative movement in the United States in 1925 (other than agricultural).

Housing.

- *No. 158. Government aid to home owning and housing of working people in foreign countries. [1914.]
- No. 263. Housing by employees in the United States. [1920.]
- No. 295. Building operations in representative cities in 1920.
- No. 424. Building permits in the principal cities of the United States, 1925.

Proceedings of Annual Conventions of the Association of Governmental Labor Officials of the United States and Canada.

- No. 266. Seventh, Seattle, Wash., July 12-15, 1920.
- No. 307. Eighth, New Orleans, La., May 2-6, 1921.
- *No. 323. Ninth, Harrisburg, Pa., May 22-26, 1922.
- No. 352. Tenth, Richmond, Va., May 1-4, 1923.
- No. 389. Eleventh, Chicago, Ill., May 19-23, 1924.
- No. 411. Twelfth, Salt Lake City, Utah, August 13-15, 1925.
- No. 429. Thirteenth, Columbus, Ohio, June 7-10, 1926.

Miscellaneous Series.

- *No. 174. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915.
- No. 208. Profit sharing in the United States. [1916.]
- No. 242. Food situation in central Europe, 1917.
- No. 254. International labor legislation and the society of nations. [1919.]
- No. 268. Historical survey of international action affecting labor. [1920.]
- No. 282. Mutual relief associations among Government employees in Washington, D. C. [1921.]
- No. 299. Personnel research agencies. A guide to organized research in employment, management, industrial relations, training, and working conditions. [1921.]
- No. 319. The Bureau of Labor Statistics: Its history, activities, and organization. [1922.]
- No. 326. Methods of procuring and computing statistical information of the Bureau of Labor Statistics. [1923.]
- No. 342. International Seaman's Union of America: A study of its history and problems. [1923.]
- No. 346. Humanity in government. [1923.]
- No. 372. Convict labor in 1923.
- No. 386. The cost of American almshouses. [1925.]
- No. 398. Growth of legal-aid work in the United States. [1926.]
- No. 401. Family allowances in foreign countries. [1926.]
- No. 420. Handbook of American trade-unions. [1926.]
- No. 437. Cooperative movement in the United States in 1925.
- No. 439. Handbook of labor statistics 1924-1926.
- No. 441. Productivity of labor in the glass industry. [1927.] (In press.)