

INDUSTRY WAGE SURVEY

Machinery Manufacturing

MARCH—MAY 1963

Bulletin No. 1388

UNITED STATES DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS
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Preface

The results of a Bureau of Labor Statistics survey of occupational wages in the machinery (except electrical) manufacturing industries in 21 areas are summarized in this bulletin. This is the 17th in a series of Bureau surveys in these industries. Wage data were obtained, largely by mail, between March and May 1963, from establishments which had been visited by Bureau field economists in a similar study in March-June 1962. Personal visits were made to nonrespondents and to respondents reporting unusual changes since the previous survey. Separate releases for the areas, issued within a few months after the payroll period studied, may be obtained from the Bureau of Labor Statistics, Washington, D. C., 20210, or from any of its regional offices.

Occupational data are presented for the machinery industries as a whole in each area and separately in selected areas for special dies and tools, die sets, jigs and fixtures, and for machine-tool accessories and measuring devices. The distributions of workers by occupational earnings contained in the separate area releases are included here for six jobs. Data on wage practices and supplementary benefits were not obtained in the current study; however, such information from the previous study is briefly summarized in this bulletin.

This bulletin was prepared by Fred W. Mohr in the Bureau's Division of Occupational Pay, under the general direction of L. R. Linsenmayer, Assistant Commissioner for Wages and Industrial Relations. Field work for the survey was directed by the Assistant Regional Directors for Wages and Industrial Relations.

Other reports available from the Bureau's program of industry wage studies, as well as the addresses of the Bureau's six regional offices, are listed at the end of this bulletin.

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Industry Wage Survey—

Machinery Manufacturing, March—May 1963

Summary

Average straight-time hourly earnings of production and related workers in the nonelectrical machinery industries rose by 2.7 percent between March—June 1962 and March—May 1963, in 21 metropolitan areas studied by the Bureau of Labor Statistics.¹ Detroit and San Francisco—Oakland led in pay levels for machinery workers. Tool and die makers were the highest paid occupational group studied in most areas, as in the previous surveys.

Industry Characteristics

Employment in the nonelectrical machinery industries in the 21 areas at the time of the survey totaled approximately 525,000—more than a third of the nationwide total in these industries. Area employment ranged from fewer than 4,000 in Denver and Portland (Oreg.) to almost 77,000 in Chicago. Other major areas of employment included Detroit (65,000), Milwaukee (46,000), and Los Angeles—Long Beach (44,000). Employment exceeded 30,000 in Cleveland, Hartford, Newark and Jersey City, and Philadelphia; it was between 20,000 and 30,000 in Boston, Minneapolis—St. Paul, and New York City; between 10,000 and 20,000 in Buffalo, Houston, Pittsburgh, St. Louis, and San Francisco—Oakland; and between 5,000 and 10,000 in Baltimore, Dallas, and Worcester.

The principal types of machinery manufactured differed among the areas. For example, a majority of the workers in Worcester and more than two-fifths in Cleveland, Detroit, and Pittsburgh were employed in establishments primarily manufacturing metalworking machinery and equipment; a majority of those in Denver and Houston were in construction, mining, and material handling machinery establishments; and approximately two-fifths in Buffalo and Hartford were in establishments making general industrial machinery and equipment. Other types of machinery manufacture covered by the study included engines and turbines; farm machinery and equipment; special industry machinery; office, computing, and accounting machines; service industry machines; and miscellaneous machinery.

Establishments with fewer than 250 workers accounted for nearly two-fifths of the workers within the scope of the survey, establishments with 250 to 2,499 workers a slightly larger proportion; and establishments with 2,500 or more employed nearly another fifth. A majority of the workers in Denver, Los Angeles—Long Beach, New York City, and San Francisco—Oakland were in the establishments with fewer than 250 workers. Hartford and Milwaukee were the only areas in which more than half of the workers were in establishments with 2,500 or more employees.

Unionization data were not obtained in the 1963 study. At the time of the 1962 survey, however, seven-tenths of the production workers in the 21 areas combined were in establishments having labor-management contracts covering a

¹ See appendix A for scope and method of survey. For definition of areas and the payroll period studied in the respective areas, see table in appendix A.

majority of their workers. By area, the proportions of workers in such establishments ranged from more than nine-tenths in Pittsburgh and San Francisco-Oakland and more than three-fourths in nine additional areas to about one-fourth in Dallas.²

Data concerning the prevalence of incentive wage payments also were not obtained in the current survey. At the time of the previous study, most production workers in each of the areas surveyed were paid time rates. However, two-fifths of the workers in Milwaukee, one-third in Hartford, and one-fifth in Baltimore, Buffalo, Cleveland, and Pittsburgh were paid on an incentive basis. Less than a tenth received incentive pay in seven areas.

Trends in Earnings

Average straight-time hourly earnings of production workers in the 21 areas studied rose 2.7 percent between March-June 1962 and March-May 1963, compared with an increase of 2.8 percent between March-May 1961 and March-June 1962. (See table and chart on pages 3 and 4, respectively.) Baltimore had the greatest increase (4.9 percent) between the 1962 and 1963 survey periods, but increases exceeded 3 percent in seven additional areas. Houston, Philadelphia, and Pittsburgh were the only areas in which the rate of increase averaged less than 2 percent. General wage changes usually account for much of the year-to-year movement in wages, although other factors such as labor turnover, incentive earnings, and changes in employment in establishments with different pay levels also affect the trend in wages.

Wage movement also varied between the skilled and unskilled jobs studied, as well as among areas. Average hourly earnings of tool and die makers (other than jobbing) in all areas combined rose 2.4 percent (about 8 cents), while earnings of material handling laborers increased 2.9 percent (approximately 6 cents). Since 1945, when the Bureau started this series of occupational wage relationship studies for the machinery industries, average earnings for these occupations have increased 138 and 184 percent, respectively. The difference between the rates of increase was much greater between 1945 and 1955 than it has been since 1955, due largely to uniform cents-per-hour increases granted during the earlier period. Twice in the past 4 years (between 1959 and 1960 and between 1961 and 1962), the percent increase was slightly greater for tool and die makers than for laborers.

Occupational Earnings, March-May 1963

Among the occupational groups studied, tool and die makers generally had the highest average hourly earnings in March-May 1963. (See table 1.) Men producing or maintaining tools and dies used in the establishments in which they were employed (i.e., other than jobbing) had average hourly earnings ranging from \$2.80 in Dallas and \$2.84 in Worcester to \$3.71 in San Francisco-Oakland; in seven areas, their average earnings exceeded \$3.25 an hour. Tool and die makers producing tools and dies for sale (jobbing) had average hourly earnings ranging, in the 14 areas for which their earnings data are shown, from \$2.83 in Baltimore to \$3.71 in Chicago. In most of these areas, the difference in average hourly earnings for tool and die makers (jobbing and other than jobbing) amounted to less than 5 percent.

Average hourly earnings of men machine-tool operators (class A), who set up their own machines and perform a variety of machining operations to close tolerances, ranged from \$2.49 in Dallas to \$3.41 in St. Louis; in 10 areas, their

² See Industry Wage Survey: Machinery Manufacturing, March-June 1962 (BLS Bulletin 1352, 1963), pp. 26-27.

Indexes¹ of average straight-time hourly earnings² of production workers in machinery manufacturing in selected areas and occupations, March–May 1963 and March–June 1962, and percent change in selected periods³

Area and occupation	Indexes (1958–59=100)		Percent increase from—					
	Mar.– May 1963	Mar.– June 1962	Mar.–June 1962 to Mar.–May 1963	Mar.–May 1961 to Mar.–June 1962	Jan. 1960 to Mar.– May 1961	Jan. 1959 to Jan. 1960	Jan. 1958 to Jan. 1959	Jan. 1945 to Mar.– May 1963
	All areas combined-----	115.1	112.1	2.7	2.8	3.1	4.1	3.3	155.9
<u>Area</u>								
Baltimore-----	118.0	112.5	4.9	1.9	4.3	2.8	6.1	168.5
Boston-----	118.7	115.4	2.8	3.0	4.3	5.1	4.6	161.5
Buffalo-----	114.9	111.1	3.5	1.9	4.0	3.4	2.7	144.8
Chicago-----	114.6	111.1	3.1	3.0	1.5	4.3	3.8	158.9
Cleveland-----	117.6	114.5	2.7	3.8	2.1	6.8	2.1	144.8
Dallas-----	113.8	110.9	2.6	2.6	3.1	3.0	3.5	121.3
Denver-----	112.2	109.4	2.5	1.1	3.2	3.6	2.3	161.2
Detroit-----	113.0	110.4	2.4	2.0	2.8	4.1	2.3	132.5
Hartford-----	117.7	114.0	3.2	2.4	4.7	4.7	3.1	164.4
Houston-----	112.0	109.9	1.9	2.1	4 ⁻ 2	7.4	.9	138.2
Los Angeles–Long Beach-----	115.2	111.8	3.1	3.2	3.0	4.0	2.5	136.7
Milwaukee-----	115.3	112.5	2.5	3.0	3.5	3.9	3.3	179.0
Minneapolis–St. Paul-----	116.4	113.6	2.5	2.0	5.9	3.9	2.7	157.1
Newark and Jersey City-----	114.1	111.1	2.7	3.0	4.1	1.4	4.4	140.0
New York City-----	115.1	111.8	3.0	3.7	4.0	2.9	1.3	146.3
Philadelphia-----	114.1	112.7	1.2	2.4	3.2	4.2	5.0	155.5
Pittsburgh-----	111.0	110.3	.6	1.6	2.9	2.8	5.5	176.7
Portland (Oreg.)-----	120.4	117.0	2.9	3.5	2.1	9.1	3.2	148.4
St. Louis-----	119.7	115.7	3.4	5.1	4.4	3.7	3.5	194.3
San Francisco–Oakland-----	116.3	112.6	3.3	2.5	3.0	2.5	8.5	151.0
Worcester-----	115.9	111.8	3.7	2.7	5.2	1.8	3.4	174.1
<u>Occupation</u>								
Laborers, material handling-----	115.8	112.5	2.9	2.3	4.0	3.4	4.7	184.1
Tool and die makers (other than jobbing)-----	115.4	112.7	2.4	2.7	3.6	3.9	4.1	138.4

¹ For the methodology used in constructing the indexes, see appendix A.

² Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

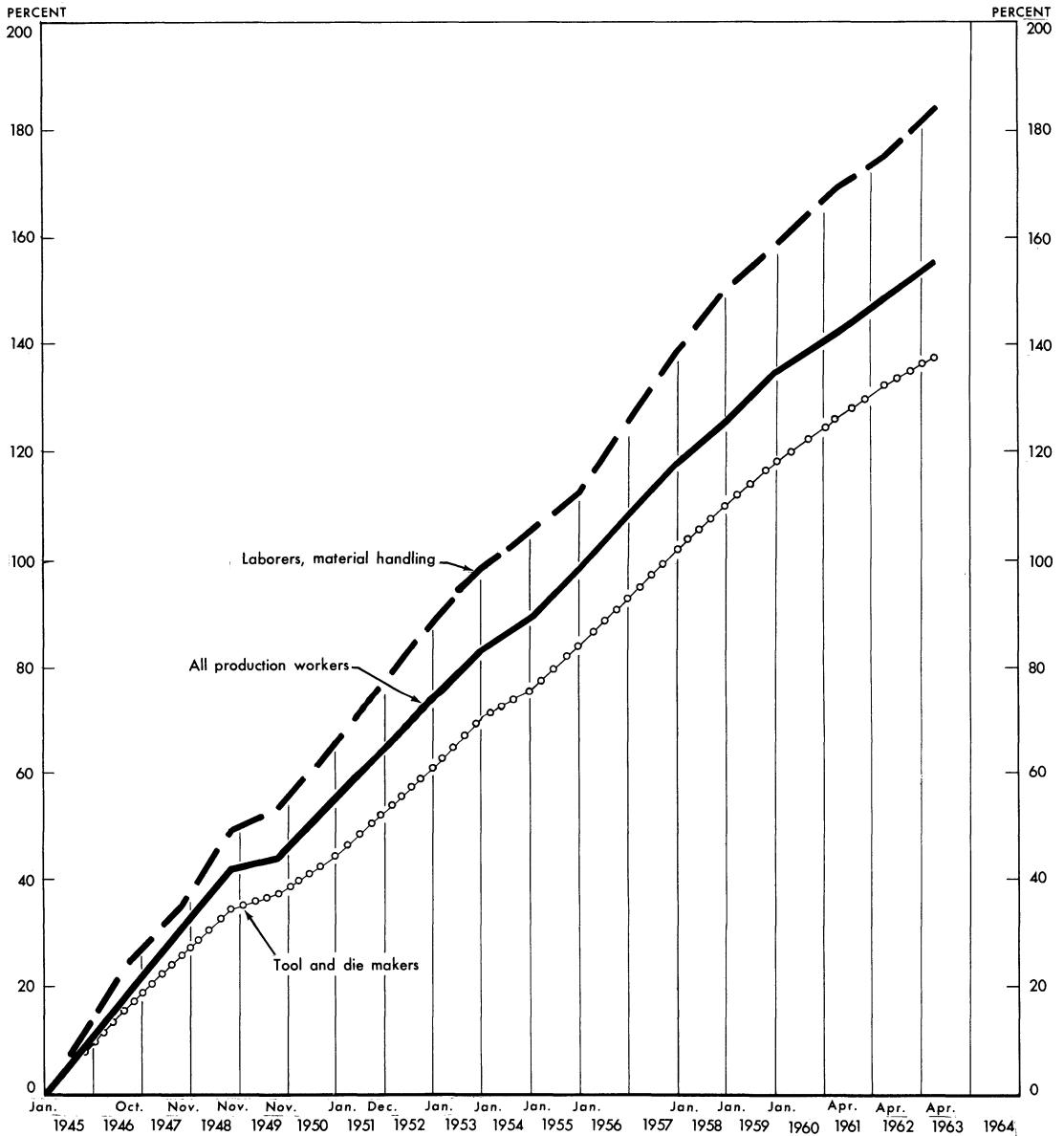
³ Data for periods shown as January cover various months of the winter.

⁴ This decrease was due to changes in incentive earnings and in the proportions of workers in some job classifications in establishments having different pay levels.

earnings averaged \$3 or more. Area averages for men in the intermediate group of machine-tool operators (class B) ranged from \$2.06 to \$2.85 an hour; the range for those who performed more routine, repetitive machining operations (class C) was from \$1.64 to \$2.64.

Janitors, porters, and cleaners, the lowest paid group in the men's occupations studied in most areas, had average earnings ranging from \$1.49 an hour in Dallas to \$2.40 in San Francisco–Oakland, \$2.41 in Detroit, and \$2.43 in Portland (Oreg.); their average earnings exceeded \$2 an hour in 14 areas. Material handling laborers' earnings averaged less than \$2 an hour in two areas and more than \$2.50 in three areas.

PERCENT INCREASE IN AVERAGE STRAIGHT-TIME HOURLY EARNINGS FOR ALL PRODUCTION WORKERS AND TWO SELECTED OCCUPATIONS IN MACHINERY INDUSTRIES JANUARY 1945 TO SPECIFIED DATES



Data for nine areas are presented in table 4 for selected occupations in establishments primarily engaged in manufacturing special dies and tools, die sets, jigs and fixtures, and/or machine-tool accessories and measuring devices.³

Women, accounting for a relatively small proportion of the workers in machinery manufacturing establishments,⁴ were most commonly employed in routine assembly and inspection or repetitive machining operations. In eight areas for which data are shown in table 2, for women class C assemblers, their average hourly earnings ranged from \$1.77 in Chicago and \$1.78 in Los Angeles—Long Beach and New York City to \$2.50 in Detroit.⁵ Average earnings of women class C machine-tool operators in the areas shown ranged from \$1.98 an hour in Chicago to \$2.68 in Detroit.⁶

Incentive-paid workers generally had higher average earnings than workers in the same occupation who were paid on a time basis (table 3).

The following tabulation, in which area average earnings for production workers⁷ are expressed as a percent of the average for Chicago, shows that wage levels were highest in Detroit and San Francisco—Oakland, and lowest in Dallas.

Relative pay levels in 21 areas
(Chicago=100)

Detroit-----	109
San Francisco—Oakland-----	109
St. Louis-----	105
Milwaukee-----	105
Portland (Oreg.)-----	104
Pittsburgh-----	103
Cleveland-----	102
Chicago-----	100
Los Angeles—Long Beach-----	97
Newark and Jersey City-----	97
Philadelphia-----	97
Buffalo-----	95
Denver-----	95
Hartford-----	95
Baltimore-----	94
New York City-----	93
Houston-----	93
Minneapolis—St. Paul-----	92
Worcester-----	91
Boston-----	90
Dallas-----	78

Pay levels in all areas, except Dallas, were within 10 percent of the Chicago average, ranging from 2 percent to 9 percent above the Chicago level in 7 areas and from 3 to 10 percent below in 12 areas.

³ The separate area releases also provide data for oilfield machinery in Los Angeles—Long Beach, paper and printing machinery in New York City, and textile machinery in Philadelphia.

⁴ At the time of the 1962 study, women accounted for fewer than one-tenth of the plant workers in the machinery industries in the 21 areas surveyed.

⁵ The separate area releases also show earnings data for women in this occupation in Dallas, Minneapolis—St. Paul, and Boston, with averages of \$1.32, \$1.52, and \$1.90 an hour, respectively.

⁶ The Worcester and Philadelphia area releases also include this occupation, and show average hourly earnings of \$1.94 and \$2.37, respectively.

⁷ The pay index for production workers was based on 10 men's jobs common to all areas (assemblers, classes A and B; inspectors, class A; janitors, porters, and cleaners; laborers, material handling; machine-tool operators, production, classes A, B, and C; tool and die makers (other than jobbing); and welders, hand, class A). To minimize interarea differences in occupational composition, weights expressing constant employment relationships based on total employment in the respective jobs in all 21 areas were used. Aggregates were computed for each area by multiplying the straight-time hourly earnings for each job by these weights and totaling. The ratio of these aggregates formed the basis for the index.

Supplementary Wage Benefits, March-June 1962

Information on supplementary wage benefits was not obtained in the 1963 study. Data from the 1962 study are briefly summarized below.⁸

At the time of the 1962 survey, nearly all workers in the nonelectrical machinery industries in the 21 areas studied were employed in establishments providing paid holidays, paid vacations, and some type of insurance or pension plan. A majority of both production and office workers in Boston, New York City, Philadelphia, San Francisco-Oakland, and Worcester were employed in establishments which granted 8 or more holidays annually. In each of the other areas, most workers received at least 6 days a year. Half day holidays in addition to full day holidays were common in most areas.

Paid vacations of at least 1 week after 1 year and 2 weeks after 5 years of service were provided in establishments employing nearly all production and office workers in the areas studied. In most areas, at least three-fourths of the workers were in establishments which provided vacations of 3 weeks or longer after 15 years of service.

Life, hospitalization, and surgical insurance, for which employers paid at least part of the cost, were available to more than four-fifths of the production and office workers in each of the areas studied. Sickness and accident insurance and medical insurance also were provided to a large majority of the workers in most areas. Retirement pension benefits (other than those available under Federal old-age, survivors, and disability insurance) were provided by establishments accounting for a majority of the production workers in all except four areas and for half or more of the office employees in all areas.

⁸ See BLS Bulletin 1352, op. cit., pp. 7-8 and pp. 34-41. The provisions in effect at the time of the 1963 survey may not have been the same as those reported in the 1962 study, since changes in benefits may have occurred during the interval between the two studies.

Table 1. Occupational Averages: Men Workers

(Number and average straight-time hourly earnings¹ of men in selected occupations in machinery manufacturing, 21 selected areas, March-May 1963²)

Occupation	New England						Middle Atlantic								South							
	Boston		Hartford		Worcester		Buffalo		Newark and Jersey City		New York City		Philadelphia		Pittsburgh		Baltimore		Dallas		Houston	
	Num-ber of work-ers	Aver-age hourly earn-ings	Num-ber of work-ers	Aver-age hourly earn-ings	Num-ber of work-ers	Aver-age hourly earn-ings	Num-ber of work-ers	Aver-age hourly earn-ings	Num-ber of work-ers	Aver-age hourly earn-ings	Num-ber of work-ers	Aver-age hourly earn-ings	Num-ber of work-ers	Aver-age hourly earn-ings	Num-ber of work-ers	Aver-age hourly earn-ings						
Assemblers, class A	460	\$2.77	269	\$2.81	265	\$2.74	299	\$2.94	752	\$2.96	805	\$2.83	680	\$2.79	371	\$3.18	107	\$3.32	158	\$2.34	286	\$2.61
Assemblers, class B	389	2.48	847	2.36	189	2.46	186	2.59	892	2.39	594	2.34	414	2.43	199	2.82	109	2.59	242	1.99	123	2.44
Assemblers, class C	138	2.27	560	2.17	35	2.34	99	2.34	279	2.25	943	1.99	-	-	88	2.49	57	2.01	172	1.47	60	2.13
Electricians, maintenance	61	2.87	94	3.01	42	2.81	78	2.89	145	3.09	40	2.94	98	3.05	106	3.10	29	2.90	29	2.54	101	3.08
Inspectors, class A	152	2.82	175	2.64	87	2.66	112	3.02	229	2.86	127	3.02	351	2.82	144	3.30	79	2.92	53	2.54	153	2.93
Inspectors, class B	146	2.53	338	2.45	58	2.50	73	2.76	179	2.58	71	2.56	258	2.91	66	2.74	36	2.63	58	2.07	166	2.79
Inspectors, class C	78	2.22	556	2.39	-	-	17	2.34	97	2.47	99	1.91	38	2.45	-	-	27	2.19	-	-	-	-
Janitors, porters, and cleaners	197	1.84	235	2.08	112	1.96	163	2.14	395	1.92	199	1.87	288	2.04	144	2.29	99	1.74	170	1.49	284	1.89
Laborers, material handling	249	2.14	323	2.09	83	2.14	74	2.36	483	2.16	191	2.08	229	2.25	160	2.41	-	-	124	1.56	246	1.93
Machine-tool operators, production, class A ³	1,581	2.77	1,361	2.86	783	2.70	857	2.80	1,912	2.89	1,493	2.85	2,716	2.87	1,655	3.07	723	2.88	695	2.49	1,302	2.85
Automatic-lathe operators, class A	35	2.84	-	-	-	-	-	-	-	-	27	3.08	34	3.34	-	-	-	-	54	2.51	87	2.87
Drill-press operators, radial, class A	102	2.83	51	2.78	68	2.59	-	-	154	2.99	92	3.00	234	2.80	120	2.75	28	3.10	13	2.29	68	2.79
Drill-press operators, single- or multiple-spindle, class A	87	2.86	20	2.81	28	2.78	17	2.50	71	2.56	-	-	131	2.69	-	-	-	-	20	2.32	32	2.65
Engine-lathe operators, class A	173	2.76	142	2.72	109	2.62	168	2.78	342	2.85	169	2.85	250	2.91	272	3.15	108	2.67	153	2.52	204	2.97
Grinding-machine operators, class A	203	2.77	376	2.95	147	2.68	78	2.89	184	2.88	133	2.93	339	2.68	233	2.96	27	3.19	70	2.59	110	2.79
Milling-machine operators, class A	186	2.90	144	2.87	118	2.79	121	2.85	323	2.91	297	2.90	318	2.81	253	3.08	90	3.37	90	2.47	183	2.82
Screw-machine operators, automatic, class A	64	2.93	118	2.89	14	2.92	-	-	26	3.23	34	2.97	-	-	-	-	-	-	30	2.43	-	-
Turret-lathe operators, hand (including hand screw machine), class A	243	2.65	232	2.80	118	2.64	227	2.80	351	2.83	223	2.81	381	2.85	190	2.92	87	3.03	183	2.46	334	2.84
Machine-tool operators, production, class B ³	854	2.39	1,761	2.64	458	2.49	597	2.54	1,346	2.74	1,130	2.47	1,379	2.85	558	2.76	427	2.46	289	2.06	463	2.63
Automatic-lathe operators, class B	-	-	10	2.67	16	2.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	2.61
Drill-press operators, radial, class B	37	2.38	41	2.51	47	2.36	36	2.78	46	2.50	56	2.20	54	2.44	-	-	13	2.42	52	1.99	47	2.59
Drill-press operators, single- or multiple-spindle, class B	71	2.35	165	2.62	52	2.48	38	2.40	108	2.41	48	2.40	37	2.53	-	-	36	2.56	14	1.86	22	2.50
Engine-lathe operators, class B	68	2.46	37	2.22	30	2.41	160	2.50	114	2.56	184	2.74	120	2.64	88	3.13	51	2.30	36	2.31	24	2.59
Grinding-machine operators, class B	87	2.41	803	2.66	150	2.46	82	2.64	-	-	75	2.39	-	-	-	-	64	2.47	29	2.03	61	2.73
Milling-machine operators, class B	80	2.52	169	2.45	61	2.62	32	2.76	107	2.42	156	2.53	-	-	41	2.84	-	-	37	2.14	77	2.66
Screw-machine operators, automatic, class B	21	2.34	241	2.90	10	2.49	-	-	-	-	-	-	-	-	-	-	-	-	16	2.05	-	-
Turret-lathe operators, hand (including hand screw machine), class B	149	2.37	91	2.68	43	2.41	136	2.58	36	2.74	97	2.48	172	3.04	-	-	38	2.51	51	2.02	156	2.65
Machine-tool operators, production, class C ³	326	1.98	1,035	2.62	83	2.12	120	2.38	399	2.28	701	2.04	-	-	71	2.59	328	2.02	241	1.64	198	2.27
Drill-press operators, radial, class C	-	-	-	-	-	-	-	-	-	-	22	2.06	-	-	-	-	-	-	-	-	14	2.07
Drill-press operators, single- or multiple-spindle, class C	46	1.95	215	2.58	-	-	51	2.28	147	2.35	215	1.75	23	2.09	-	-	22	1.63	51	1.57	-	-
Engine-lathe operators, class C	-	-	-	-	9	1.85	-	-	-	-	39	2.14	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators, class C	16	2.65	468	2.76	36	2.12	17	2.59	40	2.38	19	2.26	-	-	-	-	11	2.42	-	-	21	2.26
Milling-machine operators, class C	23	1.99	197	2.37	-	-	-	-	24	2.11	59	2.06	-	-	-	-	-	-	7	1.69	28	2.35
Turret-lathe operators, hand (including hand screw machine), class C	60	2.01	33	2.62	-	-	-	-	-	-	-	-	28	2.16	-	-	-	-	-	-	45	2.28
Machine-tool operators, toolroom	71	2.69	290	2.99	28	2.68	119	2.91	985	2.94	197	2.80	269	3.01	-	-	123	2.89	77	2.67	146	2.92
Machinists, production	260	2.79	-	-	24	2.71	-	-	205	2.89	157	3.01	118	2.78	-	-	-	-	93	2.51	393	2.99
Tool and die makers (jobbing)	177	3.03	302	2.96	-	-	161	3.04	711	3.14	307	3.05	585	3.21	-	-	91	2.83	-	-	-	-
Tool and die makers (other than jobbing)	121	3.05	493	3.09	70	2.84	114	3.03	350	3.23	143	3.17	370	3.22	68	3.25	51	2.98	69	2.80	97	3.15
Welders, hand, class A	285	2.70	28	3.07	26	2.87	231	2.89	240	3.05	71	3.20	545	2.83	185	2.95	93	2.82	281	2.34	556	2.73
Welders, hand, class B	-	-	36	2.32	14	2.51	46	2.53	-	-	174	2.48	-	-	73	2.73	35	2.56	140	1.89	316	2.65

See footnotes at end of table.

Table 1. Occupational Averages: Men Workers—Continued

(Number and average straight-time hourly earnings¹ of men in selected occupations in machinery manufacturing, 21 selected areas, March–May 1963²)

Occupation	Middle West												Far West							
	Chicago		Cleveland		Detroit		Milwaukee		Minneapolis-St. Paul		St. Louis		Denver		Los Angeles-Long Beach		Portland		San Francisco-Oakland	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Assemblers, class A	2,548	\$3.02	1,002	\$3.11	713	\$3.36	516	\$3.15	633	\$2.70	276	\$2.93	126	\$2.77	1,204	\$2.85	222	\$3.11	117	\$3.26
Assemblers, class B	2,030	2.65	764	2.91	1,283	2.78	928	2.91	1,241	2.37	578	2.70	60	2.43	758	2.41	98	2.80	150	2.84
Assemblers, class C	873	2.21	185	2.49	438	2.60	505	2.76	294	2.13	596	2.32	30	2.21	313	2.07	11	2.51	369	2.53
Electricians, maintenance	356	3.30	144	3.16	208	3.48	218	3.21	49	3.13	57	3.31	-	-	83	3.07	9	3.03	23	3.59
Inspectors, class A	632	2.98	284	2.99	523	3.28	441	3.03	148	2.76	97	3.14	40	2.91	514	3.05	41	3.11	143	3.23
Inspectors, class B	505	2.68	216	2.84	434	2.88	463	2.93	-	-	164	2.60	8	2.55	100	2.54	-	-	-	-
Inspectors, class C	340	2.43	77	2.70	72	2.79	91	2.56	-	-	-	-	-	-	21	2.36	-	-	-	-
Janitors, porters, and cleaners	817	2.11	410	2.20	982	2.41	391	2.29	259	2.04	175	2.11	92	2.05	465	2.10	35	2.43	107	2.40
Laborers, material handling	1,471	2.15	320	2.42	680	2.60	777	2.38	341	2.27	345	2.23	-	-	357	2.29	32	2.66	61	2.59
Machine-tool operators, production, class A ³	6,979	3.07	4,038	3.00	4,938	3.34	2,084	3.13	1,094	2.80	647	3.41	283	3.03	5,317	3.04	557	3.11	1,099	3.31
Automatic-lathe operators, class A	201	3.15	37	3.01	14	3.09	97	3.11	42	2.71	50	3.08	-	-	152	3.00	-	-	18	3.32
Drill-press operators, radial, class A	599	3.03	233	3.00	92	3.36	188	3.04	65	2.82	40	3.05	13	3.03	238	2.87	44	3.07	28	3.27
Drill-press operators, single- or multiple-spindle, class A	295	2.94	160	3.16	68	3.08	98	3.05	99	2.70	12	3.04	-	-	153	2.71	-	-	-	-
Engine-lathe operators, class A	1,182	3.07	365	2.95	546	3.35	202	3.00	73	2.84	-	-	44	2.75	823	3.04	142	3.11	131	3.26
Grinding-machine operators, class A	836	3.09	577	3.08	2,073	3.34	250	3.15	58	2.90	42	3.18	-	-	1,684	3.18	17	3.07	-	-
Milling-machine operators, class A	773	3.07	473	3.07	580	3.32	227	3.11	57	2.86	66	3.44	24	3.45	528	2.91	77	3.11	-	-
Screw-machine operators, automatic, class A	73	3.26	259	3.03	166	3.18	86	3.23	91	2.86	58	3.31	-	-	87	3.01	-	-	95	3.15
Turret-lathe operators, hand (including hand screw machine), class A	1,064	3.15	674	2.96	491	3.19	521	3.13	275	2.82	44	3.11	56	3.26	784	2.94	57	3.10	143	3.23
Machine-tool operators, production, class B ³	2,820	2.71	1,560	2.83	3,946	2.83	1,576	2.84	674	2.52	504	2.75	117	2.44	1,276	2.48	124	2.73	375	2.83
Automatic-lathe operators, class B	99	2.89	90	2.65	87	2.78	22	2.80	19	2.55	-	-	-	-	13	2.43	-	-	-	-
Drill-press operators, radial, class B	265	2.78	71	2.81	311	2.74	284	2.79	134	2.57	-	-	31	2.51	61	2.54	26	2.73	45	2.91
Drill-press operators, single- or multiple-spindle, class B	331	2.63	234	2.91	364	2.70	231	2.78	135	2.48	-	-	10	2.29	247	2.34	26	2.75	97	2.90
Engine-lathe operators, class B	316	2.68	146	2.98	239	3.06	182	2.68	59	2.63	97	2.62	8	2.48	-	-	-	-	-	-
Grinding-machine operators, class B	396	2.71	254	2.86	1,545	2.84	164	3.00	32	2.51	45	2.74	9	2.33	176	2.54	-	-	56	2.78
Milling-machine operators, class B	431	2.78	190	2.79	459	2.75	252	2.91	28	2.64	44	2.69	10	2.46	156	2.49	6	2.79	8	2.86
Screw-machine operators, automatic, class B	44	2.90	38	2.80	190	3.01	10	2.95	-	-	45	3.32	-	-	27	2.74	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class B	345	2.74	213	2.71	399	2.81	228	2.83	36	2.59	60	2.55	11	2.36	183	2.64	14	2.79	62	2.84
Machine-tool operators, production, class C ³	1,350	2.18	545	2.42	1,033	2.64	280	2.61	399	1.92	180	2.43	35	2.31	348	2.21	-	-	208	2.58
Drill-press operators, radial, class C	59	2.52	16	2.52	-	-	26	2.64	-	-	-	-	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle, class C	396	2.07	131	2.37	158	2.54	92	2.62	169	1.76	94	2.23	-	-	-	-	-	-	88	2.56
Engine-lathe operators, class C	36	2.30	13	2.60	41	2.70	-	-	-	-	12	2.66	-	-	-	-	-	-	-	-
Grinding-machine operators, class C	170	2.33	107	2.39	278	2.51	-	-	-	-	17	2.37	-	-	83	2.12	-	-	-	-
Milling-machine operators, class C	147	2.34	70	2.54	159	2.63	51	2.85	-	-	-	-	-	-	33	2.31	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class C	116	2.33	-	-	-	-	-	-	-	-	29	2.69	-	-	-	-	-	-	-	-
Machine-tool operators, toolroom	1,477	3.28	790	3.07	4,112	3.61	477	3.21	206	2.93	206	3.32	34	2.90	287	3.12	24	3.25	75	3.40
Machinists, production	232	3.29	-	-	-	-	-	-	124	2.91	259	3.41	-	-	666	3.09	125	3.09	315	3.27
Tool and die makers (jobbing)	1,351	3.71	792	3.23	4,023	3.69	282	3.49	191	3.37	323	3.66	-	-	852	3.31	-	-	-	-
Tool and die makers (other than jobbing)	563	3.44	197	3.28	476	3.52	367	3.43	161	3.18	211	3.55	36	3.03	332	3.27	-	-	168	3.71
Welders, hand, class A	1,555	3.08	417	2.94	331	3.14	580	3.06	568	2.73	214	2.91	136	2.81	1,342	3.03	271	3.07	345	3.29
Welders, hand, class B	693	2.55	209	2.65	388	2.77	556	2.85	211	2.61	112	2.47	40	2.56	235	2.63	-	-	-	-

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

² Payroll periods covered in individual areas are indicated in the table in appendix A.

³ Includes data for operators of other machine tools in addition to those shown separately.

Table 2. Occupational Averages: Women Workers

(Number and average straight-time hourly earnings¹ of women in selected occupations in machinery manufacturing, 10 selected areas, March-May 1963)

Occupation	New England		Middle Atlantic				South		Middle West	
	Hartford		Newark and Jersey City		New York City		Baltimore		Chicago	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Assemblers, class B	168	\$ 2.23	-	-	24	\$ 2.01	-	-	-	-
Assemblers, class C	991	2.26	478	\$ 2.22	174	1.78	-	-	764	\$ 1.77
Inspectors, class B	-	-	-	-	16	2.07	-	-	31	2.41
Inspectors, class C	533	2.10	-	-	-	-	-	-	57	1.94
Machine-tool operators, production, class B	-	-	9	2.44	-	-	15	\$ 2.44	-	-
Machine-tool operators, production, class C ²	393	2.04	-	-	40	2.26	92	2.34	197	1.98
Drill-press operators, single- or multiple-spindle, class C	320	2.05	-	-	-	-	-	-	62	2.22
Grinding-machine operators, class C	-	-	-	-	-	-	-	-	11	2.21
Milling-machine operators, class C	39	2.07	-	-	-	-	-	-	-	-
	Middle West—Continued						Far West			
	Cleveland		Detroit		St. Louis		Los Angeles—Long Beach		San Francisco—Oakland	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Assemblers, class B	-	-	-	-	-	-	114	\$ 2.10	-	-
Assemblers, class C	103	\$ 2.42	764	\$ 2.50	565	\$ 2.44	1,035	1.78	-	-
Inspectors, class B	-	-	88	2.87	-	-	37	2.47	-	-
Inspectors, class C	126	2.45	401	2.58	300	2.23	-	-	83	\$ 2.38
Machine-tool operators, production, class B	92	2.57	90	2.87	-	-	43	2.37	6	2.84
Machine-tool operators, production, class C ²	147	2.19	220	2.68	-	-	30	2.13	38	2.50
Drill-press operators, single- or multiple-spindle, class C	-	-	71	2.63	-	-	-	-	31	2.49
Grinding-machine operators, class C	-	-	71	2.80	-	-	30	2.13	-	-
Milling-machine operators, class C	-	-	60	2.68	-	-	-	-	-	-

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

² Includes data for operators of other machine tools in addition to those shown separately.

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

Table 4. Occupational Averages: Special Dies and Tools and Machine-Tool Accessories

(Number and average straight-time hourly earnings¹ of men in selected occupations in establishments primarily manufacturing special dies and tools and machine-tool accessories, 9 selected areas, March-May 1963)

Occupation	Chicago				Cleveland		Detroit					
	Special dies and tools ²		Machine-tool accessories ³		Special dies and tools ²		Special dies and tools ²		Machine-tool accessories ³			
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings		
Inspectors, class A	-	-	39	\$2.85	20	\$3.03	12	\$3.87	79	\$3.20		
Inspectors, class B	-	-	13	2.68	-	-	-	-	65	3.03		
Janitors, porters, and cleaners	46	\$1.96	50	2.09	36	1.92	288	2.41	129	2.25		
Laborers, material handling	27	2.26	31	2.34	-	-	142	2.71	-	-		
Machine-tool operators, production, class A ⁴	-	-	439	3.12	-	-	150	3.29	1,410	3.17		
Engine-lathe operators, class A	-	-	53	3.09	-	-	-	-	155	3.16		
Grinding-machine operators, class A	-	-	229	3.19	-	-	-	-	832	3.20		
Milling-machine operators, class A	-	-	70	3.01	-	-	-	-	225	3.22		
Machine-tool operators, production, class B ⁴	117	2.73	354	2.66	153	2.54	298	2.90	883	2.75		
Engine-lathe operators, class B	20	2.72	56	2.74	11	2.59	-	-	27	2.79		
Grinding-machine operators, class B	-	-	133	2.66	7	2.61	-	-	565	2.75		
Milling-machine operators, class B	-	-	69	2.68	-	-	-	-	223	2.75		
Machine-tool operators, production, class C ⁴	78	1.99	175	2.16	26	2.17	81	2.55	369	2.48		
Grinding-machine operators, class C	-	-	84	2.14	-	-	-	-	226	2.52		
Machine-tool operators, toolroom	776	3.42	47	3.03	453	2.99	3,633	3.63	80	3.51		
Tool and die makers (jobbing)	1,346	3.71	-	-	769	3.23	4,009	3.69	-	-		
Welders, hand, class A	7	2.99	7	2.99	11	2.97	18	3.58	15	3.10		
	Boston		Hartford		Los Angeles-Long Beach		Milwaukee		Newark and Jersey City		New York City	
	Special dies and tools ² and machine-tool accessories ³											
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Inspectors, class A	11	\$2.71	36	\$2.55	87	\$3.32	-	-	20	\$2.99	-	-
Inspectors, class B	7	2.37	35	2.35	8	2.42	-	-	-	-	-	-
Janitors, porters, and cleaners	10	1.72	20	1.84	56	1.90	9	\$2.05	53	1.67	20	\$1.70
Laborers, material handling	-	-	14	1.94	16	2.28	-	-	18	1.60	-	-
Machine-tool operators, production, class A ⁴	76	2.69	416	2.96	541	3.21	-	-	-	-	48	2.75
Engine-lathe operators, class A	-	-	51	2.81	97	3.23	-	-	-	-	-	-
Grinding-machine operators, class A	52	2.66	230	3.06	188	3.24	-	-	-	-	-	-
Milling-machine operators, class A	-	-	44	2.70	47	3.12	-	-	-	-	-	-
Machine-tool operators, production, class B ⁴	105	2.37	556	2.39	160	2.52	60	2.63	91	2.44	116	2.36
Engine-lathe operators, class B	-	-	26	2.32	22	2.41	-	-	-	-	18	2.42
Grinding-machine operators, class B	15	2.49	397	2.43	75	2.60	-	-	14	2.56	-	-
Milling-machine operators, class B	-	-	64	2.18	24	2.45	-	-	-	-	-	-
Machine-tool operators, production, class C ⁴	70	1.89	78	2.11	68	2.14	-	-	91	2.17	65	1.85
Grinding-machine operators, class C	-	-	-	-	-	-	-	-	23	2.07	-	-
Machine-tool operators, toolroom	-	-	91	2.76	40	3.20	163	3.19	645	2.79	146	2.73
Machinists, production	49	2.61	-	-	-	-	-	-	-	-	58	2.66
Tool and die makers (jobbing)	138	3.04	302	2.96	833	3.32	282	3.49	711	3.14	307	3.05
Welders, hand, class A	-	-	-	-	43	3.15	-	-	-	-	-	-

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

² Includes die sets, jigs and fixtures, also.

³ Includes measuring devices, also.

⁴ Includes data for operators of other machine tools in addition to those shown separately.

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

Table 5. Earnings Distribution: Tool and Die Makers (Other Than Jobbing)

(Percent distribution of men workers by straight-time hourly earnings¹ in machinery manufacturing, 20 selected areas, March-May 1963)

Average hourly earnings ¹	New England			Middle Atlantic				South				Middle West					Far West			
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	San Francisco-Oakland
\$ 2.20 and under \$ 2.30.....	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-
\$ 2.30 and under \$ 2.40.....	-	0.4	2.9	-	-	-	-	-	-	4.3	-	-	-	-	-	-	-	-	-	-
\$ 2.40 and under \$ 2.50.....	5.8	1.2	1.4	-	-	-	-	-	-	17.4	-	-	-	-	-	-	0.5	-	-	-
\$ 2.50 and under \$ 2.60.....	3.3	.6	2.9	3.5	0.6	0.7	-	-	5.9	2.9	-	-	-	-	-	-	-	-	-	-
\$ 2.60 and under \$ 2.70.....	2.5	2.0	11.4	-	-	2.1	1.4	-	7.8	2.9	-	0.4	-	-	-	-	-	-	-	-
\$ 2.70 and under \$ 2.80.....	19.0	8.9	30.0	3.5	5.1	3.5	2.7	14.7	11.8	11.6	-	2.7	10.2	-	2.5	0.6	-	2.8	0.3	-
\$ 2.80 and under \$ 2.90.....	5.8	6.1	11.4	8.8	6.3	5.6	1.4	8.8	11.8	13.0	-	1.8	-	3.6	.5	3.1	-	8.3	.9	-
\$ 2.90 and under \$ 3.00.....	9.9	22.9	20.0	23.7	6.3	10.5	21.4	-	11.8	5.8	2.1	5.0	11.2	-	.8	6.8	-	25.0	4.2	-
\$ 3.00 and under \$ 3.10.....	7.4	19.1	8.6	21.1	20.3	16.8	21.9	-	9.8	36.2	15.5	4.8	5.1	1.7	5.4	12.4	2.4	41.7	3.0	-
\$ 3.10 and under \$ 3.20.....	1.7	2.4	11.4	28.1	6.9	9.1	9.7	19.1	25.5	-	27.8	3.0	9.6	5.9	9.3	36.0	-	22.2	6.0	-
\$ 3.20 and under \$ 3.30.....	18.2	6.9	-	2.6	13.1	6.3	4.1	38.2	7.8	1.4	48.5	6.0	7.1	-	8.7	21.1	.5	-	46.1	-
\$ 3.30 and under \$ 3.40.....	2.5	14.2	-	-	7.4	35.7	5.4	-	7.8	-	-	13.5	28.9	14.1	10.1	18.0	6.2	-	21.1	-
\$ 3.40 and under \$ 3.50.....	19.0	1.6	-	-	6.3	2.8	9.2	-	-	-	-	13.0	10.7	4.0	28.6	-	38.9	-	16.3	-
\$ 3.50 and under \$ 3.60.....	4.1	13.6	-	8.8	4.3	7.0	2.7	13.2	-	-	-	9.9	7.6	28.2	5.2	-	6.2	-	2.1	-
\$ 3.60 and under \$ 3.70.....	-	-	-	-	23.4	-	13.2	-	-	2.9	-	26.3	2.0	26.7	8.2	1.9	29.4	-	-	84.5
\$ 3.70 and under \$ 3.80.....	.8	-	-	-	-	-	.5	-	-	-	-	6.2	4.1	11.1	16.1	-	10.4	-	-	7.7
\$ 3.80 and under \$ 3.90.....	-	-	-	-	-	-	.8	-	-	-	-	4.4	.5	3.4	3.0	-	2.4	-	-	7.1
\$ 3.90 and under \$ 4.00.....	-	-	-	-	-	-	5.1	-	-	-	-	2.0	-	1.5	.8	-	1.9	-	-	-
\$ 4.00 and over.....	-	-	-	-	-	-	.5	5.9	-	-	-	-	1.1	3.0	-	.8	-	1.4	-	.6
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	121	493	70	114	350	143	370	68	51	69	97	563	197	476	367	161	211	36	332	168
Average hourly earnings ¹	\$3.05	\$3.09	\$2.84	\$3.03	\$3.23	\$3.17	\$3.22	\$3.25	\$2.98	\$2.80	\$3.15	\$3.44	\$3.28	\$3.52	\$3.43	\$3.18	\$3.55	\$3.03	\$3.27	\$3.71

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 6. Earnings Distribution: Machine-Tool Operators, Production, Class A

(Percent distribution of men workers by straight-time hourly earnings ¹ in machinery manufacturing, 21 selected areas, March-May 1963)

Average hourly earnings ¹	New England			Middle Atlantic				South			Middle West					Far West					
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Under \$ 2.00-----	0.2	0.5	0.8	0.7	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
\$ 2.00 and under \$ 2.10-----	.7	.1	2.7	1.3	-	-	-	-	-	0.7	-	-	-	-	-	-	-	-	(²)	-	-
\$ 2.10 and under \$ 2.20-----	1.1	1.5	1.5	2.6	0.1	0.1	0.1	-	-	2.3	-	(²)	-	-	-	-	-	-	(²)	-	-
\$ 2.20 and under \$ 2.30-----	5.4	1.0	3.2	.8	.1	2.1	.4	-	5.1	12.8	.5	0.1	-	-	-	0.2	-	-	(²)	-	-
\$ 2.30 and under \$ 2.40-----	7.8	1.6	4.5	.7	1.6	.7	5.4	0.1	.6	11.7	.5	.1	0.1	-	0.4	2.6	0.3	-	0.2	-	-
\$ 2.40 and under \$ 2.50-----	11.8	5.7	8.6	3.7	5.8	1.9	4.9	.7	3.3	19.7	.5	.3	.8	0.2	.9	3.8	2.0	0.4	.5	-	-
\$ 2.50 and under \$ 2.60-----	11.3	7.7	10.3	7.8	14.4	10.9	4.8	1.9	9.0	21.0	1.2	4.2	1.9	1.0	1.9	10.8	.5	8.8	1.0	-	-
\$ 2.60 and under \$ 2.70-----	17.2	13.2	22.1	11.1	6.1	12.7	8.3	4.5	25.9	17.0	6.3	7.5	7.2	1.0	5.0	11.6	1.5	3.5	4.2	-	-
\$ 2.70 and under \$ 2.80-----	9.4	12.3	16.3	12.0	11.4	18.3	23.5	23.4	18.3	10.2	39.3	7.4	25.7	4.1	12.7	17.7	3.1	4.9	12.9	-	-
\$ 2.80 and under \$ 2.90-----	8.0	15.3	6.3	15.1	6.2	7.0	19.7	12.9	11.6	3.9	10.5	9.9	12.0	2.8	9.0	28.5	2.0	48.8	11.6	1.6	5.5
\$ 2.90 and under \$ 3.00-----	3.7	11.8	7.2	26.3	8.1	16.7	7.7	10.3	4.8	-	26.7	8.6	16.4	5.5	7.5	9.4	4.9	2.5	9.9	1.6	.9
\$ 3.00 and under \$ 3.10-----	3.5	8.4	2.6	11.1	11.5	11.7	5.1	5.7	1.0	.1	10.1	10.2	7.5	14.2	8.3	4.8	12.4	2.5	13.5	1.6	2.9
\$ 3.10 and under \$ 3.20-----	2.2	3.5	7.3	3.4	28.0	8.1	7.5	14.2	1.5	-	1.6	11.6	7.3	5.8	10.1	3.8	16.4	1.8	24.0	85.3	11.1
\$ 3.20 and under \$ 3.30-----	5.5	7.3	4.7	2.2	2.6	4.1	1.8	2.1	.6	.6	1.7	10.7	4.2	11.0	13.1	2.2	4.3	2.5	6.5	9.9	48.0
\$ 3.30 and under \$ 3.40-----	1.8	2.1	1.3	1.1	1.5	2.5	3.1	5.7	2.9	-	.4	22.4	3.4	9.5	15.0	1.9	4.8	1.8	4.6	-	9.2
\$ 3.40 and under \$ 3.50-----	1.8	2.0	.3	-	1.9	.5	1.1	3.8	2.2	-	.3	3.5	2.7	12.2	5.4	2.3	5.1	3.9	5.5	-	8.0
\$ 3.50 and under \$ 3.60-----	1.2	2.4	.1	.2	.8	.8	1.4	2.1	3.0	-	.2	1.4	2.0	13.2	3.1	.3	6.0	2.5	2.8	-	5.5
\$ 3.60 and under \$ 3.70-----	1.8	1.4	.1	-	.1	.5	1.2	3.0	1.1	-	-	1.2	1.7	4.7	2.2	-	7.9	3.2	1.2	-	-
\$ 3.70 and under \$ 3.80-----	1.1	.7	.1	-	-	.4	.9	2.2	1.9	-	-	.4	2.0	5.6	.9	-	10.5	3.5	.9	-	5.9
\$ 3.80 and under \$ 3.90-----	2.2	.7	-	-	-	.3	.8	4.4	2.4	-	-	.2	1.4	3.6	1.5	-	8.0	2.5	.2	-	-
\$ 3.90 and under \$ 4.00-----	.9	-	.1	-	-	.1	.7	1.0	1.2	-	.1	.1	1.5	.5	.7	-	2.2	2.8	.2	-	3.0
\$ 4.00 and over-----	1.5	.9	-	-	-	.5	1.4	1.9	3.6	-	-	.3	2.1	5.1	2.3	-	8.0	4.2	-	-	-
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers-----	1,581	1,361	783	857	1,912	1,493	2,716	1,655	723	695	1,302	6,979	4,038	4,938	2,084	1,094	647	283	5,317	557	1,099
Average hourly earnings ¹ -----	\$2.77	\$2.86	\$2.70	\$2.80	\$2.89	\$2.85	\$2.87	\$3.07	\$2.88	\$2.49	\$2.85	\$3.07	\$3.00	\$3.34	\$3.13	\$2.80	\$3.41	\$3.03	\$3.04	\$3.11	\$3.31

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

² Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 7. Earnings Distribution: Machine-Tool Operators, Production, Class B

(Percent distribution of men workers by straight-time hourly earnings¹ in machinery manufacturing, 21 selected areas, March-May 1963)

Average hourly earnings ¹	New England			Middle Atlantic				South				Middle West					Far West				
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Under \$ 1.70.....	0.1	0.3	-	-	-	1.0	1.7	-	2.7	1.3	-	-	-	-	-	-	-	-	-	-	-
\$ 1.70 and under \$ 1.80.....	.2	.7	-	-	-	-	.1	-	2.3	3.8	-	-	-	-	-	-	-	-	-	-	-
\$ 1.80 and under \$ 1.90.....	1.1	1.9	0.2	1.5	0.1	1.8	.1	-	3.7	9.7	0.9	-	-	-	-	-	-	-	-	-	-
\$ 1.90 and under \$ 2.00.....	2.3	1.6	3.3	4.4	.4	3.1	.1	-	-	17.6	.2	-	-	-	-	0.1	0.2	2.6	-	-	-
\$ 2.00 and under \$ 2.10.....	7.4	2.9	2.0	-	3.0	6.2	.7	-	.9	25.3	-	1.0	0.3	0.4	-	2.2	.4	3.4	1.2	-	-
\$ 2.10 and under \$ 2.20.....	10.4	4.3	5.7	1.2	2.9	3.8	1.6	-	5.4	19.0	.9	1.1	.1	.6	0.5	.9	2.6	10.3	11.0	-	-
\$ 2.20 and under \$ 2.30.....	14.9	4.0	13.5	.8	7.4	9.9	4.8	0.2	24.1	12.8	3.5	4.0	.9	1.0	1.0	11.0	2.8	3.4	10.4	-	-
\$ 2.30 and under \$ 2.40.....	21.9	7.5	19.2	1.0	8.5	13.0	3.7	.2	12.6	2.1	5.0	4.4	2.4	1.5	7.6	3.3	7.3	4.3	9.5	0.8	2.7
\$ 2.40 and under \$ 2.50.....	14.4	12.8	17.7	44.1	5.2	13.5	9.4	11.1	10.5	2.1	10.6	9.6	13.4	5.1	8.4	20.2	8.9	36.8	16.5	3.2	5.3
\$ 2.50 and under \$ 2.60.....	11.9	9.2	9.0	13.4	5.7	16.3	10.1	16.1	4.2	6.2	22.9	14.0	11.9	5.5	14.0	31.6	15.1	18.8	22.6	12.9	2.7
\$ 2.60 and under \$ 2.70.....	2.9	7.3	8.5	7.4	4.6	6.6	7.4	16.1	5.4	-	17.9	14.4	19.0	6.5	9.1	16.2	22.4	17.9	15.5	17.7	2.7
\$ 2.70 and under \$ 2.80.....	3.0	9.5	7.4	7.4	6.6	8.3	14.1	25.4	9.1	-	15.1	14.6	16.5	18.4	10.9	5.5	7.1	1.7	5.3	18.5	10.4
\$ 2.80 and under \$ 2.90.....	1.6	10.3	5.5	11.1	5.2	4.1	9.4	14.2	6.3	-	16.0	11.0	6.4	22.7	9.3	5.8	10.3	-	3.1	35.5	24.5
\$ 2.90 and under \$ 3.00.....	.6	11.8	1.3	4.9	19.8	1.2	10.2	3.6	2.3	-	2.8	10.9	6.8	14.1	5.5	1.8	6.7	.9	2.9	11.3	44.5
\$ 3.00 and under \$ 3.10.....	4.2	6.8	1.5	1.0	14.2	11.2	5.4	2.9	1.4	-	1.7	6.6	2.8	12.3	7.4	.7	2.0	-	2.0	-	3.2
\$ 3.10 and under \$ 3.20.....	.2	4.4	.9	.7	16.0	-	3.2	.7	3.7	-	1.3	3.6	3.3	7.3	8.6	.3	4.6	-	-	-	3.7
\$ 3.20 and under \$ 3.30.....	.8	2.6	2.0	.7	.3	.1	2.2	3.0	2.6	-	.6	2.1	2.0	3.7	7.1	.1	2.4	-	.1	-	.3
\$ 3.30 and under \$ 3.40.....	.5	1.0	.7	.2	-	-	1.8	.5	.9	-	.2	1.5	1.8	.8	4.3	.1	.8	-	-	-	-
\$ 3.40 and under \$ 3.50.....	.4	.4	.9	.3	-	-	1.3	.7	.7	-	.2	.9	2.0	-	2.1	.1	.2	-	-	-	-
\$ 3.50 and under \$ 3.60.....	.4	.1	.2	-	-	-	1.9	.5	-	-	-	.2	1.9	-	1.6	-	.6	-	-	-	-
\$ 3.60 and under \$ 3.70.....	.2	-	.2	-	-	-	2.3	.4	.2	-	.2	.1	2.1	-	1.2	-	.4	-	-	-	-
\$ 3.70 and under \$ 3.80.....	-	.1	.4	-	-	-	1.7	.4	-	-	-	.1	1.7	-	.4	-	1.2	-	-	-	-
\$ 3.80 and over.....	.5	.5	-	.2	-	-	6.5	2.7	-	-	-	.2	4.7	-	1.1	-	4.0	-	-	-	-
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	854	1,761	458	597	1,346	1,130	1,379	558	427	289	463	2,820	1,560	3,946	1,576	674	504	117	1,276	124	375
Average hourly earnings ¹	\$2.39	\$2.64	\$2.49	\$2.54	\$2.74	\$2.47	\$2.85	\$2.76	\$2.46	\$2.06	\$2.63	\$2.71	\$2.83	\$2.83	\$2.84	\$2.52	\$2.75	\$2.44	\$2.48	\$2.73	\$2.83

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 8. Earnings Distribution: Machine-Tool Operators, Production, Class C

(Percent distribution of men workers by straight-time hourly earnings¹ in machinery manufacturing, 19 selected areas, March-May 1963)

Average hourly earnings ¹	New England			Middle Atlantic				South			Middle West					Far West			
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	San Francisco-Oakland
\$ 1.20 and under \$ 1.30-----	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-
\$ 1.30 and under \$ 1.40-----	-	-	-	-	-	0.6	-	7.3	7.1	-	-	-	-	-	9.0	-	-	-	-
\$ 1.40 and under \$ 1.50-----	-	-	-	-	-	.3	-	3.7	13.7	-	-	-	-	-	13.5	-	-	0.3	-
\$ 1.50 and under \$ 1.60-----	-	-	6.0	-	-	4.1	-	3.7	20.7	2.0	0.1	-	-	-	-	-	-	.3	-
\$ 1.60 and under \$ 1.70-----	5.8	-	3.6	-	-	10.7	-	1.2	9.5	-	6.1	-	-	-	4.5	-	-	.3	-
\$ 1.70 and under \$ 1.80-----	11.3	0.8	-	-	8.3	20.5	-	5.2	20.7	2.5	9.0	1.5	-	0.4	12.8	-	-	1.4	-
\$ 1.80 and under \$ 1.90-----	23.3	2.6	12.0	-	4.3	8.1	-	9.5	19.9	2.5	4.5	-	2.3	3.6	3.3	-	2.9	.9	-
\$ 1.90 and under \$ 2.00-----	15.3	2.6	4.8	-	2.3	5.0	-	11.3	7.5	2.5	13.9	1.8	1.8	6.8	6.5	1.7	-	-	-
\$ 2.00 and under \$ 2.10-----	23.9	1.4	14.5	1.7	14.8	2.7	4.2	16.2	.8	7.6	13.2	6.2	2.0	1.8	10.3	17.2	8.6	16.4	-
\$ 2.10 and under \$ 2.20-----	9.2	4.4	24.1	21.7	14.5	12.0	-	11.3	-	19.2	4.9	2.0	4.4	6.4	10.3	5.6	2.9	11.5	-
\$ 2.20 and under \$ 2.30-----	.9	8.4	18.1	23.3	8.5	13.7	8.5	10.7	-	19.2	12.7	10.5	7.9	7.1	13.5	13.9	34.3	42.5	4.8
\$ 2.30 and under \$ 2.40-----	3.4	2.4	3.6	13.3	13.0	11.7	14.1	4.9	-	16.7	7.7	11.4	9.6	8.9	14.5	28.9	31.4	18.1	6.2
\$ 2.40 and under \$ 2.50-----	1.2	2.9	3.6	12.5	12.8	1.6	8.5	6.1	-	17.2	5.8	39.1	4.0	7.1	11.7	-	-	7.8	-
\$ 2.50 and under \$ 2.60-----	.3	4.6	3.6	8.3	1.5	.9	23.9	2.4	-	2.0	11.2	12.8	5.9	10.4	-	2.8	20.0	.6	37.0
\$ 2.60 and under \$ 2.70-----	2.5	39.5	1.2	10.8	3.3	.1	18.3	.9	-	2.5	1.9	9.2	9.2	6.8	.8	.6	-	-	43.3
\$ 2.70 and under \$ 2.80-----	1.5	8.7	1.2	3.3	7.8	.3	-	1.5	-	2.0	3.7	3.9	10.6	6.1	-	2.2	-	-	8.7
\$ 2.80 and under \$ 2.90-----	.3	4.5	3.6	5.0	5.0	-	-	1.8	-	.5	2.8	.2	8.2	6.8	-	3.9	-	-	-
\$ 2.90 and under \$ 3.00-----	-	3.7	-	-	4.0	7.1	-	.9	-	1.0	.6	-	26.7	4.6	-	1.1	-	-	-
\$ 3.00 and under \$ 3.10-----	-	3.8	-	-	-	.1	22.5	.3	-	.5	.7	.2	6.6	6.1	-	-	-	-	-
\$ 3.10 and under \$ 3.20-----	-	4.8	-	-	-	.1	-	-	-	.5	.1	.6	.8	3.2	-	2.8	-	-	-
\$ 3.20 and under \$ 3.30-----	-	2.3	-	-	-	.1	-	-	-	.5	.6	.4	-	7.1	-	.6	-	-	-
\$ 3.30 and under \$ 3.40-----	-	1.9	-	-	-	-	-	-	-	.5	.3	-	-	3.9	-	1.7	-	-	-
\$ 3.40 and under \$ 3.50-----	.3	.4	-	-	-	-	-	-	-	.5	.1	-	-	1.8	-	-	-	-	-
\$ 3.50 and over-----	.6	.1	-	-	-	.1	-	-	-	-	.1	.4	-	1.1	-	5.6	-	-	-
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers-----	326	1,035	83	120	399	701	71	328	241	198	1,350	545	1,033	280	399	180	35	348	208
Average hourly earnings ¹ -----	\$ 1.98	\$ 2.62	\$ 2.12	\$ 2.38	\$ 2.28	\$ 2.04	\$ 2.59	\$ 2.02	\$ 1.64	\$ 2.27	\$ 2.18	\$ 2.42	\$ 2.64	\$ 2.61	\$ 1.92	\$ 2.43	\$ 2.31	\$ 2.21	\$ 2.58

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 9. Earnings Distribution: Assemblers, Class B

(Percent distribution of men workers by straight-time hourly earnings¹ in machinery manufacturing, 21 selected areas, March-May 1963)

Average hourly earnings ¹	New England			Middle Atlantic				South			Middle West					Far West					
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
\$ 1.40 and under \$ 1.50-----	-	-	-	-	-	-	1.0	-	-	2.9	-	-	-	-	-	-	-	-	-	-	-
\$ 1.50 and under \$ 1.60-----	-	-	-	-	-	1.0	.2	-	-	3.7	-	-	-	-	-	-	-	-	-	-	-
\$ 1.60 and under \$ 1.70-----	-	-	-	-	-	1.3	4.1	-	-	12.8	-	-	-	-	-	-	-	-	-	-	-
\$ 1.70 and under \$ 1.80-----	-	0.6	-	-	2.7	2.2	1.4	-	-	14.9	4.1	-	-	-	-	0.8	-	-	-	-	-
\$ 1.80 and under \$ 1.90-----	1.5	.2	-	-	4.0	1.3	1.0	-	1.8	5.8	-	2.6	-	-	-	.2	-	-	1.1	-	-
\$ 1.90 and under \$ 2.00-----	2.1	7.4	0.5	-	2.7	13.5	1.0	-	.9	15.7	.8	.9	-	-	1.5	-	-	4.0	-	-	-
\$ 2.00 and under \$ 2.10-----	2.6	.6	4.8	-	1.6	4.5	5.3	-	2.8	12.4	-	1.9	0.8	-	-	17.9	11.4	10.0	5.0	-	-
\$ 2.10 and under \$ 2.20-----	3.9	18.1	8.5	3.8	34.5	4.7	5.1	-	4.6	9.1	8.1	2.0	.8	0.9	-	22.6	.9	5.0	14.2	-	6.7
\$ 2.20 and under \$ 2.30-----	6.4	9.2	6.3	-	1.5	16.8	6.8	-	2.8	6.2	2.4	4.4	.8	9.4	3.8	1.8	11.4	11.7	11.2	-	-
\$ 2.30 and under \$ 2.40-----	23.9	29.8	15.3	5.9	16.7	7.1	14.3	2.5	2.8	2.9	29.3	5.6	9.6	2.8	4.0	15.5	6.6	6.7	12.5	-	-
\$ 2.40 and under \$ 2.50-----	32.1	13.6	20.6	29.6	4.4	9.6	12.3	15.1	21.1	6.2	7.3	10.3	1.7	3.7	10.3	3.0	14.4	16.7	11.6	-	-
\$ 2.50 and under \$ 2.60-----	9.0	4.8	17.5	18.3	1.8	19.7	22.0	15.6	10.1	1.7	8.1	5.9	15.8	-	6.6	20.6	12.1	46.7	11.5	-	-
\$ 2.60 and under \$ 2.70-----	3.6	6.1	15.9	7.0	2.0	7.7	17.9	.5	31.2	1.7	24.4	17.4	24.3	4.8	16.2	3.1	3.6	3.3	15.2	39.8	-
\$ 2.70 and under \$ 2.80-----	2.6	4.0	9.0	22.6	10.0	1.7	2.9	12.6	1.8	.8	14.6	20.1	9.8	45.5	3.8	2.5	1.2	-	3.0	6.1	5.3
\$ 2.80 and under \$ 2.90-----	2.6	1.9	1.1	10.8	5.7	4.2	.2	27.1	6.4	.8	-	5.7	3.9	.7	5.0	3.0	2.2	-	3.2	44.9	9.3
\$ 2.90 and under \$ 3.00-----	2.1	1.1	.5	-	5.3	-	.7	2.5	5.5	-	-	12.4	4.1	10.8	5.5	1.6	3.8	-	5.5	9.2	78.7
\$ 3.00 and under \$ 3.10-----	1.3	.7	-	1.1	2.4	.2	.2	4.5	1.8	.8	.8	5.3	1.8	15.0	5.2	2.7	3.3	-	2.0	-	-
\$ 3.10 and under \$ 3.20-----	.8	.4	-	.5	4.3	-	-	3.5	.9	.8	-	4.8	1.3	6.3	6.0	1.4	7.6	-	-	-	-
\$ 3.20 and under \$ 3.30-----	1.5	.4	-	-	.6	3.4	.2	12.1	1.8	-	-	.4	2.4	-	26.0	.7	4.7	-	-	-	-
\$ 3.30 and under \$ 3.40-----	.3	.5	-	.5	-	.8	.2	-	1.8	.8	-	.1	1.4	-	.6	.4	8.1	-	-	-	-
\$ 3.40 and under \$ 3.50-----	.8	.6	-	-	-	.2	.5	-	.9	-	-	.1	1.7	-	2.0	.2	3.1	-	-	-	-
\$ 3.50 and under \$ 3.60-----	.3	-	-	-	-	-	.5	-	.9	-	-	(2)	5.6	-	.4	.2	-	-	-	-	-
\$ 3.60 and under \$ 3.70-----	.3	.1	-	-	-	-	-	-	-	-	-	(2)	1.2	-	1.0	.1	5.5	-	-	-	-
\$ 3.70 and under \$ 3.80-----	.5	-	-	-	-	-	.2	4.0	-	-	-	2.1	-	-	.3	-	-	-	-	-	-
\$ 3.80 and under \$ 3.90-----	1.8	-	-	-	-	-	.5	-	-	-	-	2.7	-	-	1.1	-	-	-	-	-	-
\$ 3.90 and under \$ 4.00-----	.3	-	-	-	-	-	.7	-	-	-	-	2.4	-	-	1.8	-	-	-	-	-	-
\$ 4.00 and over-----	-	-	-	-	-	-	.7	-	-	-	-	5.8	-	.4	-	-	-	-	-	-	-
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers-----	389	847	189	186	892	594	414	199	109	242	123	2,030	764	1,283	928	1,241	578	60	758	98	150
Average hourly earnings ¹ -----	\$2.48	\$2.36	\$2.46	\$2.59	\$2.39	\$2.34	\$2.43	\$2.82	\$2.59	\$1.99	\$2.44	\$2.65	\$2.91	\$2.78	\$2.91	\$2.37	\$2.70	\$2.43	\$2.41	\$2.80	\$2.84

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.² Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 10. Earnings Distribution: Laborers, Material Handling

(Percent distribution of men workers by straight-time hourly earnings¹ in machinery manufacturing, 19 selected areas, March-May 1963)

Average hourly earnings ¹	New England			Middle Atlantic				South		Middle West						Far West			
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Philadelphia	Pittsburgh	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Los Angeles-Long Beach	Portland	San Francisco-Oakland
\$1.20 and under \$1.30	-	-	-	-	-	1.0	-	-	13.7	-	-	-	-	-	-	-	-	-	-
\$1.30 and under \$1.40	-	-	-	-	0.8	.5	-	-	17.7	4.1	-	-	-	-	-	-	-	-	-
\$1.40 and under \$1.50	-	-	-	-	-	7.9	-	-	8.9	10.2	-	-	-	-	-	-	-	-	-
\$1.50 and under \$1.60	1.2	-	-	-	1.2	5.2	2.2	-	11.3	-	0.9	-	-	1.9	-	-	-	-	-
\$1.60 and under \$1.70	-	0.3	-	-	.4	5.8	.9	-	12.1	23.6	1.9	-	-	1.9	-	-	-	-	-
\$1.70 and under \$1.80	3.6	3.4	-	-	4.6	3.1	-	-	21.0	5.7	8.0	-	-	-	0.3	-	-	-	-
\$1.80 and under \$1.90	8.4	15.8	15.7	-	7.0	11.5	4.8	0.6	7.3	.8	23.2	-	-	-	3.8	1.4	22.1	-	-
\$1.90 and under \$2.00	13.7	16.4	21.7	-	23.6	7.3	3.9	-	6.5	7.7	7.3	-	-	-	1.2	7.8	2.0	-	-
\$2.00 and under \$2.10	15.3	29.4	15.7	-	1.9	4.7	.9	-	1.6	11.4	2.5	2.4	1.0	9.7	13.9	4.5	-	-	-
\$2.10 and under \$2.20	12.4	10.8	15.7	1.4	19.3	5.2	3.5	7.5	-	6.5	10.4	5.0	-	5.1	2.3	35.7	7.0	-	-
\$2.20 and under \$2.30	13.7	.9	14.5	36.5	7.2	23.0	13.1	30.6	-	7.3	4.2	14.7	4.7	18.4	43.4	10.4	13.2	-	-
\$2.30 and under \$2.40	27.7	11.5	8.4	25.7	14.9	4.7	69.9	15.6	-	13.0	4.4	42.5	2.9	26.1	20.8	14.8	5.9	-	-
\$2.40 and under \$2.50	4.0	5.0	2.4	36.5	1.7	1.0	-	28.1	-	2.0	13.9	13.1	9.3	14.4	11.1	2.9	14.8	6.3	21.3
\$2.50 and under \$2.60	-	6.2	1.2	-	7.0	1.0	.9	2.5	-	2.4	21.3	3.4	38.7	4.1	5.6	8.4	3.1	37.5	49.2
\$2.60 and under \$2.70	-	.3	-	-	-	15.7	-	-	-	.4	1.8	9.4	13.7	26.1	1.8	2.3	5.3	6.3	4.9
\$2.70 and under \$2.80	-	-	-	-	10.4	1.6	-	-	-	4.5	.1	6.6	19.0	.8	-	-	22.1	50.0	24.6
\$2.80 and under \$2.90	-	-	-	-	-	-	-	11.3	-	-	-	1.3	4.1	-	-	-	-	-	-
\$2.90 and under \$3.00	-	-	-	-	-	.5	-	-	-	.4	-	.3	4.4	-	-	.6	-	-	-
\$3.00 and under \$3.10	-	-	-	-	-	-	-	2.5	-	-	-	.3	.9	-	-	.3	-	-	-
\$3.10 and under \$3.20	-	-	-	-	-	-	-	-	-	-	-	.6	-	-	-	1.2	-	-	-
\$3.20 and under \$3.30	-	-	4.8	-	-	-	-	1.3	-	-	-	.3	-	-	-	-	-	-	-
\$3.30 and over	-	-	-	-	-	-	-	-	-	-	-	.3	-	-	.3	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	249	323	83	74	483	191	229	160	124	246	1,471	320	680	777	341	345	357	32	61
Average hourly earnings ¹	\$2.14	\$2.09	\$2.14	\$2.36	\$2.16	\$2.08	\$2.25	\$2.41	\$1.56	\$1.93	\$2.15	\$2.42	\$2.60	\$2.38	\$2.27	\$2.23	\$2.29	\$2.66	\$2.59

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Appendix A: Scope and Method of Survey

Scope of Survey

The survey included establishments primarily engaged in manufacturing machinery, except electrical (major group 35 as defined in the 1957 edition of the Standard Industrial Classification Manual, prepared by the U.S. Bureau of the Budget). This major group includes establishments engaged in manufacturing machinery and equipment, other than electrical equipment (major group 36) and transportation equipment (major group 37). Machines powered by built-in or detachable motors ordinarily are included in major group 35, with the exception of electrical household appliances (major group 36). Portable tools, both electric and pneumatic powered, are included in major group 35, but handtools are classified in major group 34. Central offices of the firms studied were excluded.

The study covered establishments with 20 or more workers at the time of reference of the data used in compiling the universe lists. Also included were establishments which employed 8 to 19 workers and which primarily manufactured special dies and tools, die sets, jigs and fixtures, or machine-tool accessories and measuring devices (industries 3544 and 3545).

The number of establishments and workers actually studied by the Bureau, as well as the number estimated to be in the industry during the payroll period studied, are shown in the following table:

Estimated number of establishments and workers within scope of survey and number studied,
machinery industries, 21 areas, March-May 1963

Area ¹	Payroll period	Number of establishments ²		Workers in establishments	
		Within scope of study	Studied	Within scope of study	Studied
New England:					
Boston-----	March	165	42	20,919	14,053
Hartford-----	May	151	39	30,762	26,404
Worcester-----	April	45	19	8,072	7,057
Middle Atlantic:					
Buffalo-----	April	85	25	11,532	7,262
Newark and Jersey City-----	April	278	54	31,142	18,443
New York City-----	April	314	67	21,281	11,555
Philadelphia-----	May	201	45	31,661	22,185
Pittsburgh-----	April	108	27	14,432	10,214
South:					
Baltimore-----	May	50	20	8,806	7,196
Dallas-----	March	68	27	8,873	5,897
Houston-----	March	89	29	14,908	11,454
Middle West:					
Chicago-----	May	635	112	76,979	42,866
Cleveland-----	May	282	64	34,912	21,262
Detroit-----	May	732	101	64,704	39,845
Milwaukee-----	May	159	44	46,606	38,167
Minneapolis-St. Paul-----	May	148	33	22,193	15,246
St. Louis-----	May	124	33	15,695	12,176
Far West:					
Denver-----	April	29	16	3,516	2,749
Los Angeles-Long Beach-----	April	546	74	43,775	17,686
Portland-----	May	33	15	3,598	2,634
San Francisco-Oakland-----	April	119	26	10,641	6,604
Total, 21 areas-----		4,361	912	525,007	340,955

¹ Standard Metropolitan Statistical Areas, as defined by the U.S. Bureau of the Budget, except Chicago (Cook County); Hartford (Hartford and New Britain Standard Metropolitan Statistical Areas, and Bristol, Conn.); New York City (the 5 boroughs); Newark and Jersey City (a combination of the 2 Standard Metropolitan Statistical Areas); Philadelphia (Philadelphia and Delaware Counties, Pa., and Camden County, N.J.); and Worcester (Worcester Standard Metropolitan Statistical Area, except Northbridge).

² Includes only establishments manufacturing special dies and tools, die sets, jigs and fixtures, or machine-tool accessories and measuring devices which employed 8 or more workers and other machinery establishments with 20 or more workers at the time of reference of the unemployment insurance listings.

Method of Study

Data were obtained from establishments surveyed the previous year, principally by mail but in some instances by personal visits of Bureau field economists under the direction of the Bureau's Assistant Regional Directors for Wages and Industrial Relations. The survey was conducted on a sample basis. To obtain appropriate accuracy at minimum cost, a greater proportion of large than of small establishments was studied. In combining the data, however, all establishments were given their appropriate weight. All estimates are presented, therefore, as relating to all establishments in the industry group in the areas, excluding only those below the minimum size at the time of reference of the universe data.

Establishment Definition

An establishment, for purposes of this study, is defined as a single physical location where industrial operations are performed. An establishment is not necessarily identical with the company, which may consist of one or more establishments.

Employment

The estimates of the number of workers within the scope of the study are intended as a general guide to the size and composition of the labor force included in the survey. The advance planning necessary to make a wage survey requires the use of lists of establishments assembled considerably in advance of the payroll period studied.

Production Workers

The term "production workers," as used in this bulletin, includes working foremen and all nonsupervisory workers engaged in nonoffice functions. Excluded were administrative, executive, professional, and technical personnel, and force-account construction employees utilized as a separate work force on the firm's own properties.

Occupations Selected for Study

Occupational classification was based on a uniform set of job descriptions designed to take account of interestablishment and interarea variations in duties within the same job. (See appendix B for these job descriptions.) The occupations were chosen for their numerical importance, their usefulness in collective bargaining, or their representativeness of the entire job scale in the industry.

Occupational Earnings

Earnings data for the selected jobs (tables 1-10) are shown for full-time workers, i.e., those hired to work a full-time schedule for the given occupational classification. Working supervisors, apprentices, learners, beginners, trainees, handicapped, temporary, and probationary workers were not included.

The wages represent average straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems and cost-of-living bonuses, were included as part of the workers' regular pay; but nonproduction bonus payments such as Christmas or yearend bonuses were excluded. The estimated average hourly earnings for each occupation were obtained by weighting each rate (or hourly earning) by the number of workers receiving the rate.

Occupational employment estimates refer to the total in all establishments within the scope of the study and not to the number actually surveyed. Because of the variation in occupational structure among establishments, estimates of occupational employment are subject to considerable fluctuation attributable to sampling. Hence, they serve only to indicate the relative numerical importance of the jobs studied. The fluctuations in employment do not materially affect the accuracy of the earnings data.

Wage Trends

The machinery index series has been developed from data obtained in the Bureau's program of occupational wage surveys and is based on straight-time hourly earnings of men production workers in selected machinery occupations.

The indexes for 1945, 1946, and 1947 are based on the category "miscellaneous machinery" which consists of all types of machinery manufacture except electrical machinery, machine tools, and machine-tool accessories. For 1949 and successive years, the information includes machine tools and machine-tool accessories, as well as miscellaneous machinery. To minimize the effect of the shift in industrial coverage, the two sets of indexes were linked by applying the percent of change in the miscellaneous machinery group from 1947 to 1948 to the previous 1947 index. The 1948 index computed in this fashion is the published index. To compute the 1949 index, the percent change in all machinery from 1948 to 1949 was applied to the 1948 index.

Since the 1959 survey was based on a revised definition of the machinery industries group, as provided in the 1957 edition of the SIC Manual, a linking procedure was necessary to minimize the effect on the index of the change in industry definition. This was done by computing the percent of change from 1958 to 1959 for those establishments included in both surveys. This percentage change was then applied to the 1958 index (computed on the basis of the previous industry definition) to obtain the index for 1959.

Indexes were constructed for each area to minimize the effect of changes in occupational composition of the work force and in the relative importance in the industry of the areas studied. For each year in 2 successive years (1945-46, 1946-47, etc.), the average straight-time hourly earnings for each selected occupation were weighted by the number employed in that occupation during the latter of the 2 years. The result each year was an area aggregate for all selected jobs. The percentage relationship between the aggregates for the pair of years was computed and then linked to the index for the earlier of the 2 years. The resulting indexes based on 1945 were then converted to a 1947-49 base by dividing all the indexes by the average of the indexes for 1947-49. Beginning with 1962, indexes have been converted to a 1958-59 base.

In 1952, the occupational coverage of the machinery industries survey was increased to include all machine-tool operators, classes A, B, and C (except operators of certain special machines). Coverage of machine-tool operators before 1952 was limited to single- and multiple-spindle drill-press operators, engine-lathe operators, grinding-machine operators, and milling-machine operators. The indexes since 1952 have been computed on the basis of the broader occupational coverage indicated above. In addition, a system of constant weights has been utilized (rather than weighting by the actual employment in an occupation during the latter of the 2 years); this minimizes the effect of changes in occupational composition of the work force. The constant weights for the indexes from 1953 through 1961 were based on an average of 1953 and 1954 employment; beginning with the 1962 index, the weights were based on an average for the years 1960 and 1961.

Definitions for production and toolroom machine-tool operators and tool and die makers were revised in 1960. In computing the percent of change from 1959 to 1960 in areas affected by the changes, the average earnings used for these jobs, for the purposes of this index, in both years were based on the earnings of workers classified in accordance with the revised definitions.

In obtaining the composite index for all areas combined, the techniques followed were similar to those employed in determining area indexes. The technique used in computing the composite index for the earlier years, 1945-52, was as follows: For each year in a pair (1945-46, 1946-47, etc.), an overall aggregate for all areas combined was obtained. This aggregate was computed by weighting the overall average (aggregate earnings in selected jobs divided by the total employment in the selected jobs) for each area by total production worker employment in the industry and area in the second of the 2 years. From this point, the procedure was identical with that used in constructing individual area indexes for these years. For indexes since 1952, a system of constant area weights has been used, thereby eliminating the effect of changes in the relative importance in the industry of the area studied. For the years 1953 through 1961, the weights were based on average employment for the years 1953 and 1954; beginning with the 1962 index, the weights were based on averages for the years 1960 and 1961.

Appendix B: Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field economists are instructed to exclude working supervisors, apprentices, learners, beginners, trainees, handicapped, part-time, temporary, and probationary workers.

ASSEMBLER

(Bench assembler; floor assembler; jig assembler; line assembler; subassembler)

Assembles and/or fits together parts to form complete units or subassemblies at a bench, conveyor line, or on the floor, depending upon the size of the units and the organization of the production process. Work may include processing operations requiring the use of handtools in scraping, chipping, and filing of parts to obtain a desired fit as well as power tools and special equipment when punching, riveting, soldering, or welding of parts is necessary. Workers who perform any of these processing operations exclusively as part of specialized assembling operations are excluded.

Class A. Assembles parts into complete units or subassemblies that require fitting of parts and decisions regarding proper performance of any component part or the assembled unit. Work involves any combination of the following: Assembling from drawings, blueprints or other written specifications; assembling units composed of a variety of parts and/or subassemblies; assembling large units requiring careful fitting and adjusting of parts to obtain specified clearances; and using a variety of hand and powered tools and precision measuring instruments.

Class B. Assembles parts into units or subassemblies in accordance with standard and prescribed procedures. Work involves any combination of the following: Assembling a limited range of standard and familiar products composed of a number of small- or medium-size parts requiring some fitting or adjusting; assembling large units that require little or no fitting of component parts; working under conditions where accurate performance and completion of work within set time limits are essential for subsequent assembling operations; and using a limited variety of hand or powered tools.

Class C. Performs short-cycle, repetitive assembling operations. Work does not involve any fitting or making decisions regarding proper performance of the component parts or assembling procedures.

AUTOMATIC-LATHE OPERATOR

(Automatic-between-centers-lathe operator; automatic-chucking-machine operator; automatic-turret-lathe operator)

Operates one or more lathes equipped with automatic feed mechanisms for actuating the cutting tools over the complete work cycle. Automatic lathes may differ as to type of construction (horizontal or vertical); number of spindles (single or multiple); method of feed (hand-feed, automatic-chucking, or hopper-feed); method of holding the work (in chucks or between centers); and method of presenting the tools to the stock in sequence (turrets, slide, revolving work stations). (For description of class of work, see machine-tool operator, production.)

DRILL-PRESS OPERATOR, RADIAL

Operates one or more types of radial-drilling machines designed primarily for the purpose of drilling, reaming, countersinking, counterboring, spot-facing, or tapping holes in large or heavy metal parts. Several types of radial drills are in use, the most common type being designed so that the tool head and saddle are movable along a projecting arm which can be rotated about a vertical column and adjusted vertically on that column. (For description of class of work, see machine-tool operator, production.)

DRILL-PRESS OPERATOR, SINGLE- OR MULTIPLE-SPINDLE

Operates one or more types of single- or multiple-spindle drill-presses, to perform such operations as drilling, reaming, countersinking, counterboring, spot-facing, and tapping. Drill-press operators, radial, and operators of portable drilling equipment are excluded. (For description of class of work, see machine-tool operator, production.)

ELECTRICIAN, MAINTENANCE

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generating, distribution, or utilization of electric energy in an establishment. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layout or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's hand-tools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

ENGINE-LATHE OPERATOR

Operates an engine lathe for shaping external and internal cylindrical surfaces of metal objects. The engine lathe, basically characterized by a headstock, tailstock, and power-fed tool carriage, is a general-purpose machine tool used primarily for turning. It is also commonly used in performing such operations as facing, boring, drilling and threading, and equipped with appropriate attachments, may be used for a very wide variety of special machining operations. The stock may be held in position by the lathe "centers" or by various types of chucks and fixtures. Bench-lathe operators, automatic-lathe operators, screw-machine operators, automatic, and turret-lathe operators, hand (including hand screw machine) are excluded. (For description of class of work, see machine-tool operators, production.)

GRINDING-MACHINE OPERATOR

(Centerless-grinder operator; cylindrical-grinder operator; external-grinder operator; internal-grinder operator; surface-grinder operator; Universal-grinder operator)

Operates one of several types of precision grinding machines to grind internal and external surfaces of metal parts to a smooth and even finish and to required dimensions. Precision grinding is used primarily as a finishing operation on previously machined parts, and consists of applying abrasive wheels, rotating at high speeds to the surfaces to be ground. In addition to the types of grinding machines indicated above, this classification includes operators of other production grinding machines such as: Single-purpose grinders (drill grinders, broach grinders, saw grinders, gear-cutter grinders, thread grinders, etc.) and automatic and semiautomatic general purpose grinding machines. Operators of portable grinders are excluded. (For description of class of work, see machine-tool operator, production.)

INSPECTOR

Inspects parts, products, and/or processes. Performs such operations as examining parts or products for flaws and defects, checking their dimensions and appearance to determine whether they meet the required standards and specifications.

INSPECTOR—Continued

Class A. Responsible for decisions regarding the quality of the product and/or operations. Work involves any combination of the following: Thorough knowledge of the processing operations in the branch of work to which he is assigned, including the use of a variety of precision measuring instruments; interpreting drawings and specifications in inspection work on units composed of a large number of component parts; examining a variety of products or processing operations; determining causes of flaws in products and/or processes and suggesting necessary changes to correct work methods; and devising inspection procedures for new products.

Class B. Work involves any combination of the following: Knowledge of processing operations in the branch of work to which he is assigned, limited to familiar products and processes or where performance is dependent on past experience; performing inspection operations on products and/or processes having rigid specifications, but where the inspection procedures involve a sequence of inspection operations, including decisions regarding proper fit or performance of some parts; and using precision measuring instruments.

Class C. Work involves any combination of the following: Short-cycle, repetitive inspection operations; using a standardized, special-purpose measuring instrument repetitively; and visual examination of parts or products, rejecting units having obvious deformities or flaws.

JANITOR, PORTER, OR CLEANER

(Sweeper; charwoman; janitress)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve a combination of the following: Sweeping, mopping, or scrubbing, polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; and providing supplies and minor maintenance services; cleaning lavatories, showers, and restrooms. Workers who specialize in window washing are excluded.

LABORER, MATERIAL HANDLING

(Loader and unloader; handler and stacker; shelver; trucker; stockman or stock helper; warehouseman or warehouse helper)

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve one or more of the following: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. Longshoremen, who load and unload ships, are excluded.

MACHINE-TOOL OPERATOR, PRODUCTION

Operates one or more nonportable, power-driven machine tools in order to shape metal by progressively removing portion of the stock in the form of chips or shavings, or by abrasion. For wage study purposes, this classification is limited to operators of the following types of machine tools:

Automatic lathes	Machine tools, miscellaneous ⁹
Boring machines	Milling machines
Drill presses, radial	Planers
Drill presses, single- or multiple-spindle	Screw machines, automatic
Engine lathes	Screw machines, hand
Gear-cutting machines	Shapers
Gear-finishing machines	Turret lathes, automatic
Grinding machines	Turret lathes, hand

⁹ Operators required alternately to operate more than one type of machine tools as listed above are to be classified as machine-tool operator, miscellaneous.

MACHINE-TOOL OPERATOR, PRODUCTION

Class A, Sets up machines by determining proper feeds, speeds, tooling and operation sequence or by selecting those prescribed in drawings, blueprints, or layouts; makes necessary adjustments during operation where changes in work and setup are relatively frequent and where care is essential to achieve requisite dimensions of very close tolerances.

Class B, Sets up machines on standard or roughing operations where feeds, speeds, tooling, and operation sequence are prescribed or maintains operation setup made by others; and makes all necessary adjustments during operation where care is essential to achieve very close tolerances or where changes in product are relatively frequent.

Class C, Operates machines on routine and repetitive operations; makes only minor adjustments during operations; and when trouble occurs stops machine and calls foreman, leadman, or setup man to correct the operation.

MACHINE-TOOL OPERATOR, TOOLROOM

Specializes in the operation of one or more types of machine tools such as jig borers, cylindrical or surface grinders, engine lathes, or milling machines in the construction of machine-shop tools, gages, jigs, fixtures, or dies. Work involves most of the following: Planning and performing difficult machining operations; processing items requiring complicated setups or a high degree of accuracy; using a variety of precision measuring instruments; selecting feeds, speeds, tooling and operation sequence; and making necessary adjustments during operation to achieve requisite tolerances or dimensions. May be required to recognize when tools need dressing, to dress tools, and to select proper coolants and cutting and lubricating oils.

MACHINIST, PRODUCTION

Fabricates metal parts involving a series of progressive operations. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts and equipment needed for his work; fitting and assembling parts. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MILLING-MACHINE OPERATOR

(Milling-machine operator, automatic; milling-machine operator, hand)

Performs a variety of work such as grooving, planing, and shaping metal objects on a milling machine, which removes material from metal surfaces by the cutting action of multitoothed rotating cutters of various sizes and shapes. Milling-machine types vary from the manually controlled machines employed in unit production to fully automatic (conveyor-fed) machines found in plants engaged in mass production. For wage study purposes, operators of single-purpose millers such as thread millers, duplicators, diesinkers, pantograph millers, and engraving millers are excluded. (For description of class of work, see machine-tool operator, production.)

SCREW-MACHINE OPERATOR, AUTOMATIC

Operates one or more multiple- or single-spindle automatic screw machines. Automatic screw machines are production turning machines with automatic-feed cycle designed to produce parts from bar or tube stock fed automatically through spindles or the head stock. These machines, equipped with from one to eight spindles or a turret, automatically perform and repeat a cycle of operations on each length of stock fed into the machine. (For description of class of work, see machine-tool operator, production.)

TOOL AND DIE MAKER

(Die maker; jig maker; toolmaker; fixture maker; gage maker)

Constructs and repairs machine-shop tools, gages, jigs, fixtures or dies for forgings, punching, and other metalforming work. Work involves most of the following: Planning and laying out of work from models, blueprints, drawings, or other oral and written specifications; using a variety of tool and die maker's handtools and precision measuring instruments; understanding of the working properties of common metals and alloys; setting up and operating of machine tools and related equipment; making necessary shop computations relating to dimensions of work, speeds, feeds, and tooling of machines; heat-treating of metal parts during fabrication as well as of finished tools and dies to achieve required qualities; working to close tolerances; fitting and assembling of parts to prescribed tolerances and allowances; and selecting appropriate materials, tools, and processes. In general, the tool and die maker's work requires a rounded training in machine-shop and toolroom practice usually acquired through a formal apprenticeship or equivalent training and experience.

For wage study purposes, tool and die makers are classified as follows:

Tool and die maker (jobbing)

Worker making dies and tools, die sets, jigs, and fixtures, etc., as the end product of an establishment.

Tool and die maker (other than jobbing)

Worker making and/or maintaining dies and tools, die sets, jigs and fixtures, etc., for use within an establishment.

TURRET-LATHE OPERATOR, HAND (INCLUDING HAND-SCREW MACHINE)

Operates a lathe equipped with a turret used to present a number of cutting tools, required for a cycle of machining operations, to the work in sequence. Operations commonly performed on a turret lathe include turning, facing, boring, drilling, and threading. The operator rotates or indexes the turret to bring the tools toward the work for each operation. Individual workpieces, such as forgings and castings, are held in a chuck or the lathe may be equipped with a bar stock feeding device to present the correct length of stock to the tools at the beginning of each cycle of operations. (For description of class of work, see machine-tool operator, production.)

WELDER, HAND

Fuses (welds) metal objects by means of an oxyacetylene torch or arc welding apparatus in the fabrication of metal shapes and in repairing broken or cracked metal objects. In addition to performing hand welding or brazing operation, the welder may also lay out guide lines or marks on metal parts and may cut metal with a cutting torch.

Class A. Performs welding operations requiring most of the following: Planning and laying out of work from drawings, blueprints, or other written specifications; knowledge of welding properties of a variety of metals and alloys, setting up work and determining operation sequence; welding high pressure vessels or other objects involving critical safety and load requirements; working from a variety of positions.

Class B. Performs welding operations on repetitive work, where no critical safety and load requirements are involved; where the work calls mainly for one-position welding; and where the layout and planning of the work are performed by others.

INDUSTRY WAGE STUDIES

The most recent reports for industries included in the Bureau's program of industry wage surveys since January 1950 are listed below. Those for which a price is shown are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, or any of its regional sales offices. Those for which a price is not shown may be obtained free as long as a supply is available, from the Bureau of Labor Statistics, Washington, D.C., 20210, or from any of the regional offices shown on the inside back cover.

I. Occupational Wage Studies

Manufacturing

- Basic Iron and Steel, 1962. BLS Bulletin 1358 (30 cents).
Candy and Other Confectionery Products, 1960. BLS Report 195.
*Canning and Freezing, 1957. BLS Report 136.
Cigar Manufacturing, 1961. BLS Bulletin 1317 (30 cents).
Cigarette Manufacturing, 1960. BLS Report 167.
Cotton Textiles, 1960. BLS Report 184.
Distilled Liquors, 1952. Series 2, No. 88.
- Fabricated Structural Steel, 1957. BLS Report 123.
Fertilizer Manufacturing, 1962. BLS Bulletin 1362 (40 cents).
Flour and Other Grain Mill Products, 1961. BLS Bulletin 1337 (30 cents).
Fluid Milk Industry, 1960. BLS Report 174.
Footwear, 1962. BLS Bulletin 1360 (45 cents).
Hosiery, 1962. BLS Bulletin 1349 (45 cents).
- Industrial Chemicals, 1955. BLS Report 103.
Iron and Steel Foundries, 1962. BLS Bulletin 1386 (40 cents).
Leather Tanning and Finishing, 1963. BLS Bulletin 1378 (40 cents).
Machinery Manufacturing, 1962. BLS Bulletin 1352 (40 cents).
Men's and Boys' Shirts (Except Work Shirts) and Nightwear, 1961. BLS Bulletin 1323 (40 cents).
Men's and Boys' Suits and Coats, 1958. BLS Report 140.
Miscellaneous Plastics Products, 1960. BLS Report 168.
Miscellaneous Textiles, 1953. BLS Report 56.
Motor Vehicles and Motor Vehicle Parts, 1957. BLS Report 128.
- Nonferrous Foundries, 1960. BLS Report 180.
Paints and Varnishes, 1961. BLS Bulletin 1318 (30 cents).
Petroleum Refining, 1959. BLS Report 158.
Pressed or Blown Glass and Glassware, 1960. BLS Report 177.
*Processed Waste, 1957. BLS Report 124.
Pulp, Paper, and Paperboard Mills, 1962. BLS Bulletin 1341 (40 cents).

* Studies of the effects of the \$1 minimum wage.

I. Occupational Wage Studies—Continued

Manufacturing—Continued

- Radio, Television, and Related Products, 1951. Series 2, No. 84.
Railroad Cars, 1952. Series 2, No. 86.
*Raw Sugar, 1957. BLS Report 136.
Southern Sawmills and Planing Mills, 1962. BLS Bulletin 1361 (30 cents).
Structural Clay Products, 1960. BLS Report 172.
Synthetic Fibers, 1958. BLS Report 143.
Synthetic Textiles, 1960. BLS Report 192.
Textile Dyeing and Finishing, 1961. BLS Bulletin 1311 (35 cents).
*Tobacco Stemming and Redrying, 1957. BLS Report 136.
- West Coast Sawmilling, 1959. BLS Report 156.
Women's and Misses' Coats and Suits, 1962. BLS Bulletin 1371 (25 cents).
Women's and Misses' Dresses, 1960. BLS Report 193.
Wood Household Furniture, Except Upholstered, 1962. BLS Bulletin 1369 (40 cents).
*Wooden Containers, 1957. BLS Report 126.
Wool Textiles, 1962. BLS Bulletin 1372 (45 cents).
Work Clothing, 1961. BLS Bulletin 1321 (35 cents).

Nonmanufacturing

- Auto Dealer Repair Shops, 1958. BLS Report 141.
Banking Industry, 1960. BLS Report 179.
Bituminous Coal Mining, 1962. BLS Bulletin 1383 (45 cents).
Communications, 1961. BLS Bulletin 1343 (20 cents).
Contract Cleaning Services, 1961. BLS Bulletin 1327 (25 cents).
Crude Petroleum and Natural Gas Production, 1960. BLS Report 181.
Department and Women's Ready-to-Wear Stores, 1950. Series 2, No. 78.
- Eating and Drinking Places, 1961. BLS Bulletin 1329 (40 cents).
Electric and Gas Utilities, 1962. BLS Bulletin 1374 (50 cents).
Hospitals, 1960. BLS Bulletin 1294 (50 cents).
Hotels and Motels, 1961. BLS Bulletin 1328 (30 cents).
Life Insurance, 1961. BLS Bulletin 1324 (30 cents).
Power Laundries and Cleaning Services, 1961. BLS Bulletin 1333 (45 cents).

II. Other Industry Wage Studies

- Factory Workers' Earnings—Distribution by Straight-Time Hourly Earnings, 1958. BLS Bulletin 1252 (40 cents).
Factory Workers' Earnings—Selected Manufacturing Industries, 1959. BLS Bulletin 1275 (35 cents).
- Retail Trade:
Employee Earnings in Retail Trade, June 1962 (Overall Summary of the Industry). BLS Bulletin 1380 (45 cents).
- Wages in Nonmetropolitan Areas, South and North Central Regions, October 1960. BLS Report 190.

* Studies of the effects of the \$1 minimum wage.

BUREAU OF LABOR STATISTICS REGIONAL OFFICES

