

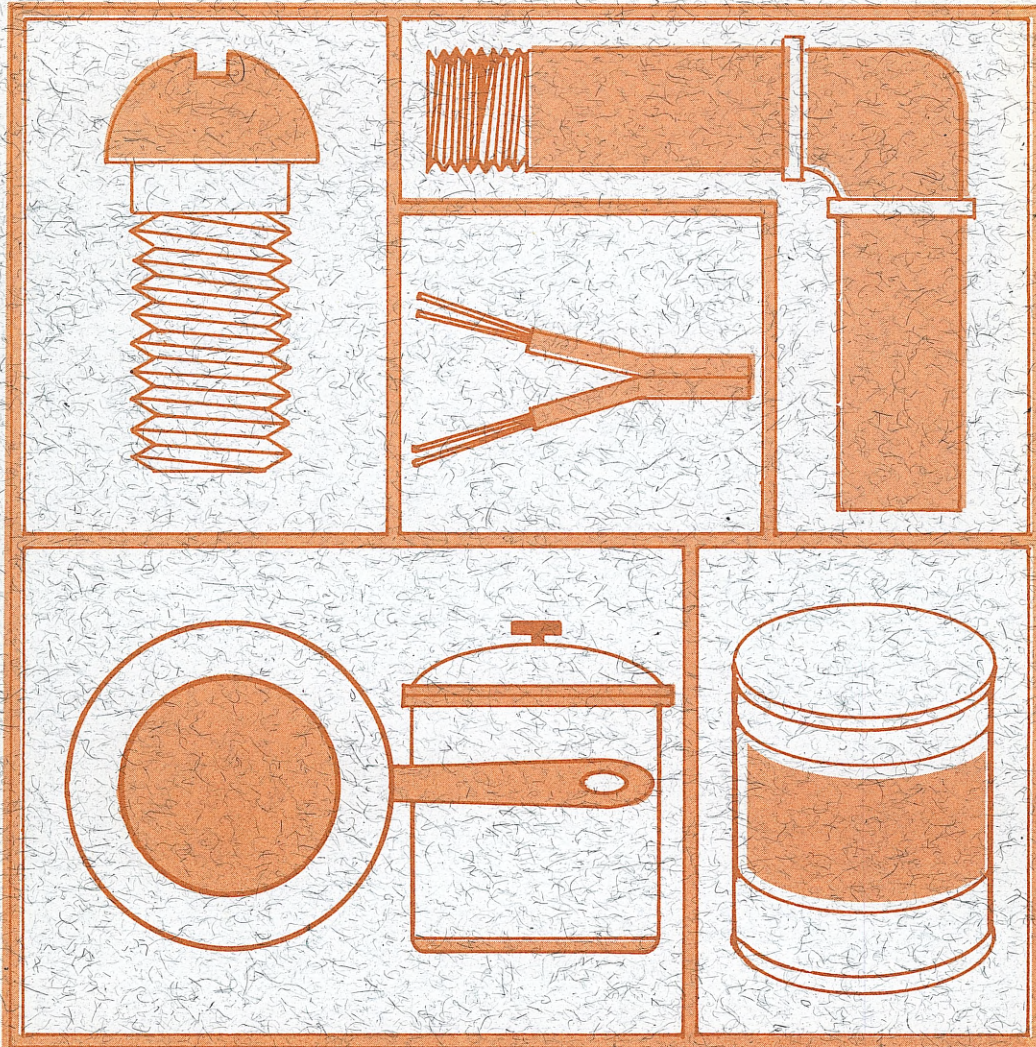
# Industry Wage Survey: Nonferrous Metal Manufacturing Industries, February 1981

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U.S. Department of Labor  
Bureau of Labor Statistics  
December 1983

Bulletin 2167



# Industry Wage Survey: Nonferrous Metal Manufacturing Industries, February 1981

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U.S. Department of Labor  
Raymond J. Donovan, Secretary

Bureau of Labor Statistics  
Janet L. Norwood, Commissioner  
December 1983

Bulletin 2167

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# Preface

This bulletin summarizes the results of the first Bureau of Labor Statistics survey of occupational wages and employee benefits in nonferrous metal manufacturing industries since the inception of the current industry wage survey program in 1960. The survey provides information for February 1981 about five industrial sectors: Copper smelting and refining; aluminum primary production; copper rolling, drawing, and extruding; aluminum rolling, drawing, and extruding; and nonferrous wire drawing and insulation.

Separate summaries were issued earlier for copper rolling, drawing, and extruding in Connecticut; and wire drawing and insulation in Connecticut and New York-Northeastern New Jersey. Copies of these summaries

are available from the Bureau or any of its regional offices.

This study was conducted in the Bureau's Office of Wages and Industrial Relations. Staff of the Division of Occupational Pay and Employee Benefit Levels analyzed the survey data and prepared this bulletin. The Bureau's Assistant Regional Commissioners for Operations directed the fieldwork.

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

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# Nonferrous Metal Manufacturing Industries, February 1981

As part of its industry wage survey program, the Bureau of Labor Statistics surveyed for the first time occupational wages and employee benefits of production and related workers in five major segments of the nonferrous metal manufacturing industries in February 1981: Primary smelting and refining of copper; aluminum primary production; rolling, drawing, and extruding of both copper and aluminum; and nonferrous wire drawing and insulation.<sup>1</sup> Together, they account for about one-fourth of the total employment in all primary metal manufacturing industries.<sup>2</sup>

Regional employment composition varied by industry. The copper industries were somewhat concentrated. Two-thirds of the workers in copper smelting were in the Middle West and Mountain regions. Two-fifths of the workers in copper rolling, drawing, and extruding mills were in the Great Lakes States; the remainder of the workers in this industry were about equally divided between the New England and Middle Atlantic regions.

The aluminum and wire industries were less concentrated. Workers in aluminum primary production were chiefly in the Southeast, Southwest, Great Lakes, and Pacific regions. The Southeast and Great Lakes regions were the principal locations for aluminum rolling, drawing, and extruding. New England and the Southeast were important regions for the wire industry.

Copper smelting and aluminum primary production mills were nearly always in metropolitan areas, had single-rate time pay systems, were nearly always covered by union contracts, and were parts of large, multiplant companies. The remaining three industries were also heavily dependent on time-rated pay systems, but were occasionally located in rural communities, had small, single-plant companies, and were less heavily unionized.

## Earnings

Average straight-time hourly earnings of production workers varied widely among the five industries in February

1981, from a low of \$6.68 in wire drawing and insulation to a high of \$10.92 in aluminum primary production.<sup>3</sup> Hourly earnings averages in the remaining segments were \$7.75 in copper rolling, drawing, and extruding; \$9.54 in aluminum rolling, drawing, and extruding; and \$10.57 in copper smelting and refining (tables 1, 11, 21, 32, and 43). These nationwide pay levels were influenced, in part, by the regional distribution of the workers in each industry. For example, New England and the Southeast, both relatively low-paying regions, accounted for one-half of the wire drawing work force, while the high-paying Pacific region employed less than 5 percent of these workers.

Where comparisons could be made, average earnings of production workers were generally higher in metropolitan than in nonmetropolitan areas, in union than in nonunion mills, and in mills with 250 employees or more than in smaller mills.<sup>4</sup> The pay advantage associated with these establishment characteristics, however, varied among the industries.

*Copper smelting and refining.* Hourly earnings of virtually all 6,938 production workers covered by the survey were between \$9 and \$12 (table 1). The middle 50 percent of the workers earned between \$10.01 and \$11.20. The nearly total adoption of single-rate pay systems for individual occupations, almost universal union coverage, and the presence of a few large, multiplant companies in the industry contributed to the narrow earnings range around the industry's average of \$10.57.

Fourteen occupations, accounting for two-fifths of the production work force, were selected to represent wage levels for the types of skills and operations used in copper smelting and refining mills. Among the four direct production jobs for which data can be presented, average hourly earnings were \$10.35 for tank-house operators, \$10.54 for spout workers, \$10.92 for rever-

<sup>1</sup> See appendix A for scope and method of survey and for definitions of terms used in this bulletin. Appendix B contains occupational descriptions used in the survey.

<sup>2</sup> Estimates are based on data from the Bureau's monthly establishment survey.

<sup>3</sup> Earnings data in this report exclude premium pay for overtime and for work on weekends, holidays, and late shifts. The survey excluded establishments employing under 50 workers.

<sup>4</sup> Such comparisons could not be made in copper smelting and refining and aluminum primary production, where virtually all workers were in metropolitan areas, union mills, and in mills with at least 250 workers.



beratory skimmers, and \$11.17 for furnace operators. Among maintenance and service occupations, average hourly earnings ranged from \$9.46 for janitors to \$11.78 for electronics technicians. Crane operators (electric bridge) and power-truck operators were numerically the most important occupations studied. Workers in these jobs averaged \$10.87 and \$10.25, respectively. Averages for two-thirds of the occupations were between \$10.25 and \$11.48.

*Aluminum primary production.* Nine-tenths of the 28,332 production workers in aluminum production mills earned between \$10 and \$13 an hour (table 11). The middle 50 percent of the workers earned between \$10.45 and \$11.45; the industry average was \$10.92. As in the copper smelting industry, the prevalence of single-rate pay systems, nearly universal union coverage, and large, multiplant companies contributed to the narrow earnings spread in this industry.

Nineteen occupations, accounting for nearly two-fifths of the production work force, were selected to represent the full spectrum of production activities in aluminum production mills. Among these jobs, average earnings ranged from \$9.77 for janitors to \$12.22 for maintenance mechanics (table 12). Crane operator was numerically the most important occupation surveyed separately. Operators working on electric bridges averaged \$10.84 an hour, while operators of cranes mounted on truck chassis (mobile operators) averaged \$11.44. Other numerically important occupations and their averages included potline monitors (\$10.78), anode rebuilders (\$10.81), and maintenance electricians (\$12.11).

*Copper rolling, drawing, and extruding.* Unlike patterns in copper smelting and aluminum primary production, earnings in copper rolling, drawing, and extruding mills spanned a relatively broad range around the \$7.75 an hour average. Approximately 95 percent of the 15,906 production and related workers surveyed earned between \$5 and \$11 an hour in February 1981; the middle 50 percent earned between \$7.22 and \$8.56 (table 22). Among the three regions for which separate data can be shown, average earnings were \$7.90 in the Middle Atlantic region, \$8.03 in New England, and \$8.19 in the Great Lakes, where slightly more than two-fifths of the industry's workers were employed. Four-fifths of the New England work force were employed in Connecticut, averaging \$8.33 an hour.

Averages among the 33 occupations studied separately in this industry ranged from \$6.67 for packers to \$8.94 for operators of hot rolling mills (table 23). Other occupations with averages above \$8.50 an hour included maintenance electricians (\$8.63), tool and diemakers (\$8.73), hand welders (\$8.77), maintenance machinists (\$8.81) and operators of cold rolling mills (\$8.81). Numerically important direct production jobs included

tube drawers (\$6.97), metal cut-off saw operators (\$7.20), inspectors (\$7.60), and machine-tool operators (\$7.61).

Occupational pay relationships at the industrywide level did not always reflect the wage structure found within individual mills. This is mostly due to the disparate pay levels among establishments in the industry and the varying job mix within those establishments.<sup>5</sup> For example, table 23 indicates that class B machine-tool operators averaged 7 percent an hour more than their more highly skilled counterparts (class A)—\$8.40 compared to \$7.83. However, within mills employing both class A and class B operators, the higher skilled workers always averaged more; pay differentials were typically between 5 and 10 percent.

*Aluminum rolling, drawing, and extruding.* The 40,739 production and related workers in this industry segment had average straight-time earnings of \$9.54 an hour in February 1981. All but about 6 percent of the work force earned between \$5 and \$13; the middle 50 percent of the workers earned between \$8.20 and \$10.96. Average earnings in the regions for which data could be shown separately were \$8.53 in the Southeast, \$9.73 in the Pacific, and \$9.85 in the Great Lakes (table 33).

Thirty-five occupations were selected to represent the industry's wage structure and production activities; they accounted for slightly more than one-half of the work force. Average hourly earnings ranged from \$6.40 for electroplaters to \$11.69 for maintenance electricians. Numerically important occupations—with at least 1,000 incumbents—included packers (\$7.68), laborers (\$7.89), power-truck operators (\$9.49), electric bridge crane operators (\$9.75), inspectors (\$9.77), general utility maintenance workers (\$10.53), and mechanics (\$11.09) (table 34).

Among direct processing jobs, workers who operate rolling mills which form metal into plate, sheet foil, flatware, or rods averaged \$11.35 an hour for work on hot mills and \$10.68 for work on cold rolling mills. Helpers on cold rolling mills averaged \$10.15 an hour. Workers who heat slabs and fabricate forms to specified temperatures for rolling or processing (furnace operators) averaged \$9.90 an hour. At the low end, averages below \$8 an hour were recorded for electroplaters (\$6.40), punch-press operators (\$6.64), extruder operators (\$7.66), cut-off saw operators (\$7.67), die setters (\$7.84), and milling-machine operators (\$7.89).

*Wire drawing and insulation.* Earnings of about nine-tenths of the 50,086 production workers in wire draw-

<sup>5</sup>For a comparison of occupational pay relationships within establishments and differentials among nationwide averages, see Robert W. Van Giezen, "A New Look at Occupational Wages Within Individual Establishments," *Monthly Labor Review*, November 1982, pp. 22-28.

ing mills were between \$5 and \$13 an hour. The middle 50 percent earned from \$5.61 to \$7.69; the industry average was \$6.68. This relatively broad earnings range reflects, in part, differences in regional pay levels. Regional averages ranged from \$5.68 an hour in the Southeast, where three-tenths of the workers were employed, to \$9.04 in the Pacific States. Among other regions, average earnings were from \$6.01 in New England (one-fifth of the workers) to \$7.05 in the Southwest. In the two subregional areas studied separately—Connecticut and New York—Northeastern New Jersey—workers averaged \$6.79 and \$6.60 an hour, respectively (table 44).

Among the occupations surveyed separately, average straight-time hourly earnings ranged from \$5.88 for janitors to \$8.68 for truckdrivers. Wire drawers and stranding-machine operators, together accounting for 5,200 workers, averaged \$6.74 and \$6.79 an hour, respectively. Other numerically important occupations (at least 1,000 incumbents) were material handling laborers (\$6.03), inspectors (\$6.32), power-truck operators (\$6.41), extruder operators (\$6.60), and mechanics (\$8.23) (table 45). Jobs falling within the \$7 to \$8 range included machine welders (\$7.16), milling-machine operators (\$7.26), and hot rolling machine operators (\$7.64). Those above \$8 were largely represented by skilled maintenance classifications.

## Benefits

*Paid holidays and vacations.* Virtually all production workers were employed in mills providing paid holidays and paid vacations after qualifying periods of service. Holiday provisions varied by industry. In aluminum primary production, workers typically received 11 or 12 days annually (table 17); in the copper and aluminum rolling, drawing, and extruding segments, provisions for 10 to 12 days were typical (tables 28 and 39); in copper smelting, 9 days prevailed (table 7); and in wire drawing, the most common provisions were 8, 11, or 12 days (table 50).

Vacation provisions also varied among the industries, but typically amounted to 1 week of vacation pay after 1 year of service, 2 weeks after 3 years, 3 weeks after 10 years, 4 weeks after 20 years, and 5 weeks after 25 years of service or more (tables 8, 18, 29, 40, and 51). Vacation bonus plans, which provided for flat sum or percentage payments in addition to regular vacation pay, were available to all copper smelting workers, three-fourths of the aluminum primary production work force, nearly two-thirds of the aluminum rolling and drawing workers, two-thirds of the copper rolling and drawing workers, and to one-tenth of the wire workers<sup>6</sup>. Such plans typically vary the amount of the bonus,

<sup>6</sup>The survey excluded vacation bonus plans providing only seasonal bonuses to workers who do not take off during popular periods, such as the summer.

based on the time of the year in which the vacation is taken.

Extended vacation benefits were available to production workers in mills employing nine-tenths of the aluminum primary production workers and nearly three-fifths of the aluminum rolling, drawing, and extruding work force. Less than one-tenth of the workers in each of the other industries studied were covered by such plans (tables 10, 20, 31, 42, and 53). Extended vacations were generally granted under a savings and vacation plan. Under most of these plans, employers contributed a specified amount to a fund that provided 13 weeks' vacation every 5 years to "Senior Group" employees (that half of the work force with longest continuous service) and 3 weeks every 5 years for "Junior Group" employees. These weeks were in addition to regular vacations. Other plans provided an additional two weeks' vacation each year for senior employees, and one week for junior employees.

*Insurance.* All or virtually all workers were in mills that provided at least part of the cost of life, hospitalization, surgical, basic medical, and major medical insurance coverage (tables 9, 19, 30, 41, and 52). Accidental death and dismemberment coverage was available to at least nine-tenths of the workers in each of the two copper industries, to two-thirds of the wire drawing work force, and to slightly more than two-fifths of the workers in the two aluminum industries. Sickness and accident insurance was available to one-half of the wire drawing workers and to four-fifths or more in the other segments. In some cases, principally in the copper smelting industry, workers were covered by both sickness and accident insurance and sick leave plans. The latter plans typically covered the waiting period before insurance benefits could begin. Long-term disability insurance plans covered one-tenth of the workers in the aluminum primary production and rolling and drawing industries, slightly more than one-fourth in the copper rolling and drawing and wire drawing industries, and approximately one-half of the copper smelting work force.

*Retirement plans.* Retirement pension plans—other than Federal social security—applied to three-fourths of the wire drawing work force and to at least nine-tenths of the workers in the other industries. Retirement severance plans—often in addition to pension plans—were available to about three-fourths of the copper smelting workers and to less than one-fourth of the workers in each of the other industries.

*Other benefits.* A number of other worker benefits were common in the industries; for example, about seven-eighths of the workers were in mills with provisions for funeral leave and jury-duty pay (tables 10, 20, 31, 42, and 53). Provisions for automatic adjustments

of pay rates, usually triggered by changes in the Bureau of Labor Statistics' Consumer Price Index, applied to one-third of the wire drawing work force, seven-tenths of the copper rolling and drawing workers, four-fifths of the aluminum rolling workers, and all of the copper smelting and refining and aluminum primary production workers studied. Technological severance pay provisions applied to slightly less than one-half of the copper smelting work force, but less than one-fifth of the workers in the other industries. Supplemental unemployment benefit plans were available to at least four-fifths of the workers in copper smelting and aluminum production, two-thirds of the workers in aluminum rolling, drawing, and extruding and to less than one-fifth in the remaining industries.

### Industry characteristics

The nonferrous metal plants within the scope of this survey employed nearly 142,000 production and related workers in February 1981. Slightly more than one-third of the workers were in wire drawing mills; slightly less than one-third in aluminum rolling, drawing, and extruding plants; one-fifth in aluminum primary production facilities; one-tenth in copper rolling and drawing plants; and about 5 percent in copper smelting and refining mills.

Plants in the copper smelting and aluminum primary production industries are chiefly engaged in separating the metals from ore and then refining them. The copper and aluminum rolling, drawing, and extruding industries are chiefly engaged in shaping these metals into intermediate or finished products. The wire mills in the study produce wire and cable of nonferrous metals from purchased bars and rods.

Nine-tenths or more of the workers in four of the industries were paid on a time-rated basis, nearly always under formal pay systems. Except in the wire drawing industry, where range-of-rate arrangements dominated, time-rated systems typically provided for single rates for individual occupations (tables 3, 13, 24,

35, and 46). Nearly one-third of the copper rolling and drawing work force were paid incentive rates, about equally divided between individual piecework and group bonus plans (table 24).

At least four-fifths of the workers in each industry were employed in mills with 40-hour weekly schedules (tables 4, 14, 25, 36, and 47). Most of the remaining workers were on longer schedules. In copper rolling and drawing mills, however, nearly one-tenth of the workers had schedules of 37.5 hours per week.

Nearly all workers were in mills with formal premium pay provisions for second- and third-shift work (tables 5, 15, 26, 37, and 48). In February 1981, between one-fifth and three-tenths of the production workers in each industry were actually employed on second shifts. The proportion on third shifts ranged from 14 percent in copper smelting and refining mills to nearly one-fourth in aluminum production plants (tables 6, 16, 27, 38, and 49). Shift differentials varied among and within the industries, particularly by region, but typically amounted to 20-30 cents or 3-5 percent for the second shift and 25-45 cents or 5 percent for the third shift.

Virtually all workers in the copper smelting and primary aluminum industries were covered by collective bargaining agreements. Nine-tenths of the aluminum rolling and drawing workers, three-fourths of the copper rolling and drawing work force, and about one-half of the wire drawing workers were in mills having such coverage for a majority of the production workers. The principal unions in the industries were the United Steelworkers of America (AFL-CIO), the United Automobile, Aerospace and Agricultural Implement Workers of America (AFL-CIO), and the Aluminum, Brick and Glass Workers International Union (AFL-CIO).<sup>7</sup>

<sup>7</sup>Result of a 1982 merger between the Glass and Ceramic Workers Union and the Aluminum, Brick and Clay Workers International Union. In 1980, the Brick and Clay Workers Union merged with the International Union of Aluminum Workers to form the Aluminum, Brick and Clay Workers International Union.

**Table 1. Copper smelting and refining: Earnings distribution**

(Percent distribution of production workers by straight-time hourly earnings,<sup>1</sup> United States and Mountain region, February 1981)

Hourly earnings	United States <sup>2</sup>	Mountain Region
Number of workers .....	6,938	2,770
Average hourly earnings <sup>1</sup> .....	\$10.57	\$10.73
Total .....	100.0	100.0
Under \$9 .....	1.1	-
\$9.00 and under \$9.20 .....	1.0	.6
\$9.20 and under \$9.40 .....	1.5	-
\$9.40 and under \$9.60 .....	7.7	4.6
\$9.60 and under \$9.80 .....	4.5	3.6
\$9.80 and under \$10.00 .....	8.5	2.8
\$10.00 and under \$10.20 .....	13.1	16.8
\$10.20 and under \$10.40 .....	12.1	14.4
\$10.40 and under \$10.60 .....	5.2	2.1
\$10.60 and under \$10.80 .....	7.8	11.9
\$10.80 and under \$11.00 .....	7.2	6.5
\$11.00 and under \$11.20 .....	5.3	4.7
\$11.20 and under \$11.40 .....	3.3	4.1
\$11.40 and under \$11.60 .....	5.9	6.8
\$11.60 and under \$11.80 .....	9.2	13.5
\$11.80 and under \$12.00 .....	6.3	7.5
\$12.00 and over .....	.2	.1

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to the Mountain region shown separately. For defini-

tion of regions, see appendix table A-1, footnote 1.

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

**Table 2. Copper smelting and refining: Occupational earnings**

(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and Mountain region, February 1981)

Department and occupation	United States <sup>2</sup>				Mountain Region			
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>		
		Mean	Median	Middle range		Mean	Median	Middle range
<b>Production</b>								
Furnace operators .....	193	\$11.17	\$11.09	\$10.89 - \$11.69	38	\$11.47	\$11.49	\$11.18 - \$11.96
Skimmers, reverberatory .....	57	10.92	10.97	10.62 - 11.56	27	10.58	10.62	9.57 - 11.82
Spout workers .....	47	10.54	10.43	10.19 - 10.76	-	-	-	-
Tank-house operators .....	156	10.35	10.32	9.93 - 10.74	-	-	-	-
<b>Maintenance and service</b>								
Crane operators, electric bridge .....	253	10.87	10.79	10.74 - 11.08	103	10.99	10.88	10.74 - 11.28
Combination of sizes .....	92	10.59	10.74	10.32 - 10.75	-	-	-	-
Under 20 tons .....	34	10.88	10.87	10.83 - 11.08	-	-	-	-
20 tons or more .....	127	11.06	10.91	10.79 - 11.42	62	11.14	11.28	10.88 - 11.42
Crane operators, mobile .....	26	10.77	10.71	10.47 - 11.15	13	10.87	-	-
Electricians, maintenance .....	198	11.69	11.69	11.59 - 11.81	87	11.67	11.69	11.64 - 11.69
Electronics technicians .....	52	11.78	11.96	11.67 - 11.96	46	11.81	11.96	11.69 - 11.96
Class A .....	46	11.84	11.96	11.69 - 11.96	-	-	-	-
Janitors .....	99	9.46	9.44	9.44 - 9.53	33	9.53	9.53	9.53 - 9.53
Laborers, material handling .....	236	9.57	9.53	9.38 - 9.64	61	10.00	10.34	9.70 - 10.34
Machinists, maintenance .....	86	11.70	11.69	11.69 - 11.69	50	11.68	11.69	11.69 - 11.69
Mechanics, maintenance .....	238	11.48	11.69	11.23 - 11.69	134	11.60	11.69	11.69 - 11.69
Power-truck operators .....	257	10.25	10.19	10.06 - 10.43	60	10.56	10.34	10.34 - 10.61
Forklift .....	142	10.23	10.31	10.12 - 10.34	41	10.32	10.34	10.34 - 10.34
Other than forklift .....	115	10.28	10.06	9.92 - 10.57	-	-	-	-
Truckdrivers .....	54	10.47	10.34	10.34 - 10.85	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

<sup>3</sup> See appendix A for definitions of means, medians, and

middle ranges. Medians and middle ranges are not provided for entries with fewer than 15 workers.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for subcategories not shown separately.

**Table 3. Copper smelting and refining: Method of wage payment**

(Percent of production workers by method of wage payment,<sup>1</sup> United States and Mountain region, February 1981)

Method	United States <sup>2</sup>	Mountain region
All workers .....	100	100
Time-rated workers .....	100	100
Formal plans .....	100	100
Single rate .....	98	100
Range of rates .....	2	-
Individual rates .....	-	-
Incentive workers .....	-	-

<sup>1</sup> For definition of method of wage payment, see appendix A.

<sup>2</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see appendix table A-

1, footnote 1.

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

**Table 4. Copper smelting and refining: Scheduled weekly hours**

(Percent of production workers by scheduled weekly hours,<sup>1</sup> United States and Mountain region, February 1981)

Weekly hours	United States <sup>2</sup>	Mountain region
All workers .....	100	100
40 hours .....	95	88
48 hours .....	5	12

<sup>1</sup> Data relate to the predominant schedule for full-time day-shift workers in each establishment.

<sup>2</sup> Includes data for regions in addition to the Mountain region shown separately. For definition

of regions, see appendix table A-1, footnote 1.

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

**Table 5. Copper smelting and refining: Shift differential provisions**

(Percent of production workers by shift differential provisions,<sup>1</sup> United States and Mountain region, February 1981)

Shift differential	United States <sup>2</sup>	Mountain region
<b>Second shift</b>		
Workers in establishments with second-shift provisions .....	100.0	100.0
With shift differential .....	100.0	100.0
Uniform cents per hour .....	84.5	60.5
12 cents .....	15.5	-
30 cents .....	69.0	60.5
Other formal paid differential <sup>3</sup> .....	15.5	39.5
<b>Third shift</b>		
Workers in establishments with third-shift provisions .....	100.0	100.0
With shift differential .....	100.0	100.0
Uniform cents per hour .....	84.5	60.5
20 cents .....	15.5	-
40 cents .....	18.9	31.9
45 cents .....	50.1	28.6
Other formal paid differential <sup>3</sup> .....	15.5	39.5

<sup>1</sup> Refers to policies of establishments currently operating late shifts or having provisions covering late shifts.

<sup>2</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Includes establishments providing 8 hours' pay for 7 1/2 hours' work plus a cents-per-hour or percentage addition to first-shift rates.

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

**Table 6. Copper smelting and refining: Shift differential practices**

(Percent of production workers employed on late shifts by amount of pay differential, United States and Mountain region, February 1981)

Shift differential	United States <sup>1</sup>	Mountain region
<b>Second shift</b>		
Workers employed on second shift .....	20.9	20.6
Receiving differential .....	20.9	20.6
Uniform cents per hour .....	18.6	14.7
12 cents .....	4.6	-
30 cents .....	13.9	14.7
Other formal paid differential <sup>2</sup> .....	2.3	5.9
<b>Third shift</b>		
Workers employed on third shift .....	13.6	14.3
Receiving differential .....	13.6	14.3
Uniform cents per hour .....	11.6	9.2
20 cents .....	1.6	-
40 cents .....	3.0	5.3
45 cents .....	7.1	4.0
Other formal paid differential <sup>2</sup> .....	2.0	5.1

<sup>1</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Includes establishments providing 8 hours' pay for 7 1/2

hours' work plus a cents-per-hour or percentage addition to first-shift rates.

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

**Table 7. Copper smelting and refining: Paid holidays**

(Percent of production workers in establishments with formal provisions for paid holidays, United States and Mountain region, February 1981)

Number of paid holidays	United States <sup>1</sup>	Mountain region
All workers .....	100	100
Workers in establishments providing paid holidays .....	100	100
8 days .....	2	-
9 days .....	78	100
10 days .....	15	-
11 days .....	5	-

<sup>1</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

**Table 8. Copper smelting and refining: Paid vacations**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and Mountain region, February 1981)

Vacation policy	United States <sup>1</sup>	Mountain region
All workers .....	100	100
<b>Method of payment</b>		
Workers in establishments providing paid vacations .....	100	100
Length-of-time payment .....	85	100
Percentage payment .....	15	-
<b>Amount of vacation pay<sup>2</sup></b>		
After 1 year of service:		
1 week .....	83	100
2 weeks .....	17	-
After 2 years of service:		
1 week .....	74	100
Over 1 and under 2 weeks .....	9	-
2 weeks .....	17	-
After 3 years of service:		
2 weeks .....	100	100
After 4 years of service:		
2 weeks .....	100	100
After 5 years of service:		
2 weeks .....	89	84
Over 2 and under 3 weeks .....	5	-
3 weeks .....	6	16
After 10 years of service:		
3 weeks .....	100	100
After 12 years of service:		
3 weeks .....	100	100
After 15 years of service:		
3 weeks .....	100	100
After 20 years of service:		
4 weeks .....	100	100
After 25 years of service:		
5 weeks .....	100	100
After 30 years of service: <sup>3</sup>		
5 weeks .....	100	100

<sup>1</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Vacation payments, such as percent of annual earnings, were converted to an equivalent time basis. Periods of service were chosen arbitrarily and do not necessarily reflect individual establishment provisions for progres-

sion. For example, changes indicated at 10 years may include changes that occurred between 5 and 10 years.

<sup>3</sup> Vacation provisions were virtually the same after longer periods of service.

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

**Table 9. Copper smelting and refining: Health, insurance, and retirement plans**

(Percent of production workers in establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States and Mountain region, February 1981)

Type of plan	United States <sup>2</sup>	Mountain region
All workers .....	100	100
Workers in establishments providing:		
Life insurance .....	100	100
Noncontributory plans .....	100	100
Accidental death and dismemberment insurance .....	100	100
Noncontributory plans .....	100	100
Sickness and accident insurance or sick leave or both <sup>3</sup> .....	100	100
Sickness and accident insurance .....	100	100
Noncontributory plans .....	100	100
Sick leave (full pay, no waiting period) .....	29	61
Sick leave (partial pay or waiting period) .....	-	-
Long-term disability insurance .....	52	74
Noncontributory plans .....	52	74
Hospitalization insurance .....	100	100
Noncontributory plans .....	100	100
Surgical insurance .....	100	100
Noncontributory plans .....	100	100
Medical insurance .....	100	100
Noncontributory plans .....	100	100
Major medical insurance .....	100	100
Noncontributory plans .....	100	100
Dental insurance .....	100	100
Noncontributory plans .....	-	-
Retirement plans <sup>4</sup> .....	100	100
Pensions .....	100	100
Noncontributory plans .....	100	100
Severance pay .....	76	77

<sup>1</sup> Includes those plans for which the employer pays at least part of the cost and excludes legally required plans such as workers' compensation and social security; however, plans required by State temporary disability insurance laws are included if the employer contributes more than is legally required or the employees receive benefits in excess of legal requirements. "Noncontributory plans" include only those plans financed entirely by the employer.

<sup>2</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Unduplicated total of workers receiving sickness and accident insurance and sick leave shown separately.

<sup>4</sup> Unduplicated total of workers covered by pension plans and severance pay shown separately.

**Table 10. Copper smelting and refining: Other selected benefits**

(Percent of production workers in establishments with formal provisions for other selected benefits,<sup>1</sup> United States and Mountain region, February 1981)

Type of benefit	United States <sup>2</sup>	Mountain region
Workers in establishments with provisions for:		
Funeral leave .....	100	100
Jury duty leave .....	100	100
Technological severance pay .....	45	61
Cost-of-living adjustments .....	100	100
Based on BLS consumer price index .....	100	100
Vacation bonuses .....	100	100
Based on fixed flat-sum .....	29	39
Based on flat sum which varies by length of service .....	6	-
Seasonal bonus <sup>3</sup> .....	66	61
Extended or supplemental vacation .....	-	-
Supplemental unemployment benefit plan .....	60	61

<sup>1</sup> For definition of items, see appendix A.

<sup>2</sup> Includes data for regions in addition to the Mountain region shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Includes bonus arrangements that provide additional bonus for using vacation time during specified periods of the year.

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



**Table 11. Aluminum primary production: Earnings distribution**(Percent distribution of production workers by straight-time hourly earnings,<sup>1</sup> United States and selected regions, February 1981)

Hourly earnings	United States <sup>2</sup>	Southwest	Pacific
Number of workers .....	28,332	6,406	5,685
Average hourly earnings <sup>1</sup> .....	\$10.92	\$10.94	\$11.17
Total .....	100.0	100.0	100.0
Under \$9.60 .....	1.4	.4	-
\$9.60 and under \$9.80 .....	3.7	4.8	1.8
\$9.80 and under \$10.00 .....	3.7	1.1	3.4
\$10.00 and under \$10.20 .....	8.8	4.4	7.4
\$10.20 and under \$10.40 .....	5.2	1.6	5.1
\$10.40 and under \$10.60 .....	11.0	9.3	9.1
\$10.60 and under \$10.80 .....	16.9	32.8	9.1
\$10.80 and under \$11.00 .....	9.4	4.0	4.1
\$11.00 and under \$11.20 .....	10.0	13.3	13.4
\$11.20 and under \$11.40 .....	3.7	5.9	8.4
\$11.40 and under \$11.60 .....	3.3	1.9	8.0
\$11.60 and under \$11.80 .....	4.2	3.4	4.0
\$11.80 and under \$12.00 .....	4.1	3.1	13.2
\$12.00 and under \$12.20 .....	4.9	12.5	4.2
\$12.20 and under \$12.40 .....	7.9	1.4	1.7
\$12.40 and under \$12.60 .....	.7	-	1.3
\$12.60 and under \$12.80 .....	.9	-	4.3
\$12.80 and under \$13.00 .....	.3	-	1.3
\$13.00 and over .....	( <sup>3</sup> )	-	( <sup>3</sup> )

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix ta-

ble A-1, footnote 1.

<sup>3</sup> Less than 0.05 percent.

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

**Table 12. Aluminum primary production: Occupational earnings**

(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions, February 1981)

Department and occupation	United States <sup>2</sup>				Southwest				Pacific				
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			
		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range	
<b>Production</b>													
Anode rebuilders .....	1,020	\$10.81	\$10.82	\$10.67 - \$10.82	-	-	-	-	-	69	\$10.93	\$11.04	\$10.75 - \$11.04
Carbon setters .....	604	\$10.97	10.73	10.73 - 11.28	-	-	-	-	-	-	-	-	
Casting operators .....	267	11.18	11.15	10.93 - 11.35	-	-	-	-	-	100	\$11.55	11.79	11.15 - 11.83
Furnace chargers .....	133	11.11	10.95	10.84 - 11.31	-	-	-	-	-	-	-	-	
Pot liners .....	483	10.57	10.51	10.51 - 10.62	138	\$10.52	\$10.62	\$10.51 - \$10.62	-	99	10.73	10.67	10.52 - 10.70
Potline monitors .....	1,205	10.78	11.04	10.28 - 11.06	-	-	-	-	-	458	11.12	11.04	11.04 - 11.11
Rodding-anode renewers .....	210	10.45	10.40	10.29 - 10.45	-	-	-	-	-	-	-	-	
Spout workers .....	31	11.13	11.53	10.81 - 11.53	-	-	-	-	-	-	-	-	
<b>Maintenance and service</b>													
Crane operators, electric bridge .....	1,321	10.84	10.78	10.51 - 11.04	-	-	-	-	-	260	10.99	11.25	10.78 - 11.25
Combination of sizes .....	594	10.94	11.04	10.62 - 11.04	-	-	-	-	-	-	-	-	
Under 20 tons .....	630	10.71	10.51	10.51 - 10.78	-	-	-	-	-	245	11.00	11.25	10.78 - 11.25
Crane operators, mobile .....	31	11.44	11.20	10.84 - 12.05	-	-	-	-	-	-	-	-	
Electricians, maintenance .....	839	12.11	12.10	11.83 - 12.19	-	-	-	-	-	251	12.39	12.19	12.19 - 12.64
Electronics technicians .....	81	12.12	12.27	11.61 - 12.27	-	-	-	-	-	-	-	-	
Class B .....	78	12.16	12.27	11.61 - 12.27	-	-	-	-	-	-	-	-	
Janitors .....	443	9.77	9.74	9.74 - 9.76	-	-	-	-	-	83	9.94	9.89	9.79 - 10.05
Laborers, material handling .....	443	10.02	9.89	9.89 - 10.23	132	9.92	9.96	9.74 - 10.18	-	-	-	-	
Machinists, maintenance .....	161	12.13	12.05	12.05 - 12.27	-	-	-	-	-	33	12.58	12.64	12.52 - 12.83
Mechanics, maintenance .....	716	12.22	12.18	11.94 - 12.55	-	-	-	-	-	264	12.34	12.29	11.78 - 12.71
Power-truck operators .....	561	10.37	10.40	10.22 - 10.52	-	-	-	-	-	84	10.58	10.52	10.52 - 10.59
Forklift .....	455	10.34	10.40	10.22 - 10.51	85	10.41	10.40	10.40 - 10.51	-	-	-	-	
Other than forklift .....	106	10.49	10.40	10.40 - 10.62	-	-	-	-	-	-	-	-	
Tool clerks .....	48	10.49	10.29	10.18 - 10.48	-	-	-	-	-	-	-	-	
Truckdrivers .....	439	10.56	10.40	10.40 - 10.54	-	-	-	-	-	77	11.39	11.83	10.59 - 11.83
Combination of sizes .....	136	10.42	10.51	10.28 - 10.54	-	-	-	-	-	-	-	-	
Heavy (over 4 tons, trailer type .....	28	10.63	11.22	11.22 - 11.95	-	-	-	-	-	-	-	-	
Heavy (over 4 tons, other than trailer) .....	114	10.92	10.62	10.49 - 11.83	-	-	-	-	-	-	-	-	

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

<sup>3</sup> See appendix A for definitions of means, medians, and middle ranges. Me-

dians and middle ranges are not provided for entries with fewer than 15 workers.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for subcategories not shown separately.

**Table 13. Aluminum primary production: Method of wage payment**

(Percent of production workers by method of wage payment,<sup>1</sup> United States and selected regions, February 1981)

Method	United States <sup>2</sup>	Southwest	Pacific
All workers .....	100	100	100
Time-rated workers .....	100	100	100
Formal plans .....	100	100	100
Single rate .....	99	100	100
Range of rates .....	( <sup>3</sup> )	-	-
Individual rates .....	-	-	-
Incentive workers .....	-	-	-

<sup>1</sup> For definition of method of wage payment, see appendix A.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1,

footnote 1.

<sup>3</sup> Less than 0.5 percent.

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

**Table 14. Aluminum primary production: Scheduled weekly hours**

(Percent of production workers by scheduled weekly hours,<sup>1</sup> United States and selected regions, February 1981)

Weekly hours	United States <sup>2</sup>	Southwest	Pacific
All workers .....	100	100	100
40 hours .....	95	100	91
42 hours .....	3	-	-
44 hours .....	2	-	9

<sup>1</sup> Data relate to the predominant schedule for full-time day-shift workers in each establishment.

<sup>2</sup> Includes data for regions in addition to those shown separately. For defini-

tion of regions, see appendix table A-1, footnote 1.

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

**Table 15. Aluminum primary production: Shift differential provisions**

(Percent of production workers by shift differential provisions,<sup>1</sup> United States and selected regions, February 1981)

Shift differential	United States <sup>2</sup>	Southwest	Pacific
<b>Second shift</b>			
Workers in establishments with second-shift provisions .....	100.0	100.0	100.0
With shift differential .....	100.0	100.0	100.0
Uniform cents per hour .....	11.9	3.1	15.9
30 cents .....	8.7	3.1	-
40 cents .....	3.2	-	15.9
Uniform percentage .....	77.9	96.9	57.9
3 percent .....	77.5	96.9	57.9
10 percent .....	.4	-	-
Other formal paid differential <sup>3</sup> .....	10.2	-	26.3
<b>Third shift</b>			
Workers in establishments with third-shift provisions .....	100.0	100.0	100.0
With shift differential .....	100.0	100.0	100.0
Uniform cents per hour .....	11.9	3.1	15.9
35 cents .....	4.7	-	-
45 cents .....	3.3	-	-
50 cents .....	.7	3.1	-
60 cents .....	3.2	-	15.9
Uniform percentage .....	77.9	96.9	57.9
5 percent .....	77.5	96.9	57.9
10 percent .....	.4	-	-
Other formal paid differential <sup>3</sup> .....	10.2	-	26.3

<sup>1</sup> Refers to policies of establishments currently operating late shifts or having provisions covering late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Includes establishments providing 8 hours' pay for 7 1/2 hours' work plus a cents-per-hour or percentage addition to first-shift rates.

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

**Table 16. Aluminum primary production: Shift differential practices**

(Percent of production workers employed on late shifts by amount of pay differential, United States and selected regions, February 1981)

Shift differential	United States <sup>1</sup>	Southwest	Pacific
<b>Second shift</b>			
Workers employed on second shift .....	22.7	21.3	19.8
Receiving differential .....	22.7	21.3	19.8
Uniform cents per hour .....	2.8	.3	3.2
30 cents .....	2.1	.3	-
40 cents .....	.6	-	3.2
Uniform percentage .....	17.1	20.9	8.6
3 percent .....	17.1	20.9	8.6
10 percent .....	( <sup>2</sup> )	-	-
Other formal paid differential <sup>3</sup> .....	2.8	-	8.0
<b>Third shift</b>			
Workers employed on third shift .....	23.9	21.3	14.4
Receiving differential .....	23.9	21.3	14.4
Uniform cents per hour .....	2.5	.3	1.6
35 cents .....	1.6	-	-
45 cents .....	.5	-	-
50 cents .....	.1	.3	-
60 cents .....	.3	-	1.6
Uniform percentage .....	19.2	20.9	7.5
5 percent .....	19.2	20.9	7.5
10 percent .....	( <sup>2</sup> )	-	-
Other formal paid differential <sup>3</sup> .....	2.3	-	5.3

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Less than 0.05 percent.

<sup>3</sup> Includes establishments providing 8

hours' pay for 7 1/2 hours' work plus a cents-per-hour or percentage addition to first-shift rates.

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

**Table 18. Aluminum primary production: Paid vacations**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	Southwest	Pacific
All workers .....	100	100	100
<b>Method of payment</b>			
Workers in establishments providing paid vacations .....	100	100	100
Length-of-time payment .....	98	100	100
Percentage payment .....	2	-	-
<b>Amount of vacation pay<sup>2</sup></b>			
After 1 year of service:			
1 week .....	92	100	100
Over 1 and under 2 weeks .....	8	-	-
After 2 years of service:			
1 week .....	54	66	71
Over 1 and under 2 weeks .....	40	31	29
2 weeks .....	1	3	-
3 weeks .....	5	-	-
After 3 years of service:			
2 weeks .....	91	97	100
Over 2 and under 3 weeks .....	4	3	-
3 weeks .....	5	-	-
After 4 years of service:			
2 weeks .....	91	97	100
Over 2 and under 3 weeks .....	4	3	-
3 weeks .....	5	-	-
After 5 years of service:			
2 weeks .....	91	97	100
Over 2 and under 3 weeks .....	3	-	-
Over 3 and under 4 weeks .....	1	3	-
Over 4 and under 5 weeks .....	5	-	-
After 10 years of service:			
3 weeks .....	91	97	100
Over 4 and under 5 weeks .....	4	3	-
6 weeks .....	5	-	-
After 12 years of service:			
3 weeks .....	91	97	100
Over 4 and under 5 weeks .....	1	3	-
Over 5 and under 6 weeks .....	3	-	-
6 weeks .....	5	-	-
After 15 years of service:			
3 weeks .....	68	97	84
4 weeks .....	23	-	16
Over 4 and under 5 weeks .....	1	3	-
Over 5 and under 6 weeks .....	3	-	-
6 weeks .....	5	-	-
After 20 years of service:			
3 weeks .....	( <sup>2</sup> )	-	-
4 weeks .....	91	97	100
Over 4 and under 5 weeks .....	1	3	-
6 weeks .....	5	-	-
Over 7 weeks .....	3	-	-

See footnotes at end of table.

**Table 17. Aluminum primary production: Paid holidays**

(Percent of production workers in establishments with formal provisions for paid holidays, United States and selected regions, February 1981)

Number of paid holidays	United States <sup>1</sup>	Southwest	Pacific
All workers .....	100	100	100
Workers in establishments providing paid holidays .....	100	100	100
8 days .....	( <sup>2</sup> )	-	-
10 days .....	7	-	22
11 days .....	39	3	33
12 days .....	53	97	46

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Less than 0.5 percent.

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

**Table 18. Aluminum primary production: Paid vacations—Continued**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	Southwest	Pacific
<b>Amount of vacation pay<sup>2</sup>—Continued</b>			
After 25 years of service:			
3 weeks .....	( <sup>3</sup> )	-	-
Over 4 and under 5 weeks .....	1	3	-
5 weeks .....	91	97	100
6 weeks .....	5	-	-
Over 7 weeks .....	3	-	-
After 30 years of service: <sup>4</sup>			
3 weeks .....	( <sup>3</sup> )	-	-
Over 4 and under 5 weeks .....	1	3	-
5 weeks .....	91	97	100
6 weeks .....	5	-	-
Over 7 weeks .....	3	-	-

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Vacation payments, such as percent of annual earnings, were converted to an equivalent time basis. Periods of service were chosen arbitrarily and do not necessarily reflect individual establishment provisions for progression. For

example, changes indicated at 10 years may include changes that occurred between 5 and 10 years.

<sup>3</sup> Less than 0.5 percent.

<sup>4</sup> Vacation provisions were virtually the same after longer periods of service.

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

**Table 19. Aluminum primary production: Health, insurance, and retirement plans**

(Percent of production workers in establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States and selected regions, February 1981)

Type of plan	United States <sup>2</sup>	Southwest	Pacific
All workers .....	100	100	100
Workers in establishments providing:			
Life insurance .....	100	100	100
Noncontributory plans .....	95	100	91
Accidental death and dismemberment insurance .....	45	3	71
Noncontributory plans .....	40	3	62
Sickness and accident insurance or sick leave or both <sup>3</sup> .....	100	100	100
Sickness and accident insurance .....	85	34	100
Noncontributory plans .....	81	34	100
Sick leave (full pay, no waiting period) .....	17	73	-
Sick leave (partial pay or waiting period) .....	-	-	-
Long-term disability insurance .....	11	-	38
Noncontributory plans .....	11	-	38
Hospitalization insurance .....	100	100	100
Noncontributory plans .....	96	100	100
Surgical insurance .....	100	100	100
Noncontributory plans .....	96	100	100
Medical insurance .....	100	100	100
Noncontributory plans .....	96	100	100
Major medical insurance .....	100	100	100
Noncontributory plans .....	96	100	100
Dental insurance .....	100	100	100
Noncontributory plans .....	8	-	22
Retirement plans <sup>4</sup> .....	100	100	100
Pensions .....	100	100	100
Noncontributory plans .....	100	100	100
Severance pay .....	22	97	-

<sup>1</sup> Includes those plans for which the employer pays at least part of the cost and excludes legally required plans such as workers' compensation and social security; however, plans required by State temporary disability insurance laws are included if the employer contributes more than is legally required or the employees receive benefits in excess of legal requirements. "Noncontributory plans" include only those plans financed

entirely by the employer.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Unduplicated total of workers receiving sickness and accident insurance and sick leave shown separately.

<sup>4</sup> Unduplicated total of workers covered by pension plans and severance pay shown separately.

**Table 20. Aluminum primary production: Other selected benefits**(Percent of production workers in establishments with formal provisions for other selected benefits,<sup>1</sup> United States and selected regions, February 1981)

Type of benefit	United States <sup>2</sup>	Southwest	Pacific
<b>Workers in establishments with provisions for:</b>			
Funeral leave .....	100	100	100
Jury duty leave .....	100	100	100
Technological severance pay .....	15	66	-
Cost-of-living adjustments .....	100	100	100
Based on BLS consumer price index .....	100	100	100
Vacation bonuses .....	76	34	54
Based on time-off .....	34	23	-
Based on fixed flat-sum .....	8	-	-
Seasonal bonus <sup>3</sup> .....	33	11	54
Extended or supplemental vacation .....	89	97	100
Supplemental unemployment benefit plan ....	86	73	100

<sup>1</sup> For definition of items, see appendix A.<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.<sup>3</sup> Includes bonus arrangements that

provide additional bonus for using vacation time during specified periods of the year.

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

**Table 21. Copper rolling, drawing, and extruding: Average hourly earnings by selected characteristics**

(Number and average straight-time hourly earnings<sup>1</sup> of production workers by selected characteristics, United States and selected regions, February 1981)

Characteristic	United States <sup>2</sup>		New England		Middle Atlantic		Great Lakes	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
All workers .....	15,906	\$7.75	2,628	\$8.03	3,639	\$7.90	6,977	\$8.19
Size of community:								
Metropolitan areas <sup>3</sup> .....	12,445	7.97	1,391	7.86	3,396	8.15	6,329	8.22
Nonmetropolitan areas .....	3,461	6.98	-	-	-	-	-	-
Size of establishment:								
50-249 workers .....	3,362	7.22	864	8.11	-	-	972	7.45
250 workers or more .....	12,544	7.89	1,764	7.99	2,916	8.27	6,005	8.31
Labor-management contract coverage:								
Establishments with--								
Majority of workers covered .....	15,906	7.75	2,628	8.03	3,639	7.90	6,977	8.19
None or a minority of workers covered .....	1,205	6.36	-	-	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on week-ends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

<sup>3</sup> Standard Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget through February 1974.

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



**Table 22. Copper rolling, drawing, and extruding: Earnings distribution**

(Percent distribution of production workers by straight-time hourly earnings,<sup>1</sup> United States and selected regions and State, February 1981)

Hourly earnings	United States <sup>2</sup>	Regions			State
		New England	Middle Atlantic	Great Lakes	Connecticut
Number of workers .....	15,906	2,628	3,639	6,977	2,122
Average hourly earnings <sup>1</sup> .....	\$7.75	\$8.03	\$7.90	\$8.19	\$8.33
Total .....	100.0	100.0	100.0	100.0	100.0
Under \$5.00 .....	3.4	.6	5.4	.3	-
\$5.00 and under \$5.20 .....	.3	.2	.2	( <sup>3</sup> )	-
\$5.20 and under \$5.40 .....	.9	.6	.4	.2	-
\$5.40 and under \$5.60 .....	1.4	.2	.2	.1	-
\$5.60 and under \$5.80 .....	2.5	1.9	.1	( <sup>3</sup> )	-
\$5.80 and under \$6.00 .....	2.6	3.5	-	( <sup>3</sup> )	-
\$6.00 and under \$6.20 .....	1.8	1.1	.4	.6	-
\$6.20 and under \$6.40 .....	2.6	.5	.1	1.3	-
\$6.40 and under \$6.60 .....	1.3	1.9	.1	.1	( <sup>3</sup> )
\$6.60 and under \$6.80 .....	2.5	.6	1.3	.9	.5
\$6.80 and under \$7.00 .....	1.5	.8	.3	2.2	.9
\$7.00 and under \$7.20 .....	3.6	3.9	7.0	2.6	4.3
\$7.20 and under \$7.40 .....	8.8	5.5	18.6	7.6	6.4
\$7.40 and under \$7.60 .....	9.4	8.5	6.0	14.3	9.2
\$7.60 and under \$7.80 .....	6.0	10.9	2.6	7.3	10.7
\$7.80 and under \$8.00 .....	7.9	11.3	7.1	9.4	11.3
\$8.00 and under \$8.20 .....	7.7	6.8	9.0	9.8	8.1
\$8.20 and under \$8.40 .....	7.1	8.4	11.2	7.0	9.7
\$8.40 and under \$8.60 .....	4.9	5.8	2.4	7.4	7.1
\$8.60 and under \$8.80 .....	6.3	6.8	6.9	7.7	7.8
\$8.80 and under \$9.00 .....	3.6	6.2	3.2	4.1	6.9
\$9.00 and under \$9.20 .....	2.9	2.6	4.8	3.0	3.2
\$9.20 and under \$9.40 .....	3.3	1.4	5.6	4.1	1.8
\$9.40 and under \$9.60 .....	1.5	2.4	2.3	1.3	2.9
\$9.60 and under \$9.80 .....	1.0	1.0	1.0	1.3	1.2
\$9.80 and under \$10.00 .....	.7	.3	.9	1.0	.4
\$10.00 and under \$10.20 .....	.5	1.3	.4	.4	1.6
\$10.20 and under \$10.40 .....	1.9	.7	.4	3.8	.8
\$10.40 and under \$10.60 .....	.4	.7	.2	.4	.8
\$10.60 and under \$10.80 .....	.3	.3	.5	.2	.4
\$10.80 and under \$11.00 .....	.8	1.3	.2	1.1	1.6
\$11.00 and over .....	.6	1.9	1.0	.2	2.4

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Less than 0.05 percent.

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

**Table 23. Copper rolling, drawing, and extruding: Occupational earnings**

(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions and State, February 1981)

Department and occupation	United States <sup>2</sup>				New England				Middle Atlantic				
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			
		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range	
<b>Production</b>													
Casting-wheel operators .....	44	\$7.24	\$6.63	\$6.61 - \$8.37	-	-	-	-	-	-	-	-	-
Cut-off saw operators, metal .....	330	7.20	7.32	6.28 - 8.05	-	-	-	-	86	\$7.75	\$7.75	\$7.31 - \$8.12	-
Draw-bench operators .....	262	6.98	7.38	6.43 - 7.52	51	\$6.89	\$6.53	\$6.43 - \$7.72	-	-	-	-	-
Extruder operators .....	132	7.07	7.57	6.12 - 8.32	-	-	-	-	-	-	-	-	-
Furnace operators .....	225	8.08	7.97	7.55 - 8.33	-	-	-	-	-	-	-	-	-
Heat treaters .....	212	8.03	8.12	7.56 - 8.76	76	8.11	8.03	7.71 - 8.53	36	8.68	8.95	8.07 - 9.28	-
Ingot-casting operators .....	127	8.02	7.96	7.61 - 8.75	-	-	-	-	-	-	-	-	-
Inspectors .....	382	7.60	7.97	7.25 - 8.29	63	7.32	7.84	5.96 - 8.01	102	7.69	8.05	7.42 - 9.16	-
Class A .....	75	8.17	8.54	7.56 - 8.64	-	-	-	-	-	-	-	-	-
Class B .....	194	7.31	7.46	6.39 - 8.29	34	7.28	7.91	5.74 - 8.23	-	-	-	-	-
Class C .....	113	7.71	8.03	7.18 - 8.05	23	7.28	7.84	5.96 - 7.93	-	-	-	-	-
Machine-tool operators, production ..	326	7.61	7.71	6.16 - 8.35	29	7.80	7.80	7.71 - 7.89	45	8.12	8.28	7.55 - 8.35	-
Class A .....	182	7.83	8.10	6.88 - 8.58	-	-	-	-	-	-	-	-	-
Class B .....	45	8.40	8.10	7.55 - 9.52	-	-	-	-	-	-	-	-	-
Class C .....	99	6.85	6.16	6.16 - 7.71	25	7.80	7.80	7.71 - 7.89	-	-	-	-	-
Milling-machine operators .....	19	7.96	7.81	7.65 - 8.12	-	-	-	-	-	-	-	-	-
Punch-press operators:													
Class B .....	34	7.01	7.33	7.33 - 7.40	-	-	-	-	-	-	-	-	-
Rolling-mill operators, hot rolls .....	78	8.94	9.15	8.45 - 9.33	-	-	-	-	10	8.57	-	-	-
Rolling-mill operators, cold rolls .....	213	8.81	8.82	8.23 - 9.16	84	8.95	8.82	8.36 - 9.20	-	-	-	-	-
Rolling-mill helpers, hot rolls .....	27	8.31	8.10	8.10 - 8.64	-	-	-	-	-	-	-	-	-
Rolling-mill helpers, cold rolls .....	183	7.96	7.84	7.39 - 8.58	-	-	-	-	35	8.04	7.40	7.40 - 9.20	-
Stretcher-leveler operators .....	19	7.07	7.35	7.35 - 7.50	-	-	-	-	-	-	-	-	-
Tube drawers .....	321	6.97	6.36	6.28 - 8.07	-	-	-	-	-	-	-	-	-
Welders, hand .....	60	8.77	8.70	8.64 - 9.52	-	-	-	-	27	8.49	8.64	7.80 - 8.64	-
Class A .....	56	8.87	8.75	8.64 - 9.52	-	-	-	-	27	8.49	8.64	7.80 - 8.64	-
Welders, machine .....	23	8.20	7.56	7.56 - 8.63	-	-	-	-	-	-	-	-	-
Wire drawers .....	-	-	-	-	54	8.36	8.32	7.91 - 8.81	-	-	-	-	-
<b>Maintenance and service</b>													
Crane operators, electric bridge .....	552	7.52	7.67	7.33 - 8.20	52	7.74	7.76	7.63 - 7.97	85	7.80	7.78	7.48 - 8.05	-
Under 20 tons .....	483	7.45	7.60	7.27 - 8.20	-	-	-	-	43	7.56	7.49	7.47 - 7.49	-
Electricians, maintenance .....	326	8.63	8.82	8.53 - 9.15	74	8.93	8.82	8.72 - 9.09	86	8.33	8.95	8.01 - 9.15	-
Electronics technicians:													
Class B .....	19	8.18	9.02	6.87 - 9.08	-	-	-	-	-	-	-	-	-
Class C .....	11	8.89	-	-	-	-	-	-	-	-	-	-	-
Janitors .....	176	7.01	7.11	6.98 - 7.41	35	7.32	7.39	7.06 - 7.56	36	7.14	7.07	7.06 - 7.15	-
Laborers, material handling .....	158	6.83	7.30	5.63 - 7.96	13	7.47	-	-	45	6.20	7.75	3.95 - 7.78	-

See footnotes at end of table.

**Table 23. Copper rolling, drawing, and extruding: Occupational earnings—Continued**(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions and State, February 1981)

Department and occupation	United States <sup>2</sup>				New England				Middle Atlantic					
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>				
		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range		
<b>Maintenance and service—Continued</b>														
Machinists, maintenance .....	360	\$8.81	\$8.71	\$8.40 - \$9.64	72	\$9.01	\$8.82	\$8.63 - \$9.21	75	\$8.38	\$8.40	\$8.01 - \$8.71		
Maintenance workers, general utility .....	128	8.42	8.71	7.27 - 9.24	15	8.66	10.35	6.85 - 10.35	-	-	-	-	-	-
Mechanics, maintenance .....	485	7.87	8.50	6.61 - 8.64	58	8.71	8.58	8.31 - 8.65	161	8.44	8.64	8.01 - 8.64		
Packers .....	563	6.67	7.23	5.71 - 7.44	-	-	-	-	87	6.80	7.23	7.23 - 7.31		
Power-truck operators .....	701	7.49	7.69	7.34 - 8.03	96	7.62	7.78	7.45 - 8.02	155	7.57	7.40	7.40 - 8.05		
Forklift .....	692	7.51	7.70	7.38 - 8.03	96	7.62	7.78	7.45 - 8.02	155	7.57	7.40	7.40 - 8.05		
Tool and die makers .....	134	8.73	8.85	8.52 - 9.19	24	7.93	7.95	6.49 - 9.36	28	8.63	8.52	8.52 - 9.19		
Tool clerks .....	62	6.84	7.33	5.76 - 7.42	-	-	-	-	-	-	-	-	-	-
Truckdrivers .....	89	7.61	7.69	6.74 - 8.33	9	7.85	-	-	-	-	-	-	-	-
Medium (1.5 tons and including 4 tons) .....	20	7.80	7.55	7.55 - 8.36	-	-	-	-	-	-	-	-	-	-
Heavy (over 4 tons, trailer type) .....	62	7.53	7.69	6.48 - 8.33	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 23. Copper rolling, drawing, and extruding: Occupational earnings—Continued**

(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions and State, February 1981)

Department and occupation	Great Lakes					Connecticut				
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>				
		Mean	Median	Middle range		Mean	Median	Middle range		
<b>Production</b>										
Cut-off saw operators, metal .....	115	\$7.33	\$7.48	\$6.81 - \$7.89	-	-	-	-	-	-
Draw-bench operators .....	38	7.67	7.41	7.35 - 7.70	-	-	-	-	-	-
Extruder operators .....	43	8.24	7.87	7.80 - 8.76	-	-	-	-	-	-
Furnace operators .....	121	8.23	7.81	7.49 - 9.32	-	-	-	-	-	-
Heat treaters .....	57	9.12	8.76	8.76 - 10.30	73	\$8.17	\$8.04	\$7.71 - \$8.58		
Ingot-casting operators .....	87	8.55	8.28	7.61 - 9.40	-	-	-	-	-	-
Inspectors .....	172	7.96	8.17	7.39 - 8.29	34	8.10	7.97	7.84 - 8.27		
Class A .....	43	8.20	8.54	8.31 - 8.64	-	-	-	-	-	-
Class B .....	98	7.82	8.17	7.39 - 8.29	-	-	-	-	-	-
Class C .....	31	8.09	8.03	7.18 - 8.03	-	-	-	-	-	-
Rolling-mill operators, cold rolls .....	71	8.99	9.12	8.87 - 9.12	83	8.96	8.82	8.36 - 9.21		
Rolling-mill helpers, cold rolls .....	58	8.32	8.44	8.20 - 8.62	-	-	-	-	-	-
Tube drawers .....	94	7.64	7.64	7.45 - 8.11	-	-	-	-	-	-
Wire drawers .....	-	-	-	-	54	8.36	8.32	7.91 - 8.81		
<b>Maintenance and service</b>										
Crane operators, electric bridge .....	288	7.99	7.90	7.58 - 8.44	-	-	-	-	-	-
Under 20 tons .....	273	8.00	7.97	7.58 - 8.44	-	-	-	-	-	-
Electricians, maintenance .....	138	8.83	8.82	8.53 - 9.21	62	9.16	8.82	8.72 - 9.19		
Class C .....	11	8.89	-	-	-	-	-	-	-	-
Janitors .....	77	7.37	7.25	7.04 - 7.96	30	7.43	7.29	7.06 - 7.56		
Laborers, material handling .....	64	7.53	7.96	7.03 - 7.96	10	7.57	-	-	-	-
Machinists, maintenance .....	155	9.50	9.87	8.53 - 10.29	53	9.33	8.82	8.63 - 9.56		
Maintenance workers, general										
utility .....	89	8.67	8.71	8.51 - 9.24	-	-	-	-	-	-
Mechanics, maintenance .....	59	8.89	8.66	8.66 - 9.21	58	8.71	8.58	8.31 - 8.65		
Packers .....	241	7.40	7.42	7.21 - 7.55	-	-	-	-	-	-
Power-truck operators .....	361	7.87	7.95	7.49 - 8.03	79	7.89	7.80	7.49 - 8.05		
Forklift .....	360	7.87	7.95	7.49 - 8.03	79	7.89	7.80	7.49 - 8.05		
Tool and die makers .....	65	9.42	8.93	8.72 - 10.83	-	-	-	-	-	-
Tool clerks .....	31	7.41	7.42	7.38 - 7.51	-	-	-	-	-	-
Truckdrivers .....	48	8.14	8.33	7.69 - 8.33	-	-	-	-	-	-
Heavy (over 4 tons, trailer type) .....	36	8.29	8.33	7.72 - 8.33	-	-	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

<sup>3</sup> See appendix A for definitions of means, medians, and middle ranges. Medians and middle ranges are

not provided for entries with fewer than 15 workers.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for subcategories in addition to those shown separately.

**Table 24. Copper rolling, drawing, and extruding: Method of wage payment**(Percent of production workers by method of wage payment,<sup>1</sup> United States and selected regions, February 1981)

Method	United States <sup>2</sup>	New England	Middle Atlantic	Great Lakes
All workers .....	100	100	100	100
Time-rated workers .....	66	50	67	65
Formal plans .....	66	50	67	65
Single rate .....	39	15	63	33
Range of rates .....	27	35	4	32
Individual rates .....	-	-	-	-
Incentive workers .....	34	50	33	35
Individual piecework .....	14	42	-	14
Group piecework .....	( <sup>3</sup> )	-	-	1
Individual bonus .....	8	5	19	8
Group bonus .....	11	3	14	13

<sup>1</sup> For definition of method of wage payment, see appendix A.<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.<sup>3</sup> Less than 0.5 percent.

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

**Table 25. Copper rolling, drawing, and extruding: Scheduled weekly hours**(Percent of production workers by scheduled weekly hours,<sup>1</sup> United States and selected regions, February 1981)

Weekly hours	United States <sup>2</sup>	New England	Middle Atlantic	Great Lakes
All workers .....	100	100	100	100
37.5 hours .....	8	-	23	6
40 hours .....	83	76	54	94
42.5 hours .....	1	6	-	-
44 hours .....	3	-	14	-
48 hours .....	4	14	9	-
50 hours .....	1	4	-	-

<sup>1</sup> Data relate to the predominant schedule for full-time day-shift workers in each establishment.<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of re-

gions, see appendix table A-1, footnote 1.

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

**Table 26. Copper rolling, drawing, and extruding: Shift differential provisions**

(Percent of production workers by shift differential provisions,<sup>1</sup> United States and selected regions, February 1981)

Shift differential	United States <sup>2</sup>	New England	Middle Atlantic	Great Lakes
<b>Second shift</b>				
Workers in establishments with second-shift provisions .....	100.0	100.0	100.0	100.0
With shift differential .....	100.0	100.0	100.0	100.0
Uniform cents per hour .....	98.1	100.0	100.0	100.0
7 cents .....	4.5	-	-	10.5
8 cents .....	.9	-	-	-
10 cents .....	6.7	-	6.7	-
12 cents .....	4.2	-	-	-
13 cents .....	.8	-	-	1.9
13 1/3 cents .....	1.1	-	4.7	-
14 cents .....	3.1	-	13.8	-
15 cents .....	6.7	8.3	-	2.7
17 cents .....	7.8	3.4	-	16.7
20 cents .....	17.8	32.9	36.0	9.3
Over 20 and under 25 cents .....	11.9	8.3	-	24.4
25 cents .....	30.4	47.1	29.5	34.5
Over 30 and under 35 cents .....	2.1	-	9.3	-
Other formal paid differential .....	1.9	-	-	-
<b>Third shift</b>				
Workers in establishments with third-shift provisions .....	100.0	100.0	100.0	100.0
With shift differential .....	100.0	100.0	100.0	100.0
Uniform cents per hour .....	98.1	100.0	100.0	100.0
12 cents .....	5.1	-	-	10.5
15 cents .....	6.7	-	6.7	-
16 cents .....	.9	-	-	-
17 cents .....	7.8	-	18.5	-
18 cents .....	2.8	-	-	4.6
20 cents .....	8.1	8.3	-	7.3
Over 20 and under 25 cents .....	5.0	5.7	-	9.5
25 cents .....	16.2	25.0	36.0	9.3
Over 25 and under 30 cents .....	10.6	-	-	24.4
30 cents .....	32.7	61.0	29.5	34.5
Over 30 and under 35 cents .....	2.1	-	9.3	-
Other formal paid differential .....	1.9	-	-	-

<sup>1</sup> Refers to policies of establishments currently operating late shifts or having provisions covering late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of re-

gions, see appendix table A-1, footnote 1.

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

**Table 27. Copper rolling, drawing, and extruding: Shift differential practices**

(Percent of production workers employed on late shifts by amount of pay differential, United States and selected regions, February 1981)

Shift differential	United States <sup>1</sup>	New England	Middle Atlantic	Great Lakes
<b>Second shift</b>				
Workers employed on second shift .....	29.2	24.2	26.8	31.5
Receiving differential .....	29.2	24.2	26.8	31.5
Uniform cents per hour .....	28.6	24.2	26.8	31.5
7 cents .....	1.6	-	-	3.6
8 cents .....	.2	-	-	-
10 cents .....	2.2	-	1.4	-
12 cents .....	1.4	-	-	-
13 cents .....	.2	-	-	.5
13 1/3 cents .....	.3	-	1.4	-
14 cents .....	1.1	-	4.8	-
15 cents .....	2.1	2.3	-	.8
17 cents .....	2.3	-	-	5.3
20 cents .....	4.7	8.0	10.1	2.3
Over 20 and under 25 cents .....	3.8	2.4	-	7.8
25 cents .....	8.3	11.5	7.1	11.2
Over 30 and under 35 cents .....	.4	-	1.9	-
Other formal paid differential .....	.6	-	-	-
<b>Third shift</b>				
Workers employed on third shift .....	18.4	11.4	20.5	18.1
Receiving differential .....	18.4	11.4	20.5	18.1
Uniform cents per hour .....	17.9	11.4	20.5	18.1
12 cents .....	1.2	-	-	2.6
15 cents .....	1.4	-	1.2	-
16 cents .....	.2	-	-	-
17 cents .....	1.6	-	3.3	-
18 cents .....	.5	-	-	1.1
20 cents .....	1.9	1.1	-	1.7
Over 20 and under 25 cents .....	.9	.3	-	1.9
25 cents .....	3.1	2.4	7.1	2.6
Over 25 and under 30 cents .....	1.1	-	-	2.4
30 cents .....	5.7	7.5	7.0	5.8
Over 30 and under 35 cents .....	.4	-	1.8	-
Other formal paid differential .....	.5	-	-	-

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

**Table 28. Copper rolling, drawing, and extruding: Paid holidays**

(Percent of production workers in establishments with formal provisions for paid holidays, United States and selected regions, February 1981)

Number of paid holidays	United States <sup>1</sup>	New England	Middle Atlantic	Great Lakes
All workers .....	100	100	100	100
Workers in establishments providing paid holidays .....	100	100	100	100
6 days .....	1	6	-	-
7 days .....	2	-	-	-
9 days .....	11	-	14	-
9 days plus 1 or 2 half days .....	1	7	-	-
10 days .....	21	20	23	20
11 days .....	48	50	63	57
12 days .....	11	8	-	16
13 days .....	4	8	-	7

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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



**Table 29. Copper rolling, drawing, and extruding: Paid vacations**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	New England	Middle Atlantic	Great Lakes
All workers .....	100	100	100	100
<b>Method of payment</b>				
Workers in establishments providing paid vacations .....	100	100	100	100
Length-of-time payment .....	52	47	59	50
Percentage payment .....	48	53	41	50
<b>Amount of vacation pay<sup>2</sup></b>				
After 1 year of service:				
1 week .....	88	79	68	100
Over 1 and under 2 weeks .....	11	21	32	-
2 weeks .....	1	-	-	-
After 2 years of service:				
1 week .....	84	71	68	94
Over 1 and under 2 weeks .....	13	21	32	6
2 weeks .....	3	7	-	-
After 3 years of service:				
1 week .....	7	8	-	10
Over 1 and under 2 weeks .....	19	19	9	33
2 weeks .....	71	59	91	57
Over 2 and under 3 weeks .....	2	14	-	-
After 4 years of service:				
1 week .....	6	8	-	10
Over 1 and under 2 weeks .....	19	19	9	33
2 weeks .....	72	59	91	57
Over 2 and under 3 weeks .....	2	14	-	-
After 5 years of service:				
2 weeks .....	86	73	77	92
Over 2 and under 3 weeks .....	13	27	23	6
3 weeks .....	1	-	-	2
After 10 years of service:				
2 weeks .....	2	-	-	-
Over 2 and under 3 weeks .....	11	8	-	23
3 weeks .....	87	92	100	77
After 12 years of service:				
Over 2 and under 3 weeks .....	11	8	-	21
3 weeks .....	87	92	91	79
Over 3 and under 4 weeks .....	2	-	9	-
4 weeks .....	( <sup>3</sup> )	-	-	-
After 15 years of service:				
3 weeks .....	62	55	54	54
Over 3 and under 4 weeks .....	17	36	37	6
4 weeks .....	21	8	9	40
After 20 years of service:				
3 weeks .....	7	-	7	-
Over 3 and under 4 weeks .....	1	-	-	3
4 weeks .....	76	89	61	81
Over 4 and under 5 weeks .....	10	11	23	6
5 weeks .....	7	-	9	10

See footnotes at end of table.

**Table 29. Copper rolling, drawing, and extruding: Paid vacations—Continued**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	New England	Middle Atlantic	Great Lakes
<b>Amount of vacation pay<sup>2</sup>—Continued</b>				
After 25 years of service:				
3 weeks .....	6	-	7	-
4 weeks .....	24	14	5	24
Over 4 and under 5 weeks .....	3	20	-	-
5 weeks .....	67	66	89	76
After 30 years of service: <sup>4</sup>				
3 weeks .....	6	-	7	-
4 weeks .....	20	14	5	14
Over 4 and under 5 weeks .....	4	20	-	3
5 weeks .....	70	66	89	83

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Vacation payments, such as percent of annual earnings, were converted to an equivalent time basis. Periods of service were chosen arbitrarily and do not necessarily reflect individual establishment provisions for progression. For example, changes indicated at 10 years may in-

clude changes that occurred between 5 and 10 years.

<sup>3</sup> Less than 0.5 percent.

<sup>4</sup> Vacation provisions were virtually the same after longer periods of service.

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

**Table 30. Copper rolling, drawing, and extruding: Health, insurance, and retirement plans**

(Percent of production workers in establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States and selected regions, February 1981)

Type of plan	United States <sup>2</sup>	New England	Middle Atlantic	Great Lakes
All workers .....	100	100	100	100
Workers in establishments providing:				
Life insurance .....	100	100	100	100
Noncontributory plans .....	99	92	100	100
Accidental death and dismemberment insurance .....	92	100	77	97
Noncontributory plans .....	91	92	77	97
Sickness and accident insurance or sick leave or both <sup>3</sup> .....	97	97	100	100
Sickness and accident insurance .....	96	97	100	100
Noncontributory plans .....	94	88	100	100
Sick leave (full pay, no waiting period) .....	4	-	20	-
Sick leave (partial pay or waiting period) .....	1	-	-	-
Long-term disability insurance .....	28	14	-	48
Noncontributory plans .....	28	14	-	48
Hospitalization insurance .....	100	100	100	100
Noncontributory plans .....	99	100	100	100
Surgical insurance .....	100	100	100	100
Noncontributory plans .....	99	100	100	100
Medical insurance .....	100	100	100	100
Noncontributory plans .....	99	100	100	100
Major medical insurance .....	97	100	100	93
Noncontributory plans .....	96	100	100	93
Dental insurance .....	77	80	89	90
Noncontributory plans .....	17	42	13	16
Retirement plans <sup>4</sup> .....	95	100	100	100
Pensions .....	94	100	100	100
Noncontributory plans .....	94	100	100	100
Severance pay .....	1	-	-	-

<sup>1</sup> Includes those plans for which the employer pays at least part of the cost and excludes legally required plans such as workers' compensation and social security; however, plans required by State temporary disability insurance laws are included if the employer contributes more than is legally required or the employees receive benefits in excess of legal requirements. "Noncontributory plans" include only those plans financed entirely by the em-

ployer.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Unduplicated total of workers receiving sickness and accident insurance and sick leave shown separately.

<sup>4</sup> Unduplicated total of workers covered by pension plans and severance pay shown separately.

**Table 31. Copper rolling, drawing, and extruding: Other selected benefits**

(Percent of production workers in establishments with formal provisions for other selected benefits,<sup>1</sup> United States and selected regions, February 1981)

Type of benefit	United States <sup>2</sup>	New England	Middle Atlantic	Great Lakes
Workers in establishments with provisions for:				
Funeral leave .....	92	100	100	100
Jury duty leave .....	99	97	100	100
Technological severance pay .....	15	-	-	34
Cost-of-living adjustments .....	72	74	89	87
Based on BLS consumer price index .....	70	74	89	87
Other basis .....	1	-	-	-
Vacation bonuses .....	42	7	75	54
Based on time-off .....	3	-	-	6
Based on fixed flat-sum .....	16	-	66	3
Based on flat sum which varies by length of service .....	16	7	-	35
Other .....	7	-	9	10
Extended or supplemental vacation .....	1	8	-	-
Supplemental unemployment benefit plan .....	19	17	-	38

<sup>1</sup> For definition of items, see appendix A.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

**Table 32. Aluminum rolling, drawing, and extruding: Average hourly earnings by selected characteristics**

(Number and average straight-time hourly earnings<sup>1</sup> of production workers by selected characteristics, United States, and selected regions February 1981)

Characteristic	United States <sup>2</sup>		Southeast		Great Lakes		Pacific	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
All workers .....	40,739	\$9.54	9,472	\$8.53	8,218	\$9.85	4,736	\$9.73
Size of community:								
Metropolitan areas <sup>3</sup> .....	25,565	10.01	-	-	6,781	9.83	4,736	9.73
Nonmetropolitan areas .....	15,174	8.76	4,728	6.22	-	-	-	-
Size of establishment:								
50-249 workers .....	5,502	6.43	2,126	5.08	-	-	1,006	7.27
250 workers or more .....	35,237	10.03	-	-	7,503	10.10	3,730	10.40
Labor-management contract coverage:								
Establishments with--								
Majority of workers covered .....	29,584	9.41	8,742	8.83	8,218	9.85	4,736	9.73
None or a minority of workers covered .....	1,580	7.57	-	-	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

<sup>3</sup> Standard Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget through February 1974.

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

**Table 33. Aluminum rolling, drawing, and extruding: Earnings distribution**

(Percent distribution of production workers by straight-time hourly earnings,<sup>1</sup> United States and selected regions, February 1981)

Hourly earnings	United States <sup>2</sup>	Southeast	Great Lakes	Pacific
Number of workers .....	40,739	9,472	8,218	4,736
Average hourly earnings <sup>1</sup> .....	\$9.54	\$8.53	\$9.85	\$9.73
Total .....	100.0	100.0	100.0	100.0
Under \$4.00 .....	1.5	6.6	-	-
\$4.00 and under \$4.20 .....	.9	4.0	-	-
\$4.20 and under \$4.40 .....	.5	1.8	-	-
\$4.40 and under \$4.60 .....	1.5	5.7	-	-
\$4.60 and under \$4.80 .....	.5	1.8	-	-
\$4.80 and under \$5.00 .....	1.0	3.5	-	-
\$5.00 and under \$5.20 .....	.9	2.7	-	-
\$5.20 and under \$5.40 .....	1.0	3.2	-	-
\$5.40 and under \$5.60 .....	.4	.6	-	-
\$5.60 and under \$5.80 .....	.7	1.6	-	-
\$5.80 and under \$6.00 .....	1.4	.9	2.4	3.8
\$6.00 and under \$6.20 .....	.6	.3	1.6	.7
\$6.20 and under \$6.40 .....	.8	.3	.5	1.1
\$6.40 and under \$6.60 .....	1.2	1.6	1.0	1.9
\$6.60 and under \$6.80 .....	1.6	.2	3.6	.9
\$6.80 and under \$7.00 .....	2.1	.4	2.8	3.1
\$7.00 and under \$7.20 .....	2.5	.8	3.1	5.0
\$7.20 and under \$7.40 .....	1.3	( <sup>3</sup> )	1.8	4.2
\$7.40 and under \$7.60 .....	1.4	.9	1.8	1.1
\$7.60 and under \$7.80 .....	1.9	.4	1.1	1.0
\$7.80 and under \$8.00 .....	.6	.7	.8	.3
\$8.00 and under \$8.20 .....	.7	.2	1.0	1.0
\$8.20 and under \$8.40 .....	.9	.3	.3	.4
\$8.40 and under \$8.60 .....	2.7	.3	3.0	.2
\$8.60 and under \$8.80 .....	.3	-	( <sup>3</sup> )	.4
\$8.80 and under \$9.00 .....	.3	.1	.6	.1
\$9.00 and under \$9.20 .....	.6	.5	.9	.5
\$9.20 and under \$9.40 .....	.5	.4	1.1	.6
\$9.40 and under \$9.60 .....	1.9	.4	2.3	1.2
\$9.60 and under \$9.80 .....	3.9	6.1	3.2	9.3
\$9.80 and under \$10.00 .....	5.6	4.3	4.1	8.9
\$10.00 and under \$10.20 .....	6.1	6.1	5.8	5.6
\$10.20 and under \$10.40 .....	6.2	11.8	5.7	3.5
\$10.40 and under \$10.60 .....	8.6	3.2	17.5	8.8
\$10.60 and under \$10.80 .....	7.4	4.6	7.9	7.0
\$10.80 and under \$11.00 .....	5.8	5.4	4.7	6.8
\$11.00 and under \$11.20 .....	3.1	.9	4.4	3.4
\$11.20 and under \$11.40 .....	2.5	1.2	2.0	2.3

See footnotes at end of table.

**Table 33. Aluminum rolling, drawing, and extruding: Earnings distribution—Continued**

(Percent distribution of production workers by straight-time hourly earnings,<sup>1</sup> United States and selected regions, February 1981)

Hourly earnings	United States <sup>2</sup>	Southeast	Great Lakes	Pacific
\$11.40 and under \$11.60 .....	1.9	2.0	1.3	1.7
\$11.60 and under \$11.80 .....	2.4	.4	2.6	3.7
\$11.80 and under \$12.00 .....	4.0	.2	1.6	6.9
\$12.00 and under \$12.20 .....	2.0	.6	.4	3.3
\$12.20 and under \$12.40 .....	4.3	13.2	1.1	1.1
\$12.40 and under \$12.60 .....	2.0	-	-	.1
\$12.60 and under \$12.80 .....	1.6	-	7.5	.1
\$12.80 and under \$13.00 .....	( <sup>3</sup> )	-	-	-
\$13.00 and over .....	.1	-	.3	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, foot-

note 1.

<sup>3</sup> Less than 0.05 percent.

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

**Table 34. Aluminum rolling, drawing, and extruding: Occupational earnings**

(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions, February 1981)

Department and occupation	United States <sup>2</sup>				Southeast				Great Lakes				Pacific				
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			
		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range	
<b>Production</b>																	
Casting-wheel operators .....	20	\$9.39	\$8.31	\$8.31 - 11.19	-	-	-	-	-	-	-	-	-	-	-	-	-
Cut-off saw operators, metal .....	711	7.67	7.07	6.11 - 10.22	148	\$6.32	\$5.05	\$4.65 - 10.17	135	\$7.85	\$7.10	\$6.11 - \$8.59	94	\$8.03	\$7.19	\$7.08 - \$7.72	-
Die setters .....	187	7.84	7.50	6.19 - 10.14	-	-	-	-	57	8.13	7.50	7.50 - 9.06	-	-	-	-	-
Draw-bench operators .....	207	8.12	7.49	7.01 - 11.06	-	-	-	-	-	-	-	-	-	-	-	-	-
Electroplaters .....	35	6.40	6.53	5.21 - 7.02	-	-	-	-	-	-	-	-	-	-	-	-	-
Extruder operators .....	565	7.66	7.25	5.84 - 10.24	168	5.58	5.64	4.99 - 5.84	89	7.90	7.35	6.34 - 7.50	85	8.30	7.38	7.25 - 10.24	-
Furnace operators .....	552	9.90	10.75	9.51 - 11.06	115	8.16	10.04	5.15 - 10.61	46	10.58	10.87	10.60 - 11.17	96	10.46	10.65	10.65 - 10.89	-
Heat treaters .....	179	9.90	10.66	9.48 - 10.84	-	-	-	-	66	10.18	10.66	10.55 - 10.73	20	9.45	10.89	6.53 - 10.89	-
Ingot-casting operators .....	541	10.43	10.93	10.12 - 11.61	-	-	-	-	-	-	-	-	18	7.51	7.24	6.24 - 7.24	-
Inspectors .....	1,015	9.77	10.61	9.48 - 10.78	-	-	-	-	-	-	-	-	75	9.73	10.78	7.33 - 10.78	-
Class A .....	231	9.54	10.61	9.06 - 10.61	-	-	-	-	65	9.70	10.95	9.06 - 10.95	-	-	-	-	-
Class B .....	665	9.91	10.62	9.48 - 10.95	34	5.78	5.10	5.10 - 5.53	-	-	-	-	74	9.78	10.78	7.33 - 10.78	-
Class C .....	119	9.42	10.18	9.42 - 10.40	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production ..	409	8.50	7.07	6.40 - 10.88	-	-	-	-	-	-	-	-	-	-	-	-	-
Class B .....	51	5.89	5.89	5.08 - 6.96	-	-	-	-	-	-	-	-	-	-	-	-	-
Milling-machine operators .....	24	7.89	8.75	4.47 - 10.51	-	-	-	-	-	-	-	-	-	-	-	-	-
Punch-press operators .....	425	6.45	5.83	4.10 - 8.59	-	-	-	-	164	7.52	8.59	5.83 - 8.59	45	8.45	7.11	7.11 - 9.94	-
Class A .....	169	6.43	8.59	3.35 - 8.59	-	-	-	-	-	-	-	-	-	-	-	-	-
Class B .....	256	6.47	5.83	5.83 - 8.20	-	-	-	-	-	-	-	-	-	-	-	-	-
Rolling-mill operators, hot rolls .....	220	11.35	11.58	10.78 - 12.05	57	11.16	11.36	10.60 - 11.58	43	11.40	11.72	10.78 - 11.98	-	-	-	-	-
Rolling-mill operators, cold rolls .....	722	10.68	11.33	10.05 - 11.74	136	10.66	10.60	10.36 - 11.58	-	-	-	-	-	-	-	-	-
Rolling-mill helpers, hot rolls .....	-	-	-	-	-	-	-	-	13	9.34	-	-	-	-	-	-	-
Rolling-mill helpers, cold rolls .....	663	10.15	10.40	10.07 - 10.88	-	-	-	-	-	-	-	-	-	-	-	-	-
Stretcher-leveler operators .....	645	8.17	8.06	6.24 - 10.55	140	5.72	4.87	4.65 - 5.04	167	8.45	7.05	6.80 - 10.51	91	8.32	7.45	6.93 - 9.74	-
Welders, hand .....	519	11.43	11.94	11.72 - 11.94	52	8.65	6.56	6.56 - 11.52	-	-	-	-	-	-	-	-	-
Class A .....	465	11.73	11.94	11.88 - 11.94	-	-	-	-	-	-	-	-	-	-	-	-	-
Class B .....	54	8.88	8.04	6.56 - 11.50	-	-	-	-	-	-	-	-	-	-	-	-	-
Welders, machine .....	25	10.11	10.31	9.96 - 10.31	19	9.60	10.31	9.92 - 10.31	-	-	-	-	-	-	-	-	-
Class B .....	19	9.60	10.31	9.92 - 10.31	19	9.60	10.31	9.92 - 10.31	-	-	-	-	-	-	-	-	-
Wire drawers .....	66	8.94	10.39	7.04 - 10.50	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Maintenance and service</b>																	
Crane operators, electric bridge .....	1,183	9.75	10.62	10.17 - 10.82	-	-	-	-	-	-	-	-	137	9.55	10.49	8.35 - 10.67	-
Combination of sizes .....	477	10.29	10.82	10.55 - 10.82	-	-	-	-	-	-	-	-	-	-	-	-	-
Under 20 tons .....	227	8.39	9.74	6.04 - 10.49	-	-	-	-	-	-	-	-	137	9.55	10.49	8.35 - 10.67	-
20 tons or more .....	479	9.85	10.62	10.40 - 10.73	-	-	-	-	-	-	-	-	-	-	-	-	-
Crane operators, mobile .....	34	8.53	7.10	7.10 - 10.17	-	-	-	-	-	-	-	-	-	-	-	-	-
Electricians, maintenance .....	1,207	11.69	12.07	11.85 - 12.23	-	-	-	-	254	11.95	12.69	11.83 - 12.69	138	11.32	12.10	10.94 - 12.10	-
Electronics technicians .....	301	11.33	12.23	10.08 - 12.27	-	-	-	-	-	-	-	-	50	11.09	11.18	9.41 - 12.32	-
Class A .....	218	11.94	12.27	12.23 - 12.27	-	-	-	-	-	-	-	-	-	-	-	-	-
Class B .....	54	9.20	9.41	7.60 - 9.58	-	-	-	-	-	-	-	-	-	-	-	-	-
Class C .....	29	10.67	11.61	8.64 - 11.87	-	-	-	-	-	-	-	-	-	-	-	-	-
Janitors .....	567	8.71	9.74	8.58 - 9.85	-	-	-	-	136	8.27	8.58	7.88 - 8.58	64	9.04	9.79	9.25 - 9.79	-
Laborers, material handling .....	1,780	7.89	8.20	5.83 - 9.96	427	5.34	4.94	4.46 - 5.21	163	8.82	9.63	7.37 - 9.63	199	6.85	6.40	5.83 - 7.08	-
Machinists, maintenance .....	720	11.40	12.10	11.38 - 12.49	50	7.29	5.75	5.75 - 7.91	156	11.84	12.69	11.83 - 12.69	-	-	-	-	-
Maintenance workers, general utility .....	1,086	10.53	10.82	10.07 - 12.49	95	7.12	6.81	5.66 - 7.97	-	-	-	-	-	-	-	-	-
Mechanics, maintenance .....	2,050	11.09	11.83	10.78 - 12.03	290	9.62	11.33	7.50 - 11.52	615	11.65	12.69	10.78 - 12.69	-	-	-	-	-

See footnotes at end of table.



**Table 34. Aluminum rolling, drawing, and extruding: Occupational earnings—Continued**

(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions, February 1981)

Department and occupation	United States <sup>2</sup>				Southeast				Great Lakes				Pacific						
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>					
		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range			
<b>Maintenance and service—Continued</b>																			
Packers .....	1,541	\$7.68	\$7.23	\$6.40 - \$9.96	396	\$6.51	\$4.50	\$4.46 - \$9.87	287	\$7.36	\$6.70	\$6.40 - \$8.46	184	\$8.12	\$7.23	\$7.08 - \$9.74			
Power-truck operators .....	2,246	9.49	10.44	7.78 - 10.51	173	7.93	9.56	4.99 - 10.20	546	9.83	10.44	10.15 - 10.44	-	-	-	-	-	-	-
Forklift .....	1,659	9.18	10.18	7.78 - 10.51	167	7.95	9.56	4.99 - 10.20	183	8.69	10.15	6.95 - 10.15	82	7.95	7.08	6.35 - 9.74			
Other than forklift .....	587	10.40	10.44	10.44 - 10.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tool and die makers .....	301	8.94	8.36	7.11 - 10.08	69	7.41	7.00	6.45 - 7.16	51	11.03	9.85	8.43 - 13.05	92	9.28	9.20	7.84 - 10.94			
Tool clerks .....	127	9.85	10.33	9.64 - 10.62	-	-	-	-	43	9.88	10.51	8.80 - 10.73	22	9.56	9.64	9.55 - 10.23			
Truckdrivers .....	300	9.10	10.40	7.62 - 10.50	-	-	-	-	37	8.41	8.46	6.34 - 10.55	16	8.55	7.53	7.12 - 10.02			
Combination of sizes .....	154	10.24	10.40	10.40 - 10.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medium (1.5 tons and including 4 tons) .....	46	8.51	9.37	6.46 - 10.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy (over 4 tons, trailer type) .....	90	7.61	7.78	5.67 - 8.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

<sup>3</sup> See appendix A for definitions of means, medians, and middle ranges. Medians and middle ranges are not provided for entries with fewer than 15 workers.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for subcategories in addition to those shown separately.

**Table 35. Aluminum rolling, drawing, and extruding: Method of wage payment**

(Percent of production workers by method of wage payment,<sup>1</sup> United States and selected regions, February 1981)

Method	United States <sup>2</sup>	Southeast	Great Lakes	Pacific
All workers .....	100	100	100	100
Time-rated workers .....	99	100	100	100
Formal plans .....	97	100	100	100
Single rate .....	80	87	91	54
Range of rates .....	17	13	9	46
Individual rates .....	3	-	-	-
Incentive workers .....	1	-	-	-

<sup>1</sup> For definition of method of wage payment, see appendix A.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of re-

gions, see appendix table A-1, footnote 1.

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

**Table 36. Aluminum rolling, drawing, and extruding: Scheduled weekly hours**

(Percent of production workers by scheduled weekly hours,<sup>1</sup> United States and selected regions, February 1981)

Weekly hours	United States <sup>2</sup>	Southeast	Great Lakes	Pacific
All workers .....	100	100	100	100
40 hours .....	96	100	100	100
42 hours .....	4	-	-	-
53 hours .....	( <sup>3</sup> )	-	-	-

<sup>1</sup> Data relate to the predominant schedule for full-time day-shift workers in each establishment.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Less than 0.5 percent.

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

**Table 37. Aluminum rolling, drawing, and extruding: Shift differential provisions**

(Percent of production workers by shift differential provisions,<sup>1</sup> United States and selected regions, February 1981)

Shift differential	United States <sup>2</sup>	Southeast	Great Lakes	Pacific
<b>Second shift</b>				
Workers in establishments with second-shift provisions .....	100.0	100.0	100.0	100.0
With shift differential .....	98.0	91.4	100.0	100.0
Uniform cents per hour .....	38.9	34.8	36.7	62.0
5 cents .....	2.8	12.1	-	-
10 cents .....	4.8	9.0	9.7	4.2
12 cents .....	5.1	5.7	7.9	-
13 cents .....	.2	-	-	-
15 cents .....	8.4	4.0	13.5	9.2
20 cents .....	7.5	-	5.5	30.0
Over 20 and under 25 cents .....	.5	-	-	-
25 cents .....	9.4	4.0	-	18.5
30 cents .....	.2	-	-	-
Uniform percentage .....	57.0	50.1	63.3	38.0
3 percent .....	57.0	50.1	63.3	38.0
Other formal paid differential .....	2.0	6.5	-	-
<b>Third shift</b>				
Workers in establishments with third-shift provisions .....	99.7	98.7	100.0	100.0
With shift differential .....	97.7	90.1	100.0	100.0
Uniform cents per hour .....	38.6	33.5	36.7	62.0
10 cents .....	2.8	12.1	-	-
15 cents .....	5.8	13.4	9.7	4.2
17 cents .....	1.6	-	7.9	-
18 cents .....	.7	-	-	-
20 cents .....	3.6	2.2	9.7	-
Over 20 and under 25 cents .....	1.6	-	-	9.2
25 cents .....	5.1	1.8	-	-
30 cents .....	14.0	4.0	9.3	43.1
35 cents .....	2.9	-	-	-
50 cents .....	.6	-	-	5.4
Uniform percentage .....	57.0	50.1	63.3	38.0
Under 5 percent .....	2.2	-	-	-
5 percent .....	54.8	50.1	63.3	38.0
Other formal paid differential .....	2.0	6.5	-	-

<sup>1</sup> Refers to policies of establishments currently operating late shifts or having provisions covering late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of re-

gions, see appendix table A-1, footnote 1.

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

**Table 38. Aluminum rolling, drawing, and extruding: Shift differential practices**

(Percent of production workers employed on late shifts by amount of pay differential, United States and selected regions, February 1981)

Shift differential	United States <sup>1</sup>	Southeast	Great Lakes	Pacific
<b>Second shift</b>				
Workers employed on second shift .....	27.5	30.2	22.7	27.0
Receiving differential .....	27.0	28.1	22.7	27.0
Uniform cents per hour .....	11.1	11.2	8.7	17.5
5 cents .....	1.2	5.3	-	-
10 cents .....	.8	2.1	1.0	.4
12 cents .....	1.5	1.6	1.9	-
13 cents .....	.1	-	-	-
15 cents .....	2.4	1.1	4.1	2.8
20 cents .....	2.2	-	1.7	9.5
25 cents .....	2.8	1.2	-	4.9
30 cents .....	.1	-	-	-
Uniform percentage .....	15.4	15.0	14.0	9.5
3 percent .....	15.4	15.0	14.0	9.5
Other formal paid differential .....	.6	1.9	-	-
<b>Third shift</b>				
Workers employed on third shift .....	22.0	18.9	21.0	20.8
Receiving differential .....	21.8	18.3	21.0	20.8
Uniform cents per hour .....	7.6	5.1	7.9	11.3
10 cents .....	.2	.9	-	-
15 cents .....	.8	2.2	1.4	-
17 cents .....	.4	-	1.9	-
18 cents .....	.1	-	-	-
20 cents .....	.9	.7	2.9	-
Over 20 and under 25 cents .....	.2	-	-	1.4
25 cents .....	1.0	.1	-	-
30 cents .....	3.4	1.2	1.7	8.7
35 cents .....	.6	-	-	-
50 cents .....	.1	-	-	1.3
Uniform percentage .....	13.9	12.1	13.1	9.5
Under 5 percent .....	.7	-	-	-
5 percent .....	13.1	12.1	13.1	9.5
Other formal paid differential .....	.4	1.1	-	-

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

**Table 39. Aluminum rolling, drawing, and extruding: Paid holidays**

(Percent of production workers in establishments with formal provisions for paid holidays, United States and selected regions, February 1981)

Number of paid holidays	United States <sup>1</sup>	Southeast	Great Lakes	Pacific
All workers .....	100	100	100	100
Workers in establishments providing paid holidays .....	100	100	100	100
7 days .....	3	14	-	-
8 days .....	2	6	-	-
9 days .....	6	12	-	5
10 days .....	33	14	51	42
11 days .....	27	50	18	39
12 days .....	27	4	22	13
13 days .....	1	-	5	-
14 days .....	1	-	4	-

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

**Table 40. Aluminum rolling, drawing, and extruding: Paid vacations**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	Southeast	Great Lakes	Pacific
All workers .....	100	100	100	100
<b>Method of payment</b>				
Workers in establishments providing paid vacations .....	100	100	100	100
Length-of-time payment .....	93	100	90	92
Percentage payment .....	7	-	10	-
Other <sup>2</sup> .....	1	-	-	8
<b>Amount of vacation pay<sup>3</sup></b>				
After 1 year of service:				
1 week .....	83	95	78	65
Over 1 and under 2 weeks .....	9	-	22	30
2 weeks .....	7	5	-	-
3 weeks .....	1	-	-	5
After 2 years of service:				
1 week .....	34	29	17	38
Over 1 and under 2 weeks .....	46	65	64	30
2 weeks .....	17	6	9	27
Over 2 and under 3 weeks .....	2	-	10	-
4 weeks .....	1	-	-	5
After 3 years of service:				
1 week .....	( <sup>4</sup> )	2	-	-
Over 1 and under 2 weeks .....	7	21	5	-
2 weeks .....	79	74	78	65
Over 2 and under 3 weeks .....	13	4	18	30
4 weeks .....	1	-	-	5
After 4 years of service:				
1 week .....	( <sup>4</sup> )	2	-	-
Over 1 and under 2 weeks .....	5	15	5	-
2 weeks .....	81	79	78	65
Over 2 and under 3 weeks .....	7	4	18	-
Over 3 and under 4 weeks .....	6	-	-	30
5 weeks .....	1	-	-	5
After 5 years of service:				
2 weeks .....	74	90	73	53
Over 2 and under 3 weeks .....	5	1	12	-
3 weeks .....	11	5	6	12
Over 3 and under 4 weeks .....	7	4	-	30
Over 4 and under 5 weeks .....	3	-	10	-
5 weeks .....	1	-	-	5
After 10 years of service:				
2 weeks .....	5	11	12	-
3 weeks .....	72	80	61	60
Over 3 and under 4 weeks .....	2	-	9	-
4 weeks .....	10	5	-	4
Over 4 and under 5 weeks .....	7	4	8	30
5 weeks .....	2	-	-	-
Over 5 and under 6 weeks .....	2	-	10	-
6 weeks .....	1	-	-	5

See footnotes at end of table.

**Table 40. Aluminum rolling, drawing, and extruding: Paid vacations—Continued**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	Southeast	Great Lakes	Pacific
<b>Amount of vacation pay<sup>2</sup>—Continued</b>				
After 12 years of service:				
2 weeks .....	1	4	-	-
3 weeks .....	72	84	68	47
Over 3 and under 4 weeks .....	5	-	14	13
4 weeks .....	11	8	-	4
Over 4 and under 5 weeks .....	7	4	8	30
5 weeks .....	2	-	-	-
Over 5 and under 6 weeks .....	2	-	10	-
6 weeks .....	1	-	-	5
After 15 years of service:				
2 weeks .....	1	3	-	-
3 weeks .....	65	72	68	47
Over 3 and under 4 weeks .....	3	1	9	-
4 weeks .....	14	20	5	17
5 weeks .....	6	-	-	-
Over 5 and under 6 weeks .....	6	4	10	30
6 weeks .....	4	-	8	5
After 20 years of service:				
2 weeks .....	1	3	-	-
3 weeks .....	6	13	12	-
Over 3 and under 4 weeks .....	1	1	6	-
4 weeks .....	70	79	56	48
Over 4 and under 5 weeks .....	( <sup>3</sup> )	-	-	-
5 weeks .....	4	-	9	17
Over 5 and under 6 weeks .....	5	4	-	30
6 weeks .....	9	-	8	-
Over 6 and under 7 weeks .....	2	-	10	-
7 weeks .....	1	-	-	5
After 25 years of service:				
2 weeks .....	1	3	-	-
3 weeks .....	3	12	-	-
Over 3 and under 4 weeks .....	1	1	6	1
4 weeks .....	14	24	17	10
5 weeks .....	62	57	51	55

See footnotes at end of table.

**Table 40. Aluminum rolling, drawing, and extruding: Paid vacations—Continued**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	Southeast	Great Lakes	Pacific
<b>Amount of vacation pay<sup>3</sup>—Continued</b>				
Over 5 and under 6 weeks .....	5	4	4	30
6 weeks .....	9	-	5	-
Over 6 and under 7 weeks .....	2	-	10	-
7 weeks .....	1	-	-	5
Over 7 weeks .....	2	-	8	-
After 30 years of service: <sup>5</sup>				
2 weeks .....	1	3	-	-
3 weeks .....	3	12	-	-
Over 3 and under 4 weeks .....	1	1	6	-
4 weeks .....	12	24	5	10
5 weeks .....	64	57	63	55
Over 5 and under 6 weeks .....	5	4	4	30
6 weeks .....	9	-	5	-
Over 6 and under 7 weeks .....	2	-	10	-
7 weeks .....	1	-	-	5
Over 7 weeks .....	2	-	8	-

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Includes plans which combine percentage and flat-sum payments.

<sup>3</sup> Vacation payments, such as percent of annual earnings, were converted to an equivalent time basis. Periods of service were chosen arbitrarily and do not necessarily reflect individual establishment provisions for progression. For ex-

ample, changes indicated at 10 years may include changes that occurred between 5 and 10 years.

<sup>4</sup> Less than 0.5 percent.

<sup>5</sup> Vacation provisions were virtually the same after longer periods of service.

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



**Table 41. Aluminum rolling, drawing, and extruding: Health, insurance, and retirement plans**

(Percent of production workers in establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States and selected regions, February 1981)

Type of plan	United States <sup>2</sup>	Southeast	Great Lakes	Pacific
All workers .....	100	100	100	100
Workers in establishments providing:				
Life insurance .....	100	100	100	100
Noncontributory plans .....	91	83	100	61
Accidental death and dismemberment insurance .....	44	93	27	32
Noncontributory plans .....	39	77	27	23
Sickness and accident insurance or sick leave or both <sup>3</sup> .....	91	80	100	65
Sickness and accident insurance .....	83	80	100	46
Noncontributory plans .....	81	75	100	46
Sick leave (full pay, no waiting period) .....	10	8	-	27
Sick leave (partial pay or waiting period) .....	2	-	-	-
Long-term disability insurance .....	11	11	5	49
Noncontributory plans .....	8	6	5	49
Hospitalization insurance .....	100	100	100	100
Noncontributory plans .....	95	80	100	100
Surgical insurance .....	100	100	100	100
Noncontributory plans .....	95	80	100	100
Medical insurance .....	100	100	100	100
Noncontributory plans .....	95	80	100	100
Major medical insurance .....	100	100	100	100
Noncontributory plans .....	95	80	100	100
Dental insurance .....	84	63	87	100
Noncontributory plans .....	6	2	-	47
Retirement plans <sup>4</sup> .....	95	79	100	100
Pensions .....	95	79	100	100
Noncontributory plans .....	94	79	100	95
Severance pay .....	22	4	43	30

<sup>1</sup> Includes those plans for which the employer pays at least part of the cost and excludes legally required plans such as workers' compensation and social security; however, plans required by State temporary disability insurance laws are included if the employer contributes more than is legally required or the employees receive benefits in excess of legal requirements. "Noncontributory plans" include only those plans financed entirely by the employer.

employer.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Unduplicated total of workers receiving sickness and accident insurance and sick leave shown separately.

<sup>4</sup> Unduplicated total of workers covered by pension plans and severance pay shown separately.

**Table 42. Aluminum rolling, drawing, and extruding: Other selected benefits**

(Percent of production workers in establishments with formal provisions for other selected benefits,<sup>1</sup> United States and selected regions, February 1981)

Type of benefit	United States <sup>2</sup>	Southeast	Great Lakes	Pacific
Workers in establishments with provisions for:				
Funeral leave .....	97	100	100	96
Jury duty leave .....	96	100	100	87
Technological severance pay .....	1	-	-	-
Cost-of-living adjustments .....	81	75	87	79
Based on BLS consumer price index .....	81	75	87	79
Vacation bonuses .....	64	63	68	68
Based on time-off .....	3	-	-	30
Based on fixed flat-sum .....	1	3	-	-
Based on flat sum which varies by length of service .....	2	-	8	-
Based on percent of pay .....	1	-	5	-
Seasonal bonus <sup>3</sup> .....	43	4	55	38
Other <sup>4</sup> .....	13	57	-	-
Extended or supplemental vacation .....	56	57	63	38
Extended vacation .....	45	7	63	38
Supplemental unemployment benefit plan .....	64	50	71	68

<sup>1</sup> For definition of items, see appendix A.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Includes bonus arrangements that provide additional bonus for using vacation time during

specified periods of the year.

<sup>4</sup> Includes plans providing bonus based on time off plus a flat sum.

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

**Table 43. Wire drawing and insulation: Average hourly earnings by selected characteristics**

(Number and average straight-time hourly earnings<sup>1</sup> of production workers by selected characteristics, United States and selected regions, February 1981)

Characteristic	United States <sup>2</sup>		New England		Middle Atlantic		Southeast		Southwest		Pacific	
	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
All workers .....	50,086	\$6.68	9,957	\$6.01	6,952	\$6.73	15,049	\$5.68	1,787	\$7.05	1,825	\$9.04
Size of community:												
Metropolitan areas .....	23,394	7.19	7,467	6.00	6,062	6.93	-	-	-	-	1,825	9.04
Nonmetropolitan areas .....	26,692	6.23	2,490	6.03	-	-	15,049	5.68	1,179	7.49	-	-
Size of establishment:												
50-249 workers .....	10,060	6.80	2,186	6.04	2,190	6.71	1,054	6.19	1,072	6.59	605	7.43
250 workers or more .....	40,026	6.64	7,771	6.00	4,762	6.71	13,995	5.64	715	7.74	-	-
Labor-management contract coverage:												
Establishments with--												
Majority of workers covered .....	23,954	7.23	8,511	6.01	846	6.82	1,054	6.19	1,139	7.45	1,825	9.04
None or a minority of workers covered .....	26,128	6.16	1,446	6.01	6,106	6.72	13,995	5.64	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

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

**Table 44. Wire drawing and insulation: Earnings distribution**

(Percent distribution of production workers by straight-time hourly earnings,<sup>1</sup> United States, selected regions and localities, February 1981)

Hourly earnings	United States <sup>2</sup>	Regions					Localities	
		New England	Middle Atlantic	Southeast	Southwest	Pacific	Connecticut	New York-North-eastern New Jersey
Number of workers .....	50,086	9,957	6,952	15,049	1,787	1,825	3,107	3,650
Average hourly earnings <sup>1</sup> .....	\$6.68	\$6.01	\$6.73	\$5.68	\$7.05	\$9.04	\$6.79	\$6.60
Total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under \$4.00 .....	3.8	1.4	4.3	<sup>3</sup> 9.2	-	.1	-	3.5
\$4.00 and under \$4.20 .....	.9	.6	1.8	1.3	-	.1	-	.5
\$4.20 and under \$4.40 .....	1.0	1.6	1.7	.8	-	2.3	-	1.1
\$4.40 and under \$4.60 .....	1.6	2.9	1.1	2.5	.1	.2	.1	1.0
\$4.60 and under \$4.80 .....	1.2	1.6	.9	2.0	-	1.1	-	.9
\$4.80 and under \$5.00 .....	1.2	3.2	.4	1.2	-	2.1	.6	.5
\$5.00 and under \$5.20 .....	6.9	9.0	.4	15.8	3.8	1.3	1.3	.7
\$5.20 and under \$5.40 .....	2.6	8.7	.8	1.3	2.2	3.0	3.1	1.4
\$5.40 and under \$5.60 .....	5.5	12.3	1.1	7.5	6.4	2.7	9.2	1.7
\$5.60 and under \$5.80 .....	3.0	7.9	1.3	1.6	13.9	-	7.4	1.7
\$5.80 and under \$6.00 .....	11.7	8.7	2.8	28.7	13.0	.2	4.2	3.2
\$6.00 and under \$6.20 .....	3.8	7.1	5.3	1.6	7.1	1.4	7.9	6.6
\$6.20 and under \$6.40 .....	3.9	4.8	5.6	3.9	5.1	3.9	5.7	1.6
\$6.40 and under \$6.60 .....	4.2	3.5	10.3	2.8	5.5	3.5	5.5	14.7
\$6.60 and under \$6.80 .....	4.7	3.7	16.7	1.7	4.9	1.4	6.9	26.3
\$6.80 and under \$7.00 .....	7.4	2.7	11.7	5.2	2.4	2.7	4.5	14.7
\$7.00 and under \$7.20 .....	4.6	4.2	3.5	7.3	2.4	3.6	8.6	5.3
\$7.20 and under \$7.40 .....	3.5	3.2	3.4	.9	2.7	.2	6.2	3.6
\$7.40 and under \$7.60 .....	1.4	3.6	1.9	.4	1.8	.4	8.2	1.1
\$7.60 and under \$7.80 .....	4.3	2.6	9.9	3.8	1.8	1.1	4.6	1.6
\$7.80 and under \$8.00 .....	3.0	1.8	3.9	.4	2.1	6.1	4.0	.3
\$8.00 and under \$8.20 .....	3.4	1.4	1.6	.3	.9	4.6	3.3	.1
\$8.20 and under \$8.40 .....	3.2	.9	2.7	-	4.1	3.8	1.8	.8
\$8.40 and under \$8.60 .....	3.1	.7	3.6	(*)	.3	-	1.9	2.1
\$8.60 and under \$8.80 .....	2.1	.8	.7	-	3.5	-	2.4	1.2
\$8.80 and under \$9.00 .....	.8	.3	.9	-	.7	.5	.9	1.6
\$9.00 and under \$9.20 .....	.5	.3	.5	-	.6	.1	1.0	.1
\$9.20 and under \$9.40 .....	1.2	.1	.2	-	.1	1.2	.2	.1
\$9.40 and under \$9.60 .....	.3	.1	(*)	-	-	-	.2	(*)
\$9.60 and under \$9.80 .....	.7	(*)	.4	-	.7	-	(*)	.8
\$9.80 and under \$10.00 .....	.1	.1	-	-	2.9	-	.4	-
\$10.00 and under \$10.20 .....	.4	-	(*)	-	1.6	5.1	-	.1
\$10.20 and under \$10.40 .....	.2	-	(*)	-	1.3	3.7	-	.1
\$10.40 and under \$10.60 .....	.4	-	(*)	-	.8	7.1	-	.1
\$10.60 and under \$10.80 .....	-	-	-	-	-	-	-	-
\$10.80 and under \$11.00 .....	.4	-	-	-	4.2	5.9	-	-

See footnotes at end of table.

**Table 44. Wire drawing and insulation: Earnings distribution—Continued**(Percent distribution of production workers by straight-time hourly earnings,<sup>1</sup> United States, selected regions and localities, February 1981)

Hourly earnings	United States <sup>2</sup>	Regions					Localities	
		New England	Middle Atlantic	Southeast	Southwest	Pacific	Connecticut	New York-North-eastern New Jersey
\$11.00 and under \$11.20 .....	0.3	-	-	-	1.3	4.8	-	-
\$11.20 and under \$11.40 .....	.8	-	-	-	.1	12.0	-	-
\$11.40 and under \$11.60 .....	.1	-	-	-	-	2.5	-	-
\$11.60 and under \$11.80 .....	.9	-	-	-	-	.4	-	-
\$11.80 and under \$12.00 .....	.1	-	0.4	-	-	.3	-	0.8
\$12.00 and over .....	.3	-	-	-	1.5	7.6	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Workers were distributed as follows: 2.2 percent at \$3.80 and under \$4; 1.9 percent at \$3.60 and under \$3.80; 4.9 percent

at \$3.40 and under \$3.60; and 0.2 percent at \$3.35 and under \$3.40.

<sup>4</sup> Less than 0.05 percent.

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



**Table 45. Wire drawing and insulation: Occupational earnings—Continued**(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions, State, and locality, February 1981)

Department and occupation	United States <sup>2</sup>				New England				Middle Atlantic				Southeast						
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>					
		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range			
<b>Maintenance and service—Continued</b>																			
Light (under 1.5 tons) .....	8	\$6.00	-	-	-	-	-	-	6	\$5.71	-	-	-	-	-	-	-	-	-
Medium (1.5 tons and including 4 tons) .....	19	7.06	\$7.30	\$5.97 - \$8.05	10	\$6.60	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy (over 4 tons, trailer type) .....	68	9.94	10.68	7.20 - 11.99	11	6.08	-	-	57	10.69	\$10.68	10.68 - 11.99	-	-	-	-	-	-	-
Heavy (over 4 tons, other than trailer) .....	15	7.96	6.30	6.30 - 10.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 45. Wire drawing and insulation: Occupational earnings—Continued**

(Number and average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, United States and selected regions, State, and locality, February 1981)

Department and occupation	Southwest				Pacific				Connecticut				New York-Northeastern New Jersey				
	Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			Number of workers	Hourly earnings <sup>3</sup>			
		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range	
<b>Production</b>																	
Electroplaters .....	-	-	-	-	-	-	-	-	-	12	\$6.11	-	-	-	-	-	
Extruder operators .....	169	\$8.17	\$7.84	\$6.21 - 10.29	98	\$6.51	\$6.38	\$5.74 - \$7.01	-	-	-	-	-	410	\$6.46	\$6.69	\$6.69 - \$6.75
Inspectors .....	140	6.59	6.46	6.11 - 7.07	-	-	-	-	-	162	6.40	\$6.43	\$5.26 - \$7.15	96	6.08	6.42	5.74 - 6.83
Class A .....	40	6.97	7.07	6.46 - 7.22	-	-	-	-	-	-	-	-	-	-	-	-	
Class B .....	76	6.68	6.38	6.11 - 6.64	-	-	-	-	-	39	7.24	7.58	6.34 - 7.89	-	-	-	
Class C .....	24	5.65	5.72	5.27 - 5.94	-	-	-	-	-	97	5.83	5.41	5.26 - 6.43	82	5.96	6.28	5.67 - 6.60
Stranding-machine operators .....	170	7.93	7.51	6.11 - 10.07	84	8.07	8.04	6.46 - 10.92	179	6.22	5.70	5.61 - 6.92	183	6.84	6.69	6.23 - 7.06	
Wire drawers .....	56	7.49	6.27	6.06 - 7.83	70	7.92	8.06	5.08 - 11.02	208	6.49	6.12	6.07 - 6.77	224	6.48	6.83	5.89 - 6.83	
<b>Maintenance and service</b>																	
Electricians, maintenance .....	27	7.74	7.06	6.75 - 9.05	-	-	-	-	-	53	7.67	7.58	7.27 - 8.08	53	8.09	7.67	7.63 - 8.64
Electronics technicians .....	14	7.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Class B .....	9	7.31	-	-	-	-	-	-	-	9	8.75	-	-	-	-	-	
Janitors .....	18	6.02	5.46	5.22 - 5.94	-	-	-	-	-	23	5.98	5.61	5.49 - 6.43	60	5.79	5.70	5.60 - 6.47
Laborers, material handling .....	-	-	-	-	24	5.64	4.88	4.88 - 6.75	38	6.19	5.73	5.31 - 7.43	-	-	-	-	
Machinists, maintenance .....	10	7.55	-	-	-	-	-	-	43	7.93	8.14	7.08 - 8.69	50	9.14	9.27	8.88 - 9.65	
Maintenance workers, general utility .....	63	6.98	6.78	6.46 - 7.65	126	10.75	12.64	9.39 - 12.64	-	-	-	-	37	6.56	6.20	6.20 - 6.58	
Mechanics, maintenance .....	69	9.29	8.83	6.75 - 12.27	-	-	-	-	78	7.42	7.32	6.90 - 7.88	53	7.34	7.33	6.75 - 7.65	
Packers .....	-	-	-	-	-	-	-	-	-	-	-	-	-	189	6.37	6.60	5.99 - 6.60
Power-truck operators .....	92	6.65	5.72	5.60 - 8.07	41	8.71	7.94	7.80 - 10.59	80	6.81	7.22	5.73 - 7.57	168	6.60	6.63	6.56 - 6.63	
Forklift .....	92	6.65	5.72	5.60 - 8.07	41	8.71	7.94	7.80 - 10.59	80	6.81	7.22	5.73 - 7.57	168	6.60	6.63	6.56 - 6.63	
Tool clerks .....	15	7.92	7.21	6.40 - 9.48	-	-	-	-	16	6.54	6.12	5.89 - 7.07	-	-	-	-	

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see footnote 1, table A-1, appendix A.

<sup>3</sup> See appendix A for definitions of means, medians, and middle ranges. Medians and middle ranges are not provided for entries with fewer than 15 workers.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for subcategories in addition to those shown separately.



**Table 46. Wire drawing and insulation: Method of wage payment**

(Percent of production workers by method of wage payment,<sup>1</sup> United States and selected regions, February 1981)

Method	United States <sup>2</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
All workers .....	100	100	100	100	100	100
Time-rated workers .....	90	88	94	100	100	100
Formal plans .....	89	85	94	100	100	86
Single rate .....	31	44	66	7	38	71
Range of rates .....	58	41	28	93	62	15
Individual rates .....	1	( <sup>3</sup> )	( <sup>3</sup> )	-	-	14
Incentive workers .....	10	12	6	-	-	-
Individual piecework .....	4	9	-	-	-	-
Group piecework .....	1	-	6	-	-	-
Individual bonus .....	4	3	-	-	-	-
Group bonus .....	( <sup>3</sup> )	-	-	-	-	-

<sup>1</sup> For definition of method of wage payment, see appendix

<sup>3</sup> Less than 0.5 percent.

A.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

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**Table 47. Wire drawing and insulation: Scheduled weekly hours**

(Percent of production workers by scheduled weekly hours,<sup>1</sup> United States and selected regions, February 1981)

Weekly hours	United States <sup>2</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
All workers .....	100	100	100	100	100	100
37.5 hours .....	1	-	-	-	-	15
40 hours .....	91	70	93	98	82	85
42 hours .....	1	-	-	-	18	-
45 hours .....	2	3	7	-	-	-
48 hours .....	1	3	-	-	-	-
50 hours .....	5	24	-	2	-	-

<sup>1</sup> Data relate to the predominant schedule for full-time day-shift workers in each establishment.

note 1.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

**Table 48. Wire drawing and insulation: Shift differential provisions**

(Percent of production workers by shift differential provisions,<sup>1</sup> United States and selected regions, February 1981)

Shift differential	United States <sup>2</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
<b>Second shift</b>						
Workers in establishments with second-shift provisions .....	100.0	100.0	100.0	100.0	100.0	100.0
With shift differential .....	99.2	100.0	100.0	100.0	85.3	100.0
Uniform cents per hour .....	58.4	82.9	80.8	29.5	70.8	47.7
7 cents .....	3.4	-	4.3	9.0	-	-
8 cents .....	.6	-	-	1.9	-	-
10 cents .....	9.5	15.6	8.8	7.7	-	3.9
12 cents .....	7.5	13.2	19.4	-	-	29.8
13 cents .....	1.9	3.3	9.0	-	-	-
14 cents .....	1.3	-	-	-	-	-
15 cents .....	7.4	14.3	3.8	-	18.3	-
16 cents .....	3.3	-	-	-	-	-
17 cents .....	.5	2.6	-	-	-	-
18 cents .....	7.4	24.6	-	8.4	-	-
20 cents .....	7.5	3.5	15.7	-	16.2	-
25 cents .....	6.1	3.0	15.1	2.5	17.8	14.0
30 cents .....	.7	2.8	-	-	-	-
35 cents .....	.6	-	-	-	18.5	-
40 cents .....	.2	-	-	-	-	-
Over 40 cents .....	.6	-	4.7	-	-	-
Uniform percentage .....	36.9	13.9	9.8	70.5	14.5	-
3 percent .....	.5	-	-	-	14.5	-
5 percent .....	24.1	3.0	-	70.5	-	-
7 percent .....	.8	4.0	-	-	-	-
7.5 percent .....	.5	2.7	-	-	-	-
10 percent .....	11.1	4.3	9.8	-	-	-
Other formal paid differential <sup>3</sup> .....	3.8	3.3	9.5	-	-	52.3
<b>Third shift</b>						
Workers in establishments with third-shift provisions .....	100.0	100.0	100.0	100.0	100.0	100.0
With shift differential .....	99.2	100.0	100.0	100.0	85.3	100.0
Uniform cents per hour .....	58.4	82.9	80.8	29.5	70.8	47.7
10 cents .....	4.5	-	-	9.0	-	-
12 cents .....	.9	-	2.3	1.9	-	-
15 cents .....	7.4	20.9	10.9	2.3	-	3.9
17 cents .....	4.9	3.0	19.4	-	-	15.2
18 cents .....	4.7	8.3	9.0	-	-	14.6
19 cents .....	3.1	-	-	-	-	-
20 cents .....	12.8	12.2	8.9	5.4	18.3	-
Over 20 and under 25 cents .....	2.8	-	-	8.4	-	-
25 cents .....	8.3	28.2	10.0	-	17.8	-
Over 25 and under 30 cents .....	1.1	1.0	6.4	-	-	-
30 cents .....	1.8	3.5	2.3	-	16.2	-
Over 30 and under 35 cents .....	1.7	-	7.0	-	-	-
35 cents .....	1.9	-	-	2.5	18.5	14.0
Over 35 and under 40 cents .....	.6	2.8	-	-	-	-
40 cents .....	.7	-	-	-	-	-

See footnotes at end of table.

**Table 48. Wire drawing and insulation: Shift differential provisions—Continued**(Percent of production workers by shift differential provisions,<sup>1</sup> United States and selected regions, February 1981)

Shift differential	United States <sup>2</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
Uniform cents per hour						
50 cents .....	0.6	3.0	-	-	-	-
Over 50 cents .....	.6	-	4.7	-	-	-
Uniform percentage .....	36.9	13.9	9.8	70.5	14.5	-
5 percent .....	22.9	3.0	-	70.5	14.5	-
10 percent .....	12.7	10.9	-	-	-	-
15 percent .....	1.4	-	9.8	-	-	-
Other formal paid differential <sup>3</sup> .....	3.8	3.3	9.5	-	-	52.3

<sup>1</sup> Refers to policies of establishments currently operating late shifts or having provisions covering late shifts.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Includes establishments providing 8 hours' pay for 7 1/2 hours' work plus a cents-per-hour addition to day-shift rates.

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

**Table 49. Wire drawing and insulation: Shift differential practices**

(Percent of production workers employed on late shifts by amount of pay differential, United States and selected regions, February 1981)

Shift differential	United States <sup>1</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
<b>Second shift</b>						
Workers employed on second shift .....	27.0	23.1	25.8	29.6	27.4	32.5
Receiving differential .....	26.7	23.1	25.8	29.6	23.4	32.5
Uniform cents per hour .....	14.9	19.1	21.2	8.2	18.7	13.0
7 cents .....	1.3	-	1.0	3.7	-	-
8 cents .....	.2	-	-	.6	-	-
10 cents .....	2.8	4.2	3.2	2.0	-	1.2
12 cents .....	2.1	3.5	5.9	-	-	8.7
13 cents .....	.6	1.4	2.0	-	-	-
14 cents .....	.2	-	-	-	-	-
15 cents .....	1.9	4.5	.4	-	3.9	-
16 cents .....	.8	-	-	-	-	-
17 cents .....	.1	.6	-	-	-	-
18 cents .....	1.0	2.7	-	1.5	-	-
20 cents .....	2.1	.8	4.6	-	5.7	-
25 cents .....	1.4	.8	3.3	.5	3.4	3.1
30 cents .....	.2	.6	-	-	-	-
35 cents .....	.2	-	-	-	5.8	-
40 cents .....	( <sup>2</sup> )	-	-	-	-	-
Over 40 cents .....	.1	-	.8	-	-	-
Uniform percentage .....	10.7	3.5	1.7	21.3	4.7	-
3 percent .....	.2	-	-	-	4.7	-
5 percent .....	7.0	.5	-	21.3	-	-
7 percent .....	.2	1.0	-	-	-	-
7.5 percent .....	.1	.6	-	-	-	-
10 percent .....	3.2	1.4	1.7	-	-	-
Other formal paid differential <sup>3</sup> .....	1.2	.5	2.8	-	-	19.5
<b>Third shift</b>						
Workers employed on third shift .....	20.0	19.8	19.8	24.7	25.3	21.4
Receiving differential .....	19.8	19.8	19.8	24.7	21.4	21.4
Uniform cents per hour .....	10.7	17.5	17.6	3.3	16.9	10.5
10 cents .....	.4	-	-	.7	-	-
12 cents .....	.2	-	.3	.5	-	-
15 cents .....	1.4	3.9	1.9	.4	-	.5
17 cents .....	1.4	1.0	5.9	-	-	4.4
18 cents .....	.9	2.0	1.7	-	-	2.8
19 cents .....	.2	-	-	-	-	-
20 cents .....	2.5	3.4	2.2	.8	3.9	-
Over 20 and under 25 cents .....	.2	-	-	.5	-	-
25 cents .....	1.6	5.0	1.8	-	3.2	-
Over 25 and under 30 cents .....	.3	.3	1.5	-	-	-
30 cents .....	.4	.8	.3	-	3.2	-
Over 30 and under 35 cents .....	.3	-	1.1	-	-	-
35 cents .....	.5	-	-	.4	6.5	2.7
Over 35 and under 40 cents .....	.1	.3	-	-	-	-
40 cents .....	.1	-	-	-	-	-
50 cents .....	.2	.8	-	-	-	-
Over 50 cents .....	.1	-	.8	-	-	-

See footnotes at end of table.

**Table 49. Wire drawing and insulation: Shift differential practices—Continued**

(Percent of production workers employed on late shifts by amount of pay differential, United States and selected regions, February 1981)

Shift differential	United States <sup>1</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
Uniform percentage .....	8.4	2.1	0.2	21.3	4.5	-
5 percent .....	6.8	.4	-	21.3	4.5	-
10 percent .....	1.6	1.7	-	-	-	-
15 percent .....	( <sup>2</sup> )	-	.2	-	-	-
Other formal paid differential <sup>3</sup> .....	.7	.2	2.0	-	-	11.0

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Less than 0.05 percent.

<sup>3</sup> Includes establishments providing 8 hours' pay for 7 1/2

hours' work plus a cents-per-hour addition to day-shift rates.

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

**Table 50. Wire drawing and insulation: Paid holidays**

(Percent of production workers in establishments with formal provisions for paid holidays, United States and selected regions, February 1981)

Number of paid holidays	United States <sup>1</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
All workers .....	100	100	100	100	100	100
Workers in establishments providing paid holidays .....	100	100	100	100	100	100
6 days .....	1	3	-	-	-	-
7 days .....	2	-	-	5	-	-
8 days .....	24	-	-	71	18	-
9 days .....	17	-	21	17	-	-
9 days plus 1 or 2 half days .....	1	3	2	-	-	-
10 days .....	9	18	15	2	40	18
11 days .....	21	30	12	5	32	52
12 days .....	21	42	23	-	9	30
13 days .....	5	4	27	-	-	-

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

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

**Table 51. Wire drawing and insulation: Paid vacations**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
All workers .....	100	100	100	100	100	100
<b>Method of payment</b>						
Workers in establishments providing paid vacations .....	100	100	100	100	100	100
Length-of-time payment .....	78	65	70	98	82	71
Percentage payment .....	22	35	30	2	18	29
<b>Amount of vacation pay<sup>2</sup></b>						
After 1 year of service:						
1 week .....	47	49	64	27	100	100
Over 1 and under 2 weeks .....	14	29	19	-	-	-
2 weeks .....	38	22	7	73	-	-
Over 3 and under 4 weeks .....	1	-	9	-	-	-
After 2 years of service:						
1 week .....	31	38	25	22	27	68
Over 1 and under 2 weeks .....	19	29	19	5	29	32
2 weeks .....	48	33	46	73	44	-
Over 3 and under 4 weeks .....	1	-	9	-	-	-
After 3 years of service:						
1 week .....	5	-	12	9	18	-
Over 1 and under 2 weeks .....	8	27	-	5	-	29
2 weeks .....	79	67	79	86	82	71
Over 2 and under 3 weeks .....	7	7	-	-	-	-
4 weeks .....	1	-	9	-	-	-
After 4 years of service:						
1 week .....	5	-	10	9	18	-
Over 1 and under 2 weeks .....	7	27	-	5	-	14
2 weeks .....	79	67	81	86	82	86
Over 2 and under 3 weeks .....	7	7	-	-	-	-
4 weeks .....	1	-	9	-	-	-
After 5 years of service:						
1 week .....	1	-	-	-	18	-
Over 1 and under 2 weeks .....	1	-	-	-	-	14
2 weeks .....	80	60	64	100	82	86
Over 2 and under 3 weeks .....	16	34	21	-	-	-
3 weeks .....	2	6	6	-	-	-
Over 4 and under 5 weeks .....	1	-	9	-	-	-
After 10 years of service:						
Over 1 and under 2 weeks .....	1	-	-	-	18	-
2 weeks .....	8	6	19	11	-	-
3 weeks .....	81	68	66	89	82	100
Over 3 and under 4 weeks .....	8	26	-	-	-	-
4 weeks .....	1	-	6	-	-	-
Over 5 and under 6 weeks .....	1	-	9	-	-	-
After 12 years of service:						
Over 1 and under 2 weeks .....	1	-	-	-	18	-
2 weeks .....	7	6	10	11	-	-
3 weeks .....	78	65	54	89	82	100
Over 3 and under 4 weeks .....	12	26	22	-	-	-
4 weeks .....	1	3	6	-	-	-
Over 5 and under 6 weeks .....	1	-	9	-	-	-

See footnotes at end of table.

**Table 51. Wire drawing and insulation: Paid vacations—Continued**

(Percent of production workers in establishments with formal provisions for paid vacations after selected periods of service, United States and selected regions, February 1981)

Vacation policy	United States <sup>1</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
<b>Amount of vacation pay<sup>2</sup>—Continued</b>						
<b>After 15 years of service:</b>						
2 weeks .....	2	3	-	-	18	-
3 weeks .....	48	18	37	100	38	85
Over 3 and under 4 weeks .....	12	30	24	-	-	-
4 weeks .....	33	47	30	-	44	15
Over 4 and under 5 weeks .....	3	3	-	-	-	-
Over 5 and under 6 weeks .....	1	-	9	-	-	-
<b>After 20 years of service:</b>						
2 weeks .....	2	3	-	-	18	-
3 weeks .....	37	7	9	95	15	32
Over 3 and under 4 weeks .....	1	2	3	-	-	-
4 weeks .....	47	49	62	5	68	68
Over 4 and under 5 weeks .....	7	24	-	-	-	-
5 weeks .....	5	16	17	-	-	-
Over 5 and under 6 weeks .....	1	-	9	-	-	-
<b>After 25 years of service:</b>						
2 weeks .....	2	3	-	-	18	-
3 weeks .....	37	7	9	95	15	29
Over 3 and under 4 weeks .....	1	2	3	-	-	-
4 weeks .....	9	7	20	5	44	4
Over 4 and under 5 weeks .....	4	-	-	-	-	-
5 weeks .....	43	79	59	-	24	68
Over 5 and under 6 weeks .....	1	-	-	-	-	-
6 weeks .....	2	3	-	-	-	-
Over 6 and under 7 weeks .....	1	-	9	-	-	-
<b>After 30 years of service:<sup>3</sup></b>						
2 weeks .....	2	3	-	-	18	-
3 weeks .....	37	7	9	95	15	29
Over 3 and under 4 weeks .....	1	2	3	-	-	-
4 weeks .....	9	7	18	5	44	4
Over 4 and under 5 weeks .....	4	-	-	-	-	-
5 weeks .....	43	75	61	-	24	68
Over 5 and under 6 weeks .....	1	-	-	-	-	-
6 weeks .....	3	7	-	-	-	-
Over 6 and under 7 weeks .....	1	-	9	-	-	-

<sup>1</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>2</sup> Vacation payments, such as percent of annual earnings, were converted to an equivalent time basis. Periods of service were chosen arbitrarily and do not necessarily reflect individual establishment provisions for progression. For example,

changes indicated at 10 years may include changes that occurred between 5 and 10 years.

<sup>3</sup> Vacation provisions were virtually the same after longer periods of service.

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



**Table 52. Wire drawing and insulation: Health, insurance, and retirement plans**

(Percent of production workers in establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States and selected regions, February 1981)

Type of plan	United States <sup>2</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
All workers .....	100	100	100	100	100	100
Workers in establishments providing:						
Life insurance .....	98	97	98	98	100	96
Noncontributory plans .....	75	95	96	28	84	96
Accidental death and dismemberment insurance .....	67	84	92	28	69	96
Noncontributory plans .....	64	82	91	28	69	96
Sickness and accident insurance or sick leave or both <sup>3</sup> .....	64	57	79	22	100	66
Sickness and accident insurance .....	51	57	54	22	84	66
Noncontributory plans .....	46	54	47	13	84	66
Sick leave (full pay, no waiting period) .....	17	12	30	-	35	-
Sick leave (partial pay or waiting period) .....	-	-	-	-	-	-
Long-term disability insurance .....	26	22	6	2	42	52
Noncontributory plans .....	24	18	-	2	42	52
Hospitalization insurance .....	100	100	100	100	100	100
Noncontributory plans .....	71	98	94	21	84	100
Surgical insurance .....	100	100	100	100	100	100
Noncontributory plans .....	71	98	94	21	84	100
Medical insurance .....	100	100	100	100	100	100
Noncontributory plans .....	71	98	94	21	84	100
Major medical insurance .....	100	100	100	100	100	100
Noncontributory plans .....	71	98	94	21	84	100
Dental insurance .....	45	31	64	2	38	96
Noncontributory plans .....	4	20	2	-	-	-
Retirement plans <sup>4</sup> .....	75	90	100	29	100	85
Pensions .....	75	90	100	29	100	85
Noncontributory plans .....	74	90	95	29	100	85
Severance pay .....	12	3	9	-	42	-

<sup>1</sup> Includes those plans for which the employer pays at least part of the cost and excludes legally required plans such as workers' compensation and social security; however, plans required by State temporary disability insurance laws are included if the employer contributes more than is legally required or the employees receive benefits in excess of legal requirements. "Noncontributory plans" include only those plans financed entirely by the employer.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Unduplicated total of workers receiving sickness and accident insurance and sick leave shown separately.

<sup>4</sup> Unduplicated total of workers covered by pension plans and severance pay shown separately.

**Table 53. Wire drawing and insulation: Other selected benefits**

(Percent of production workers in establishments with formal provisions for selected benefits,<sup>1</sup> United States and selected regions, February 1981)

Type of benefit	United States <sup>2</sup>	New England	Middle Atlantic	Southeast	Southwest	Pacific
Workers in establishments with provisions for:						
Funeral leave .....	95	100	87	91	100	100
Jury duty leave .....	95	85	89	100	100	82
Technological severance pay .....	11	8	-	2	-	4
Cost-of-living adjustments .....	32	41	22	-	57	71
Based on BLS consumer price index .....	31	40	20	-	38	71
Other basis .....	1	1	2	-	18	-
Vacation bonuses .....	9	-	2	-	24	68
Based on time-off .....	1	-	-	-	15	-
Based on fixed flat-sum .....	1	-	-	-	9	-
Based on flat sum which varies by length of service .....	5	-	2	-	-	15
Other <sup>3</sup> .....	2	-	-	-	-	52
Extended or supplemental vacation .....	6	-	-	-	15	52
Supplemental unemployment benefit plan .....	13	6	6	-	-	52

<sup>1</sup> For definition of items, see appendix A.

<sup>2</sup> Includes data for regions in addition to those shown separately. For definition of regions, see appendix table A-1, footnote 1.

<sup>3</sup> Includes payment plans based on time off plus a flat sum.

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

# Appendix A. Scope and Method of Survey

## Scope of survey

The survey included establishments classified in the following industries as defined in the 1972 edition of the *Standard Industrial Classification Manual* prepared by the U.S. Office of Management and Budget.

*Copper smelting and refining* covers those establishments primarily engaged in smelting copper from the ore, and in refining copper by electrolytic or other processes (SIC 3331).

*Aluminum primary production* covers those establishments primarily producing aluminum from alumina and in refining aluminum by any process (SIC 3334).

*Copper rolling, drawing, and extruding* covers those establishments primarily engaged in rolling, drawing, and extruding copper, brass, bronze, and other copper base alloy basic shapes, such as plate, sheet, strip, bar and tubing (SIC 3351).

*Aluminum rolling, drawing, and extruding* covers those establishments primarily rolling and extruding aluminum and aluminum base alloy basic shapes such as sheet, plate and foil, rod and bar, pipe and tube, and tube blooms (SICs 3353 and 3354). Also includes establishments producing similar products by continuous casting, and those producing tube by drawing.

*Nonferrous wire drawing and insulation* covers those establishments primarily drawing, drawing and insulating, and insulating wire and cable of nonferrous metals from purchased wire bars, rods, or wire (SIC 3357).

Separate auxiliary units such as central offices and warehouses were excluded.

Establishments studied were selected from those employing 50 workers or more at the time of reference of the data used in compiling the universe lists. Table A-1 shows the number of establishments and workers estimated to be within the scope of the survey, as well as the number actually studied by the Bureau.

## Method of study

Data were obtained by personal visits of the Bureau's field representatives to a probability-based sample of establishments within the scope of the survey. To obtain appropriate accuracy at minimum cost, a greater proportion of large than of small establishments was studied. In combining the data, each establishment was given an appropriate weight. All estimates are presented, therefore, as relating to all establishments in the

industry, excluding only those below the minimum size at the time of reference of the universe data.

## Establishment definition

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

## Employment

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 industry's labor force, rather than as precise measures of employment.

## Production workers

The terms "production workers" and "production and related workers," used interchangeably in this bulletin, include working supervisors and all nonsupervisory workers engaged in nonoffice activities. Administrative, executive, professional, and technical personnel, and force-account construction employees, who are used as a separate work force on the firm's own properties, are excluded.

## Occupational classification

Occupational classification was based on a uniform set of job descriptions designed to take account of inter-establishment and interarea variations in duties within the same job. (See appendix B for these descriptions.) The criteria for selection of the occupations were: The number of workers in the occupation; the usefulness of the data in collective bargaining; and appropriate representation of the entire job scale in the industry. Working supervisors, apprentices, learners, beginners, trainees, and handicapped, part-time, temporary, and probationary workers were not reported in the data for selected occupations but were included in the data for all production workers.

## Wage data

Information on wages relates to 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

**Table A-1. Estimated number of establishments and employees within scope of survey and number studied, nonferrous metal manufacturing industries, February 1981**

Industry, region, <sup>1</sup> and area	Number of establishments <sup>2</sup>		Workers in establishments		
	Within scope of study	Actually studied	Within scope of study Total <sup>4</sup>	Production workers	Total actually studied <sup>3</sup>
<b>Copper smelting and refining:</b>					
United States <sup>5</sup> .....	14	14	9,248	6,938	9,248
Mountain Region .....	6	6	3,508	2,770	3,508
<b>Aluminum primary production:</b>					
United States <sup>5</sup> .....	32	18	36,574	28,332	18,919
Southwest .....	7	5	8,220	6,406	5,082
Pacific .....	7	6	7,471	5,685	6,395
<b>Copper rolling, drawing, and extruding:</b>					
United States <sup>5</sup> .....	58	38	21,670	15,906	16,379
New England <sup>6</sup> .....	17	10	4,192	2,268	2,630
Connecticut .....	13	7	3,477	2,122	1,976
Middle Atlantic .....	12	7	4,728	3,639	3,430
Great Lakes .....	17	11	9,099	6,977	7,394
<b>Aluminum rolling, drawing, and extruding:</b>					
United States <sup>5</sup> .....	95	52	53,560	40,739	32,245
Southeast .....	28	12	12,433	9,472	5,845
Great Lakes .....	16	9	10,679	8,218	7,080
Pacific .....	13	7	6,490	4,736	5,481
<b>Wire drawing and insulation:</b>					
United States <sup>5</sup> .....	166	78	67,358	50,086	35,722
New England <sup>6</sup> .....	37	21	15,028	9,957	10,709
Connecticut .....	12	9	6,369	3,107	5,512
Middle Atlantic <sup>6</sup> .....	33	20	9,464	6,952	6,631
New York-Northeastern New Jersey .....	17	12	5,149	3,650	3,696
Southeast .....	29	8	18,881	15,049	7,973
Southwest .....	10	7	2,475	1,787	1,882
Pacific .....	7	5	2,349	1,825	2,009

<sup>1</sup> The regions used in this study are defined as follows: *New England*—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic*—New Jersey, New York, and Pennsylvania; *Border States*—Delaware, District of Columbia, Kentucky, Maryland, Virginia, and West Virginia; *Southeast*—Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee; *Southwest*—Arkansas, Louisiana, Oklahoma, and Texas; *Great Lakes*—Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; *Middle West*—Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota; *Mountain*—Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming; and *Pacific*—California,

Nevada, Oregon, and Washington. Alaska and Hawaii were not included in the study.

<sup>2</sup> Includes only those establishments with 50 workers or more at the time of reference of the universe data.

<sup>3</sup> Data relate to the total employment in the establishments actually visited.

<sup>4</sup> Includes executive, professional, office, and other workers in addition to the production worker category shown separately.

<sup>5</sup> Includes data for regions in addition to those shown separately.

<sup>6</sup> Includes data for areas in addition to those shown separately.

production bonus systems, and cost-of-living bonuses were included as part of the workers' regular pay. Non-production bonus payments, such as Christmas or year-end bonuses, were excluded.

*Average (mean) hourly rates or earnings* for each occupation or category of workers, such as production workers, were calculated by weighting each rate (or hourly earnings) by the number of workers receiving the rate, totaling, and dividing by the number of individuals. The hourly earnings of salaried workers, if any, were obtained by dividing straight-time salary by normal (or standard) hours to which the salary corresponds.

The median designates position; that is, one-half of the employees surveyed received more than this rate and one-half received less. The middle range is defined by two rates of pay such that one-fourth of the em-

ployees earned less than the lower of these rates and one-fourth earned more than the higher rate.

### Size of community

Tabulations by size of community pertain to metropolitan and nonmetropolitan areas. The term "metropolitan areas," as used in this bulletin, refers to the Standard Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget through February 1974. Except in New England, a Standard Metropolitan Statistical Area is defined as a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more. Counties contiguous to the one containing such a city are included in a Standard Metropolitan Statistical Area if, according to certain criteria, they are essentially metropolitan

in character and are socially and economically integrated with the central city. In New England, where the city and town are administratively more important than the county, they are the units used in defining Standard Metropolitan Statistical Areas.

### **Labor-management agreements**

Separate wage data are presented, where possible, for establishments that had (1) a majority of the production workers covered by labor-management contracts, and (2) none or a minority of the production workers covered by labor-management contracts.

### **Method of wage payment**

Tabulations by method of wage payment relate to the number of workers paid under the various time and incentive wage systems. Formal rate structures for time-rated workers provide single rates or a range of rates for individual job categories. In the absence of a formal rate structure, pay rates are determined primarily by the qualifications of the individual worker. A single rate structure is one in which the same rate is paid to all experienced workers in the same job classification. Learners, apprentices, or probationary workers may be paid according to rate schedules which start below the single rate and permit the workers to achieve the full job rate over a period of time. An experienced worker occasionally may be paid above or below the single rate for special reasons, but such payments are exceptions. Range-of-rate plans are those in which the minimum, maximum, or both of these rates paid experienced workers for the same job are specified. Specific rates of individual workers within the range may be determined by merit, length of service, or a combination of these. Incentive workers are classified under piecework or bonus plans. Piecework is work for which a predetermined rate is paid for each unit of output. Production bonuses are for production in excess of a quota or for completion of a task in less than standard time.

### **Scheduled weekly hours**

Data on weekly hours refer to the predominant work schedule for full-time production workers employed on the day shift.

### **Shift provisions and practices**

Shift provisions relate to the policies of establishments either currently operating late shifts or having formal provisions covering late-shift work. Practices relate to workers employed on late shifts at the time of the survey.

### **Establishment practices and supplementary wage provisions**

Supplementary benefits in an establishment were considered applicable to all production workers if they applied to half or more of such workers in the establish-

ment. Similarly, if fewer than half of the workers were covered, the benefit was considered nonexistent in the establishment. Because of length-of-service and other eligibility requirements, the proportion of workers receiving the benefits may be smaller than estimated.

*Paid holidays.* Paid holiday provisions relate to full-day and half-day holidays provided annually.

*Paid vacations.* The summary of vacation plans is limited to formal arrangements and exclude informal plans whereby time off with pay is granted at the discretion of the employer or supervisor. Payments not on a time basis were converted; for example, a payment of 2 percent of annual earnings was considered the equivalent of 1 week's pay. The periods of service for which data are presented represent the most common practices, but they do not necessarily reflect individual establishment provisions for progression. For example, changes in proportions indicated at 10 years of service may include changes which occurred between 5 and 10 years.

*Vacation bonuses.* Data relate to formal plans that grant "bonuses" or extra pay in addition to regular vacation pay. Excluded were plans that provide only seasonal bonuses with no bonus to those who take time off during popular periods (e.g., summer).

*Extended or supplemental vacations.* Data relate to formal plans which provide for extended vacations for workers according to seniority group. Such plans typically provide 13 weeks of vacation every 5 years for workers in the "Senior Group" (one half of employees with longest continuous service) and 3 weeks every 5 years for "Junior Group" workers; some plans provide an additional two weeks' vacation each year for "Senior Group" employees, and 1 week for "Junior Group" employees.

*Health, insurance, and retirement plans.* Data are presented for health, insurance, pension, and retirement severance plans for which the employer pays all or a part of the cost, excluding programs required by law such as workers' compensation and social security. Among plans included are those underwritten by a commercial insurance company and those paid directly by the employer from current operating funds or from a fund set aside for this purpose.

Death benefits are included as a form of life insurance. Sickness and accident insurance is limited to that type of insurance under which predetermined cash payments are made directly to the insured on a weekly or monthly basis during illness or accident disability. Information is presented for all such plans to which the employer contributes at least a part of the cost. However, in New York and New Jersey, where temporary

disability insurance laws require employer contributions,<sup>1</sup> plans are included only if the employer (1) contributes more than is legally required, or (2) provides the employees with benefits which exceed the requirements of the law.

Tabulations of paid sick leave plans are limited to formal plans which provide full pay or a proportion of the worker's pay during absence from work because of illness; informal arrangements have been omitted. Separate tabulations are provided for (1) plans which provide full pay and no waiting period, and (2) plans providing either partial pay or a waiting period.

Long-term disability insurance plans provide payments to totally disabled employees upon the expiration of sick leave, sickness and accident insurance, or both, or after a specified period of disability (typically 6 months). Payments are made until the end of disability, a maximum age, or eligibility for retirement benefits. Payments may be full or partial, but are almost always reduced by social security, workers' compensation, and private pension benefits payable to the disabled employee.

Medical insurance refers to plans providing for complete or partial payment of doctors' fees. Such plans may be underwritten by a commercial insurance company or a nonprofit organization, or they may be a form of self-insurance.

Major medical insurance, sometimes referred to as extended medical or catastrophe insurance, includes plans designed to cover employees for sickness or injury involving an expense which exceeds the normal coverage of hospitalization, medical, and surgical plans.

<sup>1</sup> The temporary disability insurance laws in California and Rhode Island do not require employer contributions.

Dental insurance, for purposes of this survey, covers routine dental work such as fillings, extractions, and X-rays. Excluded are plans which cover only oral surgery or accidental injury.

Tabulations of retirement pensions are limited to plans which provide regular payments for the remainder of the retiree's life. Data are presented separately for retirement severance pay (one payment or several over a specified period of time) made to employees on retirement. Establishments providing both retirement severance payments and retirement pensions to employees were considered as having both retirement pensions and retirement severance plans; however, establishments having optional plans providing employees a choice of either retirement severance payments or pensions were considered as having only retirement pension benefits.

*Paid funeral and jury-duty leave.* Data for paid funeral and jury-duty leave relate to formal plans which provide at least partial payment for time lost as a result of attending funerals of specified family members or serving as a juror.

*Technological severance pay.* Data relate to formal plans providing for payments to employees permanently separated from the company because of a technological change or plant closing.

*Cost-of-living adjustments.* Provisions for cost-of-living adjustments relate to formal plans by which wage rates are adjusted periodically in keeping with changes in the BLS Consumer Price Index or some other measure.

*Supplemental unemployment benefit plans.* Data relate to formal plans designed to supplement benefits paid under State unemployment insurance systems.

## Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives 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 comparability of occupational content, the Bureau's job descriptions may differ significantly from those used in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors, apprentices, learners, beginners, trainees, and handicapped, part-time, temporary, and probationary workers.

Code numbers shown in parentheses after the job titles indicate the industries in which the occupations were surveyed, as follows:

The titles and the 3- or 4-digit codes below the job titles in this appendix are taken from the 1980 edition of the *Standard Occupational Classification Manual* (SOC), issued by the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics' occupational descriptions are much more specific than those found in the SOC manual. For example, 12 direct production occupations studied separately in the 5 industries were classified into 4 SOC groupings. Thus, in comparing the results of this survey with other sources, differences in occupational definitions should be taken into consideration.

### **ANODE REBUILDER (2)**

(613: Industrial machinery repairer)

Rebuilds anode of aluminum-reduction furnace. Work involves most of the following: Removing straps from bottom channel irons and bolting them onto next level; grinding connector shoes with emery wheel; pulling pins from anode with hydraulic puller and cleaning scale from pins; removing bottom set of channel irons, prior to lowering electrode, and installing new irons on top of pot for rebuilding anodes.

### **CARBON SETTER (2)**

(774: Fabricator, not elsewhere classified)

Replaces carbon nodes of electrolytic cells used in processing aluminum. Work involves most of the fol-

lowing: Disconnecting anode assembly from connector arm; cleaning connector arms; fastening anode rod to connector arm; adjusting assembly to suspend anode in bath; breaking burnt carbon block from steel stubs and unbolting stubs from copper rods; shoveling and loading broken carbon rods and stubs onto trailers for removal.

### **CASTING OPERATOR (2)**

(7542: Molding and casting machine operator and tender)

Controls pouring station in which aluminum and aluminum alloys are cast into ingots. Work involves most of the following: Regulating flow of molten metal into trough feeding casting molds of casting unit and from trough into molds by adjusting screw valves at bottom of trough; and controlling cooling condition of casting unit to produce ingots of uniform crystalline structure.

### **CASTING-WHEEL OPERATOR (3, 4)**

(7542: Molding and casting machine operator and tender)

(Pourer)

Operates rotating casting wheel to pour molten non-ferrous metal into molds. Work involves most of the following: Adjusting or removing stopper from kettle bottom or tilting ladle to allow metal to pour; and rotating wheel to spot successive molds under spout.

### **COIL WINDER (5)**

(772: Assembler)

Winds coils to be used in electrical equipment and instruments, according to wiring diagrams, sample coil, or work order, using coil winding machines and handtools. Work involves: Reviewing wiring diagrams and work orders or examining sample coil to ascertain type and size of wire specified and type, size, length, circumstance, and primary and secondary winding of coil to be wound; selecting coil forming device of specified coil to be wound and fastening it onto machine arbor, mandrel, or spindle or between chuck and tail stock. Threads end of wire from reel to form lead and attaches lead to coil core. May adjust tension on wire to obtain even and uniform winding and shape of coil. May wrap insulation between layers and around wound coil, or insert plastic blocks between turns to form cooling ducts in larger coils. May also thread lead wires through insulating sleeves or slide sleeves over leads, and solder

lead wires to terminals. May test coils for continuity of windings, using test lamps.

#### **CRANE OPERATOR, ELECTRIC BRIDGE (1, 2, 3, 4, 5)**

(8315: Crane and tower operator)

(Overhead crane operator; traveling crane operator)

Lifts and moves heavy objects with an electrically powered hoist mounted upon a metal bridge, which runs along overhead rails. Work involves starting machine; moving electrical controls to run the crane bridge along overhead rails, to run the hoisting trolley back and forth across the bridge, and to raise and lower the load line and anything attached to it. (Motions of crane are usually carried out in response to signals from others.)

For wage study purposes, crane operators are classified as follows:

Crane operator (combination of sizes)

Crane operator, electric bridge (under 20 tons)

Crane operator, electric bridge (20 tons or more)

#### **CRANE OPERATOR, MOBILE (1, 2, 3, 4, 5)**

(8315: Crane and tower operator) Operates gas or diesel crane mounted on truck chassis to lift and move materials. Work involves both driving vehicle to and from worksite and operating crane. May supervise worker engaged in driving crane and placing blocks and outriggers to prevent capsizing when lifting heavy loads. Excludes operators of cranes at construction sites.

#### **CUT-OFF SAW OPERATOR, METAL (3, 4, 5)**

(7329: Miscellaneous metalworking and plastics working machine setup operator)

Sets up and operates metal sawing machines, such as jacksaw, bandsaw, circular saw, friction saw, and rubber-disk saw to cut metal stock. Work involves most of the following: Preparing work by obtaining orders and materials; setting up machine by adjusting saw blade and machine speed; positioning stock against stops, starting flow of coolant; and starting machine.

#### **DIE SETTER (4, 5)**

(7319: Forging machine setup operator)

(Drop hammer setter, forging press setter)

Sets up forging machines, such as forging presses, coining presses, drop hammers, forging rolls, and up-setters. Work involves most of the following: Attaching dies to ram and anvil of presses and hammers and assuring that work meets specifications. May involve synchronizing machine with conveyor speed and furnace.

#### **DRAW-BENCH OPERATOR (3, 4, 5)**

(7517: Extruding and drawing machine operator and tender)

Operates draw-bench to draw metal rods in specific shape and diameter. Work involves most of the following: Positioning die in diehead; setting drawing speed; inserting pointed end of rod through die and into holding jaws of dolly; moving controls to pull rod through die; examining finished work for defects; and replacing worn dies on machine.

#### **ELECTRICIAN, MAINTENANCE (1, 2, 3, 4, 5)**

(6432: Electrician; 6152: Electric motor, transformer, and related repairer)

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, switch boards, 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; making standard computations relating to load requirements of wiring or electrical equipment; using a variety of electrician's handtools 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.

#### **ELECTRONICS TECHNICIAN (1, 2, 3, 4, 5)**

(3711: Electrical and electronics engineering technologist and technician)

Works on various types of electronic equipment and related devices by performing one or a combination of the following: Installing, maintaining, repairing, overhauling, troubleshooting, modifying, constructing, and testing. Work requires practical application of technical knowledge of electronics principles, ability to determine malfunctions, and skill to put equipment in required operating condition.

The equipment—consisting of either many different kinds of circuits or multiple repetition of the same kind of circuit—includes but is not limited to, the following: (a) Electronic transmitting and receiving equipment (e.g., radar, radio, television, telephone, sonar, navigational aids), (b) digital and analog computers, and (c) industrial and medical measuring and controlling equipment.

This classification excludes repairers of such standard electronic equipment as common office machines and household radio and television sets; production assemblers and testers; workers whose primary duty is servicing electronic test instruments; technicians who have administrative or supervisory responsibility; and drafters, designers, and professional engineers.



Positions are classified into levels on the basis of the following definitions:

**CLASS A.** Applies advanced technical knowledge to solve unusually complex problems (i.e., those that typically cannot be solved solely by reference to manufacturers' manuals or similar documents) in working on electronic equipment. Examples of such problems include location and density of circuitry, electromagnetic radiation, isolating malfunctions, and frequent engineering changes. Work involves: A detailed understanding of the interrelationships of circuits; exercising independent judgment in performing such tasks as making circuit analyses, calculating wave forms, tracing relationships in signal flow; and regularly using complex test instruments (e.g., dual trace oscilloscopes, Q-meters, deviation meters, pulse generators).

Work may be reviewed by supervisor (frequently an engineer designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians.

**CLASS B.** Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically can be solved by properly interpreting manufacturers' manuals or similar documents) in working on electronic equipment. Work involves: A familiarity with the interrelationships of circuits; judgment in determining work sequence; and in selecting tools and testing instruments, usually less complex than those used by the class A technician.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians.

**CLASS C.** Applies working technical knowledge to perform simple or routine tasks in working on electronic equipment, following detailed instructions which cover virtually all procedures. Work typically involves such tasks as: Assisting higher level technicians by performing such activities as replacing components, wiring circuits, and taking test readings; repairing simple electronic equipment; and using tools and common test instruments (e.g., multimeters, audio signal generators, tube testers, oscilloscopes). Is not required to be familiar with the interrelationships of circuits. This knowledge, however, may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required, from supervisor or higher level technician. Work is typically spot-checked, but is given detailed review when new or advanced assignments are involved.

## **ELECTROPLATER (4, 5)**

(7543: Plating and coating machine operator and tender)

Electroplates components with metals to resist corrosion, improve electrical conductivity, and facilitate solder connections. Work includes: Dipping components in cleaning solutions or brushing them with detergent and water to clean; placing components in fixture or jig or on rack and immersing them in plating solution; setting timer and turning on electric current; maintaining specified current in plating solution. Removes plated components and immerses them in rinsing tank. May examine for plating defects. May also immerse circuit boards in nonelectrolytic solutions.

## **EXTRUDER OPERATOR (3, 4, 5)**

(7315: Extruding and drawing machine setup operator)

(Extrusion-press operator)

Sets up and operates extrusion press to shape hot billets into products such as bars, tubing, structural shapes, and rods. Work involves most of the following: Installing dies, mandrels, containers, heating coils, press tools, extrusion heads, and budging in press; removing billet from furnace and guiding it along conveyor onto press bed; starting ram that spreads billet into container and forces it through press; starting press run-out table and butt shears to guide extrusion from press; and pulling extrusion along conveyor to racking table.

## **FURNACE CHARGER (2)**

(7529: Miscellaneous metalworking and plastic working machine operator and tender)

Charges smelting furnace with aluminum scrap and ingots. Work involves most of the following: Loading material into furnace by means of a charging machine; drawing samples of molten aluminum for analysis using standard computations to determine if smelting is within specified limits and adding additional material to furnace if necessary; maintaining records of materials charged into furnace; and operating a lift truck to load furnace.

## **FURNACE OPERATOR, FABRICATION (3, 4, 5)**

(7675: Furnace, kiln, and oven operator and tender)  
(Soaking pit operator)

Operates furnace to heat slabs and fabricated forms to specified temperature for rolling or processing. Work involves most of the following: Setting controls to regulate temperature and heating time; starting conveyors and opening furnace doors to admit slabs, plate, sheet, and coil or signals for uncovering of soaking pits and for lowering of ingots into pits; adjusting controls to maintain heat, etc., or removing material from furnace or pit.

## **FURNACE OPERATOR, SMELTING AND REFINING (1, 2)**

(7675: Furnace, kiln, and oven operator and tender)

Controls furnace to refine or smelt nonferrous ore or metal to specifications. Work involves most of the following: Controlling furnace to regulate air, gas, oil, or current to heat metal; observing appearance of metal; preventing oxidation of ore; adding reagents to remove impurities; skimming slag; opening blowers to stir bath; sealing taphole; tapping metal into pots for removal; and lifting ladles of molten metal by hoist or crane.

## **HEAT TREATER (3, 4, 5)**

(7544: Heating equipment operator and tender)

Controls heat-treating furnaces, baths, and quenching equipment to alter physical and chemical properties of metal objects by hardening, tempering, annealing, case-hardening, and normalizing. Work involves most of the following: Adjusting controls to bring furnace to proper temperature; loading parts into furnace and removing parts after operation; and quenching parts in water, oil, or bath.

## **INGOT-CASTING OPERATOR (3, 4)**

(7542: Molding and casting machine operator and tender)

Controls pouring station in which nonferrous alloys are cast into metal. Work involves most of the following: Regulating flow of molten metal from ladle or directly from melting furnace into trough feeding casting molds of casting unit; and controlling cooling conditions of casting unit.

## **INSPECTOR (3, 4, 5)**

(6881: Precision inspector, tester, and grader)

Inspects parts, products, and/or processes of the establishment. Performs such operations as examining parts or products for flaws and defects, and checking their dimensions and appearance to determine whether they meet the required standards and specifications. Does not include inspectors in toolrooms or inspectors of purchased parts.

*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 the worker 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; 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 the worker 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; 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; visual examination of parts of products, rejecting units having obvious deformities or flaws.

## **JANITOR (1, 2, 3, 4, 5)**

(5244: Janitor and cleaner)

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

## **LABORER, MATERIAL HANDLING (1, 2, 3, 4, 5)**

(8726: Freight, stock, and material mover, not elsewhere classified)

(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; transporting materials or merchandise by hand truck, car, or wheelbarrow. Longshoremen who load and unload ships are excluded.

## **MACHINE-TOOL OPERATOR, PRODUCTION (3, 4, 5)**

(731-732: Metalworking and plastic working machine setup operator)

Operates or tends one or more nonportable, power-driven machine tools (including numerically controlled (N/C) machine tools) in order to shape metal by progressively removing portions of the stock in the form of chips or shavings, or by abrasion, such as: Automatic lathes; boring machines; radial drill presses; single-or multiple-spindle drill presses; engine lathes; gear-

cutting machines; gear-finishing machines; grinding machines; miscellaneous machine tools; milling machines; planers; automatic screw machines; hand screw machines; shapers; automatic turret lathes; hand turret lathes.

**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 operations where changes in work and set-up 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 set-up made by others; 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; when trouble occurs, stops machine and calls working supervisor, leadworker, or machine-tool setter to correct the operation.

Numerically controlled set up and operate

Numerically controlled operate only

### **MACHINIST, MAINTENANCE (1, 2, 3, 4, 5)**

(6813: Machinist)

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of 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 required for work; fitting and assembling parts into mechanical equipment. In general, the machinist's work requires a rounded training in machine shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

### **MAINTENANCE WORKER, GENERAL UTILITY (1, 2, 3, 4, 5)**

(613: Industrial machinery repairer)

Keeps the machines, mechanical equipment, and/or structure of an establishment (usually a small plant where specialization in maintenance work is impractic-

cal) in repair. Duties involve the performance of operations and the use of tools and equipment of several trades, rather than specialization in one trade or one type of maintenance work only. Work involves a combination of the following: Planning and laying out of work relating to repair of buildings, machines, mechanical and/or electrical equipment; installing, aligning, and balancing new equipment; repairing buildings, floors, and stairs, as well as making and repairing bins, cribs, and partitions.

### **MECHANIC, MAINTENANCE (1, 2, 3, 4, 5)**

(613: Industrial machinery repairer)

Repairs machinery or mechanical equipment of an establishment. Work involves most of the following: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending of the machine to a machine shop for major repairs or for the production of parts ordered from machine shop; preparing written specifications for major repairs or for the production of parts ordered from machine shop; reassembling machines; and making all necessary adjustments for operations. In general, the work of a maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose primary duties involve setting up or adjusting machines.

### **MILLING MACHINE OPERATOR (3, 4, 5)**

(7513: Milling and planing machine operator and tender)

Sets up and operates milling machine that removes mill scale and other impurities from hot rolls. Work involves most of the following: Operating conveyor to bring products, such as bars, to position at milling machine; adjusting and straightening rolls and millers; starting process and observing material through rolls, mills, and shearing end and removing scrap from machine.

### **PACKER (1, 2, 3, 4, 5)**

(8761: Hand packer and packager)

Prepares finished products for shipment or storage by making wooden crates and boxes and/or placing products in shipping containers. Work involves one or more of the following: Knowledge of various items of stock in order to verify content; using handtools to make boxes and crates; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; applying labels or entering identifying data on container.

## **POT LINER (2)**

(614: Machinery maintenance occupation)

Relines pots and rebuilds continuous anodes used in reduction of alumina. Work involves the following: Replacing spacers, risers, bracket straps, supports, and collector bars in pots; attaching cables to pot superstructure for lifting from pot; cutting metal sheet to size using shears or pneumatic cutter; bending sheet around stub of anode and riveting it to casing; pouring carbon paste into form to specified height and then pouring water into pot to loosen material; digging burned out lining insulation ore, bath material, and brick from interior of pot; laying brick base on pot floor so that carbon can be pumped into pot; lining walls and floors with mix to specified depth and tamping mix into cracks and reforming shell cavity with insulating board, masonite, plywood, or sheet metal. May also remove steel shell for repair, using hoist.

## **POTLINE MONITOR (1, 2)**

(783: Production tester)

Tests electrical circuitry and measures temperature and depth levels of materials in aluminum reduction pots. Work involves most of the following: Placing contact rods of voltmeters against anode of reduction pot and cathode (lining) of next pot to obtain reading of pot circuit; recording meter readings to detect possible power loss and repeating tests at each point along potline; exposing electrical circuits to measure amount of positive and negative charges entering pot; inspecting for damaged, worn, or broken parts; measuring temperature of contents and depth; removing sample for lab analysis; and recording all measurements.

## **POWER-TRUCK OPERATOR (1, 2, 3, 4, 5)**

(8318: Industrial truck and tractor equipment operator)

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment. For wage study purposes, workers are classified by type of power truck, as follows:

Forklift operator

Power-truck operator (other than forklift)

## **PUNCH-PRESS OPERATOR (3, 4, 5)**

(7514: Punching and shearing machine operator and tender)

Feeds and operates a power press equipped with special production dies that perform one or a combination of cutting and shaping operations on the stock. Individual pieces of stock or partly fabricated units may be positioned in the machine by the operator, or the machine may be equipped with a feeding device that au-

tomatically positions single pieces of stock or repetitively positions strip or sheet stock for successive operations.

Punch presses are commonly designated by functional names derived from the operation they perform, such as blanking press or forming press; or by names that indicate how the power is transmitted, such as crank press or toggle press.

**CLASS A.** Work involves any combination of the following: Difficult positioning of work units because of size or shape, or type of operation to be performed; processing unusually large work that is positioned in the press with the aid of other workers; processing work units that must be steadied while operations are being performed; deep drawing or forming operations requiring careful positioning of work and prompt recognition of faulty operation; short-run work requiring ability to perform a variety of punch-press operations or to operate several types of presses; examining output and making adjustments as necessary to maintain production within standards; setting, aligning, and adjusting dies and fixtures in the press.

**CLASS B.** Required mainly to feed, control, and examine operation of the press, and when trouble occurs to call on supervisor, leadperson, or die maker to correct the situation. Work involves one or more of the following: Performing single operations, such as punching, blanking, or piercing on small or medium size stock easily positioned by hand; feeding small units into the press from a feed race or chute; loading and tending a press equipped with a feeding device for handling a strip or sheet stock, or a dial drum, magazine, or hopper feed for handling individual stock blanks.

## **RODDING-ANODE RENEWER (2)**

(774: Fabricator, not elsewhere classified)

Renews carbon anode assemblies used in electrolytic processing of aluminum. Work involves most of the following: Removing carbon blocks from conveyor; feeding steel stubs on conveyor through bath solution to coat them with graphite; positioning pouring ring and steel stub on carbon block and tilting crucible to pour molten iron around stub; bolting copper rod to stub and loading anode assemblies onto trailer for removal to potroom; unbolting copper rods from steel stubs embedded in disintegrated block; placing stub in hydraulic press to break off unused portions of block; cleaning and straightening stubs and rods; and activating and switching conveyors to move blocks or assemblies through assembly process.

## **ROLLING-MILLING OPERATOR (3, 4, 5)**

(7316: Rolling machine setup operator)

Sets up and operates hot or cold rolling mill to reduce or form metal into plate, sheet foil, flatware, and

rod of specific dimensions. Work involves most of the following: Adjusting rollers, buffs, and guides; turning controls to regulate flow, temperature, and solution of roll lubricants; starting entry or rolloff tables that feed metal to and from rolls; controlling speed of rolls and table; and observing product for specifications. May change rolls.

For wage survey purposes, workers are classified by type of roll, as follows:

Hot roll

Cold roll

### **ROLLING-MILLING HELPER (3, 4, 5)**

(7316: Rolling machine setup operator)

Assists rolling-mill operator by performing various tasks associated with operation of rolling mill. At hot rolls, workers may control oil and water flows and assist in manual sets. At cold rolls, workers may shape metal into rolls by operating and controlling coil handling equipment.

For wage survey purposes, workers are classified by type of roll, as follows:

Hot roll

Cold roll

### **SKIMMER, REVERBERATORY (1)**

(7759: Miscellaneous hand working occupation)

Skims slag from surface of copper being refined in reverberatory furnace. Work involves most of the following: Pushing slag towards front of furnace; dragging slag from surface of copper into pan; and inserting compressed-air line through furnace opening to force air through molten metal to oxidize impurities. May also shovel coke over surface of skimmed metal to prevent excessive oxidation.

### **SPOUT WORKER (1, 2)**

(8614: Helper; Metal and plastic processing machine operator and tender)

Directs pouring of slag from ladle through spout into reverberatory furnace used for smelting. Work involves most of the following: Raising furnace door; guiding crane operator in positioning ladle over spout and the pouring of slag; cleaning spout and work area of encrusted slag; and lining spouts with clay or other materials.

### **STRANDING-MACHINE OPERATOR (5)**

(7339: Miscellaneous fabricating machine setup operator)

Sets up and operates rotating cylindrical-shaped stranding machines to fabricate wire rope or electric cable. Work involves most of the following: Placing spools of wire of specified gauges into cradles and positioning take-up spool onto shaft; threading wire through holes; adjusting gears and greasing machine

and wire; starting machine and observing operation for malfunctions.

### **STRETCHER-LEVELER OPERATOR (3, 4)**

(7529: Miscellaneous metalworking and plastic working machine operator and tender)

Operates machine to stretch metal sheet, strip, or rod to specified length, flatness, twist, or contour. Work involves most of the following: Adjusting stretcher blocks to size of metal; positioning material in vise; measuring metal to judge size; moving controls to clamp metal in stretcher jaws and starting machine; and verifying output by measuring size of product.

### **TANK-HOUSE OPERATOR (1)**

(7529: Miscellaneous metalworking and plastic working machine operator and tender)

Controls equipment to purify copper by electrorefining. Work involves most of the following: Immersing copper starter sheets (cathodes) into tank; breaking off lumps which might cause short circuit; examining, connecting, and tightening electrical connections; turning on current and measuring density of electrolyte; and inspecting tanks for defects and repairing anodes, replacing parts. May also cover lead sheets with primary coat of copper and operate equipment that purifies copper through electrolysis.

### **TOOL AND DIE MAKER (1, 2, 3, 4, 5)**

(6811: Tool and die maker)

(Die maker; mold maker; jig maker; toolmaker; fixture maker; gauge maker)

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). Work typically involves: Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete tasks; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, tool and die maker's work requires rounded training in machine-shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience.

### **TOOL CLERK (1, 2, 3, 4, 5)**

(4754: Stock and inventory clerk)

(Store clerk; tool checker; tool crib attendant; tool handler; tool keeper)

Receives, stores, and issues handtools, machine tools,

dies, and equipment, such as measuring devices and materials, in industrial establishments. Work consists of most of the following: Keeping records of loaned tools; searching for lost or misplaced tools; preparing periodic inventory and requisitioning stock as needed; unpacking and storing new equipment; and reporting damaged and worn-out equipment to superiors. May carry tools or move them on trucks to workers, and may make minor tool repairs.

### **TRUCKDRIVER (1, 2, 3, 4, 5)**

(821: Motor vehicle operator)

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or workers between various types of establishments such as plants, depots, warehouses, and trade establishments or between retail stores and customers' establishments. May also load or unload truck with or without helpers, make minor repairs, and keep truck in good working order. Driver-salesworkers and over-the-road drivers are excluded.

For wage study purposes, truckdrivers are classified by size and type of equipment, as follows: (Tractor-trailers should be rated on the basis of the trailer capacity.)

Truckdriver, combination of sizes listed separately

Truckdriver, light (under 1.5 tons)

Truckdriver, medium (1.5 tons and including 4 tons)

Truckdriver, heavy (over 4 tons, trailer type)

Truckdriver, heavy (over 4 tons, other than trailer)

### **TUBE DRAWER (3)**

(7515: Extruding and drawing machine operator and tender)

(Draw bench operator)

Operates tube drawing machine that shapes and forms metal tubing of specified diameters. Work involves most of the following: Positioning die in diehead and plug die on plug rod; centering plug die in opening of drawing die; loading tube over plug rod; placing tapered end of tube to die of machine that pulls through die; and examining product for defects.

### **WELDER, HAND (3, 4, 5)**

(7714: Welder and cutter)

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 operations, the welder may also lay out guide lines or marks on metal parts and may cut metal with 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.

### **WELDER, MACHINE (3, 4, 5)**

(7714: Welder and cutter)

(Butt welder; flash welder; seam welder; spot welder)

Operates one or more types of resistance welding apparatus to weld (bond) together metal objects such as bars, pipes, and plates. Resistance welding is a process wherein an electric current is passed through the parts to be welded at the point of contact, and mechanical pressure is applied forcing the contact surfaces together at the points to be joined. Welding machines are generally designed according to type of weld performed and arrangement of welding surfaces of parts to be joined. Welds may be made on overlapping units in the form of one or more spots (spot welding) or lineally by using a rolling electrode (seam welding). Machine welding of units where the edges are brought together without lapping is referred to as butt welding.

**CLASS A.** Work involves most of the following: Working from other specifications; knowledge of welding properties of a variety of metals and alloys; selecting and setting up work-holding fixtures and electrodes; determination of proper pressures, temperatures, timing, and flow of current; determination of number and spacing of welds; positioning and welding units with or without fixtures; using such handtools as hammers, pliers, and wrenches.

**CLASS B.** Work involves: Performing repetitive welding operations on standard units where current settings and electrodes are prescribed or set by others; using fixtures for positioning work or positioning by hand small parts requiring simple welding operations.

### **WIRE DRAWER (3, 4, 5)**

(7315: Extruding and drawing machine setup operator)

Sets up and operates one or more wiredrawing machine to draw wire of all types and rod through one or a series of dies to reduce its dimension. Work involves most of the following: Positioning dies; placing wire coil into feed reel and tapering and threading it; securing wire into drawing block which pulls wire through dies; coating wire with lubricant; starting machine; and inspecting product.

# Industry Wage Surveys

The most recent reports providing occupational wage data for industries currently included in the Bureau's program of industry wage surveys are listed below. Copies are for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from any of its regional offices, and from the regional offices of the Bureau of Labor Statistics shown on the inside back cover. Bulletins that are out of stock are available for reference at leading public, college, or university libraries, or at the Bureau's Washington or regional sales offices.

## *Manufacturing*

Basic Iron and Steel, 1978-1979. BLS Bulletin 2064  
Cigarette Manufacturing, 1981. BLS Bulletin 2132  
Corrugated and Solid Fiber Boxes, 1981. BLS Bulletin 2138  
Drug Manufacturing, 1978. BLS Bulletin 2077  
Fabricated Structural Metals, 1979. BLS Bulletin 2094  
Flour and Other Grain Mill Products, 1977. BLS Bulletin 2026  
Hosiery, 1981. BLS Bulletin 2151  
Industrial Chemicals, 1981. BLS Bulletin 2136  
Iron and Steel Foundries, 1979. BLS Bulletin 2085  
Machinery Manufacturing, 1981. BLS Bulletin 2124  
Meat Products, 1979. BLS Bulletin 2082  
Men's and Boys' Shirts and Nightwear, 1981. BLS Bulletin 2131  
Men's and Boys' Suits and Coats, 1979. BLS Bulletin 2073  
Men's and Women's Footwear, 1980. BLS Bulletin 2118  
Millwork, 1979. BLS Bulletin 2083  
Miscellaneous Plastics Products, 1979. BLS Bulletin 2103  
Motor Vehicles and Parts, 1973-74. BLS Bulletin 1912

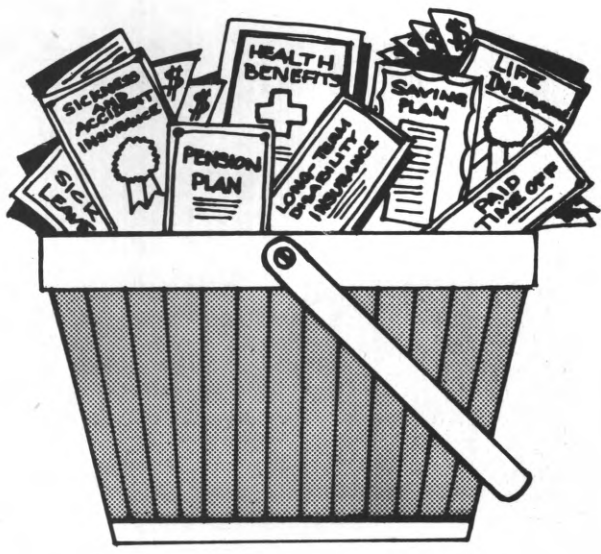
Nonferrous Metals, 1981. BLS Bulletin 2167  
Petroleum Refining, 1981. BLS Bulletin 2143  
Pressed or Blown Glass and Glassware, 1980. BLS Bulletin 2109  
Pulp, Paper, and Paperboard Mills, 1982. BLS Bulletin 2180  
Semiconductors, 1977. BLS Bulletin 2021  
Shipbuilding and Repairing, 1981. BLS Bulletin 2161  
Structural Clay Products, 1980. BLS Bulletin 2139  
Synthetic Fibers, 1981. BLS Bulletin 2150  
Textile Mills and Textile Dyeing and Finishing Plants, 1980. BLS Bulletin 2122  
Women's and Misses' Dresses, 1977. BLS Bulletin 2007  
Wood Household Furniture, 1979. BLS Bulletin 2087

## *Nonmanufacturing*

Appliance Repair Shops, 1981. BLS Bulletin 2177  
Auto Dealer Repair Shops, 1978. BLS Bulletin 2060  
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# Employee Benefits in Medium and Large Firms

U.S. Department of Labor  
 Bureau of Labor Statistics  
 Bulletin 2176



The Bureau of Labor Statistics issues its 1982 bulletin on employee benefits in medium and large firms. This survey is the fourth in an annual series.

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