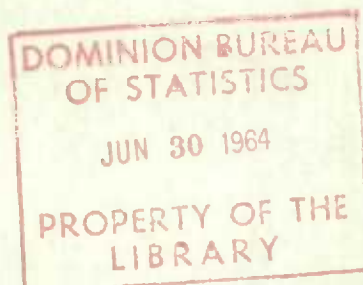


CATALOGUE No. ^{c3}

41-219

ANNUAL



PRIMARY METAL INDUSTRIES

1960

General Review

First issue. This is a new industry group comprising certain industries formerly covered by the General Reviews for Iron and Steel Products (41-201) and Non-Ferrous Metal Products (41-202). These two reviews are discontinued with the 1959 issues. For further details see introductory text.

The General Review reports for industry groups will not be published for the years 1961 and 1962.

Discontinued

ANNUAL CENSUS OF MANUFACTURES

41-202

Published by Authority of
The Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS
Industry Division

June 1964
6521-807

Price: 50 cents

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

... figures not appropriate or not applicable.

— nil or zero.

EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1960 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. Adoption of the revised Standard Industrial Classification for 1960 compilations has necessitated changes in titles of many reports in this annual series. The content of many industries has also been affected (see following note on Industrial Classification).

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1960 are as follows:

Period Covered

Firms are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

Establishment

Data for the annual census is collected on an establishment basis. A firm with more than one plant is required to file a report for each plant. In most cases an establishment is a complete factory; sometimes, however, a plant is divided into two or more establishments when it carries out operations classifiable to different industries and when separate accounting records are available. Usually the statistics for an establishment relate only to the manufacturing activities. Other activities such as construction at the plant by its own employees, wholesale or retail activities carried on at the plant location, etc., are not included. Plants engaged solely in repair work (except in the case of furniture, shipbuilding, boat building, aircraft and railway rolling stock industries) are not included but plants occupied in assembling parts into complete units are included.

Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level, and clerical employees. Working owners and partners are also included in this category.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, ware-

housing and delivery staffs. Employees on new construction work, in retail or wholesale operations, on outside piece work etc. are not included.

Production workers are reported by months, an average for the year being obtained by summing the monthly figures and dividing by twelve. This procedure is followed even though the plant did not operate in all months. Figures on employment refer to calendar years whether or not some establishments reported other data on a financial year basis.

Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included but not their withdrawals for income tax. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used, (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the works, including freight, duty, etc.

Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the works, of materials and supplies actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants or reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

Factory Shipments

Factory shipments refer to shipments of goods made from own materials either in the reporting plant or by other manufacturers on the basis of a charge to the reporting plant for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm are included. Goods bought or received as transfers

and resold without further processing are not included. Values are computed on f.o.b. plant or plant warehouse basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, aircraft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on finished units delivered in the year under review.

Inventories

Values represent the book values of manufacturing inventories owned and held at the reporting plant. Figures include inventories held in warehouses or selling outlets which have been included with plant operations for purposes of reporting shipments.

Value added by Manufacturing

Figures are computed from value of shipments plus or minus changes in inventories of finished goods and goods in process less cost of materials, fuel and electricity. This figure is sometimes referred to as net production.¹

Standard Industrial Classification

The revised Standard Industrial Classification which has been introduced with the 1960 Census of Manufactures provides for a breakdown of the universe into 140 industries arranged in 20 major groups compared with 135 industries in 17 major groups in the old classification which was used in the compilations for the years 1949 to 1959 inclusive. It incorporates changes considered desirable on the basis of experience in using the earlier classification as well as those which take account of changes in the structure of Canadian industries associated with the rapid developments of the past decade. Full details are contained in the Standard Industrial Classification Manual, Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Many industries remain unchanged in the new classification but in many instances there have been substantial changes in content because of the shifting of establishments from one industry to another or in re-grouping of establishments. Where

changes have occurred the principal statistics for 1957, 1958 and 1959 have been re-compiled to provide data on a basis comparable with those for 1960.

Short Forms

Between 1949 and 1957, in an effort to ease the reporting burden for smaller firms, a short form was used asking for the total value of shipments only or, in a few cases where losses of detail were significant, for quantities and values of principal products. For purposes of publication, missing data were estimated on the basis of appropriate ratios. In general the cut-off point for these short forms was set at \$50,000 value of shipments. About 40% of the total number of establishments reported on the short form and accounted for less than 3 per cent of the total value of shipments.

In 1958, in order to establish a new base year, the small firms were asked to report all items of principal statistics together with some detail on materials and products.

For the 1959 Census, the short form was used again, but further steps were taken to ease the respondents' burden. First, the general limit for short forms was raised to \$100,000 value of shipments. In addition, a new intermediate form was developed. This form is a shortened version of the long form in that most of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000 - \$500,000 value of shipments, but in the case of both the short and intermediate forms there were lower cut-offs for a number of industries in which the smaller firms accounted for a larger share of total shipments. On the other hand, limits were raised where this could be done without a significant loss of coverage. On most of the short forms for 1959, in addition to total value of shipments, data on principal products were requested. In a few industries, where loss of employment and earnings data were considered too large because of higher cut-offs, a question on total payroll was placed on the short form. This practice was followed again in 1960.

The intermediate and long forms provide complete data for the compilation of all elements of principal industry statistics and the details of materials and products. The one-page short form, although containing data on principal products and total value of shipments, does not request information on other elements of principal statistics such as value of inventories, materials, fuel and electricity and, in most cases, employment and salaries and wages, nor does it contain detailed data on volume and value of materials used. For purposes of compiling aggregates of principal statistics by industry and by geographic location, the missing data for each establishment were estimated for 1959 by using, in general, ratios based on the change in the value of shipments between 1958 and 1959. The proportion of the estimated data was generally less than 5 per cent of the total in each category of principal statistics.

¹ To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of office supplies used, advertising, insurance and other goods and services obtained from other businesses. Data on these inputs are not collected on the annual Census of Manufactures. Value added figures for "The primary industries and construction" are published in D.B.S. publication 61-202, *Survey of Production*.

PRIMARY METAL INDUSTRIES

1960

General Review

Data presented in this report reflect implementation of the revised Standard Industrial Classification (S.I.C.) which is being used by the Dominion Bureau of Statistics in its compilation of 1960 industry statistics. The revised classification provides for a breakdown of the Primary Metals group into 7 separate industries under the new title of Primary Metal Industries. These 7 industries were formerly major components within the old S.I.C. groups "Iron and Steel Products" and "Non-ferrous Metal Products".

Implementation of the new S.I.C. introduced as well a number of inter and intra industry changes. (See footnote A for details).

Factory shipments reported by the Primary Metal Industries group in 1960 were valued at \$2,742.5 millions, an increase of some \$177.4 millions, or 6.9%, over the comparable figure 1959 total of \$2,565.1 millions adjusted to a basis comparable with 1960.

In 1960 there were 418 operating establishments in this group employing 90,025 persons who were paid \$454.6 millions in salaries and wages. Materials for use in manufacturing cost \$1,598.2 millions and fuel and electricity amounted to \$101.5 millions.

Note:

A. Attention is drawn to the fact that the 1960 compilations, as presented in this report, are on the basis of the revised Standard Industrial Classification (S.I.C.). In many instances adoption of the new Standard Industrial Classification effected a radical shifting of manufacturing establishments as between industry groupings, and the formation of new industries. Some of the changes are as follows:

1. Iron and Steel Mills.

Significant elements in the shift in the case of the Iron and Steel Mills industry were the inclusion in this industry of the coke and gas divisions of the integrated steel mills —

previously included as separate establishments in the old S.I.C. industry The Coke and Gas Industry; and the transfer of establishments manufacturing cast steel railway car wheels to the Railroad Rolling Stock Industry.

2. Steel Pipe and Tube Mills.

This is a new industry which is comprised of "pipe and tube" establishments previously forming a major component of the old S.I.C. industry, The Iron Castings Industry.

3. Iron Foundries.

A significant element in the case of the Iron Foundries industry was the transfer of establishments producing welded and seamless steel pipe and tubing to a new and separate industry. (See number 2 above).

4. Smelting and Refining Industry.

For this industry, changes brought about by the implementation of the revised Standard Industrial Classification were of a minor nature.

5. Aluminum Rolling, Casting and Extruding.

This is a new industry in the revised S.I.C. and is comprised of a major component of the former S.I.C. industry The Aluminum Products Industry.

6. Copper and Alloy Rolling, Casting and Extruding.

This is a new industry, comprised of those establishments previously forming a substantial part of the former S.I.C. industry The Brass and Copper Products Industry.

7. Metal Rolling, Casting and Extruding, NES.

The new industry, Metal Rolling, Casting and Extruding, NES, now comprises a major component of the previous S.I.C. industry, The White Metal Alloys Industry.

B. Industry bulletins carrying revised figures for 1960 also include 1957, 1958 and 1959 data recompiled on the revised S.I.C. basis for purpose of comparability.

PRIMARY METAL INDUSTRIES

TABLE 1. Principal Statistics: Primary Metal Industries, 1957-59 and by Industry, 1960

Basis: Standard Industrial Classification revised 1960

Industry	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Selling value of factory shipments
	number				dollars		
1957	418	92,293	414,523,866	78,934,466	1,387,616,279	1,006,352,692	2,472,248,355
1958	403	82,468	385,777,429	73,666,157	1,212,040,725	1,019,627,840	2,199,317,658
1959	398	88,385	434,179,803	82,914,027	1,457,394,162	1,048,263,609	2,565,092,848
1960							
Iron and steel mills	48	36,472	193,892,738	29,174,439	359,638,415	375,384,276	756,456,392
Steel pipe and tube mills	15	3,129	16,192,477	2,161,366	86,531,345	32,733,055	120,860,404
Iron foundries	141	8,677	35,954,414	2,243,501	40,446,563	55,330,014	97,685,520
Smelting and refining	23	29,708	153,682,338	63,268,058	924,379,442	507,530,017	1,495,177,517
Aluminum rolling, casting and extruding	44	5,916	27,441,118	1,919,035	63,889,589	27,411,031	96,379,717
Copper and alloy rolling, casting and extruding	70	3,487	16,469,778	1,521,467	86,529,105	29,617,452	118,899,578
Metal rolling, casting and extruding, n.e.s.	77	2,636	10,949,673	1,197,896	36,771,653	19,188,918	57,060,903
Totals	418	90,025	454,582,536	101,485,762	1,598,186,112	1,047,194,763	2,742,520,031

TABLE 2. Principal Statistics: Primary Metal Industries, by Provinces, 1960

Province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Selling value of factory shipments
	number				dollars		
Newfoundland	3	97	286,372	16,362	112,540	303,114	402,802
Prince Edward Island	1						
Nova Scotia	7						
New Brunswick	3	4,492	21,616,147	2,867,287	30,949,783	33,446,302	67,217,160
Quebec	117						
Ontario	205						
Manitoba	12	1,426	6,366,260	1,120,639	12,557,813	12,093,555	25,902,148
Saskatchewan	5	730	3,425,084	2,734,858	18,563,133	14,017,389	34,449,898
Alberta	21	1,357	6,893,421	1,089,695	32,294,771	18,678,806	50,326,496
British Columbia	44	6,652	35,257,245	9,630,658	112,366,682	73,895,464	198,729,510
Canada	418	90,025	454,582,536	101,485,762	1,598,186,112	1,047,194,763	2,742,520,031

TABLE 3. Employees and Earnings: Primary Metal Industries, by Industries, 1960

Industry	Employees					Earnings		
	Supervisory and office		Production and related workers		Total employees	Supervisory and office	Production and related workers	Total earnings
	Male	Female	Male	Female				
	number					dollars		
Iron and steel mills	5, 055	1, 333	29, 906	176	36, 472	40, 080, 884	153, 811, 854	193, 892, 738
Steel pipe and tube mills	546	123	2, 448	12	3, 129	3, 745, 018	12, 447, 459	16, 192, 477
Iron foundries	1, 027	303	7, 226	121	8, 677	7, 176, 433	28, 775, 981	35, 954, 414
Smelting and refining	4, 919	655	24, 088	46	29, 708	34, 667, 270	119, 015, 068	153, 682, 338
Aluminum rolling, casting and extruding	1, 468	743	3, 594	111	5, 916	12, 101, 829	15, 339, 289	27, 441, 118
Copper and alloy rolling, casting and extruding	564	170	2, 730	23	3, 487	4, 086, 449	12, 383, 329	16, 469, 778
Metal rolling, casting and extruding, n.e.s.	638	163	1, 624	211	2, 636	4, 273, 871	6, 675, 802	10, 949, 673
Totals	14, 217	3, 490	71, 616	702	90, 025	106, 133, 754	348, 448, 782	454, 582, 536

TABLE 4. Employees and Earnings: Primary Metal Industries, by Provinces, 1960

Province	Employees					Earnings		
	Supervisory and office		Production and related workers		Total	Supervisory and office	Production and related workers	Total
	Male	Female	Male	Female				
	number					dollars		
Newfoundland and Prince Edward Island.....	22	8	67	—	97	107,916	178,456	286,372
Nova Scotia and New Brunswick.....	553	90	3,843	6	4,492	3,457,350	18,158,797	21,616,147
Quebec.....	4,181	1,002	16,203	47	21,433	29,694,065	76,628,823	106,322,888
Ontario.....	7,600	2,043	43,590	605	53,838	59,472,508	214,942,611	274,415,119
Manitoba.....	178	41	1,205	4	1,426	1,138,048	5,228,212	6,366,260
Saskatchewan.....	89	11	630	—	730	589,728	2,835,356	3,425,084
Alberta.....	351	53	951	2	1,357	2,387,633	4,505,788	6,893,421
British Columbia.....	1,245	242	5,127	38	6,652	9,286,506	25,970,739	35,257,245
Canada.....	14,217	3,490	71,616	702	90,025	106,133,754	348,448,782	454,582,536

TABLE 5. Production and Related Workers (Wage-earners): Primary Metal Industries, by Months, 1960

Month	Male	Female
January	73,595	718
February	73,948	731
March	73,826	738
April	73,522	725
May	72,523	726
June	72,535	700
July	71,804	698
August	71,778	676
September	70,422	682
October	70,404	712
November	66,232	671
December	66,609	652
Averages	71,616	702

TABLE 6. Principal Statistics by Selling Value of Factory Shipments, Number of Employees and Type of Ownership: Primary Metal Industries, 1960

	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity	Cost at plant of materials used	Selling value of factory shipments
	number		dollars			
(a) Factory shipments						
Under \$10,000	28	57	85,473	9,923	63,850	169,132
\$ 10,000 to \$ 24,999	30	95	227,761	19,969	184,708	486,980
25,000 " 49,999	33	191	563,321	46,357	470,915	1,273,060
50,000 " 99,999	48	437	1,453,968	121,962	1,285,052	3,455,483
100,000 " 199,999	57	895	3,200,840	238,921	3,256,098	8,101,845
200,000 " 499,999	57	2,147	8,387,378	568,662	6,825,456	18,868,158
500,000 " 999,999	36	2,409	10,161,845	638,478	10,793,159	26,545,749
1,000,000 " 4,999,999	67	9,812	42,551,964	6,345,911	93,614,453	165,277,717
5,000,000 and over	60	73,156	382,790,236	93,495,579	1,481,692,421	2,518,341,887
Head offices	—	826	5,159,728	—	—	—
Totals	418	90,025	454,582,536	101,485,762	1,598,186,112	2,742,520,031
(b) Employees						
Under 5 Employees	75	201	537,980	63,003	880,010	1,782,729
5 to 14 employees	92	821	2,937,657	251,905	4,631,327	9,599,063
15 " 49 "	97	2,760	10,874,602	992,254	35,775,956	55,694,037
50 " 99 "	52	3,662	15,823,237	1,386,301	80,033,851	111,580,284
100 " 199 "	36	4,903	21,740,654	3,754,832	80,116,234	121,997,966
200 " 499 "	34	10,813	50,653,136	11,531,961	194,670,816	297,214,923
500 " 999 "	14	9,971	47,844,335	17,696,436	221,157,892	364,369,881
1,000 " 1,499 "	5	5,691	29,247,129	10,192,521	288,327,616	348,006,096
1,500 and over	13	50,377	269,784,078	55,616,549	892,590,410	1,432,275,052
Head offices	—	826	5,159,728	—	—	—
Totals	418	90,025	454,582,536	101,485,762	1,598,186,112	2,742,520,031
(c) Type of ownership						
Individuals	51	257	637,518	51,116	661,664	1,809,751
Partnerships	51	220	834,697	150,174	2,391,387	3,864,238
Incorporated companies	336	89,548	453,110,321	101,284,472	1,595,113,081	2,737,046,042
Totals	418	90,025	454,582,536	101,485,762	1,598,186,112	2,742,520,031



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TABLE 7. Fuel and Electricity Used: Primary Metal Industries, 1960

Kind	Quantity	Cost at plant
		\$
Bituminous coal:		
(a) From Canadian mines	ton 587,771	7,155,376
(b) Imported	" 530,874	6,485,759
Sub-bituminous coal (from Alberta mines only)	" 30	660
Anthracite coal	" 120,678	1,500,879
Coke	" 301,177	6,315,975
Gasoline (including gasoline used in cars and trucks)	Imp. gal. 2,468,233	753,200
Fuel oil including kerosene or coal oil	" 198,892,529	17,592,609
Wood	cord 2,337	73,964
Gas:		
(a) Liquefied petroleum gases	Imp. gal. 695,128	130,323
(b) Other manufactured gas	M cu. ft. 2,424,449	467,429
(c) Natural gas	" 14,028,213	6,274,443
Other fuel	475,614
Electricity purchased	kwh. 20,951,153,699	54,259,531
Total	101,485,762

TABLE 8. Capital and Repair Expenditures: Primary Metal Industries, 1960-63

Year	Capital		Repair		Total capital and repair
	Construction	Machinery and equipment	Construction	Machinery and equipment	
	thousands of dollars				
1960	51,316	142,870	20,044	144,955	359,185
1961	32,958	93,657	19,020	134,909	280,544
1962	65,941	146,976	16,867	150,635	380,419
1963	43,017	143,981	17,689	159,219	363,906

Note: 1960-61 actual; 1962 preliminary estimate; 1963 intentions.

TABLE 9. Materials Used: Primary Metal Industries, by Industry, 1960

Industry	Total cost of materials ¹	Catalogue No. (Annual)
Iron and steel mills	359,638,415	41-203
Steel pipe and tube mills	88,531,345	41-220
Iron foundries	40,446,563	41-226
Smelting and refining	924,379,442	41-214
Aluminum rolling, casting and extruding	63,889,589	41-204
Copper and alloy rolling, casting and extruding	86,529,105	41-224
Metal rolling, casting and extruding, n.e.s.	36,771,653	41-215
Total	1,598,186,112	

¹ For detail of materials used refer to the separate industry reports identified by the catalogue number above.

TABLE 10. Factory Shipments by Industry: Primary Metal Industries, 1960

Industry	Selling value of factory shipments ¹	Catalogue No. (Annual)
Iron and steel mills	756,456,392	41-203
Steel pipe and tube mills	120,860,404	41-220
Iron foundries	97,683,520	41-226
Smelting and refining	1,495,177,517	41-214
Aluminum rolling, casting and extruding	96,379,717	41-204
Copper and alloy rolling, casting and extruding	118,899,578	41-224
Metal rolling, casting and extruding, n.e.s.	57,060,903	41-215
Total	2,742,520,031	

¹ For detail of factory shipments refer to the separate industry reports identified by the catalogue number above.