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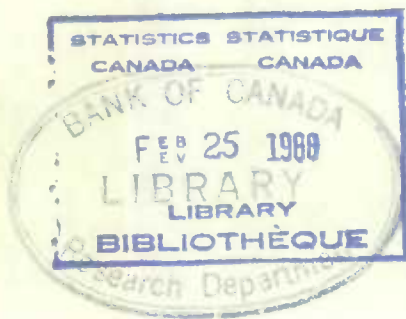


CANADA

COPPER AND ALLOY ROLLING, CASTING AND EXTRUDING

1960

First issue. Previously part of 41-206 - The Brass and Copper Products Industry which has been discontinued. Other statistics formerly included in the old title are now located in 41-227 - Metal Stamping, Pressing and Coating Industry and 41-228 - Miscellaneous Metal Fabricating Industries (New titles).



ANNUAL CENSUS OF MANUFACTURES

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SYMBOLS

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

.. figures not available.

... 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

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*.

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.

COPPER AND ALLOY ROLLING, CASTING AND EXTRUDING

1960

Data presented in this report under the heading of Copper and Alloy Rolling, Casting and Extruding 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—see item "Standard Industrial Classification" in the Explanatory Notes section of this report. For statistical purposes the industry titled Copper and Alloy Rolling, Casting and Extruding in the revised Standard Industrial Classification covers the operations of establishments primarily engaged in manufacturing copper and copper alloy shapes such as bars, rods, plates, sheets and castings. Pressure die casting of copper alloys is included in the Metal Rolling, Casting and Extruding, n.e.s. industry, and the extraction of copper from the ore is classified in the Smelting and Refining industry.

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 as in the case of Copper and Alloy Rolling, Casting and Extruding. This new industry is now comprised of those establishments previously forming a major component of the old S.I.C. industry "The Brass and Copper Products Industry". In order to provide a statistical comparison an attempt has been made to recompile 1957, 1958 and 1959 data on the revised Standard Industrial Classification basis. Figures on this basis are shown in Table 1.

There were 70 establishments classified to the Copper and Alloy Rolling, Casting and Extruding industry in 1960; there being 21 in Quebec, 36 in Ontario, 11 in British Columbia and one each in Manitoba and Alberta. Employees in this industry numbered 3,487; salaries and wages totalled \$16,469,778; materials used in the manufacturing processes cost \$86,529,105; fuel and electricity amounted to \$1,521,467; and factory shipments were valued at \$118,899,578.

The establishments in this industry manufacture copper and copper alloy pipe and tubing, plates, sheets, strip and flat products, and other forms (wire rods, castings, powder, etc.) as their main products.

**TABLE 1. Principal Statistics: Copper and Alloy Rolling, Casting and Extruding,
By Province, 1957 - 60**

Basis: Standard Industrial Classification revised 1960

Year and 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				
1957							
Quebec	21	1,120	4,634,180	528,742	38,189,131		48,755,063
Ontario	40	1,916	8,383,414	712,878	41,415,957		57,922,189
Manitoba	1	134	458,123	39,366	594,245	1	1,283,775
Alberta	1						
British Columbia	12						
Canada	73	3,170	13,475,717	1,280,986	80,199,333		107,961,027
1958							
Quebec	22	1,636	7,080,198	644,770	37,026,111		52,242,959
Ontario	36	2,016	9,077,731	846,130	39,793,055		56,398,629
Manitoba	1	123	438,998	37,683	388,914	1	983,692
Alberta	1						
British Columbia	9						
Canada	69	3,775	16,596,927	1,528,583	77,208,080		109,625,280
1959							
Quebec	19	1,142	5,101,241	559,364	38,497,776		50,310,228
Ontario	37	2,118	10,161,402	962,774	47,763,647		67,210,452
Manitoba	1	362	1,593,666	163,735	3,857,960	1	4,802,889
Alberta	1						
British Columbia	10						
Canada	68	3,622	16,856,309	1,685,873	90,119,383		122,323,569
1960							
Quebec	21	1,090	4,788,289	458,525	35,832,761	9,490,994	46,641,704
Ontario	36	2,068	10,229,277	892,438	46,239,542	17,136,703	64,175,309
Manitoba	1	329	1,452,212	170,504	4,456,802	2,989,755	8,082,565
Alberta	1						
British Columbia	11						
Canada	70	3,487	16,469,778	1,521,467	86,529,105	29,617,452	118,899,578

¹ The changeover to the new classification has delayed the recompilation of "Value added" figures for years prior to 1960 and same will not be available until the next issue of this report.

TABLE 2. Inventories:¹ Copper and Alloy Rolling, Casting and Extruding, 1960

	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
Opening:				
Quebec	864,193	2,441,921	1,136,490	4,442,604
Ontario	7,801,169	788,310	482,389	9,071,868
Manitoba, Alberta and British Columbia	317,405	573,026	1,200,404	2,090,835
Canada	8,982,767	3,803,257	2,819,283	15,605,307
Closing:				
Quebec	552,095	1,749,667	969,320	3,271,082
Ontario	6,908,018	667,998	696,075	8,272,091
Manitoba, Alberta and British Columbia	475,801	500,162	807,764	1,783,727
Canada	7,935,914	2,917,827	2,473,159	13,326,900

¹ Book value of all manufacturing inventories owned and held at plant and plant warehouses.

TABLE 3. Factory Shipments: Copper and Alloy Rolling, Casting and Extruding, 1960

Product	Quantity	Selling value of factory shipments dollars
Aluminum:		
Castings	lb. 1,000,112	859,922
Other forms (powder, etc.) .....	...	1,111,632
Copper and copper alloy (brass, bronze, etc.):		
Pipe and tubing	lb. 65,608,305	35,705,479
Plates, sheets, strip and flat products	" 41,769,325	19,995,691
Other forms (wire rods, castings, powder, etc.)	" 159,279,021	57,723,561
All other products .....	...	3,503,293
Total, all products .....	...	118,899,578

TABLE 4. Materials used: Copper and Alloy Rolling, Casting and Extruding, 1960

Material	Quantity	Cost at plant dollars
Aluminum:		
Ingots	lb. 115,383	34,262
Scrap	" 646,876	135,295
Other forms	" 1,748,541	527,812
Antimony	" 14,102	3,454
Brass and bronze:		
Ingots	" 1,747,192	547,601
Scrap	" 12,674,796	2,809,723
Bars and rods	" 93,896	43,676
Pipe and tubing	" 48,812	44,596
Other forms	" 2,746	1,732
Copper:		
Ingots, slabs, wire bars, etc.	" 207,613,366	63,542,325
Scrap	" 29,327,140	8,426,167
Plates, sheets and strip	" 20,808	11,546
Wire	" 80,734	27,310
Other forms	" 366,806	117,168
Lead, all forms	" 374,895	42,226
Manganese metal	" 61,466	16,871
Monel metal	" 146,646	192,026
Nickel	" 453,934	333,246
Nickel-copper shot	" 14,656	10,646
Nickel-silver, all forms	" 909,535	266,379
Tin all forms:		
Phosphor tin	" 256,540	263,900
Other tin	" 19,293	19,873
Zinc:		
Ingots and slabs	" 9,905,179	1,380,496
Other forms	—	—
Other non-ferrous metals .....	..	183,263
Lumber	M bd. ft. 3,980	75,316
Silica sand	ton 64	1,615
Foundry sands	" 991	9,575
Graphite	lb. 49,577	8,174
Refractories .....	...	47,135
Other materials ¹ .....	...	6,657,746
Containers and packing materials .....	...	747,951
Totals all materials		86,529,103

¹ No detailed information on materials used was collected from firms generally reporting value of shipments of less than \$300,000. The total value of materials used by these firms was \$1,870,334 and this amount is included in "Other materials".

**TABLE 5. Principal Statistics classified according to Type of Ownership:
Copper and Alloy Rolling, Casting and Extruding, 1957 and 1960**

Type	Estab- lish- ments	Employees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
	number		dollars		
1957					
Individual ownerships	22	100	265,110	385,876	793,921
Partnerships	10	67	206,018	292,794	618,692
Incorporated companies	43	3,003	13,004,589	79,520,663	106,548,414
Totals.....	75	3,170	13,475,717	80,199,333	107,961,027
1960					
Individual ownerships	16	61	163,803	236,048	487,406
Partnerships	10	48	136,138	144,730	342,947
Incorporated companies	44	3,378	16,169,837	86,148,327	118,069,225
Totals.....	70	3,487	16,469,778	86,529,105	118,899,578

**TABLE 6. Principal Statistics grouped according to Selling Value of Factory Shipments:
Copper and Alloy Rolling, Casting and Extruding, 1957 and 1960**

Type	Estab- lish- ments	Employees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
	number		dollars		
1957					
Under \$10,000	5	7	8,617	7,192	18,535
\$ 10,000 to \$ 24,999	17	51	119,420	112,095	288,725
25,000 " 49,999	9	44	121,417	133,472	310,488
50,000 " 99,999	15	123	355,774	483,964	1,045,693
100,000 " 199,999	12	152	531,230	848,876	1,693,517
200,000 " 499,999	6	130	499,658	813,276	1,638,584
500,000 " 999,999	5	238	846,900	1,501,285	3,438,800
1,000,000 " 4,999,999	2	2,413	10,919,518	76,299,173	99,526,685
5,000,000 and over	4				
Head offices	—	12	73,183	—	—
Totals.....	75	3,170	13,475,717	80,199,333	107,961,027
1960					
Under \$10,000	6	13	15,000	9,400	33,013
\$ 10,000 to \$ 24,999	13	34	78,168	101,141	206,368
25,000 " 49,999	9	52	156,343	150,718	345,996
50,000 " 99,999	11	78	291,312	345,087	787,789
100,000 " 199,999	12	161	620,971	659,177	1,615,640
200,000 " 499,999	7	172	656,875	1,044,711	2,309,790
500,000 " 999,999	5	269	1,116,147	1,601,267	3,650,280
1,000,000 and over	7	2,698	13,459,159	82,617,604	109,950,702
Head offices	—	10	75,803	—	—
Totals.....	70	3,487	16,469,778	86,529,105	118,899,578

TABLE 7. Employees and their Earnings: Copper and Alloy Rolling, Casting and Extruding, 1959 and 1960

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
1959								
Quebec	217	60	854	11	1,142	1,356,406	3,744,835	5,101,241
Ontario	277	98	1,733	10	2,118	2,232,141	7,929,261	10,161,402
Manitoba, Alberta and British Columbia	74	18	269	1	362	441,896	1,151,770	1,593,666
Canada	568	176	2,856	22	3,622	4,030,443	12,825,866	16,856,309
1960								
Quebec	208	56	815	11	1,090	1,355,511	3,432,778	4,788,289
Ontario	280	95	1,682	11	2,068	2,273,236	7,956,041	10,229,277
Manitoba, Alberta and British Columbia	76	19	233	1	329	457,702	994,510	1,452,212
Canada	564	170	2,730	23	3,487	4,086,449	12,383,329	16,469,778

TABLE 8. Production Workers, By Months: Copper and Alloy Rolling, Casting and Extruding, 1960

Month	Establishments reporting monthly detail ¹	
	Male	Female
January	2,499	19
February	2,501	19
March	2,455	20
April	2,462	18
May	2,392	18
June	2,387	19
July	2,390	19
August	2,416	19
September	2,418	20
October	2,412	19
November	2,390	16
December	2,252	15
Average for establishments reporting monthly detail	2,414	18
Average estimated for small establishments ²	316	5
Average for all establishments	2,730	23

¹ The number of production workers, by months, was collected only for establishments generally reporting value of shipments of \$300,000 and over.

² For establishments generally reporting value of shipments of less than \$300,000, no data on number of workers were collected. Average was estimated by using change in value of shipments to arrive at value of payroll which was then used in conjunction with estimated average earnings to arrive at number of workers.

TABLE 9. Fuel and Electricity Used: Copper and Alloy Rolling, Casting and Extruding, 1960

Kind		Quantity	Cost at plant \$
1. Establishments reporting commodity detail: ¹			
Bituminous coal — Canadian	ton	1,577	16,318
Imported	"	9,610	105,750
Anthracite coal	"	12	288
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	72,303	23,763
Fuel oil	"	1,904,954	178,191
Liquefied petroleum gases	Imp. gal.	115,305	22,363
Natural gas	M. cu. ft.	300,990	236,318
Electricity purchased	kwh.	87,679,355	793,522
Other fuel .....	...	...	217
2. Estimate for establishments for which no data were collected: ²			
Cost of fuel and electricity .....	...	...	144,737
3. All establishments:			
Total cost of fuel and electricity .....	...	...	1,521,467

¹ Establishments generally reporting value of shipments of \$300,000 and over.² Establishments generally reporting value of shipments of less than \$300,000.

TABLE 10. Imports of Specified Copper and Alloy Products, 1959 and 1960

Item	1959		1960		
	Quantity	Value	Quantity	Value	
		\$		\$	
Brass and its products:					
Brass scrap	cwt.	1,654	39,681	936	18,562
Brass ingots bars or rods	"	22,228	689,421	9,213	366,396
Brass in strips, sheets or plates	"	38,740	1,319,533	15,276	600,899
Brass tubing	"	15,939	1,026,876	10,836	701,167
Metal caps, for use in the manufacture of electric batteries .....	...	...	56,754	...	64,610
Pumps, hand, brass, n.o.p. ....	...	...	18,948	...	21,322
Valves, brass .....	...	...	4,936,620	...	4,950,124
Meters, brass, and parts, n.o.p. ....	...	...	365,276	...	351,228
Wire, brass, n.o.p.	lb.	320,825	145,056	464,847	238,689
Wire cloth, or woven wire of brass, n.o.p. ....	...	...	74,650	...	161,654
Manufactures of brass, n.o.p. ....	...	...	12,824,190	...	11,540,853
Plumbers' brass goods .....	...	...	5,726,883	...	4,909,191
Copper products:					
Copper in bars or rods, for the manufacture of trolley, telegraph and telephone wires, electric wires, electric cables and electrical conductors	cwt.	35,354	1,237,086	27,411	985,160
Copper in bars or rods, n.o.p.	"	1,958	80,839	4,005	133,433
Copper in strips, sheets or plates	"	9,206	435,204	4,008	196,977
Copper tubing	"	21,931	1,071,720	31,044	1,461,863
Copper rollers and stones, used in the printing of textile fabrics or wallpaper .....	...	...	114,297	...	101,799
Copper wire, n.o.p.	lb.	50,239	31,410	43,053	39,440
Copper wire cloth or woven wire of copper .....	...	...	9,317	...	3,653
Copper, manufactures of., n.o.p. ....	...	...	1,483,485	...	1,570,173

TABLE 11. Exports of Specified Copper and Alloy Products, 1959 and 1960

Item	1959		1960	
	Quantity	Value	Quantity	Value
	cwt.	\$	cwt.	\$
Brass and its products:				
Brass scrap, dross and ashes	147,903	2,604,896	246,716	4,914,836
Brass in bars, ingots, rods, strips, sheets and plates	39,860	1,765,714	35,124	1,513,999
Brass tubing	12,469	623,751	8,227	441,566
Brass valves .....	...	412,801	...	335,869
Brass wire and bronze wire	3,408	248,426	8,272	510,312
Brass manufactures, n.o.p. ....	...	181,615	...	182,500
Copper products:				
Copper in rods, strips, sheets and plates	253,382	8,552,763	288,329	9,662,563
Copper tubing	84,411	4,340,453	136,753	7,555,202
Copper wire and cable, insulated .....	...	2,464,038	...	4,588,457
Copper wire, bare .....	...	391,466	...	278,302
Copper wire screen .....	...	5,020	...	352
Copper manufactures, n.o.p. ....	...	39,428	...	62,199

Directory of Firms: Copper and Alloy Rolling, Casting and Extruding, 1960

Name of firm	Location of plant
Quebec:	
Alliance Foundry & Pattern Works Reg'd	8677 - 10th Ave., Ville St. Michel
Archambault Foundry	8016 Henry Julien, Montreal
Boullane Brass Foundry	4270 Frontenac, Montreal
Canada Wire & Cable Co. Ltd.	Sherbrooke & Durocher Sts. Montreal E.
Canadian Bronze Powder Works Ltd.	Valleyfield
Dauncey, P.A. Ltd.	Sherbrooke
Diversified Metallurgical Industries Reg'd	Dunham
Dominion Brass & Aluminum Foundry Ltd.	Ville St. Pierre
Eastern Brass Foundry Ltd.	514 Harbour St., Montreal
Empire Brass Foundry Ltd.	137 Nazareth St., Montreal
Fonderie D'Art	Longueuil
Fonderie D'Art Vandevoorde	2000 Kent St., Montreal
Fonderie St. Maurice Ltée.	Cap-de-la-Madeleine
La Prairie Brass and Aluminum	La Prairie
Mark Hot Foundries Ltd.	7735 St. Michel Blvd., Ville St. Michel
Miller's Brass Foundry	Three Rivers
Noranda Copper & Brass Ltd.	Sherbrooke St. E., Montreal E.
Rapid Foundry	St. Philomene
Trotter Metal Reg'd	St. Anne-de-la-Perade
Verdun Brass & Aluminum Foundry	2430 Ville Marie St., Montreal
Victoria Brass & Aluminum	5244 Casgrain St., Montreal
Ontario:	
Anaconda American Brass Ltd.	8th & Birmingham Sts., New Toronto
Barnard Foundries Ltd.	13 Dundas St. E., Brantford
Bond Brass Ltd	110 McArthur Ave., Eastview
Calumet & Hecla of Canada Ltd.	London
Central Castings	7 Magnificent Rd., Toronto
Craig Bronze Co.	330 Horner Ave., Toronto
Dominion Gas Meter Co. Ltd., The	London
Fisher & Son Ltd.	366 Wilson St., Hamilton
Guelph Brass & Aluminum Co.	Guelph
Kitchener Brass & Aluminum Foundry Ltd.	Kitchener
Lawrence, T.C. & Sons Ltd.	Galt
Long Branch Foundry, The	3 Magnificent Rd., Toronto
May Foundry Co.	2029 Clark Ave., Niagara Falls
Mears & Son	Brantford
Metal Atomizing & Processing Corp. Ltd.	1437 Speers Rd. Oakville
National Brass & Aluminum Foundry	117 St. Patrick St., Toronto
Niagara Bronze	497 Buttrey St., Niagara Falls
Non-Ferrous Castings Ltd.	65 Frederick St., Toronto
Ottawa Brass Mfg. Co.	542 Wellington St., Ottawa
Phillips Electrical Co. Ltd.	Brockville
Quality Brass Foundry	Port Credit
Queen City Brass Foundry	28 Dalhousie St., Toronto



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Directory of Firms: Copper and Alloy Rolling, Casting and Extruding, 1960 — Concluded

Name of firm	Location of plant
Ontario — Concluded:	
Rahn Metals Ltd.	North Bay
Ratcliffs (Canada) Ltd.	Yonge St. N., Richmond Hill
Robinson, J. & Son	2 Hinton Ave., Ottawa
Roto-Cast Ltd.	721 Eastern Ave., Toronto
S.B. & A. Foundry Ltd.	Guelph
St. Catharines Brass Works Ltd.	16 Smith St., St. Catharines
Samco Brass Ltd.	236 Welland Ave., St. Catharines
Stoermer Bell & Brass Foundry	Breslau
Sully Castings Ltd.	225 Centre St. E., Richmond Hill
Tallman, A.H. Bronze Co. Ltd.	Cavel Ave., Hamilton
Warren Alloy (Canada) Ltd.	Chatham
Wilson Brass & Aluminum Foundries Ltd.	21 Jarvis St., Toronto
Windsor Brass Works Ltd.	408 Hanna St., Windsor
Windsor Match Plate Ltd.	1125 Westcott Rd., Windsor
Manitoba:	
Winnipeg Brass Ltd.	600 Clifton St., Winnipeg
Alberta:	
Paragon Bronze & Aluminum Products	511 3rd Ave. S. W., Calgary
British Columbia:	
A-1 Pattern Shop & Brass Foundry Ltd	16 West 3rd Ave., Vancouver
A.B.M. Foundry Ltd.	North Surrey
Green, Wm. & Sons Brass Foundry	515 Pembroke St., Victoria
Hi-Way Foundry	1604 Island Highway, Victoria
Lansco Foundries Ltd.	1865 West Georgia St., Vancouver
McPhail & Sons (1960) Ltd.	251 East 2nd Ave., Vancouver
Metro Brass & Aluminum Foundry Ltd.	South Burnaby
North Shore Foundry Ltd.	234 East Esplanade, North Vancouver
Pacific Bronze Co. Ltd.	244 Woodland Drive, Vancouver
Summer Brass Foundry Ltd.	619 Bidwell St., Vancouver
Western Copper Mills Ltd.	920 Derwent Way, New Westminster