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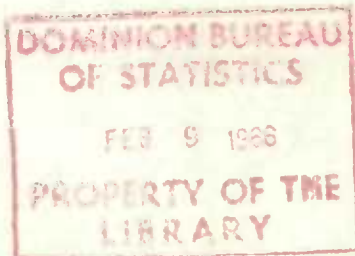
ANNUAL



COPPER AND ALLOY ROLLING, CASTING AND EXTRUDING

1963

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Q — Quarterly

M — Monthly

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COPPER AND ALLOY ROLLING, CASTING AND EXTRUDING

1963

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.) and the New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilations of industry statistics—see items "Standard Industrial Classification" and "Establishment" 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.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- p preliminary figures.
- r revised figures.
- x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1 A. Principal Statistics classified by Province, 1962 and 1963

Year and province	Establishments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and electricity	Cost of materials and supplies	Value of shipments of goods of own manufacture	Value added	Working owners and partners		Total employees		Total value added
		Number	Man-hours paid	Wages					Number	Withdrawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Totals	69	2,704	5,769	12,493	1,562	92,042	121,599	28,803 ^r	29	98	3,482	16,886	28,810 ^r
1962													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	20	828	1,714	3,697	523	52,811	62,136	6,174	9	26	1,119	5,407	6,127
Ontario	36	1,718	3,949	8,672	928	53,838	74,251	19,494	15	59	2,107	11,235	19,639
Manitoba	1	196	371	794	138	3,465	5,823	1,157	5	20	266	1,214	1,161
Saskatchewan	-												
Alberta	1												
British Columbia	9												
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	67	2,742	6,034	13,163	1,590	110,114	142,210	26,826	29	105	3,492	17,856	26,926
1963													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	18	830	1,813	3,787	537	56,128	65,648	9,280	5	12	1,135	5,573	9,254
Ontario	34	1,804	4,175	9,413	969	58,866	79,851	20,203	15	56	2,210	12,159	20,338
Manitoba	1	240	495	1,087	172	5,043	7,294	2,469	5	20	306	1,496	2,485
Saskatchewan	-												
Alberta	1												
British Columbia	8												
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	62	2,874	6,483	14,287	1,677	120,037	152,793	31,951	25	88	3,651	19,227	32,077

TABLE 1B. Principal Statistics classified by Size Groups based on Shipments of Goods of Own Manufacture, 1962 and 1963

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1962													
Under \$10,000	16	12	16	33	8	90	232	133	21	64	14	36	133
\$ 10,000 to \$ 24,999	6	17	25	47	7	93	221	121	4	19	23	67	121
25,000 " 49,999	9	53	94	189	17	281	614	325	1	3	69	259	344
50,000 " 99,999	15	174	285	573	68	994	2,078	1,067	3	18	206	709	1,069
100,000 " 199,999	8	186	398	688	61	1,255	2,799	1,508	—	—	218	911	1,515
200,000 " 499,999	5	195	389	755	75	1,784	3,598	1,755	—	—	250	1,044	1,761
500,000 " 999,999	3	192	402	916	225	6,685	9,851	1,987	—	—	251	1,356	1,981
1,000,000 " 4,999,999	5	1,913	4,426	9,963	1,128	98,931	122,817	19,931	—	—	2,447	13,373	20,006
5,000,000 and over	...	...	...	...	...	...	...	...	...	...	14	104	(4)
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	67	2,742	6,034	13,163	1,590	110,114	142,210	26,826	29	105	3,492	17,856	26,926
1963													
Under \$10,000	4	1	2	1	2	12	29	16	3	6	2	3	16
\$ 10,000 to \$ 24,999	11	8	16	24	6	71	178	99	15	48	8	24	99
25,000 " 49,999	4	9	18	21	3	46	128	77	4	15	12	30	92
50,000 " 99,999	6	34	68	118	12	177	426	236	—	—	46	173	241
100,000 " 199,999	14	187	379	604	59	967	2,135	1,172	3	19	221	746	1,235
200,000 " 499,999	9	188	393	743	73	1,387	3,231	1,750	—	—	229	993	1,741
500,000 " 999,999	5	185	381	720	76	1,733	3,606	1,715	—	—	227	975	1,732
1,000,000 " 4,999,999	3	163	362	783	142	4,635	7,001	2,183	—	—	194	1,039	2,195
5,000,000 and over	6	2,099	4,864	11,272	1,304	111,009	136,059	24,703	—	—	2,698	15,143	24,730
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	14	102	(4)
Totals	62	2,874	6,483	14,287	1,677	120,037	152,793	31,951	25	88	3,651	19,227	32,077

TABLE 1C. Principal Statistics classified by Size Groups based on Manufacturing Value Added, 1962 and 1963

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1962													
Under \$10,000	13	11	14	29	7	68	172	96	15	46	13	32	96
\$ 10,000 to \$ 24,999	10	22	36	71	10	163	338	173	11	40	28	95	173
25,000 " 49,999	7	39	65	126	14	203	473	257	—	—	54	185	277
50,000 " 99,999	15	168	278	556	63	954	1,977	1,009	3	18	198	684	1,011
100,000 " 199,999	5	93	186	371	27	590	1,340	731	—	—	110	510	731
200,000 " 499,999	10	385	779	1,503	218	5,469	9,727	2,982	—	—	499	2,181	2,987
500,000 " 999,999	3	142	320	625	160	50,253	52,636	2,358	—	—	172	784	2,357
1,000,000 " 4,999,999	4	1,882	4,356	9,882	1,090	52,413	75,547	19,220	—	—	2,404	13,281	19,298
5,000,000 and over	...	...	...	...	...	...	...	...	...	...	14	104	(4)
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	67	2,742	6,034	13,163	1,590	110,114	142,210	26,826	29	105	3,492	17,856	26,926
1963													
Under \$10,000	11	6	12	14	5	54	130	68	12	33	7	16	68
\$ 10,000 to \$ 24,999	7	7	14	25	5	66	168	96	10	36	8	26	96
25,000 " 49,999	7	39	78	125	13	186	463	264	—	—	53	187	284
50,000 " 99,999	11	139	283	418	45	757	1,602	839	3	19	165	520	903
100,000 " 199,999	8	139	278	549	46	890	2,065	1,148	—	—	162	688	1,148
200,000 " 499,999	9	285	604	1,101	113	2,837	5,431	2,517	—	—	354	1,542	2,526
500,000 " 999,999	4	187	416	894	183	55,594	58,385	2,733	—	—	227	1,102	2,740
1,000,000 " 4,999,999	5	2,072	4,798	11,160	1,267	59,653	84,549	24,286	—	—	2,661	15,044	24,311
5,000,000 and over	...	...	...	...	...	...	...	...	...	...	14	102	(4)
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	62	2,874	6,483	14,287	1,677	120,037	152,793	31,951	25	88	3,651	19,227	32,077

TABLE 1 D. Principal Statistics classified by Size Groups based on Total Value Added, 1962 and 1963

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1962													
Under \$10,000	13	11	14	29	7	68	172	96	15	46	13	32	96
\$ 10,000 to \$ 24,999	10	22	36	71	10	163	338	173	11	40	28	95	173
25,000 " 49,999	6	31	51	99	12	158	382	212	—	—	43	144	216
50,000 " 99,999	16	176	292	584	66	999	2,067	1,053	3	18	209	725	1,072
100,000 " 199,999	5	93	186	371	27	590	1,340	731	—	—	110	510	731
200,000 " 499,999	10	385	779	1,503	218	5,469	9,727	2,982	—	—	499	2,181	2,987
500,000 " 999,999	3	142	320	625	160	50,253	52,636	2,358	—	—	172	784	2,357
1,000,000 " 4,999,999	4	1,882	4,356	9,882	1,090	52,413	75,548	19,220	—	—	2,404	13,281	19,298
5,000,000 and over													
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	14	104	(4)
Totals	67	2,742	6,034	13,163	1,590	110,114	142,210	26,826	29	105	3,492	17,856	26,926
1963													
Under \$10,000	11	6	12	14	5	54	130	68	12	33	7	16	68
\$ 10,000 to \$ 24,999	7	7	14	25	5	66	168	96	10	36	8	26	96
25,000 " 49,999	7	39	78	125	13	186	463	264	—	—	53	187	284
50,000 " 99,999	10	132	269	389	42	722	1,500	770	3	19	154	471	771
100,000 " 199,999	9	146	292	579	49	926	2,167	1,218	—	—	173	737	1,280
200,000 " 499,999	9	285	604	1,101	113	2,837	5,431	2,517	—	—	354	1,542	2,526
500,000 " 999,999	4	187	416	894	183	55,594	58,385	2,733	—	—	227	1,102	2,746
1,000,000 " 4,999,999	5	2,072	4,798	11,160	1,267	59,653	84,549	24,286	—	—	2,661	15,045	24,311
5,000,000 and over													
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	14	102	(4)
Totals	62	2,874	6,483	14,287	1,677	120,037	152,793	31,951	25	88	3,651	19,227	32,077

TABLE 1 E. Principal Statistics classified by Size Groups based on Total Employed, 1962 and 1963

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Total employees		Total value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1962													
Under 5 employed	20	21	29	60	12	150	367	205	23	75	26	73	205
5- 14 employed	19	125	249	497	51	917	1,858	947	6	30	156	638	967
15- 49 "	19	426	824	1,553	192	18,572	22,725	3,987	—	—	506	1,989	3,997
50- 99 "	6	357	744	1,558	337	41,382	46,067	3,525	—	—	469	2,260	3,521
100-199 "													
200-499 "	3	1,811	4,188	9,496	999	49,093	71,193	18,161	—	—	2,321	12,793	18,240
500 employed and over													
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	14	104	(4)
Totals	67	2,742	6,034	13,163	1,590	110,114	142,210	26,826	29	105	3,492	17,856	26,926
1963													
Under 5 employed	18	13	26	40	10	120	298	164	22	69	15	42	164
5- 14 employed	14	101	202	367	37	613	1,407	795	3	19	129	489	879
15- 49 "	21	476	1,000	1,818	216	21,190	25,761	4,395	—	—	565	2,338	4,398
50- 99 "	5	285	628	1,320	245	42,026	45,675	3,485	—	—	353	1,749	3,501
100-199 "	4	1,999	4,627	10,742	1,169	56,088	79,652	23,112	—	—	2,575	14,507	23,139
200-499 "													
500 employed and over	4	1,999	4,627	10,742	1,169	56,088	79,652	23,112	—	—	2,575	14,507	23,139
Head offices, sales offices and auxiliary units													
Totals	62	2,874	6,483	14,287	1,677	120,037	152,793	31,951	25	88	3,651	19,227	32,077

TABLE 1F. Principal Statistics classified by Type of Organization, 1962 and 1963

Type of organization	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec-tricity	Cost of materials and supplies	Value of shipments of goods of own manu-facture	Value added	Working owners and partners		Total employees		Total value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			'000				'000		'000	
1962													
Individual ownerships	13	20	32	63	10	154	332	167	14	54	21	64	167
Partnerships	8	21	34	68	11	125	319	183	15	51	22	69	183
Incorporated companies	46	2,701	5,968	13,032	1,569	109,835	141,560	26,476	—	—	3,435	17,619	26,560
Cooperatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	14	104	(4)
Totals	67	2,742	6,034	13,163	1,590	110,114	142,210	26,826	29	105	3,492	17,856	26,926
1963													
Individual ownerships	12	19	38	60	9	150	333	172	14	48	19	60	172
Partnerships	6	11	22	38	7	65	192	120	11	40	12	39	120
Incorporated companies	44	2,844	6,423	14,188	1,661	119,822	152,268	31,659	—	—	3,606	19,025	31,789
Cooperatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	14	102	(4)
Totals	62	2,874	6,483	14,287	1,677	120,037	152,793	31,951	25	88	3,651	19,227	32,077

TABLE 2. Industry Output, Input and Value Added, 1962 and 1963

	Manufacturing activity		Non-manufacturing activities		Total activity	
	1962	1963	1962	1963	1962	1963
\$'000						
Output						
1. Shipments and other revenue	142,210	152,793	1,117	1,344	143,327	154,137
Inventories—Goods of own manufacture:						
Add closing—Goods in process	1,300	1,471	...	...	1,300	1,471
Finished goods	3,245	3,530	...	...	3,245	3,530
Less opening—Goods in process	3,561	1,277	...	...	3,561	1,277
Finished goods	4,665	2,851	...	...	4,665	2,851
2. Net inventory change	(3,681)	873	...	...	(3,681)	873
3. Gross output (1 + 2)	138,529	153,666	1,117	1,344	139,646	155,010
Input						
4. Purchases of goods not of own manufacture .....	...	...	786	973	786	973
Inventories—Goods not of own manufacture:						
Add opening .....	...	...	139	159	139	159
Less closing .....	...	...	159	187	159	187
5. Cost of goods sold (not of own manufacture) .....	...	...	766	945	766	945
6. Materials, supplies, components and semi-processed goods	110,114	120,037	251	273	110,385	120,310
7. Fuel and electricity	1,590	1,677	...	...	1,590	1,677
8. Gross input (5 + 6 + 7)	111,704	121,714	1,017	1,218	112,721	122,932
Census value added (3 - 8)	26,826	31,951	100	126	26,926	32,077

TABLE 3. Employment and Payroll, 1962 and 1963

Year and province	Employees										Salaries and wages				
	Production and related workers				Adminis- trative and office		Sales and distribution		Total employees		Production and related workers		Adminis- trative and office	Sales and distri- bution	Total salaries and wages
	Manufacturing		Other								Manufacturing	Other			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female						Manufacturing	Other
	number										\$'000				
1962															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	818	10	-	4	173	53	39	22	1,030	89	3,697	8	1,428	274	5,407
Ontario	1,711	7	-	-	244	80	50	15	2,005	102	8,672	-	2,029	533	11,235
Manitoba	196	-	-	-	54	10	5	1	255	11	794	-	373	47	1,214
Saskatchewan															
Alberta															
British Columbia															
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	2,725	17	-	4	471	143	94	38	3,290	202	13,163	8	3,830	854	17,856
1963															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	824	6	-	4	205	38	42	16	1,071	64	3,787	9	1,503	274	5,573
Ontario	1,799	5	-	-	251	84	56	15	2,106	104	9,413	-	2,152	594	12,159
Manitoba	240	-	-	-	44	12	8	2	292	14	1,087	-	347	62	1,496
Saskatchewan															
Alberta															
British Columbia															
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	2,863	11	-	4	500	134	106	33	3,469	182	14,287	9	4,002	930	19,227

TABLE 3A. Production and Related Workers, - Manufacturing Activity, by Months, 1962 and 1963

Month	Establishments reporting monthly detail			
	1962		1963	
	Male	Female	Male	Female
	number			
January	2,303	12	2,435	10
February	2,324	11	2,469	10
March	2,341	11	2,474	10
April	2,357	11	2,485	9
May	2,373	11	2,502	9
June	2,411	12	2,515	9
July	2,399	13	2,598	10
August	2,412	14	2,844	9
September	2,417	16	2,546	9
October	2,427	18	2,471	9
November	2,426	19	2,477	9
December	2,424	20	2,462	9
Average for establishments reporting monthly detail (collected only for large establishments) ..	2,384	15	2,492	9
Average for small establishments (only annual averages collected)	341	2	371	2
Average for all establishments	2,725	17	2,863	11

TABLE 4. Industry Inventories,¹ 1963

Province	Manufacturing				Non-manufacturing	Total inventories
	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total manufacturing	Products or materials purchased for resale	
book value \$'000						
Opening:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	—	—	—	—	—	—
Quebec	5,171	458	1,015	6,644	33	6,676
Ontario	7,174	569	1,817	9,561	51	9,612
Manitoba	212	250	584	1,046	76	1,122
Saskatchewan						
Alberta						
British Columbia						
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	12,557	1,277	3,416	17,250	159	17,410
Closing:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	—	—	—	—	—	—
Quebec	5,150	471	1,015	6,637	31	6,668
Ontario	7,207	481	2,092	9,780	92	9,672
Manitoba	191	519	704	1,414	64	1,478
Saskatchewan						
Alberta						
British Columbia						
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	12,548	1,471	3,812	17,831	187	18,018

TABLE 5. Purchased Fuel and Electricity Used in Manufacturing Activity, 1962 and 1963

Description	1962		1963	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Large establishments which reported commodity detail:				
Bituminous coal:				
(a) From Canadian mines	ton	—	1	—
(b) Imported	"	4,671	—	—
Sub-bituminous coal (from Alberta mines only)	"	—	—	—
Anthracite coal	"	—	—	—
Lignite coal	"	—	—	—
Coke	"	—	—	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	92,363	87,088	28
Fuel oil including kerosene or coal oil	"	2,617,396	3,547,714	281
Wood	cord	—	—	—
Gas:				
(a) Liquefied petroleum gases	Imp. gal.	147,563	227,237	32
(b) Other manufactured gas	M cu.ft.	—	—	—
(c) Natural gas	"	387,137	448,154	296
Other fuel .....	...	—	...	—
Electricity purchased	kwh.	97,451,517	104,752,562	889
Steam purchased .....	...	19	...	21
2. Estimate for small establishments:				
Fuel and electricity .....	...	117	...	125
3. All establishments:				
Total fuel and electricity used .....	...	1,590	...	1,677

¹ The difference between figures in Table 4 and those in Table 2 arises from firms reporting output of products on the basis of production rather than shipments. Consequently, inventories of finished products for such respondents are not taken into account for purposes of compiling value added in Table 2. See also "Concepts and Definitions" for explanation of other variances.

TABLE 6. Materials and Supplies - Manufacturing Activity, 1962 and 1963

Description	1962		1963	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Materials used:				
Aluminum:				
Ingots	lb. 197,907	63	222,023	77
Scrap	" 732,478	159	729,518	167
Other forms	" 5,659,452	1,620	3,568,443	1,068
Antimony	" 10,125	2	9,872	2
Brass and bronze:				
Ingots	" 1,639,793	549	2,028,413	698
Scrap	" 15,835,195	3,595	15,054,613	3,420
Bars and rods	" 66,923	35	70,273	27
Pipe and tubing	" 100,257	65	9,041	6
Other forms	" 16,134	6	238,601	148
Copper:				
Ingots, slabs, wire bars, etc.	" 269,679,153	84,692	294,255,788	93,527
Scrap	" 27,027,627	7,798	27,465,437	8,106
Plates, sheets and strip	" 6,090	2	5,942	4
Wire	" 290,561	96	695,276	234
Other forms	" 116,599	40	1,427,908	494
Lead, all forms	" 413,379	41	420,879	45
Manganese metal	" -	-	22,176	7
Monel metal	" 86,094	117	8,957	9
Nickel	" 543,442	453	673,454	570
Nickel-copper shot	" 2,449	2	2,782	2
Nickel-silver, all forms	" 993,241	309	1,055,582	335
Tin all forms:				
Phosphor tin	" 273,550	345	299,047	393
Other tin	" 38,570	51	36,255	46
Zinc:				
Ingots and slabs	" 13,338,233	1,600	14,630,013	1,822
Other non-ferrous metals	" -	104	-	129
Lumber	M. bd. ft. 2,274	253	2,350	238
Silica sand	ton 137	3	392	11
Foundry sands	" 770	10	973	13
Graphite	lb. 94,421	5	119,445	9
Refractories	" -	38	-	33
All other materials and components used ¹	" -	3,192	-	3,407
2. Containers and other packaging materials and supplies used	" -	941	-	991
3. Operating, maintenance and repair supplies used (excluding fuel)	" -	3,823	-	3,933
4. Amount paid out to others for work done on materials owned by establishments	" -	103	-	67
Totals .....	...	110,114	...	120,037

¹ No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. These estimated costs were \$2,036,000 in 1962 and \$2,371,283 in 1963.

TABLE 7. Shipments of Goods of Own Manufacture, 1962 and 1963

Description	1962		1963	
	Quantity	Value	Quantity	Value
		\$'000		\$'000
1. Products:				
Aluminum:				
Castings	lb. 1,003,630	866	1,187,005	1,022
Other forms (powder, etc.)	" -	2,692	-	2,241
Copper and copper alloy (brass, bronze, etc.):				
Pipe and tubing	lb. 78,601,170	40,082	86,200,285	43,861
Plates, sheets, strip and flat products	" 44,055,095	21,367	45,108,472	21,867
Other forms (wire rods, castings, powder, etc.)	" 207,528,515	74,983	224,177,171	81,631
All other products	" -	4,441	-	4,399
2. Amount received in payment for work done on materials and products owned by others	" -	194	-	306
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	" -	(2,415)	-	(2,533)
Net adjustment for establishments receiving progress payments	" -	-	-	-
Total adjusted value of shipments and work done .....	...	142,210	...	152,793

List of Establishments classified to This Industry, 1963

(Does not include establishments classified to other industries, which as a secondary activity, manufacture products typical of this industry)

Name	Location
Quebec:	
Archambault Foundry Inc.	8016 Henri Julien, Montreal
Aubertin Foundries Ltd.	10100 Hebert St., Montreal N.
Canada Wire Cable Co. Ltd.	Durocher St., Montreal E.
Canadain Bronze Powder Works Ltd.	Valleyfield
Custom Cast Reg'd.	St-Jean
Dauncey, P.A., Ltd.	Sherbrooke
Diversified Metallurgical Industries Ltd.	Dunham
Dominion Brass Aluminum Foundry Ltd.	St-Pierre
Eastern Brass Foundry Ltd.	514 Harbour St., Montreal
Empire Brass Foundry Ltd.	137 Nazareth St., Montreal
Founderie D'Art	Longueuil
Fonderie St. Maurice Ltée.	Cap-de-la-Madeleine
La Métallurgie De St. Raphaël Ltée	St-Raphaël
La Prairie Brass and Aluminum Foundry	La Prairie
Miller's Brass Foundry	Trois-Rivières
Noranda Copper Mills Ltd.	Sherbrooke and Durocher Sts., Montreal E.
Rapid Foundry	Napierville
Victory Brass Aluminum Foundry	5244 A Casgrain St., Montreal
Ontario:	
Anaconda American Brass Ltd.	260-8th St., New Toronto
Bond Brass Ltd.	110 Mc Arthur Ave., Eastview
Calumet and Hecla of Canada Ltd.	1920 Cheapside St., London
Craig Bronze Co.	330 Horner Ave., Toronto 14
Dominion Gas Meter Co. Ltd., The	11 Garfield Ave., London
Eramosa Brass and Aluminum	Guelph
Fisher and Son Ltd.	366 Wilson St., Hamilton
Guelph Brass and Aluminum Ltd.	Guelph
Kitchener Brass Aluminum Foundry Ltd.	Kitchener
Lawrence, T.C. and Sons Limited	Galt
Long Branch Foundry, The	3 Magnificent Rd., Toronto 18
Matthews, Jas. H. & Co. (Canada) 1959 Ltd.	Milton
May Foundry Co. Ltd.	Niagara Falls
Mears and Son	Brantford
National Brass and Aluminum Foundry	117 St. Patrick St., Toronto 23
Niagara Bronze	Niagara Falls
Non-Ferrous Castings Ltd.	65 Frederick St., Toronto 3
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
Rahn Metals Ltd.	North Bay
Ratcliffs (Canada) Ltd.	Richmond Hill
Robinson, J. and Son	2 Hinton Ave., Ottawa
Roto-Cast Ltd.	721 Eastern Ave., Toronto
S.B. and A. Foundry Ltd.	Guelph
St. Catharines Brass Works Divot Johnson, Mathey and Mallory Ltd.	St. Catharines
Samco Brass Ltd.	St. Catharines
Stoemer Bell and Brass Foundry	Breslau
Sully Castings Ltd.	Richmond Hill
Tallman, A.H., Bronze Co. Ltd.	Burlington
Warren Alloy (Canada) Ltd.	Chatham
Wilson Brass and Aluminum Foundries Ltd.	21 Jarvis St., Toronto 1
Windsor Match Plate and Tool Ltd.	1125 Westcott Rd, Windsor
Manitoba:	
Winnipeg Brass Ltd.	600 Clifton St., Winnipeg
Alberta:	
Paragon Bronze and Aluminum Products	511-3rd Ave. S.W., Calgary
British Columbia:	
Green, Wm. and Sons Brass Foundry	638 Pembroke St., Victoria
Hi-Way Foundry	1604 Island Highway, Victoria
McPhail and Sons (1960) Ltd.	251 East 2nd Ave., Vancouver
Metro Bronze and Aluminum Foundry Ltd.	South Burnaby
Noranda Copper Mills Ltd.	Annacis Island New Westminster
North Shore Foundry Ltd.	234 E. Esplanade Ave., North, Vancouver
Pacific Bronze Co. Ltd.	244 Woodland Dr. Vancouver
Summer Brass Foundry Ltd.	619 Bidwell St., Vancouver

CONCEPTS AND DEFINITIONS

Census of Manufactures

General

The Census of Manufactures is an annual mail survey covering Canada's Manufacturing Industries. It is based on the Standard Classification of Industries and full details concerning the system may be found in the Standard Industrial Classification manual, Catalogue No. 12-501 which is available from the Queen's Printer or the Dominion Bureau of Statistics. In summary, the Classification as it relates to the manufacturing industries provides for a breakdown into 140 industries arranged in 20 major industry groups. Of the 140 (3 digit) industries, 18 are further broken down into 58 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 178 separate industries. They cannot all be published separately by province, however, because of the confidential nature of the data in certain provinces.

The reporting unit for the Census is designated as the **establishment** (see definition of "Establishment" in following section) and a return is requested from every establishment classified to a manufacturing industry. Although respondents are required to submit reports covering the calendar year, financial year reports other than the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. When an establishment is operated for only part of a year a report is required covering the period of operation.

There are four different questionnaires used in the Census of Manufactures; (a) short form (b) long form (c) head office questionnaire and (d) commodity questionnaire. The short and long forms are used to obtain principal statistics and commodities shipped from establishments classified to manufacturing industries and differ only in the amount of detail requested. The short form is a single-sheet questionnaire sent to small manufacturers generally reporting shipments of less than \$100,000; this cut-off, however, varies somewhat between industries. The head office questionnaire is generally used for company head offices and/or auxiliary units separately located from the manufacturing establishment(s), (see following notes on Head offices and auxiliary units). The Commodity questionnaire is used to survey certain establishments which are coded (on the basis of their principal activity) to industries other than manufacturing in the Standard Industrial Classification system, but which undertake some manufacturing as a subsidiary activity. This single-sheet questionnaire is designed to collect information on the quantity and value of goods of own manufacture shipped by such establishments in order to achieve full coverage of domestically manufactured commodities (see the following note under Shipments).

The results of the Census are presented in some 140 publications. In addition to these annual industry publications there are annual summary reports for Canada and the provinces and special reports giving principal statistics by detailed geographic areas, by type of ownership and size of establishment. A special annual report covering the shipments of all manufactured commodities arranged in alphabetical order is also published.

Since 1960 the following major changes have been implemented in the Census of Manufactures: (a) a revised Standard Industrial Classification (b) a new establishment definition and (c) an extension of the establishment definition to cover the non-manufacturing activities of manufacturing establishments. The statistics presented in the various 1963 reports reflect the complete implementation of these changes and enable comparisons to be made with the years 1961 and 1962. For a complete description of the procedures followed in establishing the revised series, reference should be made to the Explanatory Notes included in the 1960, 1961 and 1962 industry publications. The statistical framework within which the Census of Manufactures is now carried out is based on the following concepts and definitions which have been developed as part of a general programme to achieve a fully integrated system of economic statistics.

Establishment

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. The majority of such establishments are firms but many firms have more than one establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements embodied in the following definition of the "establishment":

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on the different activities (manufacturing, trading in goods not of own manufacture, construction by own labour

force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completely consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own manufacturing activities. For example, inventory of goods purchased for re-sale may not be distinguishable from inventory of own manufactured goods. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the manufacturing industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other manufacturing and non-manufacturing industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on head offices and auxiliary units).

Head Offices and Auxiliary Units

All head offices and auxiliary units of companies classified to the manufacturing industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Manufactures.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the manufacturing plant (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Manufactures as they do not normally generate operational revenues, but give rise only to costs of operations (mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

(a) In the case of single establishment firms, statistics for separately located offices and units are classified to the same industry (3 or 4 digit) as the establishment;

(b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the

firm, when all establishments are in the same industry (3 or 4 digit). When establishments of such firms are coded (1) to different industries within a major group, (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

Employees

(a) Production and related workers — Manufacturing activity

In addition to those engaged in production and assembling activities, they include those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. Production and related workers engaged in manufacturing activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. The man-hours of production and related workers in manufacturing activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.). In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

(b) Production and related workers — Non-manufacturing activities

Such employees include those on manufacturing establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments, some outside piece-workers employed in certain industries, logging employees who are reported as part of a sawmilling establishment and any other production workers who are not engaged in manufacturing-type operations.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers,

etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the line supervisor or working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; these are generally included in the figures for the province in which they are located according to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truckdrivers and their helpers, etc. It may also include some sales employees who are reported as part of a manufacturing establishment but are not working at the establishment's location. These are generally broken down by province in cases where more than 15 employees are involved in any one province. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total Employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part time or seasonal employment. In all the above categories, figures on employment refer to the calendar year whether or not other establishment statistics can only be reported on a fiscal year other than the calendar year.

Working Owners or Partners

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

Salaries and Wages

Salaries and wages refer to gross earnings of employees **before** deductions for income tax and employees contributions to social services such as sickness, accident and unemployment insurance, pensions, etc. They include all salaries, wages, bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any

other allowance forming part of the worker's earnings. Payments for over-time are included. Figures on salaries and wages refer to the calendar year.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. **Any fuel and electricity produced by establishments for internal consumption are not included in the total cost.** Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of manufacturing activity it should be noted that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

Materials and Supplies

(a) Manufacturing activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. These statistics represent only commodity items or physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Non-manufacturing activities

1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of purchased machinery and equipment. Also included is the cost of office supplies not chargeable to

fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

Shipments

(a) General

The figures represent revenue from all production, sales, services and related activities of reporting establishments with shipments valued in Canadian dollars at the point at which the establishment relinquishes control. The unsold portion at year end of consignment shipments in Canada is treated as inventory and not as shipments but all shipments to foreign countries for which the form B13 "Customs Canada Export Entry" has been completed, are treated as shipments.

In those industries where work on principal products extends over a relatively long period, (Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair Industry) the value of production rather than the value of shipments is recorded. There are certain establishments in other industries which also operate on a basis of progress payments. For these establishments, shipments are also adjusted to work put in place on the basis of the net change in progress payments over the year.

(b) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost (book value) of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm, when such units are treated as separate establishments. The value of shipments are net of returned goods, discounts, returns, allowances, sales tax and excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own manufacture of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in manufacturing as a subsidiary activity are collected by means of the Commodity questionnaire referred to earlier. Such shipments together

with shipments of goods of own manufacture of establishments forming the universe of manufacturing industries are compiled and recorded in the various industry publications.

(c) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship such goods on a rental basis, the value of shipments represents the book value of these goods. All sales of consignment goods from other countries are included.

(d) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishment's own employees, such as revenue from goods produced or purchased for rental (the book value of such goods are included as part of shipments of goods of own manufacture or shipments of goods not of own manufacture), servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Inventories

(a) Manufacturing activities

Values represent the book values of manufacturing inventory owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payment accounts are maintained, the change in these accounts is treated as a net adjustment to shipments. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Goods shipped abroad and held in inventory are included in shipments. Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the

receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

(b) Non-manufacturing activities

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by the reporting establishments and held at plants and at any warehouses or selling outlets which are treated as extensions of establishments. Other characteristics are the same as in (a) above.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of materials and fuel and electricity consumed from the value of production (value of shipments adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By non-manufacturing activities

The figures are compiled by deducting the cost of goods purchased for re-sale (adjusted for changes in the value of inventories of goods

purchased for re-sale) and the cost of other materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By Total activities

The figures consist of value added by manufacturing activities plus value added by non-manufacturing activities. This total value added figure may, in some cases, be less than value added by manufacturing activities as a result of expenditures associated with non-manufacturing exceeding revenues from such activities or because of a decrease in inventory of goods not of own manufacture exceeding the mark-up on the sale of such goods. "Value added" is sometimes referred to as net production. However, to arrive at the National Accounts concept of net production, or Gross Domestic Product at "Factor cost" it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected as part of the annual Census of Manufactures. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202, "Survey of Production".

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