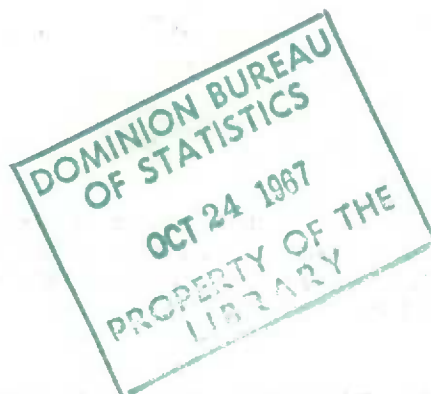


CATALOGUE No. C2

41-204

ANNUAL



ALUMINUM ROLLING, CASTING AND EXTRUDING 1965

ANNUAL CENSUS OF MANUFACTURES

Published by Authority of
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ALUMINUM ROLLING, CASTING AND EXTRUDING

1965

For statistical purposes the industry titled Aluminum Rolling, Casting and Extruding in the revised Standard Industrial Classification covers the operations of establishments primarily engaged in manufacturing aluminum shapes, such as bars, rods, plates, sheets and castings. Pressure die casting of aluminum is included in the Metal Rolling, Casting and Extruding, n.e.s. industry and the extraction of aluminum from the ore is classified to the Smelting and Refining industry.

Value of shipments and other income for this industry totalled \$156 million, an increase of \$29 million from 1964. This amount included shipments of aluminum products such as bars and rods, extruded shapes, pipe and tubing, roofing and siding, sheets and strip, castings and die castings and similar products valued at \$150 million, shipments of other products (secondary products) valued at \$5 million, and revenue of \$1 million.

Secondary products shipped by this industry in 1965 included brass and bronze and other castings, zinc base, die castings, printed paper products, magnesium extrusions, and so on.

The cost of materials and supplies, fuel and electricity, etc. (inputs) used in the production of goods of own manufacture, increased by \$10 million. Cost of inputs in 1965 represented 73 per cent of the value of shipments of own manufacture (outputs), compared to 83 per cent in 1964.

It should be noted that Table 13 covers the shipments of the establishments classified to this industry, whereas Table 14 presents the total value of shipments of the specified commodities of Canadian manufacture. And include, where applicable, shipments of those commodities reported by establishments classified to other industries.

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. Principal Statistics, 1961-65

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		Employees		Value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Totals	43	3,738	7,921	16,324	2,090	76,751	110,456	34,106	4	15	5,095	23,403	34,052
1962													
Totals	42	3,741	7,794	16,331	2,215	93,193	121,912	25,424	11	62	5,118	23,805	25,354
1963													
Totals	44	3,808	7,957	17,182	2,491	97,706	129,275	31,901	9	38	5,164	25,223	31,806
1964													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	12	x	x	x	x	x	x	x	x	x	x	x	x
Ontario	27	2,497	5,240	12,285	1,523	56,681	71,189	10,791	7	32	3,373	17,354	10,394
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	-	-	-	-	-	-	-	-	-	-	-	-	-
Alberta	3	x	x	x	x	x	x	x	x	x	x	x	x
British Columbia	5	x	x	x	x	x	x	x	x	x	x	x	x
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	47	3,411	7,294	16,590	2,237	100,807	126,579	20,905	10	42	4,834	24,770	20,426
1965													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	13	x	x	x	x	x	x	x	x	x	x	x	x
Ontario	30	2,499	5,355	12,809	1,773	52,986	85,729	32,165	8	34	3,299	17,884	31,934
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	-	-	-	-	-	-	-	-	-	-	-	-	-
Alberta	3	x	x	x	x	x	x	x	x	x	x	x	x
British Columbia	4	x	x	x	x	x	x	x	-	-	x	x	x
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	50	3,362	7,301	17,158	2,661	110,367	154,711	43,914	11	43	4,654	25,748	43,598

TABLE 2. Principal Statistics classified by Size Group based on Value of Shipments of Goods of Own Manufacture, 1964 and 1965

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		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under \$10,000	3	—	—	—	—	8	20	11	2	4	1	3	11
\$ 10,000 to \$ 24,999	5	5	10	14	3	34	87	51	4	18	6	17	54
25,000 " 49,999	5	15	30	52	5	77	191	108	3	13	19	61	108
50,000 " 99,999	3	20	40	73	3	86	236	146	—	—	26	98	146
100,000 " 199,999	9	89	182	338	23	725	1,492	747	1	7	114	487	751
200,000 " 499,999	7	169	350	652	48	807	2,122	1,264	—	—	198	821	1,307
500,000 " 999,999	4	147	384	708	62	1,181	2,664	1,455	—	—	188	977	1,436
1,000,000 " 4,999,999	5	391	828	1,840	272	9,343	13,386	3,470	—	—	580	2,659	3,428
5,000,000 and over	6	2,575	5,469	12,914	1,820	88,545	106,381	13,652	—	—	3,702	19,647	13,186
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	47	3,411	7,294	16,590	2,237	100,807	126,579	20,905	10	42	4,834	24,770	20,426
1965													
Under \$10,000	3	—	—	—	—	7	23	15	2	5	1	3	15
\$ 10,000 to \$ 24,999	5	6	12	17	3	32	86	53	4	16	7	21	53
25,000 " 49,999	4	9	18	33	3	70	177	104	4	17	10	36	104
50,000 " 99,999	5	26	52	92	8	121	338	213	—	—	33	128	207
100,000 " 199,999	5	70	143	272	14	325	866	531	—	—	86	367	546
200,000 " 499,999	8	130	261	558	42	1,023	2,225	1,176	1	6	156	725	1,175
500,000 " 999,999	6	213	471	821	82	1,820	3,596	1,736	—	—	252	1,064	1,688
1,000,000 " 4,999,999	5	228	519	1,119	170	8,013	11,066	3,199	—	—	284	1,493	3,268
5,000,000 and over	9	2,680	5,825	14,246	2,340	98,956	136,316	36,886	—	—	3,825	21,910	36,542
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	50	3,362	7,301	17,158	2,661	110,367	154,711	43,914	11	43	4,654	25,748	43,598

TABLE 3. Principal Statistics classified by Size Group based on Manufacturing Value Added, 1964 and 1965

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		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under \$10,000	4	—	—	—	1	15	32	16	3	8	1	3	16
\$ 10,000 to \$ 24,999	7	10	22	35	4	74	179	101	6	27	13	41	104
25,000 " 49,999	6	29	56	97	11	303	524	205	—	—	42	150	204
50,000 " 99,999	5	33	70	139	10	379	761	376	1	7	44	207	381
100,000 " 199,999	7	120	248	455	30	559	1,488	912	—	—	144	607	911
200,000 " 499,999	10	474	1,038	2,189	227	11,661	15,385	3,214	—	—	663	3,105	3,212
500,000 " 999,999	8	2,745	5,860	13,676	1,955	87,816	108,210	16,081	—	—	3,927	20,657	15,599
1,000,000 " 4,999,999													
5,000,000 and over													
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	47	3,411	7,294	16,590	2,237	100,807	126,579	20,905	10	42	4,834	24,770	20,426
1965													
Under \$10,000	4	1	2	2	1	11	37	24	3	9	2	5	24
\$ 10,000 to \$ 24,999	5	6	12	18	3	52	116	63	5	22	7	23	64
25,000 " 49,999	7	25	52	96	7	153	403	246	2	7	32	132	240
50,000 " 99,999	5	48	94	159	17	449	830	366	1	6	59	208	380
100,000 " 199,999	17	494	1,083	2,503	140	31,616	34,585	3,617	—	—	667	3,735	3,554
200,000 " 499,999													
500,000 " 999,999													
1,000,000 " 4,999,999	4	207	477	1,010	153	6,710	9,410	2,842	—	—	256	1,341	2,915
5,000,000 and over	8	2,581	5,582	13,368	2,340	71,375	109,330	36,755	—	—	3,631	20,305	36,421
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	50	3,362	7,301	17,158	2,661	110,367	154,711	43,914	11	43	4,654	25,748	43,598

TABLE 4. Principal Statistics classified by Size Group based on Total Value Added, 1964 and 1965

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		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under \$10,000	4	—	—	—	1	15	32	16	3	8	1	3	16
\$ 10,000 to \$ 24,999	7	10	22	35	4	74	179	101	6	27	13	41	104
25,000 " 49,999	6	29	56	97	11	303	524	205	—	—	42	150	204
50,000 " 99,999	5	33	70	139	10	379	761	376	1	7	44	207	381
100,000 " 199,999	7	120	248	455	30	559	1,488	912	—	—	144	607	911
200,000 " 499,999	10	474	1,038	2,189	227	11,662	15,385	3,214	—	—	663	3,105	3,212
500,000 " 999,999	8	2,745	5,860	13,676	1,955	87,816	108,210	16,091	—	—	3,927	20,657	15,599
1,000,000 " 4,999,999													
5,000,000 and over .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	47	3,411	7,294	16,590	2,237	100,807	126,579	20,905	10	42	4,834	24,770	20,426
1965													
Under \$10,000	4	1	2	2	1	11	37	24	3	9	2	5	24
\$ 10,000 to \$ 24,999	5	6	12	18	3	52	116	63	5	22	7	23	64
25,000 " 49,999	7	25	52	96	7	153	403	246	2	7	32	132	240
50,000 " 99,999	4	42	82	140	16	358	650	278	1	6	49	166	278
100,000 " 199,999	18	500	1,095	2,523	141	31,707	34,765	3,705	—	—	677	3,777	3,657
200,000 " 499,999	4	207	477	1,010	153	6,710	9,410	2,842	—	—	256	1,341	2,915
500,000 " 999,999													
1,000,000 " 4,999,999	8	2,581	5,582	13,368	2,340	71,375	109,330	36,755	—	—	3,631	20,305	36,421
5,000,000 and over .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	50	3,362	7,301	17,158	2,661	110,367	154,711	43,914	11	43	4,654	25,748	43,598

TABLE 5. Principal Statistics classified by Size Group based on Total Employed, 1964 and 1965

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		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under 5 employed	12	13	28	50	6	104	254	143	9	35	18	62	146
5- 14 employed	11	69	140	262	21	715	1,392	657	1	7	94	389	661
15- 49 "	11	235	501	963	77	2,151	4,236	2,030	—	—	291	1,275	2,008
50- 99 "	4	189	473	838	68	2,425	4,223	1,725	—	—	237	1,154	1,754
100-199 "	5	548	1,165	2,717	349	36,083	42,147	5,568	—	—	798	4,411	5,512
200-499 "	4	2,357	4,986	11,760	1,716	59,329	74,337	10,783	—	—	3,396	17,479	10,347
500 employed and over													
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	47	3,411	7,294	16,590	2,237	100,807	126,579	20,905	10	42	4,834	20,770	20,426
1965													
Under 5 employed	12	13	26	40	6	117	294	176	10	38	16	55	169
5- 14 employed	11	87	175	339	31	2,920	4,014	1,387	—	—	109	444	1,472
15- 49 "	15	359	738	1,565	223	10,175	14,556	4,418	1	6	433	2,040	4,402
50- 99 "	3	168	411	739	75	1,113	2,547	1,381	—	—	200	965	1,346
100-199 "	5	514	1,122	2,814	388	42,622	48,076	5,679	—	—	800	4,849	5,619
200-499 "	4	2,221	4,829	11,661	1,939	53,420	85,224	30,873	—	—	3,096	17,396	30,590
500 employed and over													
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	50	3,362	7,301	17,158	2,661	110,367	154,711	43,914	11	43	4,654	25,748	43,598

TABLE 6. Principal Statistics classified by Type of Organization, 1964 and 1965

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		Employees		Value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Individual ownerships	9	17	34	61	8	148	318	163	10	42	18	66	163
Partnerships													
Incorporated companies	38	3,394	7,259	16,529	2,229	100,659	126,261	20,742	...	...	4,816	24,704	20,263
Co-operatives .....	-	-	-	-	-	-	-	-	...	...	-	-	-
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	47	3,411	7,294	16,590	2,237	100,807	126,579	20,905	10	42	4,834	24,770	20,426
1965													
Individual ownerships	10	23	46	75	12	204	438	223	11	43	24	80	223
Partnerships													
Incorporated companies	40	3,339	7,255	17,082	2,649	110,163	154,273	43,691	...	...	4,630	25,668	43,375
Co-operatives .....	-	-	-	-	-	-	-	-	...	...	-	-	-
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	50	3,362	7,301	17,158	2,661	110,367	154,711	43,914	11	43	4,654	25,748	43,598

TABLE 7. Calculation of Output, Input and Value Added, 1964 and 1965

	Manufacturing activity		Non-manufacturing activities		Total activity	
	1964	1965	1964	1965	1964	1965
\$'000						
Output						
1. Shipments and other revenue	126,579	154,711	426	815	127,005	155,526
Inventories—Goods of own manufacture:						
Add closing—Goods in process	4,953	5,542	...	...	4,953	5,542
Finished goods	5,574	8,280	...	...	5,574	8,280
Deduct opening—Goods in process	5,636	5,085	...	...	5,636	5,085
Finished goods	7,520	6,506	...	...	7,520	6,506
2. Net inventory change	(2,629)	2,231	...	...	(2,629)	2,231
3. Gross output (1 + 2)	123,950	156,942	426	815	124,376	157,757
Input						
4. Purchases of goods not of own manufacture .....	...	...	504	859	504	859
Inventories—Goods not of own manufacture:						
Add opening .....	...	...	172	37	172	37
Deduct closing .....	...	...	37	78	37	78
5. Cost of goods sold (not of own manufacture) .....	...	...	639	818	639	818
6. Materials, supplies, etc.	100,807	110,367	265	313	101,072	110,680
7. Fuel and electricity	2,237	2,661	...	...	2,237	2,661
8. Gross input (5 + 6 + 7)	103,044	113,028	904	1,131	103,948	114,166
Value added (3 - 8)	20,905	43,914	(479)	(316)	20,426	43,598

TABLE 8. Employment and Payroll, 1964 and 1965

Year and province	Employees										Salaries and wages				
	Production and related workers				Adminis- trative and office		Sales and distribution		Total		Production and related workers		Admin- istra- tive and office	Sales and distrib- ution	Total
	Manufacturing		Other								Manufacturing	Other			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female						Manufacturing	Other
	number										\$'000				
1964															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	x	x	-	-	x	x	x	x	x	x	x	-	x	x	x
Ontario	2,389	108	-	-	643	192	31	10	3,063	310	12,285	-	4,803	265	17,354
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alberta	x	-	-	-	x	x	-	-	x	x	x	-	x	-	x
British Columbia	x	x	-	-	x	x	-	-	x	x	x	-	x	-	x
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	3,271	140	-	-	1,003	297	79	44	4,353	481	16,590	-	7,358	822	24,770
1965															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	x	x	-	-	x	x	x	x	x	x	x	-	x	x	x
Ontario	2,377	122	2	-	575	171	39	13	2,993	306	12,809	11	4,775	290	17,884
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alberta	x	-	-	-	x	x	x	x	x	x	x	-	x	x	x
British Columbia	x	x	-	-	x	x	-	-	x	x	x	-	x	-	x
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	3,207	155	2	-	906	261	90	33	4,205	449	17,158	11	7,720	860	25,748

TABLE 9. Production and Related Workers, - Manufacturing Activity, 1964 and 1965

Month	1964		1965	
	Male	Female	Male	Female
	number			
Establishments reporting monthly detail (large establishments only):				
January	3,326	149	2,824	112
February	3,346	149	2,707	138
March	3,296	156	2,855	141
April	3,353	162	2,926	133
May	3,374	159	2,972	150
June	3,169	124	2,983	159
July	3,161	113	3,177	175
August	3,179	118	3,222	154
September	3,106	114	3,285	149
October	2,650	101	3,186	146
November	2,890	113	3,142	146
December	2,786	85	3,154	135
Averages	3,133	128	3,037	145
Establishments reporting annual averages (small establishments only)	138	12	170	10
Average for all establishments	3,271	140	3,207	155

TABLE 10. Inventories, 1965

Province	Manufacturing				Non-manufacturing	Total inventories
	Materials, supplies, etc.	Goods in process	Finished goods of own manufacture	Total	Products or materials purchased for resale	
book value \$'000						
Opening:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	—	—	—	—	—	—
Quebec	x	x	x	x	—	x
Ontario	10,992	2,604	4,416	18,013	37	18,049
Manitoba	—	—	—	—	—	—
Saskatchewan	—	—	—	—	—	—
Alberta	x	—	x	x	—	x
British Columbia	x	x	x	x	—	x
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	13,962	5,085	6,506	25,553	37	25,590
Closing:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	—	—	—	—	—	—
Quebec	x	x	x	x	—	x
Ontario	5,129	2,921	5,294	13,343	78	13,421
Manitoba	—	—	—	—	—	—
Saskatchewan	—	—	—	—	—	—
Alberta	x	—	x	x	—	x
British Columbia	x	x	x	x	—	x
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	8,592	5,542	8,280	22,414	78	22,492

TABLE 11. Purchased Fuel and Electricity Used, 1964 and 1965

Description	1964		1965	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Large establishments reporting commodity detail:				
Bituminous coal:				
(a) From Canadian mines	ton	—	—	—
(b) Imported	"	—	—	—
Sub-bituminous coal (from Alberta mines only)	"	—	—	—
Anthracite coal	"	—	—	—
Lignite coal	"	—	—	—
Coke	"	—	—	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	110,027	128,431	45
Fuel oil including kerosene or coal oil	"	5,468,824	7,883,222	736
Wood	cord	—	—	—
Gas:				
(a) Liquefied petroleum gases	Imp. gal.	366,716	258,411	54
(b) Other manufactured gas	M cu. ft.	—	—	—
(c) Natural gas	"	477,267	628,526	409
Other fuel .....	...	—	...	10
Electricity purchased	kwh.	171,328,657	180,788,871	1,362
Steam purchased	—	—	—	—
2. Small establishments not reporting commodity detail:				
Estimate for fuel and electricity .....	...	32	...	45
3. All establishments:				
Total fuel and electricity used .....	...	2,237	...	2,661

TABLE 12. Materials and Supplies - Manufacturing Activity, 1964 and 1965

Description	1964		1965	
	Quantity	Cost	Quantity	Cost
	lbs.	\$'000	lbs.	\$'000
1. Materials used:				
Aluminum:				
Ingots (Includes wire bar and re-roll sheet stock)	274,358,965	68,325	277,117,006	69,790
Scrap	19,125,965	3,713	20,306,654	4,762
Sheets and strip	6,974,669	2,210	9,605,051	3,745
Other	...	15,468	...	18,696
Brass and bronze	134,645	60	96,245	45
Copper	373,031	125	162,314	73
Magnesium	1,048,571	374	1,430,583	515
Zinc	173,790	29	195,567	33
Other non-ferrous metals	...	820	...	640
Stainless steel	...	20	...	37
Steel (except alloy steel):				
Plates, sheets and strip	...	5	...	6
Other forms	...	229	...	243
All other materials and components used ¹	...	3,689	...	4,435
2. Containers and other packaging materials and supplies used	...	1,050	...	1,080
3. Operating, maintenance and repair supplies used (excluding fuel)	...	4,058	...	5,007
4. Amount paid out to others for work done on materials owned by establishments	...	631	...	1,261
Totals	...	100,807	...	110,367

¹ No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. These estimated costs were \$905,615 in 1964 and \$1,025,452 in 1965.

TABLE 13. Shipments of Goods of Own Manufacture, 1964 and 1965

Description	1964		1965	
	Quantity	Cost	Quantity	Cost
	lbs.	\$'000	lbs.	\$'000
1. Products:				
Castings, aluminum (except die castings)	5,959,200	4,463	9,074,225	6,496
Castings, other (brass, bronze magnesium, etc.) (except die castings)	...	1,472	...	1,721
Extruded shapes, aluminum	59,487,855	27,497	63,642,981	29,262
Foil, aluminum	1	1	33,421,019	18,597
All other products	...	93,145	...	98,260
2. Amount received in payment for work done on materials and products owned by others	...	433	...	659
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	...	(431)	...	(283)
Net adjustment for establishments receiving progress payments	-	-	-	-
Total adjusted value of shipments and work done	...	126,579	...	154,711

¹ Confidential included in "All other products".

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries, 1961-65

(Includes shipments from other industries which manufacture, as a secondary activity, the commodities listed)

A. Aluminum Castings and Aluminum Die Castings

Year	Aluminum castings ¹		Aluminum die castings ¹	
	Quantity	Value	Quantity	Value
	M lbs.	\$'000	M lbs.	\$'000
1961	8,762	7,063	3,737	2,651
1962	9,111	7,974	8,098	5,302
1963	10,674	7,996	10,128	6,086
1964	9,704	7,797	10,146	6,491
1965	12,567	9,844	24,781	14,592

¹ Reported for sale as such, does not include castings produced for own use or castings reported under other commodity headings such as hardware, parts, etc.

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries, 1961 - 65 - Concluded
B. Specified Aluminum Products

Year	Extruded shapes		Aluminum foil
	Quantity	Value	Value
	M lbs.	\$'000	
1961	43,004	21,958	13,392
1962	51,578	25,156	15,010
1963	58,796	27,108	16,423
1964	62,179 ^r	28,733 ^r	17,244
1965	67,230	30,912	18,597

List of Establishments classified to this industry, 1965

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

Name	Location
Quebec:	
Alcan Aluminum Limited.....	Arvida
Aluminum Permanent Moulding.....	Waterloo
Cenal Foundry Ltd.....	St-Rémi
Cercast Inc.....	3905 Industrial Blvd., Montréal-Nord
Custom-Aire Aluminum Limited.....	114 Labrosse Blvd., Pointe-Claire
Decelles, Georges.....	Pointe-aux-Trembles
Fonderie Laliberté, Ent.....	Québec
Modern Aluminum Products Co.....	1520 Notre-Dame St. N., Montreal
Nesco Aluminum Ltd.....	La Malbale
Precision Mastercrafts Ltd.....	10206 Armand Lavergne St., Montreal-Nord
Reynolds Aluminum Co. of Canada Ltd.....	Cap-de-la-Madeleine
Reynolds Extrusion Sales Co. Ltd.....	Ste-Thérèse-de-Blainville
Supreme Precision Castings Ltd. (1963)	550 Montée de Liasse Rd., St-Laurent
Ontario:	
Alcan Aluminum Ltd.....	Kingston
Alcan Aluminum Ltd.....	Scarborough
Almag Aluminum and Magnesium Ltd.....	343 Munster Ave., Toronto
Alumaloy Castings Limited.....	483 Eastern Ave., Toronto
Aluminum Star Products.....	175 College St. W., Belleville
Canada Foils Limited.....	1891 Eglinton Ave. E., Toronto
Canadian Mouldings Ltd.....	400 Lacroix St., Chatham
Chrysler Canada Ltd.....	15 Brown's Line, Toronto
City Foundry Co.....	Windsor
Coles, J., Aluminum Foundry.....	114 Sinnott Rd., Scarborough
Custom-Aire Aluminum Limited.....	61 Arrow Rd., Weston
Custom Aluminum Foundry.....	Hespeler
Drummond, T.A., Metal Products Ltd.....	Cooksville
Dunbar Aluminum Foundry Ltd.....	Kitchener
Fulton Aluminum.....	Brantford
Harrington Aluminum Foundry Ltd.....	Woodstock
Industrial Fine Castings Ltd.....	272 Geary Ave., Toronto
Kem's Foundry.....	Windsor
Meteor Foundry.....	10 Camso Rd., Rexdale
Mid Canadian Investment Castings Ltd.....	Georgetown
Per-Mold Castings Ltd.....	160 Fessmar Dr., Toronto
Precision Castings Ltd.....	156 St. Helens Ave., Toronto
Queen East Foundry.....	96 Gould St., Toronto
Ramsden Manufacturing Ltd.....	London
Regal Die Casting Co. Ltd.....	Brampton
Reynolds Extrusion Co. Ltd.....	Oshawa
Robertson, Joseph, Foundries Ltd.....	32 Milford Ave., Toronto
Supreme Castings and Mfg. Co.....	14 Racine Rd., Rexdale
Wallaceburg Aluminum Extrusions Ltd.....	Wallaceburg
Woodstock Foundry Ltd.....	Woodstock
Alberta:	
Albronze Foundry Ltd.....	Calgary
American Brass and Aluminum Foundry Ltd.....	Edmonton
Indalex Limited.....	Calgary
British Columbia:	
Alcan Aluminum Limited.....	Richmond
Bird Foundry Ltd.....	396 East 1st Avenue, Vancouver
Globe Foundry Ltd.....	New Westminster
Pacific Aluminum Foundry Ltd.....	Burnaby

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 55 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 176 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 135 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 reports reflect the complete implementation of these changes and enable comparisons to be made back to and including 1961. 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 activities

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. For those establishments reporting on the "long" form, 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. In the case of those establishments reporting on the "short" form, respondents are requested to report average annual figures. 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.). Data on man-hours are not collected from establishments reporting on the short form. Man-hours for these establishments are estimated on the basis of ratios derived from the 1958 census. During this census all establishments reported on the long form. 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 are 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 manufacturing materials, supplies, etc. and fuel and electricity consumed from the (value of shipments of goods of own manufacture 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 pur-

chased for re-sale) and the cost of non-manufacturing 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 output or 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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