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CANADA

THE WHITE METAL ALLOYS INDUSTRY

1953

Published by Authority of
The Right Honourable C. D. Howe, Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS
Industry and Merchandising Division
Metal and Chemical Products Section

6512-609
29-12-54

Price 25 cents

Vol. 2—Part XII—D-1

EDMOND CLOUTIER, C.M.G., O.A., D.S.P., Queen's Printer and Controller of Stationery, Ottawa, 1955.

NOTICE

The annual reports prepared by the Industry and Merchandising Division of the Bureau of Statistics are divided into 3 volumes, as follows: Volume I — The Primary Industries, including mining, forestry and fisheries; Volume II — Manufacturing; Volume III — Merchandising and Services. The volumes are made up of parts, and the parts in turn are subdivided according to the industries or provinces which they comprise.

Volume II consists of the following parts, the first two of which deal with manufacturing as a whole and the balance with the major manufacturing groups.

- I — General Review of the Manufacturing Industries, \$1.50
- II — The Manufacturing Industries of Canada, (7 sections, as follows:)
 - Section A. Summary for Canada, 25¢
 - Section B. Atlantic Provinces, 25¢
 - Section C. Quebec, 25¢
 - Section D. Ontario, 25¢
 - Section E. Prairie Provinces, 25¢
 - Section F. British Columbia, 25¢
 - Section G. The Manufacturing Industries of Canada, Regional Distribution, 75¢
- III — Foods and Beverages
- IV — Tobacco and Tobacco Products
- V — Rubber Products
- VI — Leather Products
- VII — Textiles
- VIII — Wood and Paper Products
- IX — Printing Trades
- X — Iron and Steel Products
- XI — Transportation Equipment
- XII — Non-ferrous Metal Products
- XIII — Electrical Apparatus and Supplies
- XIV — Non-metallic Mineral Products
- XV — Products of Petroleum and Coal
- XVI — Chemicals and Allied Products
- XVII — Miscellaneous Manufactures

The present report belongs in Part XII, Non-ferrous Metal Products. It is punched to permit of filing in a ring binder along with others of the group. The reports in this group are:

- A — General Review, 25¢
- B — The Aluminum Products Industry, 25¢
- C — The Brass and Copper Products Industry, 25¢
- D — The White Metal Alloys Industry, 25¢
- E — The Jewellery and Silverware Industry, 25¢
- F — The Non-ferrous Smelting and Refining Industry, 25¢
- G — The Miscellaneous Non-ferrous Metal Products Industry, 25¢

THE WHITE METAL ALLOYS INDUSTRY

1953

Statistics given in this report cover the operations of firms in Canada which were occupied chiefly in (a) the manufacture of white metal alloys, such as babbitt, solders, type and type metal; (b) the refining of scrap to recover white metals, such as lead, tin, zinc, etc.; and (c) the manufacture of products, such as lead sheet, lead pipe, antimonial lead, collapsible tubes, castings, metal foil, etc., in which the white metals or their alloys are the principal materials. In some establishments all three of these operations are carried on, so it is not practicable to make a subdivision of the industry.

Fifty-six factories reported in this group in 1953, and the value of their output was \$50,505,347. This total represented a decline of 5.4 per cent from the 1952 value of \$53,379,433.

Of the total output during the year under review, 77 per cent came from the 33 plants in Ontario, 18 per cent from the 18 plants in Quebec and 5 per cent from the 3 plants in Manitoba and 2 in British Columbia.

Employment was afforded to a total of 3,641 people, including 708 on salaries and 2,933 on wages. Salaries for the year amounted to \$2,765,200 and wages to \$8,242,318, a total of \$11,007,518. In the previous year the 3,238 workers were paid \$9,525,283.

Materials used in manufacturing, exclusive of fuel and electricity, cost \$30,142,086 delivered at the works. Included in these materials were 44,532 tons of scrap metals at \$10,215,698; 21,621 tons of pig lead at \$5,477,538; 1,878 tons of pig tin at \$3,607,680; 3,906 tons of aluminum at \$2,275,054; 10,239 tons of zinc spelter at \$2,671,906 and other metals at \$2,837,979.

Factory shipments included 32,453 tons of refined metals (recovered from scrap) valued at \$9,845,789; 5,617 tons of solders at \$5,083,663; 3,160 tons of type and type metal at \$1,724,280; 1,329 tons of babbitt metal at \$1,021,277; die castings at \$8,229,618; 1,524 tons of lead pipe at \$674,991; 2,451 tons of lead sheet at \$957,284 and other lines, such as metal foil, moulded shot, collapsible tubes, etc.

TABLE 1. Principal Statistics of the White Metal Alloys Industry, 1949-1953

Year	Number of plants	Number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
			\$	\$	\$	\$
1949	47	3,428	7,843,173	704,742	30,643,550	45,478,527
1950	48	3,557	8,620,347	792,080	35,161,532	52,100,390
1951	51	3,376	9,512,342	809,230	46,540,009	66,023,915
1952	55	3,238	9,525,283	767,984	34,689,608	53,379,433 ¹
1953	56	3,641	11,007,518	767,613	30,142,086	50,505,347 ¹
Per cent change, 1953 from 1952	-	+ 12.4	+ 15.6	-	- 13.1	- 5.4

1. Factory shipments since 1952. The inventory value of finished products at plant at end of 1952 amounted to \$2,566,000 and at end of 1953 to \$2,211,000.

Note. Profits or losses cannot be calculated from above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

TABLE 2. Principal Statistics, by Provinces, 1952 and 1953

Province	Number of plants	Number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Value of factory shipments
			\$	\$	\$	\$
1952						
Quebec	15	434	1,255,516	79,536	7,466,583	9,471,902
Ontario	33	2,654	7,866,335	648,013	24,827,610	40,760,704
Manitoba	3	82	198,236	22,573	1,395,784	1,771,860
British Columbia	4	68	205,196	17,862	999,631	1,374,967
Canada	55	3,238	9,525,283	767,984	34,689,608	53,379,433
1953						
Quebec	18	437	1,388,175	77,168	6,393,337	8,932,941
Ontario	33	3,040	9,171,146	631,961	21,682,524	38,690,301
Manitoba	3	164	448,197	58,484	2,066,225	2,882,105
British Columbia	2					
Canada	56	3,641	11,007,518	767,613	30,142,086	50,505,347

TABLE 3. Products Made in the White Metal Alloys Industry, 1952 and 1953

Product	1952		1953	
	Quantity lb.	Value of factory shipments \$	Quantity lb.	Value of factory shipments \$
Refined metals (reclaimed or remelted):				
Aluminum	14,133,414	3,069,891	12,289,843	2,395,352
Lead (antimonial)	31,278,348	5,419,782	39,665,587	5,523,886
Lead (common)	11,410,859	1,995,260	9,851,059	1,419,607
Tin	222,853	274,059	250,949	207,036
Zinc	3,410,013	610,195	2,848,869	299,908
Other metals	—	—	—	—
Alloys:				
Babbitt	2,537,457	1,156,232	2,657,575	1,021,277
Brass and bronze ingots	14,260,143	4,487,394	9,236,291	2,546,784
Copper alloys, not elsewhere specified	1,578,429	674,912	617,150	266,081
Lead alloys, not elsewhere specified	1,499,216	467,711	270,998	94,625
Solders	11,726,235	5,669,016	11,234,928	5,083,663
Tin alloys, not elsewhere specified	17,327	14,086	894,683	217,096
Type and type metal	7,559,473	2,065,443	6,320,582	1,724,280
Die casting alloys	9,622,605	1,978,276	11,615,920	1,670,720
Zinc alloys, not elsewhere specified	2,764,809	602,672	1,136,974	197,081
Other non-ferrous alloys	429,808	119,390	541,752	162,238
Castings:				
Die castings:				
Of aluminum-base alloy	1,069,865	815,977	1,126,638	957,459
Of zinc-base alloy	12,294,573	6,725,478	12,784,919	7,011,563
Of other metal base	295,443	134,359	407,849	260,596
Other castings:				
Brass and bronze	498,567	461,013	589	401
Lead	238,129	85,574	159,183	104,651
Other (aluminum, magnesium, zinc, etc.)	—	1,406,808	—	4,927,313
Lead products:				
Pipe	3,318,046	843,409	3,048,214	674,991
Sheets	4,552,827	1,034,702	4,902,499	957,284
Traps and fittings	1,156,727	489,408	1,660,715	607,018
Miscellaneous, including bullet wire, shot, etc.	—	836,320	—	700,666
Scrap and dross	—	207,013	—	358,266
All other products ¹	—	11,734,853	—	11,115,505
Total	—	53,379,433	—	50,505,347

1. Includes commodities which were made by only one or two firms in this industry, such as metal foil, collapsible tubes, lead oxides, etc.

NON-FERROUS METAL PRODUCTS

TABLE 4. Materials Used in the White Metal Alloys Industry, 1952 and 1953

Material	1952		1953	
	Quantity	Cost at works ¹	Quantity	Cost at works ¹
Metals (other than scrap):		\$		\$
Aluminum:				
Ingots:				
Primary or virgin	lb.	2,142,409	522,509	3,344,525
Secondary (from scrap)	"	428,517	113,874	677,283
Other forms	"	3,378,769	1,229,966	3,789,594
Antimony	lb.	1,188,925	403,187	1,497,123
Arsenic:				
Metallic arsenic	lb.	68,127	11,062	36,515
Oxide, As ₂ O ₃	"			50,178
Bismuth	"	39,566	92,007	42,422
Brass, and bronze, all forms	"	17,587	7,403	291,351
Cadmium	"	6,226	15,510	5,042
Copper ingots and slabs:				
Primary or virgin	lb.	162,251	46,311	214,203
Secondary (from scrap)	"	—	—	540,898
Die casting alloys	lb.	5,604,800	1,071,615	5,063,710
Lead, pig:				
Pure:				
Primary or virgin	lb.	29,146,851	4,631,428	38,729,698
Secondary (from scrap)	"	5,038,926	880,213	1,809,807
Antimonial:				
Primary	lb.	1,760,335	327,570	2,313,669
Secondary (from scrap)	"	832,213	146,364	389,267
Magnesium	lb.	1,412,736	648,511	1,796,134
Manganese metal	"	21,970	10,863	14,992
Nickel	"	21,735	13,047	849
Silicon metal	"	53,841	10,818	63,356
Silver, fine	Troy oz.	15,220	15,542	15,188
Tellurium	lb.	1,237	1,558	510
Tin, pig:				
Primary or virgin	lb.	2,827,305	3,367,742	3,740,185
Secondary (from scrap)	"	435,809	636,087	15,368
Zinc slabs, bars and ingots:				
Primary or virgin	lb.	18,277,228	3,220,188	15,955,874
Secondary (from scrap)	"	711,815	131,806	4,512,005
Other metals, except scrap, but including alloys ..	lb.	—	267,227	1,075,563
Scrap metals of all kinds:				
Aluminum	lb.	13,076,883	2,118,660	11,676,434
Babbitt	"	2,632,039	687,672	2,269,389
Brass and bronze	"	10,020,722	2,035,978	6,201,165
Copper	"	7,808,043	1,882,336	5,225,850
Lead:				
Battery plates and lugs	lb.	28,543,608	2,827,004	31,816,175
Dross	"	2,926,220	287,164	6,826,443
Other	"	13,069,460	1,748,672	11,447,904
Magnesium	lb.	7,849	706	166
Solder	"	1,684,095	519,913	1,636,378
Tin	"	70,993	61,239	45,183
Type metal	"	4,503,136	870,077	5,842,601
Zinc	"	1,731,263	168,652	1,696,149
Zinc dross	lb.	4,291,008	479,730	3,257,303
Other scrap, including scrap unspecified by kind	"	—	665,459	1,123,448
Shipping containers	—	—	188,917	—
All other materials	—	—	2,325,021	—
Total	—	—	34,689,608	30,142,086

1. Includes freight, duty, taxes, etc.

TABLE 5. Production¹ of Babbitt, Solders, Type and Type Metal, 1944-1953 (from all industries)

Year	Babbitt metal		Solders of all kinds		Type and type metal	
	Quantity	Selling value at works	Quantity	Selling value at works	Quantity	Selling value at works
			pounds	\$	pounds	\$
1944	4,100,724	847,005	8,447,480	2,004,955	5,118,068	515,737
1945	4,409,033	950,407	7,156,668	1,814,494	6,563,071	686,094
1946	5,077,738	1,386,295	7,475,951	2,102,508	6,565,831	727,537
1947	6,511,921	1,961,280	10,153,577	3,104,615	7,761,868	1,376,819
1948	5,496,104	1,840,169	10,480,048	4,511,761	8,601,466	1,824,902
1949	3,630,232	1,278,156	9,473,573	4,412,506	7,812,131	1,768,434
1950	4,202,607	1,634,590	12,897,001	6,009,587	9,129,748	2,157,457
1951	4,061,472	2,287,717	11,873,951	7,409,623	8,592,650	2,377,489
1952	2,810,857	1,358,068	11,734,509	5,674,938	7,559,473	2,065,443
1953	2,879,263	1,168,778	11,242,213	5,087,584	6,320,582	1,724,280

1. Factory shipments since 1952.

TABLE 6. Imports of Lead, Tin and Zinc, and Their Products, 1952 and 1953

Item	1952		1953	
	Quantity	Value	Quantity	Value
		\$		\$
Lead and its products:				
Lead in pigs and blocks	lb.	709,836	127,066	510,657
Lead, old and scrap	"	259,389	45,873	52,704
Lead in bars and sheets	"	4,433	1,988	61,102
Lead pipe	lb.	1,431	583	—
Lead capsules for bottles	—	—	141,186	—
Shot and bullets, lead	lb.	2,341	1,367	2,827
Manufactures of lead, n.o.p.	—	—	214,325	—
				255,067
Tin and its products:				
Tin in blocks, pigs or bars	cwt.	88,466	10,595,385	82,928
Tinfoil	lb.	2,779	3,869	16,565
Collapsible tubes	—	—	73,324	—
				83,240
Zinc and its products:				
Zinc in blocks, pigs, bars and rods, and zinc plates, n.o.p.	cwt.	10,425	194,032	572
Zinc strip and sheets, and zinc plates for marine boilers	"	15,188	421,759	25,945
Zinc dust	"	4,847	113,957	6,703
Zinc slugs for discs, for the manufacture of seamless cups or shells for electric dry batteries	—	—	332,612	—
Zinc, manufactures of, n.o.p.	—	—	1,777,968	—
				388,991
				2,368,677
Alloys, n.o.p.:				
Babbitt metal in blocks, bars, plates and sheets	cwt.	407	24,720	484
Britannia metal, manufactures of, not plated	—	—	10,823	—
Chromium metal and tungsten metal, in lumps, powder, ingots, blocks or bars, and scrap of alloy metal containing chromium and tungsten, for alloying purposes	lb.	73,485	202,064	106,360
Metal alloy slugs, cast, with diamonds or diamond clips embedded therin, as for the mould, and metal alloy strip	—	—	43,097	—
Phosphor tin and phosphor bronze, in blocks, bars, plates, sheets and wire	lb.	1,639,457	1,072,158	655,409
Alloys of copper	—	—	295,995	—
Alloys of magnesium	—	—	136,742	—
				448,536
				277,139
				144,253
Type and type metal:				
Type metal, in blocks, bars, plates and sheets	lb.	—	—	2,368
Type for printing, including chases, quoins and slugs of all kinds	—	—	158,288	—
				471
				214,530

NON-FERROUS METAL PRODUCTS

TABLE 7. Exports of Lead and Zinc and Their Products, 1952 and 1953

Item	1952		1953		
	Quantity	Value	Quantity	Value	
Lead in pigs, refined lead	cwt.	2,594,809	\$ 41,614,984	2,057,586	\$ 22,976,167
Lead scrap	"	104,261	1,163,151	10,451	74,488
Lead pipe and tubing	"	976	25,312	1,262	29,205
Lead manufactures	—	—	41,584	—	24,937
Zinc spelter	cwt.	3,337,281	\$ 61,309,973	3,167,755	\$ 34,292,884
Zinc scrap, dross and ashes	"	72,533	481,752	83,667	355,477
Zinc, manufactures of	—	—	419,996	—	127,003

TABLE 8. Employees and Their Earnings in the White Metal Alloys Industry, by Provinces, 1952 and 1953

Province	Number of employees					Earnings		
	Office and supervisory		Production workers		Total	Office and supervisory	Production workers	Total
	Male	Female	Male	Female				
1952								
Quebec.....	106	24	295	9	434	\$ 404,891	850,625	1,255,516
Ontario.....	355	134	1,665	500	2,654	2,067,069	5,799,266	7,866,335
Manitoba	11	5	60	6	82	57,784	140,452	198,236
British Columbia	10	8	50	—	68	63,615	141,581	205,196
Canada	482	171	2,070	515	3,238	\$ 2,593,359	6,931,924	9,525,283
1953								
Quebec.....	81	21	327	8	437	\$ 422,651	965,524	1,388,175
Ontario.....	410	149	1,932	549	3,040	2,192,108	6,979,038	9,171,146
Manitoba	29	18	111	6	164	150,441	297,756	448,197
British Columbia								
Canada	520	188	2,370	563	3,641	\$ 2,765,200	8,242,318	11,007,515

TABLE 9. Capital and Repair Expenditures in the White Metal Alloys Industry, 1949-1953

Year	Capital expenditures		Sub-total	Repair and maintenance expenditures		Sub-total	Total capital and repair expenditures
	Construction	Machinery and equipment		Construction	Machinery and equipment		
\$'000							
1949	186	885	1,071	139	652	791	1,862
1950	247	699	946	137	782	919	1,865
1951	508	927	1,435	145	577	722	2,157
1952	712	695	1,407	111	624	735	2,142
1953 ¹	2,471	1,040	3,511	90	656	746	4,257

1. Preliminary.

TABLE 10. Fuel and Electricity Used¹ in the White Metal Alloys Industry, 1948 and 1953

	Kilo	1948		1953	
		Quantity	Cost at works	Quantity	Cost at works
Bituminous coal:			\$		\$
Canadian	tons	791	8,854	253	4,070
Imported	"	4,075	53,810	2,611	33,088
Anthracite coal	"	631	7,235	998	15,815
Coke	"	1,443	26,974	1,250	28,397
Gasoline	Imp. gal.	69,758	25,130	113,307	43,635
Kerosene	"	24,586	5,571	7,031	1,781
Fuel oil	"	1,942,022	278,639	1,880,651	257,027
Wood	cords	16	135	—	—
Gas:					
Liquefied petroleum gases (propane, etc.)	Imp. gal.	2	2	63,820	19,929
Manufactured	M cu. ft.	129,590	67,919	170,378	86,838
Natural	"	36,439	27,083	52,543	55,886
Other fuel	—	—	1,246	—	440
Electricity purchased	k.w.h.	25,821,378	185,517	20,682,937	220,707
Total	—	—	688,113	—	767,613

1. Details shown in Tables 10 and 11 are collected only every five years; accordingly, data for intervening years are not available.

2. Not available separately.

TABLE 11. Power Equipment¹, 1948 and 1953

		Ordinarily in use		In reserve or idle	
		Number of units	Total rated horse power	Number of units	Total rated horse power
1948					
Gasoline, gas and oil engines, other than Diesel engines		6	450	1	120
Electric motors operated by purchased power		2,118	12,554	141	731
Total		2,124	13,004	142	851
Stationary power boilers		7	515	—	—
Motor-generator sets		20	508 k.v.a.	—	—
1953					
Diesel engines		1	200	—	—
Gasoline, gas and oil engines, other than Diesel engines		15	58	—	—
Electric motors operated by purchased power		2,279	10,522	187	723
Total		2,295	10,780	187	723
Stationary power boilers		1	28	—	—
Motor-generator sets		34	388 k.v.a.	1	7 k.v.a.

1. See footnote to Table 10.

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Directory of Firms in the White Metal Alloys Industry, 1953

Name of firm	Location of plant
Quebec:	
Canada Metal Company Limited, The	6265 Notre Dame St. E., Montreal
Eagle Smelting & Refining Works Limited	1095 Smith St., Montreal
Eastern Die Casting Co. Reg'd.....	345 Decarie Blvd., Ville St. Laurent
Federated Metals Canada Ltd.	1201 Mill St., Montreal
Granby Die Casting Inc.	Granby
Harbour Smelting & Refining Co.	153 Nazareth St., Montreal
Industrie Leadco, Limitée.....	5889 Des Erables St., Montreal
Kay Metal Refining Works Reg'd.....	301 Nazareth St., Montreal
Lawson Machine Works Ltd.	651 Bridge St., Montreal
Montebello Metal Ltd.	Montebello
Montreal Materials Processing Co. Ltd.	5270 Arnoldi St., Montreal
National Die Castings Co.	503 Desjardins St., Montreal
Ouellette, O.J., Co.	270 Vitre Est, Montreal
Richler, Michael.....	846 William St., Montreal
Richmond Machine Tool & Die Casting Co. Ltd.	165 St. Zotique W., Montreal
Riverside Smelting & Refining Works, Ltd.	639 Farm St., Montreal
Standard Metal Co. Inc.	269 Prince St., Montreal
Steel Company of Canada, Limited, The.....	2320 Notre Dame St. W., Montreal
Ontario:	
Barber Die Casting Co. Limited.....	Cor. Hillyard & Munroe Sts., Hamilton
Binkley, T., Die Casting Co.	175 Samuelson St., Galt
Canada Foils Limited	1891 Eglinton Ave. E., Toronto
Canada Metal Co. Ltd., The	721 Eastern Ave., Toronto
Canadian Magnesium Products Ltd.	Preston
Castcraft Mfg. Co.	10 Hastings Ave., Toronto
Cohen, I., & Co. Ltd.	594 Montreal St., Kingston
Dominion & Monarch Type Foundries	276 Parliament St., Toronto
Dominion Die Casting Ltd.	Heinz St., Wallaceburg
Dominion Magnesium Limited	Haley
Dundas Die Casters Ltd.	James St., Dundas
Federated Metals Canada Ltd.	Don Rdwy. & Eastern Ave., Toronto
General Smelting Company of Canada, Ltd.	Wilcox St., Hamilton
Great Lakes Die Casting Co. Ltd.	875 Tecumseh Rd. E., Windsor
Grenville Castings Limited.....	Merrickville
Hewitt Metals Corporation, Limited.....	1554 McDougall Ave. E., Windsor
Kester Solder Company of Canada Limited.....	51 Bruce St., Brantford
Lakeshore Die Casting Ltd.	Queen Elizabeth Highway, Oakville
Last Minute Mfg. Co. Ltd.	Wellington St. N., Thorold
Light Alloys Limited	Haley & Renfrew
Lintet Metal Industries Limited	21 Argyle St., Renfrew
Magic Foil of Canada, Ltd.	First Ave., Ajax
Metals & Alloys Limited	Wicksteed Ave., Leaside, Toronto
Modern Containers Limited	1190 Birchmont Rd., Scarborough
Moore Type Foundry Limited	431 King St. W., Toronto
Newburg Die Castings	29A Birch Ave., Toronto
Pressure Castings of Canada Limited.....	67 Main St. S., Weston
Prince & Smith Type Foundry	113 St. Patrick St., Toronto
Schultz Die Casting Co. of Canada Limited	Wallaceburg
Spooner Copperine Company Limited.....	John St., Port Hope
Sun Tube Corp. of Canada Ltd.	145 Spruce St., Ottawa
Toronto Refiners & Smelters Ltd.	28 Bathurst St., Toronto
White Metal Die Castings	112 Ossington Ave., Toronto
Manitoba:	
Canada Metal Company Limited, The	301 Chambers St., Winnipeg
Diecast Products Ltd.	1085 Winnipeg Ave., Winnipeg
Union Metal Company Limited, The.....	654 McGee St., Winnipeg
British Columbia:	
Canada Metal Company Limited, The	1428 Granville St., Vancouver
Metal Distributors Ltd.	1416 Franklin St., Vancouver