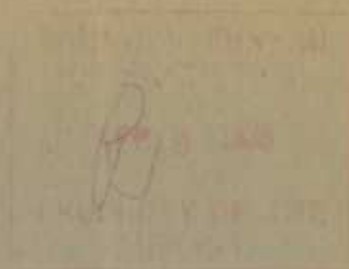


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Minister of Trade and Commerce.



CANADA
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
CENSUS OF INDUSTRY
MINING, METALLURGICAL & CHEMICAL BRANCH

THE BOILERS, TANKS & ENGINES
INDUSTRY
IN
CANADA
1937



OTTAWA
1939

Price 10 cents

DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
CENSUS OF INDUSTRY
MINING, METALLURGICAL AND CHEMICAL BRANCH
OTTAWA - CANADA

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ANNUAL INDUSTRY REPORT
IRON AND STEEL AND THEIR PRODUCTS GROUP
THE BOILERS, TANKS AND ENGINES INDUSTRY, 1937.

In accordance with the Statistics Act each manufacturing concern in Canada is required to submit to the Dominion Bureau of Statistics at Ottawa a yearly report covering such items as production, employment, capital, etc. In most cases a manufacturer makes more than one product but is not asked to apportion these details between the different products which he manufactures. It is impossible, therefore, except in a few cases, to compile detailed figures of employment, etc., for any single commodity.

For the presentation of these detailed statistics, the Bureau has subdivided manufacturing into nine groups of industries, producing concerns being classified according to the principal component material of their major products. For example, the pulp and paper industry is classified under "Wood and Paper"; boiler manufacturers under "Iron and Steel and Their Products", etc. These main groups are further divided into industries to which the concerns are allotted according to the nature of their main products. The iron and steel group is subdivided into 17 industries, one being the Boilers, Tanks and Engines Industry which is reviewed in this bulletin. This industry covers the operations of the establishments which made as their chief products such articles as boilers or heating radiators, engines, tanks, and miscellaneous products from steel plate such as bins, hoppers, smokestacks, etc. It is apparent, however, from the explanation given above, that the production figures as compiled for this industry do not necessarily represent the total Canadian output for the commodities listed as they may have been produced also as minor products of firms in other industries. Supplementary tables nos. 13 to 18, have been added to give total output figures for boilers, engines and heating radiators.

Production in the Boilers, Tanks and Engines Industry, attained a new high level in 1937 when it was valued at \$11,211,501. This output was 35 per cent over the \$8,305,860 of 1936 and exceeded the \$10,006,278 of 1929, the previous record year, by 12 per cent.

Fifty-four establishments were included in this industry in 1937, there being 27 in Ontario, 12 in Quebec, 9 in British Columbia, 4 in Nova Scotia, and 1 in each of Manitoba and Saskatchewan. These concerns, with a fixed and working capital amounting to \$13,875,620 gave employment to a monthly average of 2,936 people and paid \$3,694,393 in salaries and wages. Materials used in manufacturing processes cost \$4,872,296 at the plants and \$226,991 was spent for fuel and electricity.

Tables 1 to 12 of this report deal with the Boilers, Tanks and Engines Industry only, while Tables 13 to 18 give supplementary data covering the total production in Canada of boilers, engines and heating radiators. The total output value in 1937 for heating and power boilers of all kinds was \$2,329,452; for engines of all kinds (except automobile) \$1,569,917; and for heating radiators, \$1,534,056.

Table 1 - PRINCIPAL STATISTICS OF THE BOILERS, TANKS AND ENGINES INDUSTRY, 1921 - 1937.

Years	No. of plants	Capital employed	Average number of employees	Salaries and Wages	Cost of fuel and electricity	Cost of materials at works	Gross selling value of products at works
		\$		\$	\$	\$	\$
1929	37	10,665,197	2,157	3,043,768	163,137	5,091,406	10,006,278
1930	35	9,982,016	1,924	2,649,804	159,813	4,565,856	9,597,239
1931	40	10,833,223	1,803	2,376,416	135,668	2,640,600	6,367,008
1932	41	10,231,811	1,391	1,636,953	116,755	1,527,402	4,465,089
1933	50	13,331,336	1,572	1,742,257	168,784	1,553,690	4,445,256
1934	51	14,202,122	2,047	2,291,422	194,556	2,432,907	6,485,814
1935	56	15,417,364	2,410	2,771,854	231,328	2,774,327	7,365,523
1936	56	14,848,789	2,519	3,066,242	244,687	3,567,813	8,305,860
1937	54	13,875,620	2,936	3,694,393	226,991	4,872,296	11,211,501
% change 1937 from 1936	-3.6	-6.6	+16.5	+20.5	-7.0	+36.5	+35.0

Table 2 - PRINCIPAL STATISTICS, BY PROVINCES, 1936 and 1937.

Years	No. of plants	Capital employed	Average number of employees	Salaries and Wages	Cost of fuel and electricity	Cost of materials at works	Gross selling value of products at works
		\$		\$	\$	\$	\$
1936							
Nova Scotia	6	964,344	148	183,570	16,136	222,192	444,062
Quebec	12	2,625,404	552	666,508	60,275	942,519	1,821,884
Ontario	27	10,448,331	1,628	1,958,364	158,126	2,154,300	5,391,003
Manitoba	1)	92,302	33	31,292	3,133	34,665	80,946
Saskatchewan	1)						
British Columbia	9	718,408	158	226,508	7,017	214,137	567,965
CANADA	56	14,848,789	2,519	3,066,242	244,687	3,567,813	8,305,860
1937							
Nova Scotia	4	963,811	158	172,787	16,075	267,534	514,705
Quebec	12	2,969,128	592	693,058	40,040	1,130,032	2,156,886
Ontario	27	9,134,164	1,984	2,531,175	160,763	3,213,471	7,844,253
Manitoba	1)	115,643	33	50,494	2,932	40,689	97,707
Saskatchewan	1)						
British Columbia	9	692,874	169	246,879	7,161	220,570	597,950
CANADA	54	13,875,620	2,936	3,694,393	226,991	4,872,296	11,211,501

Table 3 - SIZE OF ESTABLISHMENTS ACCORDING TO PRODUCTION, NUMBER OF EMPLOYEES and CAPITAL EMPLOYED, 1937.

	Number of plants	Capital employed	Number of employees	Gross selling value of products at works
		\$		\$
(a) PRODUCTION				
Under \$10,000	5	86,781	16	23,512
\$10,000 to \$25,000	8	262,556	70	130,541
\$25,001 to \$50,000	8	395,211	107	313,117
\$50,001 to \$100,000	10	721,242	212	718,214
\$100,001 to \$200,000	7	1,786,928	293	1,121,563
\$200,001 to \$300,000	5	1,854,550	391	1,293,343
Over \$300,000	11	8,768,352	1,847	7,611,211
TOTAL	54	13,875,620	2,936	11,211,501

Table 3 - SIZE OF ESTABLISHMENTS ACCORDING TO PRODUCTION, NUMBER OF EMPLOYEES and CAPITAL EMPLOYED, 1937 (Concluded)

	Number of plants	Capital employed \$	Number of employees	Gross selling value of products at works \$
(b) <u>EMPLOYEES</u>				
10 and under	13	250,158	69	186,443
11 to 25	17	1,532,469	287	1,225,421
26 to 50	7	905,118	245	838,328
51 to 75	4	1,538,414	257	864,189
Over 75	13	9,649,461	2,078	8,097,120
TOTAL	54	13,875,620	2,936	11,211,501
(c) <u>CAPITAL</u>				
Under \$25,000	11	161,550	60	133,972
\$25,001 to \$100,000	19	1,170,275	330	1,018,800
\$100,001 to \$250,000	7	1,181,774	408	1,191,397
Over \$250,000	17	11,362,021	2,138	8,867,332
TOTAL	54	13,875,620	2,936	11,211,501

Table 4 - CAPITAL EMPLOYED, 1936 and 1937.

Province	Present value of land, build- ings, machinery and equipment \$	Inventory value of materials and finished products on hand and stocks in process \$	Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.) \$	TOTAL CAPITAL EMPLOYED \$
<u>1936</u>				
Nova Scotia	633,887	181,843	148,614	964,344
Quebec	1,755,648	456,861	412,895	2,625,404
Ontario	6,816,200	1,965,845	1,666,286	10,448,331
British Columbia ...	427,852	145,165	145,391	718,408
Other provinces	58,065	12,307	21,930	92,302
TOTAL	9,691,652	2,762,021	2,395,116	14,848,789
<u>1937</u>				
Nova Scotia	612,941	221,719	129,151	963,811
Quebec	1,652,613	617,848	698,667	2,969,128
Ontario	5,193,802	2,659,088	1,281,474	9,134,164
British Columbia ...	400,686	128,146	164,042	692,874
Other provinces	71,839	25,200	18,604	115,643
TOTAL	7,931,681	3,652,001	2,291,938	13,875,620

Table 5 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1936 and 1937.

Provinces	Average number of employees					Salaries	Wages	TOTAL
	On salaries		On wages		TOTAL			SALARIES
	Male	Female	Male	Female				AND WAGES
						\$	\$	\$
1936								
Nova Scotia	23	8	117	...	148	51,484	132,086	183,570
Quebec	113	13	426	...	552	207,922	458,586	666,508
Ontario	294	80	1,253	1	1,628	642,661	1,315,703	1,958,364
British Columbia..	24	1	133	...	158	55,685	170,823	226,508
Other provinces .	6	1	26	...	33	11,136	20,156	31,292
TOTAL	460	103	1,955	1	2,519	968,888	2,097,354	3,066,242
1937								
Nova Scotia	22	5	131	...	158	51,266	121,521	172,787
Quebec	110	14	468	...	592	201,838	491,220	693,058
Ontario	322	98	1,563	1	1,984	764,363	1,766,812	2,531,175
British Columbia..	25	...	144	...	169	47,693	199,186	246,879
Other provinces .	8	...	25	...	33	12,713	37,761	50,494
TOTAL	487	117	2,331	1	2,936	1,077,873	2,616,520	3,694,393

Table 6 - WAGE-EARNERS, BY MONTHS, 1936 and 1937.

Month	1 9 3 6			1 9 3 7		
	Male		Total	Male		Total
	Male	Female		Male	Female	
January	1,793	1	1,794	2,052	1	2,053
February	1,892	1	1,893	2,092	1	2,093
March	1,944	1	1,945	2,260	1	2,261
April	2,050	1	2,051	2,428	1	2,429
May	1,958	1	1,959	2,444	1	2,445
June	1,970	1	1,971	2,496	1	2,497
July	1,864	1	1,865	2,411	1	2,412
August	1,910	1	1,911	2,463	1	2,464
September	1,982	1	1,983	2,453	1	2,454
October	2,125	1	2,126	2,389	1	2,390
November	1,997	1	1,998	2,274	1	2,275
December	1,936	1	1,937	2,222	1	2,223
AVERAGE	1,955	1	1,956	2,331	1	2,332

Table 7 - REGULAR HOURS WORKED PER WEEK BY WAGE-EARNERS, 1936 and 1937.
(Overtime not included)

Regular hours worked per week	Percent of wage-earners		Regular hours worked per week	Percent of wage-earners	
	1936	1937		1936	1937
40 hours or less	5.6	8.6	51 - 53 hours	1.2	.7
41 - 43 hours .....	.6	2.1	54 hours	2.5	1.7
44 hours	17.4	18.1	55 hours .....	.8	1.5
45 - 47 hours	12.4	11.6	56 - 59 hours	2.9	3.5
48 hours	9.4	9.5	60 hours and over	4.8	6.8
49 - 50 hours	42.4	35.9			

Table 8 - FUEL AND ELECTRICITY USED, 1936 and 1937.

Kinds	Unit of measure	1 9 3 6	Cost at	1 9 3 7	Cost at
		Quantity	works	Quantity	works
Bituminous coal - Canadian ..	short ton	5,148	31,886	3,735	23,304
Imported ..	short ton	3,500	23,540	2,840	18,948
Anthracite coal	short ton	6,649	44,142	6,896	45,525
Lignite coal	short ton	33	267	56	183
Coke	short ton	867	7,528	986	8,985
Gasoline	Imp. gal.	26,745	5,743	44,648	8,242
Kerosene	Imp. gal.	2,690	431	3,054	496
Fuel oil	Imp. gal.	158,941	14,096	106,891	9,683
Wood	cord	339	1,858	462	2,355
Gas - Manufactured	M cu. ft.	2,045	2,047	3,060	2,378
Natural	M cu. ft.	3,532	2,134	3,208	1,973
Electricity purchased	Kw. H.	6,942,283	105,962	9,655,654	104,298
Other fuel	xxx	...	5,053	...	621
TOTAL	xxx	...	244,687	...	226,991
Electricity generated for own use	Kw. H.	37,000	...	6,000	...

Table 9 - POWER EQUIPMENT, 1936 and 1937.

Type	1 9 3 6	1 9 3 7
	Number of units	Total rated horse power
Steam engines and turbines	32	2,628
Diesel engines	7	300
Gasoline, gas and oil engines	14	345
Hydraulic turbines or water wheels	1	30
Total Primary	54	3,303
Electric motors run by purchased power.	817	14,498
TOTAL	871	17,801
Electric motors run by primary power ..	113	2,564
Total Electric Motors	930	17,062
Boilers	23	3,454

Table 10 - POWER EQUIPMENT, 1937, SHOWING - ORDINARILY IN USE - separately from -
IN RESERVE OR IDLE.

Type	Ordinarily in Use	In Reserve or Idle
	Number of units	Total rated horse power
Steam engines and turbines	22	2,185
Diesel engines	5	245
Gasoline, gas and oil engines	14	360
Hydraulic turbines or water wheels	1	30
Total Primary	42	2,820
Electric motors run by purchased power.	773	13,452
TOTAL	815	16,272
Electric motors run by primary power ..	130	2,300
Total Electric Motors	903	15,752
Boilers	19	2,927

Table 11 - MATERIALS USED, 1936 and 1937.

		1	9	3	6	1	9	3	7
Materials	Unit of measure	Quantity		Cost at works		Quantity		Cost at works	
				\$				\$	
<u>IRON</u>									
Pig iron	long ton	10,331		219,294		9,974		247,906	
Iron castings	short ton	869		88,570		684		86,706	
<u>STEEL, HOT OR COLD ROLLED -</u>									
Steel castings	short ton	167		41,070		235		64,730	
Bars and rods	short ton	799		44,959		1,087		68,673	
Forgings	short ton	62		12,334		86		18,637	
Shafting	short ton	89		9,154		68		8,934	
Sheets, plain	short ton	3,233		190,442		3,708		238,492	
Sheets, galvanized	short ton	211		16,996		205		17,471	
Strip	short ton	412		23,588		441		25,700	
Plates, boiler	short ton	2,363		136,041		2,735		185,125	
Plates, other	short ton	17,757		475,549		8,977		584,708	
Stampings	short ton	8		1,536		...		2,667	
Structural shapes	short ton	3,459		215,820		5,046		328,936	
Boiler tubes	foot	722,497		170,969		...		270,370	
Wire	short ton	28		3,134		30		5,337	
Alloy steels .....	...	...		3,591		16		2,373	
Scrap iron and steel	short ton	16,660		173,242		19,591		294,298	
Other iron and steel	xxx	...		23,985		...		7,527	
<u>NON-FERROUS METALS, including scrap -</u>									
Aluminium	pound	16,116		5,098		20,394		5,147	
Brass and bronze castings	pound	113,929		32,069)		117,702		31,859	
Brass and bronze sheets	pound	52,834		16,317)		...		...
Copper bars, sheets, etc.	pound	48,307		8,902		88,871		14,324	
Lead	pound	3,055		294		3,730		321	
Nickel	pound	166		50		788		143	
Tin	pound	52,383		29,580		47,945		24,547	
Zinc	pound	213,762		10,088		269,504		11,146	
Babbitt metals and solders	pound	41,687		17,296		32,324		12,700	
Other non-ferrous metals	xxx	...		983		...		1,149	
<u>OTHER MATERIALS -</u>									
Parts for engines, boilers, etc. ..	xxx	...		683,723		...		1,221,828	
Iron and steel pipe and fittings ..	xxx	...		129,405		...		70,675	
Bolts, nuts, rivets and screws	xxx	...		65,271		...		86,109	
Electrical goods, including motors. xxx	xxx	...		11,462		...		10,748	
Paints, oils and varnishes	xxx	...		26,985		...		32,291	
Asbestos and other linings and coverings	xxx	...		4,547		...		3,914	
Foundry coke	short ton	7,027		80,822		9,044		104,037	
Moulding sands	short ton	5,571		22,242		5,066		23,825	
Silica sand for sand-blasting	short ton	75		299		74		360	
Core sands	short ton	6,792		15,211		9,809		23,566	
Other foundry sands	short ton	310		1,916		90		730	
Starch	pound	1,400		112		...		...
Plumbago	pound	15,994		1,042		20,201		1,285	
Other foundry facings	pound	403,262		6,462		718,756		9,058	
Patterns and models	xxx	...		13,173		...		8,926	

Table 11 - MATERIALS USED, 1936 and 1937 (Concluded).

Materials	Unit of measure	1 9 3 6	1 9 3 7
		Quantity	Cost at works
			\$
<u>OTHER MATERIALS (Concluded) -</u>			
Lumber	M ft.b.m.	875	36,361
Firebrick	Number	47,455	4,026
Fireclay	short ton	825	7,665
Cupola blocks	Number	7,848	1,401
Core oil	Imp. gal.	24,975	14,540
Core compounds	pound	2,000	100
Shipping containers	xxx	...	2,481
All other materials	xxx	...	467,616
TOTAL	xxx	...	3,567,813
			\$
			41,008
			5,929
			5,956
			1,159
			16,505
			241
			4,095
			640,125
			4,872,296

Table 12 - PRODUCTS MADE IN THE BOILERS, TANKS AND ENGINES INDUSTRY, 1936 and 1937.

NOTE - Data in this table are for the Boilers, Tanks and Engines Industry which includes only the manufacturers that made boilers, tanks and engines as their main products. Figures for the individual commodities do not represent the total output in Canada as these articles were made also in other industries. (See Tables 14, 16 and 18).

Products	Unit of measure	1 9 3 6	1 9 3 7
		Quantity	Selling value at works
			\$
<u>Boilers, heating -</u>			
Cast iron sectional - hot water and steam	Number	10,775	798,611
Steel firebox, locomotive type ..	"	29	20,242
Horizontal return tubular	"	11	7,368
Electric welded, steel	"	243	97,670
Water tube, steel	"	18	9,568
<u>Boilers, power -</u>			
Water tube - horizontal type	"	35	212,780
Water tube - vertical type .....	"	...	...
Water tube - bent tube type	"	8	74,751
Return tubular power, horizontal.	"	75	127,040
Marine type	"	1	3,000
Steel firebox, locomotive type ..	"	8	16,978
Fire tube, vertical type	"	129	59,629
All other boilers	"	48	18,482
Boiler parts	xxx	...	79,210
<u>Radiators, heating -</u>			
Cast iron, standing	Sq. ft.	4,113,996	1,116,510
Cast iron, concealed	" "	290,582	63,613
<u>Engines -</u>			
Gasoline - Marine type (outboard and other)	Number	4,751	548,741
Stationary	"	1,992	86,563
Aeroplane, hand car and railway motor car	"	192	135,171
Steam and diesel, including steam turbines	"	83	159,122
Engine and turbine parts	xxx	...	196,249
			\$
			1,050,709
			32,297
			10,313
			128,412
			10,251
			42,008
			238,027
			77,654
			88,905
			38,853
			42,562
			42,836
			33,075
			197,644
			1,316,345
			80,181
			817,663
			41,275
			392,708
			179,585
			141,336

Table 12 - PRODUCTS MADE IN THE BOILERS, TANKS AND ENGINES INDUSTRY, 1936 and 1937
(Concluded).

Products	Unit of measure	1 9 3 6	1 9 3 7
		Quantity	Selling value at works
			\$
Miscellaneous plate work -			
Bins and hoppers	Number	83	11,203
Smokestacks	"	184	37,309
Smoke breeching	xxx	...	22,297
Rivetted and welded steel pipe ..	short ton	77	9,352
Other plate work	xxx	10,714	1,337,840
Structural work, including fabri-			
cated and erected shapes	xxx	...	167,294
Tanks -			
Steel storage for water and fuel			
oil	xxx	...	239,245
Steel, septic	xxx	...	36,785
Steel, pneumatic	Number	4,067	60,645
All other pressure tanks	xxx	...	29,446
Tank heaters for domestic water			
supply	Number	4,873	49,913
Pumps, all kinds, and parts	"	212	112,987
Stokers, mechanical, and parts ...	xxx	...	101,238
Receipts from custom work and			
repairs	xxx	...	902,510
All other products(x)	xxx	...	1,555,238
TOTAL	xxx	...	8,305,860
			11,211,501

(x) Includes data for items made by less than three firms such as cast iron soil pipe, furnaces, pulverizers, milk cans, etc.

DIRECTORY OF FIRMS INCLUDED IN THE BOILERS, TANKS AND ENGINES INDUSTRY, 1937.

NOTE - This is not intended to be a complete list of concerns which made boilers, tanks or engines. It is merely a directory of the firms which made these articles as their main products and which, therefore, were classified to this industry for statistical purposes.

Names of Firms

Location of Plants

(a) ENGINES, Chiefly

NOVA SCOTIA -

Acadia Gas Engines Limited
Hawbolt Gas Engines

Bridgewater
Chester

QUEBEC -

Canadian Pratt & Whitney Aircraft Co.Ltd. Longueuil
Canadian Wright Ltd. and / or Aero
Engines of Canada. Ltd.

6259 Notre Dame St., Montreal

ONTARIO -

Buchanan, F. L., Limited
Outboard Marine & Manufacturing Co. of
Canada, Ltd.

129 Front St., Orillia
Peterborough

DIRECTORY OF FIRMS INCLUDED IN THE BOILERS, TANKS AND ENGINES INDUSTRY, 1937.

Names of Firms

Location of Plants

(a) ENGINES, Chiefly (Concluded)

ONTARIO - (Concluded)

Kermath Mfg. Co. of Canada, Ltd.	619 King St. W., Toronto
St. Lawrence Engine Co. Ltd.	Brockville
Sylvester Manufacturing Company Ltd.	Lindsay
Russel Bros. Ltd.	3rd Ave. E., Owen Sound

BRITISH COLUMBIA -

Easthope Brothers Limited	1747 West Georgia St., Vancouver
Vivian Engine Works Ltd.	1090 West Sixth Avenue, Vancouver
Simplex Engine & Mfg. Co. Ltd.	1963 West Georgia St., Vancouver

(b) BOILERS, RADIATORS, TANKS AND PLATE WORK, Chiefly

NOVA SCOTIA -

Hogan, T., & Co.	121 Lower Water St., Halifax
Robb Engineering Works Ltd.	Amherst

QUEBEC -

Canadian John Woods Mfg. Co.	2143 St. Patrick St., Montreal
Farand & Delorme Ltd.	385 Martin St., Montreal
Latulippe, Michel	303 Dorchester St., Quebec
La Compagnie de Radiateurs Victoire Ltée.	925 Perrault Lane, Montreal
Manny, E. S., Co.	1820 Gilford St., Montreal
McKay, Alex, Boiler and Tank Works Reg'd.	West End, Louise Embankment, Quebec
Radiateur Plessis Ltée.	Plessisville
Warden King Ltd.	2104 Bennett Ave., Maisonneuve, Montreal
Weir, J. & R., Ltd.	33 Nazareth St., Montreal

ONTARIO -

Babcock-Wilcox and Goldie-McCulloch Ltd.	Grand Ave., Galt
Bell, Robt., Engine and Thresher Co.	Seaforth
Campbell Steel and Iron Works Ltd.	855 Carling Ave., Ottawa
Canadian John Wood Mfg. Co. Ltd.	101 Hanson St., Toronto
Dominion Radiator and Boiler Co. Ltd.	17 S. Market St., Brantford, and 1322 Dufferin St., Toronto
Gurney Foundry Co. Ltd.	4 Junction Road, Toronto
Horton Steel Works Ltd.	Jennett St., Fort Erie
Imperial Iron Corp. Ltd.	Berryman Ave., St. Catharines
Leonard, E., and Sons, Ltd.	381 York St., London
Levy and Westwood Machinery Co.	340 Dufferin St., Toronto
Macpherson, C. E.	468 Rideau St., Kingston
Napanee Iron Works Ltd.	Ann St., Napanee
Ottawa Boiler and Steel Works	158 Queen St. W., Ottawa
Park, Archibald	165 William St. S., Chatham
Pendell Boiler Ltd.	50 Bartlett Ave., Toronto
Port Colborne Iron Works, Ltd.	Fraser St., Port Colborne
Steel Fabricating & Welding Ltd.	Dundas
Taylor-Forbes, Ltd.	Queen St., Guelph
Toronto Iron Works Ltd.	629 Eastern Ave., Toronto
Winnett, R., & Son	271 Hamilton Road, London

MANITOBA -

Canadian Brown Steel Tank Co. Ltd.	20th St. and Pacific Ave., Brandon
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DIRECTORY OF FIRMS INCLUDED IN THE BOILERS, TANKS AND ENGINES INDUSTRY, 1937.

(b) BOILERS, RADIATORS, TANKS AND PLATE WORK, Chiefly (Concluded)

<u>Names of Firms</u>	<u>Location of Plants</u>
<u>SASKATCHEWAN -</u>	
North Western Iron Works Ltd.	1419 Scarth St., Regina
<u>BRITISH COLUMBIA -</u>	
Atlas Boiler & Ship Repairs	First Avenue, Prince Rupert
Blain Boilers Works Ltd.	494 Railway St., Vancouver
Mainland Boiler Works Ltd.	496 Alexander St., Vancouver
Patterson Boiler Works	750 Alexander St., Vancouver
Vancouver Iron Works Ltd.	1155 - 6th Avenue West, Vancouver
Westminster Boiler and Tank Co.	111 - 11th Street, New Westminster.

SUPPLEMENTARY DATA

(a) Boilers

As pointed out in the opening paragraphs of this report, the Boilers, Tanks and Engines Industry includes only the firms which made boilers, engines, etc., as their major products. Hence the production figures as given in Table 12 do not represent the total output in Canada of the commodities which are listed. To provide complete figures for heating and power boilers a special compilation has been made covering the reports of all concerns which reported boilers as one of their products.

In 1937, a total of 40 concerns reported a production of heating or power boilers. These factories made goods having a gross selling value of \$13,955,847 of which boilers alone accounted for only \$2,329,452. The principal statistics covering the entire business of these works are given below, there being no separation of the figures, except for production, for the various commodities made in these establishments.

Table 13 - PRINCIPAL STATISTICS FOR ALL ESTABLISHMENTS WHICH REPORTED A PRODUCTION OF BOILERS IN 1936 and 1937.

	1936	1937
Number of manufacturers	41	40
Total capital employed \$	18,142,084	22,377,921
Total number of employees	2,881	4,012
Total salaries and wages \$	3,331,522	5,314,627
Total cost of fuel and electricity \$	285,525	350,235
Total cost of all materials used \$	3,233,456	6,214,912
Selling value of boilers manufactured \$	1,733,522	2,329,452
Selling value of other products manufactured . \$	6,241,330	11,626,395
TOTAL SELLING VALUE OF ALL PRODUCTS \$	7,974,852	13,955,847

Table 14 - TOTAL PRODUCTION IN CANADA OF HEATING AND POWER BOILERS, 1936 and 1937.

Types	1	9	3	6	1	9	3	7
	Number of boilers	Total selling value at plant			Number of boilers	Total selling value at plant		
		\$				\$		
Heating boilers -								
Cast iron sectional hot water and steam	10,997	831,127			13,529	1,070,169		
Steel firebox, locomotive type ..	149	73,018			147	100,235		
Horizontal return tubular .....	...	25,653			14	17,302		
Steel water tube .....	...	21,328			28	19,834		
Steel welded	243	97,670			249	128,812		
Power boilers -								
Water tube, horizontal type	35	212,780			8	42,008		
Water tube, vertical type .....	...	5,867			31	246,527		
Water tube, bent tube type	8	74,751			6	77,654		
Horizontal return tubular	77	130,193			69	92,155		
Marine type - internally fired ..	...	...			5	35,853		
Marine type, water tube	1	3,000			6	9,500		
Steel firebox, locomotive type ..	11	21,515			25	67,462		
Firetube, vertical type	152	64,933			169	47,964		
Boilers, type not specified .....	...	171,687			150	373,977		
TOTAL .....	...	1,733,522			14,436	2,329,452		

LIST OF ALL ESTABLISHMENTS IN CANADA WHICH REPORTED A PRODUCTION
OF HEATING OR POWER BOILERS, 1937

Names of Firms

Location of Plants

Atlas Boiler & Ship Repair Works	1st Avenue, Prince Rupert, B. C.
Babcock Wilcox & Goldie-McCulloch Ltd.	64 Grand Ave. S., Galt, Ont.
Beaver Foundry & Furnace Works	Harvey St., Tilsonburg, Ont.
Bell, Robt., Engine & Thresher Co.	Seaforth, Ont.
Blain Boiler Works Ltd.	494 Railway St., Vancouver, B. C.
Campbell Steel & Iron Works Ltd.	855 Carling Ave., Ottawa, Ont.
Canadian Brown Steel Tank Co. Ltd.	20th St., & Pacific Ave., Brandon, Man.
Canadian Vickers Ltd.	4970 Notre Dame St. E., Montreal, Que.
Chalifoux & Fils Ltée.	11 Ste. Anne St., St. Hyacinth, Que.
Dominion Radiator & Boiler Co. Ltd.	17 S. Market St., Brantford, Ont.
Dominion Engineering Works Ltd.	Lachine, Que.
Fonderie Belanger	2440 rue Des Carrieres, Montreal, Que.
Foster Wheeler Ltd.	Westchester Ave., St. Catharines, Ont.
Imperial Iron Corporation Ltd.	Berryman Ave., St. Catharines, Ont.
La Compagnie Jutras Ltée.	Victoriaville, Que.
Latulippe, Michel	303 rue Rochester, Quebec, Que.
Leonard, E., & Sons Ltd.	381 York St., London, Ont.
Matheson, I., & Co. Ltd.	North Provost St., New Glasgow, N. S.
McKay, Alex, Boiler & Tank Works Reg'd.	2162 Demontigny St. E., Montreal, Que.
Morton Engineering & Dry Dock Co. Ltd.	Louise Embankment, Quebec, Que.
Napanee Iron Works Ltd.	Ann St., Napanee, Ont.
Northwestern Iron Works Ltd.	1419 Scarth St., Regina, Sask.
Ottawa Boiler & Steel Works	158 Queen St. W., Ottawa, Ont.
Patterson Boiler Works	750 Alexander St., Vancouver, B. C.
Pender Boiler Ltd.	50 Bartlett Ave., Toronto, Ont.

LIST OF ALL ESTABLISHMENTS IN CANADA WHICH REPORTED A PRODUCTION
OF HEATING OR POWER BOILERS, 1937.(Con.)

<u>Names of Firms</u>	<u>Location of Plants</u>
Port Colborne Iron Works	Fraser St., Port Colborne, Ont.
Spencer Foundry Co. Ltd.	Fox St., Penetanguishene, Ont.
Standard Iron Works Ltd.	121 - 1st St. & 106th Ave., Edmonton, Alta.
Stewart, Bruce & Co. Ltd.	6 Great George St., Charlottetown, P. E. I.
Taylor-Forbes Ltd.	Queen St., Guelph, Ont.
Thompson & Sutherland Ltd.	North Sydney, N. S.
Vancouver Iron Works Ltd.	1155 West Sixth Ave., Vancouver, B. C.
Victoria Machinery Depot Co. Ltd.	343 Bay St., Victoria, B. C.
Vulcan Iron Works Ltd.	Pt. Douglas Ave., Winnipeg, Man.
Waterous Ltd.	S. Market St., Brantford, Ont.
Westminster Boiler & Tank Co.	111 Eleventh St., New Westminster, B.C.
Winnett, R., & Son	271 Hamilton Road, London, Ont.

(b) HEATING RADIATORS

Only 10 companies in Canada made radiators for heating purposes during 1937. Their production totalled \$3,624,932 of which heating radiators accounted for \$1,534,056.

Table 15 - PRINCIPAL STATISTICS FOR ALL ESTABLISHMENTS WHICH REPORTED A PRODUCTION OF HEATING RADIATORS IN 1937.

	1	9	3	7
Number of manufacturers				10
Total capital employed	\$		5,489,820	
Total number of employees			952	
Total salaries and wages	\$		1,220,194	
Total cost of fuel and electricity	\$		72,696	
Total cost of all materials used	\$		1,357,517	
Selling value of heating radiators manufactured	\$		1,534,056	
Selling value of other products manufactured	\$		2,090,876	
TOTAL SELLING VALUE OF ALL PRODUCTS	\$		3,624,932	

Table 16 - TOTAL PRODUCTION OF HEATING RADIATORS, 1936 and 1937.

Type		1 9 3 6		1 9 3 7	
		Quantity	Selling value at works \$	Quantity	Selling value at works \$
Direct or standing type, cast iron	sq.ft.	4,113,996	1,116,510	4,704,095	1,316,345
Concealed type - Cast iron	sq.ft.	290,582	63,613	305,621	80,181
Sheet metal	sq.ft.	...	49,360	420,000	137,530
TOTAL	sq.ft.	...	1,229,483	5,429,716	1,534,056

LIST OF ESTABLISHMENTS IN CANADA WHICH REPORTED A PRODUCTION OF
HEATING RADIATORS IN 1937

<u>Names of Firms</u>	<u>Location of Plants</u>
Dominion Radiator & Boiler Co. Ltd.	1322 Dufferin St., Toronto, Ont.
Dunham, C. A., Co. Ltd.	1523 Davenport Road, Toronto, Ont.
Gurney Foundry Co. Ltd.	4 Junction Road, Toronto, Ont.
Imperial Iron Corp. Ltd.	Berryman Ave., St. Catharines, Ont.
La Compagnie de Radiateurs Victoire Ltée.	927 Perrault Lane, Montreal, Que.
Radiateur Plessis Limitée	Plessisville, Que.
Taylor-Forbes Ltd.	Queen St., Guelph, Ont.
Trane Co. of Canada Ltd.	King & Mowat Sts., Toronto, Ont.
Vapor Car Heating Co. of Canada, Ltd.	65 Dalhousie St., Montreal, Que.
Warden King Limited	2104 Bennett Ave., Montreal, Que.

(c) ENGINES

Twenty-five firms made engines (except automobile engines) in Canada during 1937. Their total output was valued at \$9,798,113, including engines worth \$1,569,917. Three of the motor car manufacturing companies made engines for their own use, but separate statistics covering this part of their business are not available.

Table 17 - PRINCIPAL STATISTICS FOR ALL ESTABLISHMENTS WHICH REPORTED A PRODUCTION OF
ENGINES, 1936 and 1937. (Automobile engines and locomotive not covered).

	1	9	3	6	1	9	3	7
Number of manufacturers				26				25
Total capital employed \$				23,541,247				14,409,842
Total number of employees				2,457				2,547
Total salaries and wages \$				2,745,716				3,462,265
Total cost of fuel and electricity \$				184,614				214,874
Total cost of all materials used \$				2,921,334				4,784,218
Selling value of engines manufactured \$				1,031,277				1,569,917
Selling value of other products manufactured ... \$				5,650,746				8,228,196
TOTAL SELLING VALUE OF ALL PRODUCTS \$				6,682,023				9,798,113

Table 18 - TOTAL PRODUCTION OF ENGINES IN CANADA, 1937.

NOTE - Figures in this table have been assembled from all industries and represent the TOTAL OUTPUT IN CANADA.

Type	1	9	3	6	1	9	3	7
	Number			Selling	Number			Selling
	of			value at	of			value at
	engines			works	engines			works
				\$				\$
Steam, including steam turbines .....	...			79,905	63			71,474
Diesel .....	...			119,806	...			157,278
Gasoline - Marine type, outboard and other ...	4,751			548,741	6,540			817,663
Stationary type	1,992			86,563	1,535			41,275
Aeroplane, hand car and railway								
motor car	196			145,571	253			420,508
Type not specified .....	...			50,691	361			61,719
TOTAL ENGINES (except automobile) .....	...			1,031,277	...			1,569,917
Automobile engines	121,762			...	149,588			...

LIST OF ALL ESTABLISHMENTS IN CANADA WHICH REPORTED A PRODUCTION
OF ENGINES IN 1937.

<u>Names of Firms</u>	<u>Location of Plants</u>
Acadia Gas Engines Ltd.	Bridgewater, N. S.
Babcock-Wilcox & Goldie-McCulloch Ltd.	64 Grand Ave. S., Galt, Ont.
Buchanan, F. L., Ltd.	Orillia, Ont.
Canadian Pratt & Whitney Aircraft Co. Ltd.	Longueuil, Que.
Canadian Wright Ltd., and Aero Engines of Canada Ltd.	6259 Notre Dame E., Montreal, Que.
Desjardins Limitée	St. Andre de Kamouraska, Que.
Dominion Engineering Works Ltd.	Lachine, Que.
Easthope Brothers Ltd.	1747 Georgia St., Vancouver, B. C.
Hambolt Gas Engines	Chester, N. S.
Kermath Mfg. Co. of Can. Ltd.	619 King St. W., Toronto, Ont.
Lunenburg Foundry Co. Ltd.	Lunenburg, N. S.
Matheson, I., & Co. Ltd.	N. Provost St., New Glasgow, N. S.
Monarch Machinery Co. Ltd.	902 Horne St., Winnipeg, Man.
Outboard Marine & Mfg. Co. of Can. Ltd.	Peterboro, Ont.
Oxford Foundry & Machine Co. Ltd.	Foundry St., Oxford, N. S.
Plessisville Foundry	Plessisville, Que.
Russell Bros. Ltd.	3rd Ave. E., Owen Sound, Ont.
Simplex Engine & Mfg. Co. Ltd.	1950 W. Georgia St., Vancouver, B. C.
Stewart, Bruce & Co. Ltd.	6 Great George St., Charlottetown, P.E.I.
St. Lawrence Engine Co. Ltd.	St. Andrew St., Brockville, Ont.
Sylvester Mfg. Co. Ltd.	1 Victoria Ave. S., Lindsay, Ont.
United Steel Corp. Ltd.	Toronto and Welland, Ont.
Victoria Machinery Depot Co. Ltd.	343 Bay St., Victoria, B. C.
Vivian Engine Works Ltd.	1090 W. Sixth Ave., Vancouver, B. C.
Wilson Machine Co. Ltd.	161 Nazareth St., Montreal, Que.

NOTE - In addition, the following firms make automobile engines for their own use.

Chrysler Corp. of Can., Ltd.	Walkerville, Ont.
Ford Motor Co. of Can., Ltd.	East Windsor, Ont.
General Motors of Can., Ltd.	Walkerville, Ont.

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