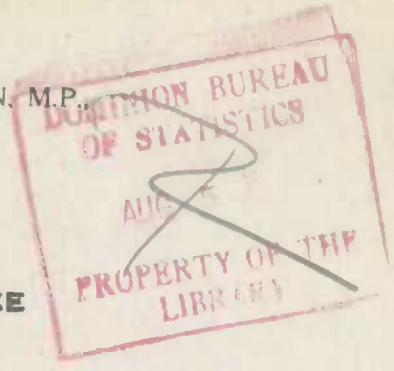


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Minister of Trade and Commerce.



CANADA
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
CENSUS OF INDUSTRY
PUBLIC UTILITIES BRANCH

USE OF ELECTRIC POWER
IN
MANUFACTURING AND MINING INDUSTRIES
IN
CANADA
1941



OTTAWA
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DOMINION BUREAU OF STATISTICS
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OTTAWA

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USE OF ELECTRIC POWER

IN

MANUFACTURING AND MINING INDUSTRIES

IN CANADA

1941

This report, issued during the past twelve years, has attempted to show the evolution of power machinery in manufacturing and mining industries in Canada toward electric drive and particularly toward electric motors driven by power generated in central stations. With no coal mined in the chief manufacturing provinces of Ontario and Quebec and with a large supply of water power within economic transmission distances of manufacturing and mining centres in these and in most of the other provinces, this trend has been more pronounced than in many countries. The trend has been measured by the ratio of electric motor capacity to total power equipment installed in these industries, the central electric station industry being excluded as one of the manufacturing industries.

This ratio of electric motor rating to total power equipment indicates this evolution, but the movement towards electric drive is slightly exaggerated because of the practice in mills, factories, etc., of installing motors at each machine or group of machines with a total capacity greater than would be necessary if only one large motor were used or if a steam engine and belts and shafting were used. Also there are some industries which require steam in their manufacturing processes, and consequently use steam engines as their primary power equipment. Some of these are a hundred per cent electrified and some are not. Other industries use direct hydraulic drive such as ground wood pulp mills. In such industries it is probable that electric motors will never supplant other forms of power equipment.

In the early annual industrial censuses no segregation was made of electric motors operated on power purchased from central electric stations and on power produced within the establishment making the report. Consequently, 1923 is the first year for which total power employed can be compiled without duplication.

During the eighteen years from 1923 to 1941 the increase in the total capacity of power equipment in manufacturing and mining industries has been 4,514,899 h.p., or 184.4 p.c. Of this total increase electric motors operated on central electric station power accounted for 3,700,541 h.p., or 82 p.c. Steam engines increased by 371,578 h.p., and internal combustion engines by 233,640 h.p. This latter increase was 434.7 p.c., there being only 53,743 h.p. installed in 1923. These engines include both gasoline or electric ignition engines and diesel or compression ignition engines, and many of these are used to drive electric generators. The electric motors driven by power generated in the industries increased in capacity from 410,996 h.p. in 1923 to 846,613 h.p. or by 106.0 p.c. The main reason for the large increase in motors driven by central electric power is the extensive use of water power, chiefly in central electric stations and particularly in Quebec and Ontario.

The following table shows the rated horse power capacity of all power equipment in manufacturing and mining industries operating in 1923 and in 1941.

	Capacity (Horse Power)		Increase	
	1923	1941	H. P.	P. C.
<u>Manufacturing Industries</u>				
Water Wheels	587,191	724,199	137,008	23.3
Steam Engines	554,191	917,474	363,283	65.6
<u>Internal Combustion Engines</u>	46,829	179,461	132,632	283.2
Total	1,188,211	1,821,134	632,923	53.5
<u>Electric Motors on Purchased Power</u>	958,692	4,028,942	3,070,250	320.3
Total Power	2,146,903	5,850,076	3,703,173	172.5
<u>Electric Motors on Power Generated in the Industries</u>	357,136	740,112	382,976	107.2
Total Electric Motors	1,315,828	4,769,054	3,453,226	262.4
<u>Mining Industries</u>				
Water Wheels	27,528	99,660	72,132	262.0
Steam Engines	148,039	156,334	8,295	5.6
<u>Internal Combustion Engines</u>	6,914	107,922	101,008	1,460.9
Total	182,481	363,916	181,435	99.4
<u>Electric Motors on Purchased Power</u>	118,835	749,126	630,291	530.3
Total Power	301,316	1,113,042	811,726	269.3
<u>Electric Motors on Power Generated in the Industries</u>	53,860	106,501	52,641	97.7
Total Electric Motors	172,695	855,627	682,932	395.5
<u>Manufacturing and Mining Industries</u>				
Water Wheels	614,719	823,859	209,140	34.0
Steam Engines	702,230	1,073,808	371,578	52.9
<u>Internal Combustion Engines</u>	53,743	287,383	233,640	434.7
Total	1,370,692	2,185,050	814,358	59.4
<u>Electric Motors on Purchased Power</u>	1,077,527	4,778,068	3,700,541	343.4
Total Power	2,448,219	6,963,118	4,514,899	184.4
<u>Electric Motors on Power Generated in the Industries</u>	410,996	846,613	435,617	106.0
Total Electric Motors	1,488,523	5,624,681	4,136,158	277.9

The ratio of electric motor capacity to total power employed in manufacturing industries has increased fairly steadily, the recessions being few and small. The increase in the ratio has been considerably less since 1929 than during the preceding six years, the increase being 6.9 points from 1929 to 1941 as against 13.4 points from 1923 to 1929. Commencing with 1935 reports data were gathered on spare or idle equipment. For each of the years 1935-1941 the percentage of total equipment not in regular use was approximately the same, around six per cent. The equipment in regular use is more informative than total figures and when data for several years are available these tables will be compiled on the basis of equipment in regular use. In the meantime, comparisons are possible only for total equipment in the operating plants. Although equipment in idle plants might be considered as idle or spare equipment in the industry or group of industries, it is not included in these tables as reports are received only from plants in operation during the year. With increased business the idle equipment would probably be reduced but the bringing into operation of idle plants will not necessarily affect the proportion of equipment in regular use and the proportion idle or held for emergencies.

Table 3 indicates that while the transfer to electric drive from other forms of power has been taking place in all groups of industries, many of them were highly electrified in 1923. The power employed in the pulp and paper industry is by far the greatest of any industry, constituting 35 per cent of the total for all manufacturing industries in 1923 and 37 per cent in 1941.

The importance of the pulp and paper industry as a consumer of electricity is even greater than the power equipment data would indicate. This is due to the plants operating more or less continuously throughout each day of the year and to the use of secondary electric power for electric boilers. This industry accounted for 54 per cent of the electricity purchased for power and lighting and 19 per cent of the power purchased for other purposes, 71 per cent of the electricity produced by the industries and 40 per cent of the total electricity used by all manufacturing industries for all purposes and from all sources.

In 1940 and again in 1941 these plants reduced their consumption of secondary power in electric boilers by over 1,500,000,000 kw. hrs., using coal instead. The electro-chemical and electro-metallurgical industries also are large consumers of electric power. In 1941 these industries accounted for a total of 8,863,000,000 kw. hrs. or 38 per cent of the total consumption of all manufacturing industries and their consumption was 39 per cent greater than in 1940. The aluminum industry was the largest consumer in this group.

Table 4 shows the power equipment in regular use in manufacturing plants operating during 1941. The data in this table differ from those shown in reports prior to 1936 in that idle equipment is excluded here except for the group totals where totals including and excluding idle equipment are shown. Under each group are shown only the industries having large power installations. Many other industries not listed use electric drive almost exclusively. The consumption of electricity is also shown for each industry listed. This is broken down into "purchased from central stations" and "generated by the industries." The former is also divided between that used for lighting and power purposes and for other purposes, which includes electricity used in electric furnaces, electric boilers, electro-chemical processes, etc. Electric boilers, particularly in pulp and paper mills, took the major portion of this class of electricity in former years and in most cases it was surplus or off-peak power that was purchased for this purpose. The total consumption for these other purposes was 10,831,307,000 kw. hrs. of purchased power, or over half of the total quantity purchased. A portion of the power generated in the industries also is used for other than lighting and driving machines but a comprehensive break-down is not available.

The mining industries are practically as highly electrified as the manufacturing industries, the ratio increasing from 57.3 per cent in 1923 to 76.9 per cent in 1941. Data for the mining industries are shown in Tables 2 and 7.

The fuels group showed an increase in capacity of motors operated on purchased power from 10,035 horse power in 1923 to 97,202 horse power in 1941 as compared with a decrease from 37,508 to 23,473 horse power in motors operated by power generated by the coal mines and gas and oil wells. These industries apparently have found it more economical to purchase electricity than produce it themselves and also more advantageous than to use steam engines.

Table 1. POWER EQUIPMENT OF ALL MANUFACTURING INDUSTRIES IN CANADA

SUMMARY					
Year	Total Power Employed	Electric Motors Operated			Electric Power Per Cent of Total
		By Central Electric Stn. Power	By Power generated in the Industries	Total Motor Capacity	
	H.P.	H.P.	H.P.	H.P.	P.C.
1923	2,146,903	958,692	357,136	1,315,828	61.3
1924	2,558,555	1,256,183	398,001	1,654,184	65.2
1925	2,888,164	1,547,754	434,678	1,982,432	68.6
1926	3,134,248	1,770,334	392,322	2,162,656	69.0
1927	3,287,582	1,924,687	386,555	2,311,242	70.3
1928	3,592,184	2,139,129	457,565	2,596,694	72.3
1929	3,867,979	2,393,684	496,036	2,889,720	74.7
1930	4,051,744	2,518,853	478,548	2,997,401	74.0
1931	4,114,677	2,587,411	539,800	3,127,211	76.0
1932	4,157,420	2,694,164	516,157	3,210,321	77.2
1933	4,147,851	2,671,440	502,706	3,174,147	76.5
1934	4,244,696	2,779,913	550,500	3,330,413	78.5
1935	4,346,775	2,874,693	512,396	3,387,089	77.9
1936	4,461,867	2,977,714	528,501	3,506,215	78.6
1937	4,712,279	3,129,790	602,955	3,732,745	79.2
1938	4,969,723	3,303,804	659,741	3,963,545	79.8
1939	5,056,557	3,575,169	694,450	4,069,619	80.5
1940	5,290,955	3,563,048	724,769	4,287,817	81.1
1941	5,850,076	4,028,942	740,112	4,769,054	81.6

^ Excluding central electric stations and including idle and reserve equipment.

Table 2.

POWER EMPLOYED IN THE MINING INDUSTRY [^] IN CANADA

Year	Total Power Employed	Electric Motors			Electric Power P.C. of Total
		Operated by Central Electric Station Power	Operated by Power Generated in the Industry	Total Motor Capacity	
	H.P.	H.P.	H.P.	H.P.	P.C.
1923	301,316	118,835	53,860	172,695	57.5
1924	314,173	125,725	71,376	197,101	62.7
1925	323,882	147,191	64,126	211,517	65.2
1926	356,880	167,241	64,277	231,518	68.7
1927	380,460	202,702	62,067	264,769	69.6
1928	419,464	223,666	68,121	291,787	69.6
1929	450,261	238,974	75,069	314,043	69.7
1930	509,007	297,826	88,585	386,411	75.9
1931	520,638	313,567	79,259	392,826	75.5
1932	482,344	287,130	76,626	363,756	75.4
1933	533,779	322,561	47,407	369,788	69.3
1934	621,071	400,035	66,647	466,682	75.1
1935	688,470	446,247	74,687	520,934	75.7
1936	724,639	474,000	79,140	553,140	76.3
1937	850,489	577,703	101,526	678,229	79.7
1938	874,943	582,510	89,368	671,878	76.8
1939	1,015,200	712,311	101,740	814,051	80.2
1940	1,061,840	746,777	101,606	848,383	79.9
1941	1,113,042	749,126	106,501	855,627	76.9

[^] Excluding non-ferrous smelting, salt, cement clay products and lime, included with "Manufacturing."

Table 3.

SUMMARY OF POWER EMPLOYED IN MANUFACTURING INDUSTRIES

Manufacturing Industries	1923		1939		1940		1941	
	Power		Power		Power		Power	
	Total H.P.	Per cent Electric Motor	Total H.P.	Per cent Electric Motor	Total H.P.	Per cent Electric Motor	Total H.P.	Per cent Electric Motor
1. Vegetable Products	257,176	65	364,195	80	376,319	78	402,441	79
2. Animal Products	80,895	72	145,931	78	151,321	79	163,917	78
3. Textile Products	107,850	83	234,597	94	246,054	97	251,916	91
4. Wood & Paper Products	1,146,571	50	2,579,463	74	2,677,502	74	2,772,081	75
5. Iron and its "	213,705	89	730,594	87	763,195	95	963,548	93
6. Non-ferrous Metal "	99,963	47	549,120	89	598,106	89	673,480	90
7. Non-metallic Mineral Products	131,780	83	257,731	85	270,534	82	285,820	82
8. Chemical & Allied "	62,447	72	158,300	89	179,741	90	302,746	87
9. Miscellaneous	46,516	86	27,361	98	28,163	97	34,127	90
TOTAL	2,146,903	61	5,056,357	81	5,290,935	81	5,850,076	82

Table 4.

POWER EQUIPMENT OF MANUFACTURING INDUSTRIES IN CANADA, 1941
(Equipment in Regular Use)

	Total Power Employed	Electric Motors Operated			Electric Power Per Cent of Total	Consumption of Electricity			
		By Central Electric Station Power	By Power Generated in the Industries	Total Motor Capacity		Purchased from		Generated by the Industries	Total
						Central Electric Stations for Power and Lighting	Other Purposes		
	A H.P.	B H.P.	C H.P.	D H.P.	E P.C.	F	G (Thousands of Kilowatt Hours)	H	I
GROUP 1. VEGETABLE PRODUCTS	x 402,441	284,369	32,204	316,573	78.7				
	581,490	269,322	29,728	299,050	78.4	456,154	26,262	43,980	526,396
Biscuits, confectionary, etc.	23,872	21,561	526	22,087	92.5	32,370	...	572	32,942
Bread and bakery products	19,055	17,583	...	17,583	92.5	33,342	2	...	33,344
Breweries	29,485	24,820	616	25,436	86.3	26,264	...	215	26,479
Flour and feed mills	121,285	63,998	3,204	67,202	55.4	135,460	...	2,119	137,579
Fruit and vegetable products	23,063	14,506	1,272	15,778	68.4	10,952	...	...	10,952
Rubber goods, footwear, etc.	75,853	68,784	1,030	69,814	92.0	128,420	26,251	1,001	155,672
Sugar refineries	24,954	8,085	15,507	23,592	94.5	13,766	5	18,993	32,764
GROUP 2. ANIMAL PRODUCTS	x 163,917	124,806	3,571	128,377	78.3				
	153,388	119,511	3,531	123,042	80.2	240,845	306	4,252	245,403
Butter and cheese	46,554	34,860	...	34,860	75.2	42,007	204	...	42,211
Fish curing and packing	17,651	5,762	1,652	7,414	42.0	10,404	45	2,210	12,659
Leather tanneries	15,847	13,528	548	14,076	88.9	19,743	15	...	19,758
Slaughtering and meat packing	47,128	43,664	135	43,799	92.9	129,342	36	430	129,808
GROUP 3. TEXTILES AND TEXTILE PRODUCTS	x 251,916	199,795	29,456	229,251	91.0				
	236,824	190,470	29,034	219,504	92.7	475,280	38,822	84,792	598,894
Cotton yarn and cloth	106,958	83,341	16,362	99,703	93.2	224,911	28,548	50,573	304,032
Hosiery and knitted goods	18,982	12,590	4,784	17,374	91.5	30,929	...	3,916	34,845
Silk and artificial silk	27,828	23,723	2,204	25,927	93.2	99,991	9,947	15,636	125,574
Woollen cloth	16,618	14,731	487	15,218	91.6	30,966	320	2,077	33,363
GROUP 4. WOOD & PAPER PRODUCTS	x 2,772,081	1,568,396	495,984	2,064,380	74.5				
	2,641,513	1,503,415	477,777	1,981,192	75.0	5,351,999	2,072,435	2,101,764	9,526,198
Furniture	22,269	14,449	3,978	18,427	82.7	15,373	2	2,304	17,679
Planing mills, sash and door	56,010	33,705	4,684	38,389	68.5	31,363	53	2,783	34,199
Printing and publishing	29,935	29,135	8	29,143	97.4	36,552	403	5	36,960
Pulp and paper	2,032,391	1,310,883	395,560	1,706,443	83.9	5,139,291	2,063,233	2,005,847	9,208,371
Saw mills	398,521	39,456	65,632	105,088	26.4	32,886	6	79,415	112,307

<u>GROUP 5. IRON & ITS PRODUCTS</u>	x	963,548	752,334	139,248	891,582	92.5				
		879,266	726,979	158,309	865,288	98.4	1,004,138	1,146,369	209,796	2,360,303
Agricultural implements		22,489	19,828	...	19,828	88.2	30,179	...	...	30,179
Automobiles		58,985	21,855	31,277	55,112	90.0	27,227	...	89,619	116,846
automobile supplies		55,835	54,499	25	54,524	97.7	99,273	...	...	99,273
bridge and structural steel		29,440	27,548	1,158	28,706	97.5	23,527	...	...	23,527
Castings, iron		50,280	47,701	561	48,262	96.0	62,619	1,182	472	64,273
Iron and steel products		48,320	48,056	143	48,199	99.7	65,924	...	...	65,924
Machinery		59,306	54,710	3,917	58,627	98.9	63,017	...	4,555	67,572
primary iron and steel		243,068	168,701	86,812	255,513	100.0	283,855	1,106,080	102,621	1,492,556
Railway rolling stock		118,074	107,194	5,912	113,106	95.8	116,851	30,773	7,305	154,929
Shipbuilding and repairs		84,410	75,525	...	75,525	89.5	39,617	...	254	39,871
<u>GROUP 6. NON-FERROUS METAL PRODUCTS</u>	x	673,480	592,694	16,349	609,043	90.4				
		629,906	550,976	16,030	567,006	90.1	981,741	4,983,365	265,319	6,230,425
Brass and copper products		58,069	57,169	...	57,169	98.5	81,581	29,121	...	110,702
Electrical apparatus & supplies		94,697	83,500	12,262	95,762	100.0	113,653	1,332	...	114,985
Non-ferrous metal smelting and refining		446,838	380,022	3,768	383,790	85.9	727,467	4,943,131	265,319	5,941,917
<u>GROUP 7. NON-METALLIC MINERAL PRODUCTS</u>	x	285,820	224,049	11,313	235,362	82.3				
		252,973	200,132	11,076	211,208	83.5	383,873	752,330	17,770	1,153,973
Cement		79,335	76,264	1,086	77,350	97.5	151,846	...	...	151,846
Clay products - domestic clay		20,421	13,786	134	13,920	68.2	13,581	...	269	13,850
Coke and gas products		25,432	15,494	6,207	21,701	85.3	29,320	8,986	10,272	48,578
Petroleum products		56,401	30,424	105	30,529	54.1	82,872	...	219	83,091
<u>GROUP 8. CHEMICALS AND CHEMICAL PRODUCTS</u>	x	302,746	251,831	11,987	263,818	87.1				
		278,290	235,638	11,406	247,044	88.8	511,942	1,811,416	109,377	2,432,735
Acids, alkalis and salts		124,656	97,052	10,525	107,577	86.3	201,690	1,250,097	105,362	1,557,149
Miscellaneous chemical products		64,694	52,371	607	52,978	82.0	108,743	73,519	3,945	186,207
<u>GROUP 9. MISCELLANEOUS INDUSTRIES</u>	x	34,127	30,668	...	30,668	89.9				
		31,845	29,334	...	29,334	92.1	51,959	...	3,791	55,750
<u>TOTAL ALL INDUSTRIES - 1941</u>	x	5,850,076	4,028,942	740,112	4,769,054	81.5				
		5,485,495	3,825,777	716,891	4,542,668	82.8	9,457,930	10,851,307	2,840,843	23,130,080
<u>1940</u>	x	5,290,935	3,563,048	724,769	4,287,817	81.0				
		4,980,310	3,379,270	700,426	4,079,696	81.9	8,962,475	8,992,520	2,640,919	20,595,914

x - Including equipment idle or in reserve. These totals are comparable with data in reports prior to 1936.

Table 5.

POWER EMPLOYED IN MANUFACTURING INDUSTRIES, BY PROVINCES, 1941
(In Regular Use)

Provinces	Total Power Employed	Electric Motors Operated			Electric Power Per Cent of Total	Consumption of Electricity			
		By Central Electric Station Power	By Power Generated in the Industries	Total Motor Capacity		Purchased from Central Electric Stations		Generated by the Industries	Total
						For Power & Lighting	For Other Purposes		
	H.P.	H.P.	H.P.	H.P.	P.C.	(Thousands of Kilowatt Hours)			
Prince Edward Island	5,005	1,997	10	2,007	40.1	494	...	3	497
Nova Scotia	155,406	76,294	46,595	122,889	79.1	202,999	1,614	158,734	343,347
New Brunswick	212,762	111,801	43,015	154,814	72.8	376,155	34,485	193,633	604,253
Quebec	1,976,383	1,448,385	160,615	1,609,000	81.4	4,599,093	6,589,235	1,041,732	12,230,060
Ontario	2,158,690	1,569,086	316,309	1,885,395	87.3	3,494,716	2,658,162	1,016,498	7,169,376
Manitoba	180,055	156,128	4,483	162,611	90.3	310,385	267,701	7,140	585,226
Saskatchewan	67,867	42,760	169	42,929	63.3	53,757	86,865	696	141,318
Alberta	109,379	65,925	4,919	70,844	64.8	87,443	7	4,777	92,227
British Columbia	619,766	351,395	140,778	492,171	79.4	332,888	1,193,238	437,630	1,963,756
Yukon & N.W. Territories	202	8	...	8	4.0	20	...	...	20
TOTAL	5,485,495	3,825,777	716,891	4,542,668	82.8	9,457,930	10,831,507	2,840,843	23,130,080
<u>INCLUDING IDLE AND RESERVE EQUIPMENT</u>									
Prince Edward Island	5,462	2,077	10	2,087	38.2				
Nova Scotia	164,322	79,880	46,605	126,485	77.0				
New Brunswick	243,796	121,159	43,716	164,875	67.6				
Quebec	2,093,092	1,528,892	165,940	1,694,832	81.0				
Ontario	2,314,832	1,645,839	330,551	1,976,390	85.4				
Manitoba	186,277	163,111	4,670	167,781	90.1				
Saskatchewan	71,346	44,531	170	44,701	62.7				
Alberta	119,373	73,105	5,502	78,607	65.8				
British Columbia	651,264	370,340	142,948	513,288	78.8				
Yukon & N.W. Territories	312	8	...	8	2.6				
TOTAL	5,850,076	4,028,942	740,112	4,769,054	81.5				

Table 6.

POWER EQUIPMENT - IN REGULAR USE AND INCLUDING IDLE AND RESERVE EQUIPMENT, 1941.
MANUFACTURING INDUSTRIES

	TOTAL POWER EMPLOYED		ELECTRIC MOTORS OPERATED BY						ELECTRIC POWER		CONSUMPTION OF ELECTRICITY			
	In Regular Use	Incl. Idle & Reserve Equipment	Central Station Power		Power Generated in the Industries		Total		Per Cent of Total		Purchased from Central Electric Stations		Generated By The Industries	Total
			In Regular Use	Incl. Idle & Reserve Equipment	In Regular Use	Incl. Idle & Reserve Equipment	In Regular Use	Incl. Idle & Reserve Equipment	In Regular Use	Incl. Idle & Reserve Equipment	Per Power & Lighting	For Other Purposes		
	A H.P.	B M.P.	C H.P.	D H.P.	E H.P.	F H.P.	G H.P.	H H.P.	I P.C.	J P.C.	K L M N (Thousands of Kilowatt Hours)			
1. Vegetable Products	381,490	402,441	269,322	284,369	29,728	32,204	299,050	316,573	78.4	78.7	456,154	26,262	43,980	526,396
2. Animal Products	153,398	163,917	119,511	124,806	3,531	3,571	123,042	128,377	80.2	78.3	240,845	306	4,252	245,403
3. Textiles and Textile Products	236,824	251,916	190,470	199,795	29,034	29,456	219,504	229,251	92.7	91.0	475,280	38,822	84,792	598,894
4. Wood & Paper "	2,641,513	2,772,081	1,503,415	1,568,396	477,777	495,984	1,981,192	2,064,380	75.0	74.5	5,351,999	2,072,435	2,101,764	8,526,198
5. Iron and its "	879,266	963,548	726,979	752,334	138,309	139,248	865,288	891,582	98.4	92.5	1,004,138	1,146,339	209,796	2,360,303
6. Non-ferrous Metal Products	629,906	673,480	550,976	592,694	16,030	16,349	567,006	609,043	90.1	90.4	981,741	4,983,365	265,319	6,230,425
7. Non-metallic Mineral Products	252,973	285,820	200,132	224,049	11,076	11,313	211,208	235,362	83.5	82.3	383,873	752,330	17,777	1,153,973
8. Chemicals and Chemical Products	278,290	302,746	235,638	251,831	11,406	11,987	247,044	263,818	88.8	87.1	511,942	1,811,416	109,377	2,432,735
9. Miscellaneous Industries	31,845	34,127	29,334	30,668	...	...	29,334	30,668	92.1	89.9	51,959	...	3,791	55,750
TOTAL - 1941	5,485,495	5,850,076	3,825,777	4,028,942	716,891	740,112	4,542,668	4,769,054	82.8	81.5	9,457,930	10,831,307	2,840,843	23,130,080
" - 1940	4,980,310	5,290,935	3,379,270	3,563,048	700,426	724,769	4,079,696	4,287,817	81.9	81.0	8,962,475	8,992,520	2,840,919	20,595,914
Per cent change	+ 10.1	+ 10.6	+ 13.2	+ 13.1	+ 2.4	+ 2.1	+ 11.3	+ 11.2			+ 5.5	+ 20.4	+ 7.6	+ 12.3

Table 7.

MINING INDUSTRIES

Metal Mining	652,768	720,885	539,459	569,889	68,041	78,686	607,500	646,575	93.1	90.0	1,428,678	...	272,985	1,701,663
Non-metal mining	81,163	89,153	65,269	70,272	2,743	3,437	68,012	73,709	83.8	82.7	158,860	...	3,042	161,902
Sand, Gravel & Stone	52,151	57,716	31,958	35,236	790	905	32,748	36,141	62.8	62.6	27,185	...	252	27,437
Fuels	230,955	245,288	72,083	73,729	21,499	23,473	93,582	97,202	40.5	39.6	157,310	...	33,095	190,405
TOTAL - 1941	1,017,037	1,113,142	708,769	749,126	93,073	106,501	801,842	855,627	78.8	76.9	1,772,033	...	309,374	2,081,407
" - 1940	969,122	1,061,840	710,186	746,777	90,318	101,606	800,404	849,383	82.6	79.9	1,551,105	22	303,077	1,854,204
Per cent change	+ 4.9	+ 4.8	- 0.2	+ 0.3	+ 3.2	+ 4.9	+ 0.2	+ 0.9			+ 14.2		+ 2.1	+ 12.3
Total Tables 6 and 7														
1941	6,502,532	6,963,218	4,534,546	4,778,068	809,964	846,613	5,344,510	5,624,681	82.2	80.8	11,229,963	10,891,307	3,150,217	25,211,487
1940	5,949,432	6,352,775	4,069,456	4,309,825	790,644	826,375	4,880,100	5,136,200	82.0	80.8	10,513,580	8,992,542	2,943,996	22,450,118
Per cent change	+ 9.3	+ 9.6	+ 10.9	+ 10.9	+ 2.4	+ 2.4	+ 9.5	+ 9.5			+ 6.8	+ 20.4	+ 7.0	+ 12.3

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