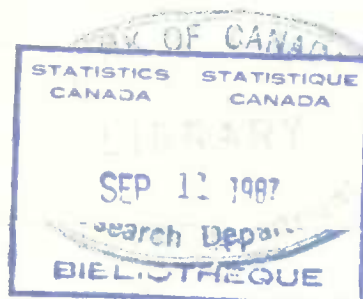


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HEATING EQUIPMENT MANUFACTURERS

1962

ANNUAL CENSUS
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SYMBOLS

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

- .. figures not available.
- ... figures not appropriate or not applicable.
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- ▮ preliminary figures.
- * revised figures.

HEATING EQUIPMENT MANUFACTURERS

1962

Data presented in this report under the heading of Heating Equipment Manufacturers reflect implementation of the revised Standard Industrial Classification (S.I.C.) and the New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilation of industry statistics—see items “Standard Industrial Classification” and “Establishment” in the Explanatory Notes section of this report.

For statistical purposes the industry titled Heating Equipment Manufacturers in the revised Standard Industrial Classification covers the operations of establishments primarily engaged in manufacturing commercial cooking equipment and major heating apparatus such as furnaces, oil burners, gas burners, steam and hot water heating apparatus and heating equipment, not elsewhere classified. Establishments primarily engaged in manufacturing cast iron sectional heating boilers and convection or cast iron radiators are included in this industry. Establishments primarily engaged in manufacturing domestic cooking equipment, electric and non-electric, are classified in Industry No. 332—Manufacturers of Major Appliances.

The introduction of the final stage of the establishment concept in the Annual Census of Manufacturers has resulted in certain changes and necessitated some adjustments to the statistics. Refer to the Explanatory Notes section of this report for a more detailed explanation. A comparison of Tables 1 and 1A indicates the extent of the changes in the principal statistics resulting from the implementation of the final stage of the establishment concept. The changes were due to the transfer of two firms to other industries and of adjustments in reported data such as the transfer of some employees from a manufacturing activity to a head office activity.

TABLE 1. Principal Statistics - Manufacturing Activity,¹ 1957-61
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Year	Estab- lish- ments	Employees						Cost of fuel and elec- tricity ⁴	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴
		Production and related workers ⁴		Administrative and office employees ³		Total ⁴					
		Number	Wages	Number	Salaries	Number	Salaries and wages				
	No.		\$'000		\$'000		\$'000				
1957	95	3, 313	11, 263	1, 209	5, 303	4, 522	16, 567	677	28, 982	60, 026	..
1958	106	3, 452	12, 452	1, 324	6, 087	4, 776	18, 539	737	31, 690	69, 557	37, 988
1959	102	3, 869	14, 676	1, 654	7, 519	5, 523	22, 195	835	37, 188	83, 385	45, 872
1960	113	3, 448	13, 111	1, 516	7, 542	4, 964	20, 653	820	34, 789	75, 794	39, 219
1961	112	3, 491	13, 406	1, 442	7, 606	4, 933	21, 012	810	35, 275	78, 488	42, 259

See footnotes following Table 3 A.

TABLE 1A. Principal Statistics - Manufacturing Activity and Total Activity,¹ 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept³

Year and province	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Nova Scotia	2	1,241	2,515	4,518	207	9,159	21,858	12,055	2	1	1,629	6,500	12,301
Quebec	25												
Ontario	63	1,833	3,828	7,428	490	21,172	47,530	25,376	14	51	3,011	13,629	27,292
Manitoba	7	188	384	644	41	2,322	4,528	2,435	2	8	267	1,037	2,537
Alberta	5	59	100	178	15	487	1,019	564	3	6	81	307	563
British Columbia	8	124	225	477	38	1,155	2,473	1,274	—	—	149	605	1,287
Totals	110	3,445	7,052	13,245	791	34,296	77,407	41,704	21	67	5,137	22,079	43,980
1962													
Nova Scotia	2	1,333	2,810	5,317	214	12,568	26,455	13,840	2	2	1,755	7,730	14,130
Quebec	24												
Ontario	57	1,840	3,816	7,564	454	23,282	49,225	26,105	11	56	3,034	13,490	28,327
Manitoba	6	207	421	746	40	2,769	5,005	1,915	—	—	295	1,101	1,983
Alberta	5	60	117	191	17	550	1,162	585	4	17	86	333	589
British Columbia	9	121	242	481	42	1,536	2,764	1,233	—	—	179	745	1,357
Totals	103	3,561	7,406	14,298	766	40,725	84,611	43,679	17	74	5,349	23,399	46,387

See Table 2 and footnotes following Table 3 A.

TABLE 1 B. Principal Statistics classified by Size Groups based on Shipments of Goods of Own Manufacture, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Under \$10,000	3	1	1	2	1	6	14	1	2	1	2	2	1
\$ 10,000 to \$ 24,999	7	7	10	18	4	39	110	70	5	17	12	34	85
25,000 " 49,999	11	40	71	130	9	135	407	272	5	13	62	202	285
50,000 " 99,999	13	67	129	210	13	318	924	600	4	17	98	344	620
100,000 " 199,999	20	199	359	574	42	1,022	2,783	1,697	—	—	277	920	1,815
200,000 " 499,999	22	409	753	1,320	103	3,124	7,500	4,328	5	18	556	2,109	4,483
500,000 " 999,999	13	419	910	1,539	98	5,388	10,554	4,704	—	—	627	2,750	5,419
1,000,000 " 4,999,999	21	2,303	4,820	9,453	522	24,265	55,134	30,035	—	—	3,468	15,487	31,287
5,000,000 and over													
Head offices, sales offices and auxiliary units ¹⁰	...	...	...	...	...	...	...	...	...	...	35	230	(15)
Totals	110	3,445	7,052	13,245	791	34,296	77,407	41,704	21	67	5,137	22,079	43,980
1962													
Under \$10,000	3	1	1	2	—	3	17	14	2	2	2	5	14
\$ 10,000 to \$ 24,999	5	5	11	19	3	36	85	46	6	24	7	27	63
25,000 " 49,999	5	13	28	48	3	48	157	98	2	9	18	66	119
50,000 " 99,999	19	99	218	369	23	586	1,459	836	2	9	143	562	873
100,000 " 199,999	15	129	269	460	29	836	2,155	1,290	3	21	175	701	1,374
200,000 " 499,999	17	303	604	1,020	68	2,359	5,269	2,925	—	—	423	1,684	3,313
500,000 " 999,999	16	503	1,030	1,853	118	6,327	11,739	5,469	2	8	747	2,949	6,175
1,000,000 " 4,999,999	23	2,508	5,245	10,528	522	30,530	63,731	33,001	—	—	3,796	17,211	34,456
5,000,000 and over													
Head offices, sales offices and auxiliary units ¹⁰	...	...	...	...	...	...	...	...	...	...	38	195	...
Totals	103	3,561	7,406	14,298	766	40,725	84,611	43,679	17	74	5,349	23,399	46,387

See footnotes following Table 3 A.

TABLE 1 C. Principal Statistics classified by Size Groups based on Manufacturing Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Under \$10,000	7	33	4	7	3	27	61	25	5	6	6	17	25
\$ 10,000 to \$ 24,999	9	17	33	54	9	105	256	151	7	23	30	89	176
25,000 " 49,999	16	88	153	271	12	356	972	606	4	17	124	405	634
50,000 " 99,999	20	217	433	790	58	1,669	3,604	1,451	—	—	344	1,322	1,633
100,000 " 199,999	18	317	586	1,032	78	2,124	5,014	2,784	4	8	428	1,604	2,886
200,000 " 499,999	19	490	1,012	1,564	107	6,783	12,926	6,073	1	10	711	2,940	6,607
500,000 " 999,999	10	674	1,350	2,504	143	8,827	16,514	7,379	—	—	910	3,761	7,790
1,000,000 " 4,999,999	11	1,639	3,481	7,022	381	14,405	38,059	23,234	—	—	2,549	11,710	24,241
5,000,000 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units ¹⁰	...	...	...	...	...	...	...	...	...	...	35	230	(15)
Totals	110	3,445	7,052	13,245	791	34,296	77,407	41,704	21	67	5,137	22,079	43,980
1962													
Under \$10,000	6	2	3	6	2	21	60	37	7	24	3	9	41
\$ 10,000 to \$ 24,999	7	13	28	48	4	94	222	117	3	12	19	68	139
25,000 " 49,999	13	60	129	215	17	363	914	503	2	9	86	332	553
50,000 " 99,999	19	157	333	578	34	1,177	2,556	1,370	3	21	217	870	1,605
100,000 " 199,999	15	231	481	786	60	2,793	5,145	2,086	—	—	362	1,442	2,228
200,000 " 499,999	22	617	1,255	2,230	135	7,861	14,413	6,878	2	6	913	3,683	7,212
500,000 " 999,999	11	547	1,007	2,115	125	10,391	18,058	7,563	—	—	846	3,608	8,869
1,000,000 " 4,999,999	10	1,934	4,068	8,320	386	16,005	43,243	25,126	—	—	2,865	13,191	25,741
5,000,000 and over													
Head offices, sales offices and auxiliary units ¹⁰	...	...	...	...	...	...	...	...	...	...	38	195	...
Totals	103	3,561	7,406	14,298	766	40,725	84,611	43,679	17	74	5,349	23,399	46,387

See footnotes following Table 3 A.

TABLE 1 D. Principal Statistics classified by Size Groups based on Total Value Added, 1961 and 1962

Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁴
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Under \$10,000	7	3	4	7	3	27	61	25	5	8	6	17	25
\$ 10,000 to \$ 24,999	8	15	29	47	9	96	233	137	7	23	26	76	144
25,000 " 49,999	16	80	133	244	11	348	942	584	2	9	116	381	607
50,000 " 99,999	17	198	415	747	51	1,250	2,902	1,175	2	8	292	1,122	1,228
100,000 " 199,999	20	315	564	977	80	2,208	5,069	2,729	4	8	441	1,582	2,886
200,000 " 499,999	20	503	1,041	1,638	107	6,865	13,016	6,093	1	10	717	2,967	6,552
500,000 " 999,999	10	608	1,202	2,190	136	7,546	14,607	6,750	—	—	843	3,622	7,303
1,000,000 " 4,999,999	12	1,723	3,664	7,394	395	15,955	40,578	24,210	—	—	2,661	12,082	25,249
5,000,000 and over													
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	35	230	(15)
Totals	110	3,445	7,052	13,245	791	34,296	77,407	41,704	21	67	5,137	22,079	43,980
1962													
Under \$10,000	5	2	3	5	2	15	44	27	4	10	3	9	27
\$ 10,000 to \$ 24,999	7	10	22	36	4	88	206	109	6	25	15	53	127
25,000 " 49,999	12	43	95	161	13	312	757	422	2	9	61	247	457
50,000 " 99,999	19	162	344	594	32	1,007	2,353	1,323	3	21	217	853	1,346
100,000 " 199,999	15	223	465	746	61	2,756	5,072	2,048	—	—	343	1,347	2,149
200,000 " 499,999	23	621	1,262	2,253	133	7,855	14,127	6,602	2	8	910	3,650	7,121
500,000 " 999,999	10	486	981	1,809	111	8,490	15,188	6,597	—	—	764	3,160	7,089
1,000,000 " 4,999,999	12	2,014	4,235	8,696	410	20,201	46,884	26,550	—	—	2,998	13,886	28,071
5,000,000 and over													
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	38	195	...
Totals	103	3,561	7,406	14,298	766	40,725	84,611	43,679	17	74	5,349	23,399	46,387

See footnotes following Table 3 A.

TABLE 1 E. Principal Statistics classified by Size Groups based on Total Employed,¹¹ 1961 and 1962

Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁴
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Under 5 employees	21	18	34	59	12	375	898	515	13	34	42	158	594
5- 14 employees	31	199	390	663	43	1,180	3,761	2,538	3	14	293	1,059	2,574
15- 49 "	34	692	1,307	2,313	159	8,341	16,282	8,016	5	18	1,008	4,176	6,918
50- 99 "	10	513	1,079	1,775	122	4,997	11,004	5,641	—	—	734	2,876	5,852
100- 199 "	8	743	1,539	2,878	179	9,271	17,358	7,766	—	—	1,015	4,252	8,150
200- 499 "	6	1,280	2,704	5,557	276	10,131	28,105	17,228	—	—	2,010	9,328	17,906
500 employees and over													
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	35	230	(15)
Totals	110	3,445	7,052	13,245	791	34,296	77,407	41,704	21	67	5,137	22,079	43,980
1962													
Under 5 employees	17	19	39	68	9	264	597	318	11	38	33	124	343
5- 14 employees	29	180	388	666	45	1,429	3,622	2,163	2	16	261	1,082	2,279
15- 49 "	31	621	1,270	2,233	133	9,065	16,369	7,299	4	20	897	3,801	8,394
50- 99 "	14	652	1,351	2,412	158	8,338	15,642	7,090	—	—	1,023	3,957	7,569
100- 199 "	6	591	1,226	2,329	131	8,251	15,019	7,060	—	—	842	3,899	7,448
200- 499 "	8	1,498	3,130	6,591	291	13,379	33,362	19,749	—	—	2,255	10,341	20,354
500 employees and over													
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	38	195	...
Totals	103	3,561	7,406	14,298	766	40,725	84,611	43,679	17	74	5,349	23,399	46,387

See footnotes following Table 3 A.

TABLE 1 F. Principal Statistics classified by Type of Organization, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Type of organization	Establishments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and electricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manufacture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man-hours paid	Wages					Number	Withdrawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Individual ownerships	6	7	12	21	5	63	159	92	6	22	8	22	92
Partnerships	7	27	62	100	8	344	667	278	14	35	32	112	300
Incorporated companies	97	3,411	6,978	13,123	779	33,889	76,581	41,333	1	10	5,062	21,714	43,602
Cooperatives													
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	35	230	(15)
Totals	110	3,445	7,052	13,245	791	34,296	77,407	41,704	21	67	5,137	22,079	43,980
1962													
Individual ownerships	7	14	30	58	5	122	282	154	7	33	15	59	157
Partnerships	5	30	66	117	10	444	873	420	10	41	35	132	423
Incorporated companies	91	3,517	7,311	14,124	751	40,160	83,456	43,106	—	—	5,261	23,014	45,807
Cooperatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	38	195	...
Totals	103	3,561	7,406	14,298	766	40,725	84,611	43,679	17	74	5,349	23,399	46,387

See footnotes following Table 3 A.

TABLE 2. Industry Outputs, Inputs and Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Item	1961	1962
	\$'000	
Manufacturing activity:		
Value of shipments—Goods of own manufacture	77,407	84,611
Add: Closing inventory—Goods in process	3,119	4,060
Finished goods	6,508	6,171
Deduct: Opening inventory—Goods in process	3,125	3,320
Finished goods	7,118	6,352
Gross output—Manufacturing activity	76,791	85,170
Deduct: Cost of materials and supplies used in manufacturing activity	34,296	40,725
Cost of fuel and electricity used	791	766
Value added—Manufacturing activity	41,704	43,679
Non-manufacturing activities:		
Value of shipments—Goods not of own manufacture .....	..	11,300
Add: All other revenue .....	..	326
Closing inventory—Goods purchased for resale	1,004	1,545
Deduct: Purchases of goods for resale as such .....	..	8,804
Opening inventory—Goods not of own manufacture	995	1,124
Cost of all other materials and supplies used .....	..	535
Value added—Non-manufacturing activities	2,276	2,708
Total value added	43,980	46,387

See footnote following Table 3 A.

TABLE 3. Employment and Payroll, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Year and province	Employees										Salaries and wages				
	Production and related workers				Admin- istrative and office ^{6,9}		Sales and distribution ⁹		Total employees ^{7,9}		Production and related workers		Admin- istrative and office	Sales and distrib- ution	Total salaries and wages
	Manufacturing ⁴		Other ⁹												
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Manufac- turing	Other			
	number										\$'000				
1961															
Nova Scotia	1,220	21	..	..	..	..	..	..	1,517	112	4,518	..	..	..	6,500
Quebec	1,797	36	..	..	..	..	..	..	2,683	328	7,428	..	..	..	13,629
Ontario	184	4	..	..	..	..	..	..	248	19	644	..	..	..	1,037
Manitoba	59	—	..	..	..	..	..	..	80	1	178	..	..	..	307
Alberta	115	9	..	..	..	..	..	..	137	12	477	..	..	..	605
British Columbia															
Totals	3,375	70	..	..	..	..	..	..	4,665	472	13,245	..	..	..	22,079
1962															
Nova Scotia	1,324	9	5	—	262	87	66	2	1,657	98	5,317	13	1,845	555	7,730
Quebec	1,796	44	10	—	605	256	265	58	2,676	358	7,564	40	4,090	1,795	13,490
Ontario	207	—	—	—	63	13	12	—	282	13	746	—	316	40	1,101
Manitoba	60	—	—	—	20	2	2	2	82	4	191	—	128	14	333
Alberta	114	7	—	—	32	8	18	—	164	15	481	—	171	94	745
British Columbia															
Totals	3,501	60	15	—	982	366	363	62	4,861	488	14,298	53	6,550	2,498	23,399

See footnotes following Table 3 A.

TABLE 3A. Production and Related Workers,⁴ — Manufacturing Activity, by Months, 1962

Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Month	Establishments reporting monthly detail	
	Male	Female
	number	
January	2,800	38
February	2,850	39
March	2,904	39
April	3,045	41
May	3,157	50
June	3,355	51
July	3,431	54
August	3,633	60
September	3,680	62
October	3,569	65
November	3,364	63
December	3,171	49
Average for establishments reporting monthly detail (collected only for large establishments).....	3,248	50
Average for small establishments (only annual averages collected)	253	10
Average for all establishments	3,501	60

¹ See Table 2 and Explanatory Notes concerning manufacturing and non-manufacturing activities.

² See Explanatory Notes.

³ This category, in this table only, includes working owners and partners. Since administrative and office employees are engaged in a variety of activities they have been excluded from manufacturing activity beginning with the revised 1961 series shown in the following tables. They are included here for purposes of comparison with the tabulations of previous years.

⁴ Conceptually identical to previous years. See Explanatory Notes.

⁵ Cannot be reported separately for manufacturing and non-manufacturing activities but related substantially to manufacturing activity. Identical concept to previous years.

⁶ Working owners and partners were included with administrative and office employees in the "Manufacturing series" published in former years. See Explanatory Notes.

⁷ Includes production and related workers, administrative and office employees, sales distribution and other employees. See Explanatory Notes for the treatment of head office employees and those employed in auxiliary units.

⁸ Value of total shipments and other operational revenue less total cost of materials, supplies, fuels used and purchases of products and materials for resale in the same condition; all adjusted for inventory changes where required. See Table 2 and Explanatory Notes.

⁹ Sales and distribution workers and production workers (non-manufacturing) are included for the first time as a result of the full implementation of the new definition of the establishment. The figures for production workers (non-manufacturing), administrative and office employees and sales and distribution workers are not yet available for 1961 but form part of total employees. Sales and distribution workers may include some employees that are reported as part of a manufacturing establishment but are not working at the establishment's location. Head offices, sales offices, etc., which report separately are included in the figures for the province in which they are located.

¹⁰ These data cover the activities reported by separately located units such as head offices, sales offices, administrative offices, laboratories, warehouses, etc. Such units do not usually constitute separate "establishments" as they do not normally generate all the necessary elements of input and output statistics. However, they are treated as extensions of manufacturing establishments and, in the case of individual industries, may be located in provinces where no processing plants are situated. For the most part, these units contribute only to costs of operations (mainly salaries and wages) and they are included here to provide completeness and consistency of the statistics. See Explanatory Notes which deal with Single and Multi establishments for a complete explanation of procedures.

¹¹ Includes paid employees and working owners but excludes unpaid family workers.

Note: Figures may not add due to rounding.

TABLE 4. Materials and Supplies Used in Manufacturing Activity, 1962

Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Description		Quantity	Cost
			\$'000
1. Materials used:			
Iron:			
Pig iron, all grades	ton	7,982	481
Castings:			
Iron	"	2,181	892
Steel	"	364	161
Steel, hot or cold-rolled:			
Bars	"	764	149
Plates	"	1,515	329
Sheets:			
Plain	"	28,136	4,616
Galvanized	"	3,694	785
Tin plate	"	633	140
Strip	"	2,307	393
Structural shapes (channels, angles, etc.)	"	642	135
Wire	"	74	23
Pipe and fittings, iron and steel .....	...		359
Alloy steel:			
Stainless:			
Billets, bars and rods .....	...		126
Other .....	...		604
Other alloy steel .....	...		47
Ferro-alloys .....	...		92
Scrap iron and steel	ton	31,657	1,167
Other iron and steel (except finished parts) .....	...		603
Non-ferrous metals (including scrap):			
Aluminum:			
Castings	pound	247,484	147
Sheet	"	1,731,953	833
Other forms	"	933,770	400
Brass and bronze	"	1,177,789	509
Copper:			
Sheet	"	200,606	118
Wire	"	8,305	5
Other forms	"	1,105,367	675
Lead	"	567	--
Babbitt metals and solders	"	6,155	4
Other non-ferrous metals .....	...		1
Other materials and supplies:			
Paints and varnishes .....	...		504
Foundry coke (used in cupola, not for heat or power)	ton	8,500	309
Foundry sands	"	14,876	125
Firebrick and cupola blocks .....	...		104
Plumbago and graphite	pound	200	--
Lumber	M ft. b.m.	1,743	171
Fireclay	ton	1,529	48
Core oil	Imp. gal.	16,941	24
All other materials and components used ² .....	...		22,704
2. Containers and other packaging materials and supplies used			755
3. Operating, maintenance and repair supplies used (excluding fuel)			1,996
4. Amount paid out to others for work done on materials owned by establishments			191
Total			40,725

¹ See Explanatory Notes.

² No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. In 1962 these estimated costs were \$1,510,898.

TABLE 5. Fuel and Electricity Used¹ in Manufacturing Activity,² 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept³

Description	Quantity	Cost
		\$'000
1. Large establishments which reported commodity detail:		
Bituminous coal:		
(a) From Canadian mines	ton 1,087	13
(b) Imported	" 348	5
Sub-bituminous coal (from Alberta mines only)	—	—
Anthracite coal	ton 200	3
Lignite coal	—	—
Coke	—	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal. 118,641	45
Fuel oil including kerosene or coal oil	" 1,146,545	136
Wood	cord 120	2
Gas:		
(a) Liquefied petroleum gases	Imp. gal. 225,658	62
(b) Other manufactured gas	—	—
(c) Natural gas	M cu. ft. 95,045	92
Other fuel	—	—
Electricity purchased	kwh. 22,564,719	342
Steam purchased .....	...	—
2. Estimate for small establishments for which no data were collected:		
Fuel and electricity .....	...	65
3. All establishments:		
Total fuel and electricity used .....	...	766

¹ Does not include fuel and electricity produced for own use.

² Includes only fuel and electricity purchased. Conceptually identical to previous years in that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

³ See Explanatory Notes.

TABLE 6. Shipments of Goods of Own Manufacture, 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Description	Quantity	Value
		\$'000
1. Products:		
Heating equipment:		
Cast iron sectional heating boilers	No. 5,713	2,343
Steel heating boilers	" 2,067	780
Furnaces, warm air:		
Designed for coal or wood burning	" 3,285	903
Designed exclusively for gas burning	" 59,303	7,947
Designed exclusively for oil burning	" 54,306	10,040
Floor and wall furnace:		
Gas	" 566	70
Oil	" 2,510	319
Furnace parts .....	...	70
Burners for furnaces and boilers:		
Gas:		
Residential	No. 11,986	687
Commercial and industrial	" 2,074	579
Oil (power type):		
Residential	" 37,508	2,721
Commercial and industrial	" 3,346	840
Oil burners, range type	" 6,707	223
Oil burner parts .....	...	156
Radiators for heating	Sq. ft. E.D.R. 12,710,304	10,556
Stokers, mechanical:		
Domestic or residential	No. 427	199
Commercial and industrial	" 159	303
Stoker parts .....	...	150
Commercial cooking and food warming equipment:		
Electric .....	...	646
Gas .....	...	897

See footnote at end of table.

TABLE 6. Shipments of Goods of Own Manufacture, 1962 - Concluded

Description		Quantity	Value
			\$'000
1. Products - Concluded:			
Heating equipment - Concluded:			
Unit heaters	No.	23,881	4,460
Stoves and ranges (all types, all fuels)	"	9,702	824
Stove parts .....		..	24
Industrial furnaces, kilns and ovens	No.	129	1,369
Water tank heaters:			
Domestic	"	22,635	729
Parts and attachments for industrial furnaces and ovens .....		...	253
Steam traps for heating systems .....		...	2,308
Incinerators .....		...	371
Registers and grills for hot air heating systems .....		...	3,025
Humidifiers (for warm air systems) .....		...	1,315
Other heating equipment .....		...	9,158
Miscellaneous products (air conditioning and refrigeration equipment, agricultural implements and parts, hardware, machinery, etc.) .....		...	14,102
Amount received for repairs .....		...	228
All other products .....		...	4,926
2. Amount received in payment for work done on materials and products owned by others			1,333
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above			(245)
Net adjustment for establishments receiving progress payments ¹ .....			...
Total adjusted value of shipments and work done			84,611

¹ See Explanatory Notes.

² See footnote 1, Table 7.

TABLE 7. Industry Inventories, 1962¹

Basis: Revised Standard Industrial Classification and New Establishment Concept²

Province	Manufacturing				Non-manufacturing	Total inventories	
	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total manufacturing	Products or materials purchased for resale		
book value \$'000							
Opening: ³							
Nova Scotia	}	2,509	728	1,281	4,517	113	4,630
Quebec							
Ontario		4,365	2,327	4,112	10,804	896	11,700
Manitoba		496	185	730	1,410	30	1,440
Alberta		168	25	99	292	—	292
British Columbia		229	56	130	415	86	501
Totals ⁴		7,767	3,320	6,352	17,439	1,124	18,563
Closing:							
Nova Scotia	}	2,590	888	1,288	4,766	248	5,014
Quebec							
Ontario		4,150	2,913	4,142	11,205	1,152	12,357
Manitoba		637	161	492	1,290	—	1,290
Alberta		171	19	96	286	—	288
British Columbia		203	80	153	436	145	581
Totals ⁴		7,752	4,060	6,171	17,983	1,545	19,528

¹ Values represent book values of inventories 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.

² See Explanatory Notes.

³ The opening inventories may differ from the closing inventories for the previous survey 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.

⁴ Figures may not add due to rounding.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries¹

A. Power-type Oil Burners,² 1953-62

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	100,288	10,609	1958	99,745	7,726
1954	114,380	11,244	1959	105,097	7,729
1955	125,639	11,282	1960	95,401	6,696
1956	122,675	10,626	1961	96,462	6,467
1957	93,794	7,656	1962	90,551	6,538

B. Furnace Blowers, 1953-62

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	32,878	814	1958	180,026	2,305
1954	60,127	1,192	1959	212,813	2,555
1955	104,705	1,760	1960	151,834	1,922
1956	120,846	1,907	1961	192,755	2,364
1957	152,723	2,029	1962	170,543	2,090

C. Mechanical Stokers, 1953-62

Year	Domestic or residential		Commercial or industrial		Total		Value of stoker parts
	Number	Value	Number	Value	Number	Value	
		\$'000		\$'000		\$'000	\$'000
1953	706	147	640	1,197	1,346	1,344	785
1954	809	200	536	885	1,345	1,085	364
1955	791	209	445	717	1,236	926	916
1956	660	156	670	1,217	1,330	1,374	708
1957	754	226	485	877	1,239	1,104	992
1958	691	191	408	885	1,099	1,076	861
1959	1,190	263	430	870	1,620	1,134	530
1960	626	248	330	786	956	1,035	465
1961	509	238	252	600	761	838	266
1962	445	203	221	491	666	694	234

D. Unit Heaters, 1953-62

Year	Number	Value	Year	Number	Value
		\$'000			\$'000
1953	26,428	4,464	1958	17,478	4,120
1954	22,590	4,244	1959	21,686	4,522
1955	23,624	4,427	1960	25,843	5,829
1956	31,387	5,451	1961	22,397	4,341
1957	25,717	6,561	1962	25,564	5,380

E. Air Registers and Grills, 1953-62

Year	Value	Year	Value
	\$'000		\$'000
1953	1,514	1958	2,807
1954	1,818	1959	2,971
1955	1,842	1960	2,980
1956	2,461	1961	2,698
1957	2,838	1962	3,318

See footnotes at end of table.

List of Establishments, 1962

Name	Location
Nova Scotia:	
Angel Mfg. & Supply Co. Ltd.	North Sydney
Enamel & Heating Products Ltd.	Amherst
Quebec:	
Atlas Webster Industries Ltd.	St. Laurent
Chaput & Frères J.B.G.	Boucherville
Combustion & Power Equipment Ltd.	Montreal
Decarie Boiler & Incinerator Ltd.	Montreal
Freco Limitée	Charmy
General Marine Co. Ltd.	Montreal
Hunt & Moscrop (Canada) Ltd.	Granby
Kresno Stamm Mfg. Co. (Canada) Ltd.	Montreal
Lemelin Products Inc.	Montmagny
Locker G.R. Co. (The)	Montreal
Mark hot Inc.	Ville St-Michel
Modern Kitchen Equipment Co.	Candiac
National Heating Products Ltd.	St. Jerome
Quebec Metal Pressing Inc.	Quebec
Progress Restaurant & Equipment Mfg. Ltd.	Montreal
Radiateur Plessis Limitée	Plessisville
Reliable Industries Limited	Montreal
Serv-All Company Inc.	Montreal
Spanner Watts Ltd.	St-Laurent
Stoker Limited	Montreal
Terry Burners Inc.	Montreal
Vapor Heating (Canada) Ltd.	Montreal
Velan Engineering Ltd.	Ville St. Laurent
Warden King Limited	Montreal
Ontario:	
Abco Steel Products Ltd.	Downsview
Aero Tool Works Limited	Toronto
Aga of Canada Ltd.	Ajax
Ajax Magnethermic Canada Ltd.	Ajax
Alexander, S.W. Ltd.	Toronto
Allied Metal Ltd.	Toronto
Anthes-Imperial Co. Ltd.	St. Catharines
Auto-Flo Corp. of Canada Inc.	Windsor
Barlin Scott Mfg. Co. Ltd.	Stoney Creek
Birleico-Lindberg Ltd.	Toronto
Brantford Engineering & Mfg. Co.	Burlington
Bravo Products Ltd.	Guelph
Canada Foundries & Forgings Ltd.	Brockville
Canadian Ema Co.	Thornbury
Canadian Infra-Red Co. Ltd.	Toronto
Carswell Furnaces Ltd.	Ottawa
Clare Bros. Ltd.	Preston
Clawsey Sohrt Mfg. Co. Ltd.	Preston
Commercial Kitchen Equipment Mfg. Co.	Toronto
Dixie Foundry Supply Co.	St. Catharines
Douglas Metal Industries Ltd.	Willowdale
Dunham-Bush (Canada) Limited	Weston
Duo-Heat Ltd.	Waterford
Eclipse Fuel Eng., of Canada Ltd.	Don Mills
Garland Commercial Ranges Ltd.	Toronto
Grimsby Stove and Furnace Limited	Grimsby
Hall Foundry Co., Limited	Hespeler
Hart and Cooley Mfg. Co. of Canada, Limited	Fort Erie N.

List of Establishments, 1962 - Concluded

Name	Location
Ontario - Concluded:	
Hodgins Bros. Limited.....	Ottawa
Holbeck, B.A.	Tillsonburg
Howard Furnace & Foundries Ltd.	Toronto
Ideal Stoker Company Ltd.	Toronto
Industrial Process Equip. Co. Ltd.	Toronto
Iron Fireman Mfg. Co. of Canada, Ltd.	Toronto
Kemp Manufacturing Co. Ltd.	Guelph
Lennox Industries (Canada) Ltd.	Toronto
Livingston Stoker Company Limited	Hamilton
Lloyd Register & Grilles Co. Ltd.	Toronto
Magiure Manufacturing Ltd.	Simcoe
Niagara Heating Manufacturers Ltd.	St. Catharines
Nixon-W.E. & Co.	Gormley
Olheiser, Murray, Co.	Kitchener
Olsen W.H., Mfg. Co.	Tilbury
Pepper's Automatic Stokers Limited	Toronto
Pettigrew-Savoil Burners Ltd.	Otterville
Roberts-Gordon Appliance Corp. Ltd.	Grimsby
Sarco Canada Ltd.	Claremont
Smith A.O. International S.A.	Stratford
Summers Manufacturing Ltd.	Toronto
Synchro Combustion Equip. Ltd.	Seaforth
Tempo Tool & Mfg. Co. Ltd.	Dixie
Tobac Curing System Limited.....	Simcoe
Trane Company of Canada, Limited.....	Toronto
Walt-Skuttle Company.....	Oakville
Wayne Forge & Machine Company Ltd.	Toronto
Western Foundry Company Limited	Wingham
White, Geo. & Sons Co. Ltd.	London
York Machine Co. Ltd.	Toronto
Manitoba:	
Bullock's Limited.....	St. James
Furnasman (Furnace) Ltd.	Winnipeg
Greensteel Industries Ltd.	Winnipeg
Progressive Manufacturing Co.	Winnipeg
Quest Metal Products.....	Winnipeg
Silver Line Manufacturing Co. Ltd.	Winnipeg
Alberta:	
Flame Master Ltd.	South, Edmonton
Kirk's Heating Limited	Three Hills
Marvel Stoker Products	Edmonton
Shannon Bros.	Medicine Hat
Sure Flame Tank Heater	Gratum
British Columbia:	
Accurate Metal Manufacturing Co. Ltd.	Vancouver
Burnaby Engineering & Prefab Ltd.	North Burnaby
Dickinson's Ltd.	Vancouver
Evans Perry Incinerators Ltd.	Vancouver
Kumfort Furnace Co. Ltd.	Vancouver
McDonell Metal Manufacturing Company Limited.....	Vancouver
Mitchell Mfg. Ltd.	Vancouver
Rees Burners Ltd.	Vancouver
Taggart Manufacturing Co. Ltd.	North Burnaby

EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1962 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and special reports on geographical distribution and on type of ownership and size of establishments.

With the publication of the results of the 1962 Census of Manufactures, the Bureau has completed a major revision in the classification and concept of its annual census of manufacturing establishments. Because of its size and complexity, this project had to be carried out in three stages. The first stage was the change in classification and the results of the 1960 Census, together with the re-compilation of the 1957, 1958 and 1959 Censuses were published in the 1960 reports on the basis of the revised Standard Industrial Classification. This part of the project was confined entirely to a re-coding of existing reporting units. The second stage consisted of the implementation of the new definition of the reporting unit i.e. "establishment" as it applied to **manufacturing activities** of manufacturing establishments (See following note on "Establishment"). Results of the 1961 Census reflected this change in concept and, in order to provide comparability of data for recent years, the 1961 reports contained principal statistics on the basis of the new establishment definition for years back to 1957.

The third stage which was the extension of the definition of the establishment to cover **total activities** of manufacturing establishments is reflected in the statistics for 1961 and 1962 contained in this report. This full implementation of the new definition of the establishment has resulted in an extension of the data to non-manufacturing activities of manufacturing establishments and in additional changes in the 1961 statistics of manufacturing activities. Statistics on manufacturing activities will continue to be shown separately as in the past but, beginning with 1961, data on all operations (total activity) of manufacturing establishments will also be given. By definition "total activity" relates to all operational data and excludes such non-operational items as rent, interest and dividends. In addition, statistics on man-hours paid will be included as part of the regular series of industry statistics. For many industries, adjustments and revisions were made to the 1961 data on **manufacturing activities** which were published during the second stage to bring them in line with reporting procedures followed in the 1962 Census and to reflect the final application of the new concept. The 1961 statistics on manufacturing activities contained in this report are thus not entirely comparable with those published in the 1961 reports. However, the 1961 statistics are shown in this publication in both their original and revised forms in order to provide a link with the immediate past. A more complete account of recent changes and additions and brief descriptions of the principal industry statistics are given in following sections of these notes.

Standard Industrial Classification

The revised Standard Industrial Classification which was introduced with the 1960 Census of Manufactures and applied to the results of the 1957, 1958 and 1959 censuses provides for a breakdown of the manufacturing universe into 140 industries arranged in 20 major groups. Custom Tailoring Shops is the only industry class in the Manufacturing Industries Division of the classification which is not covered in the annual Census of Manufactures. It is surveyed as part of the Decennial Census of Merchandising and Service Establishments. Of the 140 "three-digit" industry classes in the Manufacturing Industries Division, 21 are further broken down into 67 "four-digit" sub-classes. With the exception of the Wood Preservation and Sound Recording industries, the figures for which are at present confidential and have to be included with those of related industries, the statistics for all of the "four-digit" sub-classes are published regularly. Thus, at the Canada level, principal statistics are compiled for 183 industries. These cannot all be published separately by province because of the confidential nature of the data in certain provinces.

Reporting establishments are classified or allotted to specific industries in the classification system on the basis of the value of principal products made or shipped. In general, establishments primarily engaged in repair work (Shoe Repair Shops, Motor Vehicle Repair Shops etc.) are not included in manufacturing industries. Exceptions are establishments primarily engaged in furniture, ship, boat, aircraft and railroad rolling stock repairs which are classified to the manufacturing industries producing the products involved. Establishments primarily engaged in assembling parts into complete units have always been included in manufacturing industries.

Full details concerning the revised classification system are contained in the Standard Industrial Classification Manual, Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics.

It should be noted that two new industries (Poultry Processors and Dental Laboratories) and three new groups of establishments (book publishers in the Publishing Industry, electro-plating establishments in the Metal Stamping, Pressing and Coating Industry and prescription branches in the Ophthalmic Goods Manufacturers Industry) have been included in the 1961 (revised) and 1962 Census statistics and will continue to be included thereafter. They were surveyed for the first time in the 1960 Census (1961 Census in the case of prescription branches) in line with the revised classification but, since they did not represent new production, they were removed from the 1960 and 1961 compilations published in the 1961 Census reports in order to provide complete comparability of data over the period 1957-61. Statistics for this period are repeated in the 1962 reports to supply a link with the revised 1961 data and the new 1962 statistics.

Establishment

The reporting unit in the Census of Manufactures is the **establishment**. The majority of establishments are firms, but many firms have more than one manufacturing establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements described below.

Beginning with the 1961 Census of Manufactures the establishment is defined as follows:

"The smallest unit which is a separate operating entity capable of reporting all 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,
Inventories,
Shipments or sales."

Following is a description of the main features of the new establishment concept introduced in the 1961 Census, how they differ from those of the old "activity" concept and the steps taken to correct for breaks in continuity.

(a) The establishment is to be distinguished from smaller subdivisions or departments which do not have records that permit them to report all items required of an establishment. Prior to 1961, some establishments were required to submit two or more separate reports when they were engaged in activities which were classifiable to different industries. Beginning with 1961, separate reports for such activities are required only in cases where accounting records can provide the necessary input and output elements of principal statistics. Special reporting arrangements were made with respondents when the acceptance of combined reports would have seriously affected the statistics for particular industries or areas. Where continuity of industry statistics was affected by this change in reporting procedures, adjustments to the data were made back to 1957 in order to maintain comparability of the series for recent years.¹

(b) A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were primarily engaged in manufacturing. Beginning with the 1961 Census, establishments (accounting entities) which are not primarily engaged in manufacturing are no longer included as manufacturing establishments in the basic industry statistics.¹

Again, adjustments were made to reflect the removal of such reporting units for the period 1957-60. These reporting units are now listed as establishments in other Bureau surveys, such as Wholesale Trade, Construction etc. This has resulted in a somewhat smaller universe represented by the Census of Manufactures. In terms of overall 1960 Census results, the number of establishments transferred to other industries totalled 2,786 or 8% but these represented only 0.7% of total employment and of total value of shipments of manufactured products. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed by the Industry Division for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

(c) A manufacturing establishment may be, and often is, engaged in other activities in addition to its principal manufacturing activity. Prior to 1961 the main emphasis in the Census of Manufactures was on manufacturing activity. Beginning with 1961, each establishment reports on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on different activities (manufacturing, trading in goods not of own manufacture, construction by own labour force, revenue from services etc.) are requested separately. However, the statistics published in the 1961 reports were confined to manufacturing activity only in order to maintain comparability with previous years and to permit a more thorough audit of the new data. The 1962 reports contain principal statistics on total activities of manufacturing establishments for 1961 and 1962 with the main elements of manufacturing activity shown separately as in the past. It should be noted that the statistics for separate activities are not completely consistent. Some respondents cannot distinguish in their records materials, shipments and inventories relating to own manufacturing activities from those relating to goods not of their own manufacture or to other activities and can report operational data in total only under manufacturing activity. This situation has always existed, however, and is not considered important enough to invalidate the use of the data in the measurement of manufacturing as an "activity". The values assigned by the respondent to materials and shipments of own manufactured goods include costs in varying degrees that relate to internal (to the establishment) transportation, warehousing and selling activities, but it is not possible to make adjustments to arrive at a uniform valuation for manufacturing activity only; although valuation at the establishment "boundary" must be accepted, the items valued under manufacturing activities still relate, in most cases, to "goods of own manufacture". In the case of employment only data on manufacturing production workers and manufacturing man-hours can be assigned, in total, to manufacturing activity; administrative and office employees can seldom be allocated to separate activities.

¹ Most of these adjustments were made when the results of the 1961 Census were being compiled. Since publication of these results in the 1961 reports additional adjustments were made to the 1961 data, as noted earlier, and these are reflected, where applicable, in the revised 1961 statistics contained in this report.

Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level, and for studies or statistical measures requiring accurate co-ordinated data, the "total" statistics should be used.

(d) Additional changes resulted from intensive editing and follow-up consistent with the introduction of the new concept. An example of such changes is the provision for the elimination, in total, of sales taxes and outward transportation charges from value of shipments. Prior to 1961, although the value of shipments for each product was requested excluding taxes and transportation charges, no allowance had been made for the reporting of these items in total when the respondents' records did not permit their deduction from the values of the individual products. Another example is a change in the valuation of shipments where, prior to 1961, a manufacturing company operating warehouses or sales outlets was reporting value of shipments in terms of an estimated manufacturer's price in accordance with the old activity concept, even though his records were not kept on this basis. Since the accounting boundary in such cases extends to distribution operations, the respondent was instructed in 1961 to report shipments at the final selling price in order to obtain more realistic and accurate data.² Adjustments were made to the value of shipments for the period 1957-60 to reflect such changes and maintain continuity of the shipments data. Since no actual data to make these corrections were available for back years, 1961 adjustment ratios were applied to the previous years for each industry affected, on the assumption that the valuation changes in 1961 applied in equal proportions to the preceding period.³

(e) The new concept also demands that inventories held apart from plant be included with plant inventories if establishment boundaries extend to warehouses and sales outlets. Prior to 1961, compilations took into account only the inventories held at plant. In this case, however, most of the missing data were available from supplementary questions in the Annual Census and from the Monthly Inventories and Shipments Survey and actual corrections could be made for previous years.

² Some manufacturing firms operate sales branches or selling warehouses as separate sales establishments for which complete accounting records of receipts, expenses, employment and sales are maintained. In such cases the plants, in effect, "sell" to the sales outlets on much the same basis as they would to independent buyers. The value of plant shipments is based on factory prices and the "boundary" of the manufacturing establishment does not extend beyond the plant. The sales outlets in such cases constitute separate sales establishments and are classified to wholesale or retail trade. Some sales outlets of manufacturing firms, although they physically handle products of the plants, do not maintain separate accounts and are generally treated for statistical purposes as extensions of manufacturing operations. Special arrangements were made for separate reporting in a few cases where the treatment of such outlets as manufacturing extensions would seriously affect the significance of statistics for particular manufacturing and trade industries.

³ See footnote 1.

(f) Prior to 1961 the Census of Manufactures did not have complete coverage of head and administrative offices and had never surveyed separate sales offices, warehouses or laboratories operated by manufacturing firms. Beginning with the 1961 survey, complete coverage of these auxiliary units was effected. In the past the employment and salaries and wages of those head and administrative offices that were surveyed were either coded in total to the industry in which the greatest portion of the company's manufacturing activities was classified or else, in the case of certain large multi-unit firms with establishments in several industries, were pro-rated among the different industries involved. In the original 1961 statistics published in 1961 reports, the same coverage and treatment of head offices was applied to maintain comparability over the 1957-61 period. Beginning with the revised 1961 statistics, all head offices and auxiliary units are covered and are processed according to the methods described below.

1. Single-Establishment Companies

In the great majority of cases central administrative and executive personnel of companies consisting only of one establishment are generally located at the site of the manufacturing plant and are automatically included in the plant reports. Where head offices and auxiliary units are geographically separate from plant locations and employ a sizeable number of workers they are surveyed on special questionnaires.

Separately located head offices, sales offices, administrative offices and other separate auxiliary units (laboratories, warehouses, etc.) do not usually constitute separate establishments⁴ for purposes of industry statistics since they do not normally generate operational revenues but give rise only to costs of operation (mainly salaries and wages) which make up part of the selling price of manufactured products and which are thus included in the value of shipments or sales. Where such units belong to single-establishment companies, they will be considered as extensions of the establishment's boundaries and their operations consolidated with the establishment's total activity.

2. Multi-Establishment Companies

In the case of companies with more than one establishment the following rules are applied:

(i) Where all the establishments of a company are classified to the same (three-digit) industry, the head office and other auxiliary units are coded to that same industry.

(ii) Where the establishments of a company are not all classified to the same (three-digit) industry but are coded to different industries, or industries in different industry groups or even different divisions

⁴ See footnote 2 for exceptions.

of the Standard Industrial Classification, the inclusion of data for head office and auxiliary units in any one of the (three-digit) industries concerned would distort the relationship between items of principal statistics. In such cases, the auxiliary units are coded at the group (two-digit) level in tabulations of industry statistics. Where multi-establishment companies cut across group or major division lines of the Classification, the head office and auxiliary units will be coded to the (two-digit) industry group in which the major part of the company's operations are classified. Although this may result in some distortion of (two-digit) industry group statistics it will eliminate distortion within groups as it will leave statistics at the (three-digit) industry level free of these company-wide data.

Period Covered

Respondents are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. However, the data on employees, salaries, wages and man-hours are requested on a calendar year basis in all cases.

When establishments are operated for only a portion of a year, a report is required covering the period of operation.

Working Owners or Partners

Beginning with the revised 1961 statistics working owners and partners of unincorporated businesses are shown as a separate category in the principal statistics and are neither included in the number of employees nor in 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. In all previous reports of the Census of Manufactures these workers were included as part of the number of administrative and office employees and their withdrawals were included as part of salaries. Withdrawals are defined as amounts withdrawn by owners or partners for normal living expenses, excluding withdrawals for payment of income tax.

Number of Establishments

The number of establishments represents the number of operating units (accounting entities as per the new definition of the establishment) for which separate reports are submitted. Head offices located apart from establishments and which are surveyed separately and separate sales and administrative auxiliaries that are treated as extensions of manufacturing activities are not included in the establishment count. However, the operational statistics (employment, salaries etc.) of such auxiliary units which are coded at the "three-digit"

level are included in the principal statistics of industries coded at the same level; those units coded at the "two-digit" level are included with the statistics for groups of industries.

Employees

As noted above, the number of working owners and partners are excluded from the number of employees, beginning with the revised 1961 statistics. This change brings the definition of "employees" in the Census of Manufactures in line with that of "employees" in the Bureau's monthly Employment Survey and with that of "paid workers" in the Bureau's Labour Force Survey. For purposes of historical comparisons, the number of working owners and partners should be added to total employees (beginning with the revised 1961 data) in order to correspond with the figure of "total employees" published in previous reports concerned with the Annual Census of Manufactures.

In addition to production and related workers engaged in manufacturing activities, total employees include administrative, office, sales and distribution workers as well as any production workers employed in non-manufacturing activities such as construction undertaken for the use of the establishment by its own employees (when these are treated as a separate work force) or logging (mostly in connection with sawmills or planing mills). Number of employees represents as closely as possible equivalent annual full-time employment. Adjustments are made when reported figures indicate the existence of part-time or seasonal employment.

Administrative and office employees include all executive and supervisory officials such as presidents, vice-presidents, controllers, secretaries, treasurers etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical etc. Sales and distribution workers include office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truck drivers and their helpers, etc. They exclude persons working on a commission basis who are not considered regular employees.

Production and related workers in manufacturing activities include, in addition to those engaged in processing and assembling, those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees in related activities such as maintenance, repair, janitorial and watchman services. Working foremen doing similar work to that of employees they supervise are also included. Production workers employed in non-manufacturing activities such as construction undertaken for the use of the establishment, logging

employees or outside piece-workers employed in certain industries are excluded from the number of production and related workers but are part of the total number of employees in those industries.

Production and related workers 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 twelve. This procedure is followed even though the plant did not operate in all months in order to derive equivalent annual full-time employment. The numbers are somewhat affected by turn over, in that employment is overstated when an employee changes employment within the same industry during a pay period. Other categories of workers are reported in the form of annual averages. Figures on employment and man-hours refer to the calendar year whether or not some establishments report other data on a financial year basis.

Man-hours of production and related workers in manufacturing activities represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays etc.). In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in **average** hourly earnings and does **not** represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

Salaries and Wages

Salaries and Wages refer to gross earnings of the employees described above, **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 workers' earnings. Payments for overtime are included.

Wages refer to amounts paid to production and related workers engaged in manufacturing operations as defined above. Salaries refer to amounts paid to all other categories of employees including relatively small numbers of production workers engaged in construction and extractive operations or who are employed as outside piece-workers. Figures on salaries and wages refer to the calendar year whether or not some establishments reported other data on a financial year basis.

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.

Materials and Supplies

(a) Used in 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. The statistics represent only commodity items or physical goods (costs 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. Respondents are required to report materials and supplies **used not purchased**. 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) Purchases for resale as such. Figures represent the 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.

(c) 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. Value of construction and repair work done by outside contractors is 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 medical supplies, laboratory supplies etc.

Shipments

In general the figures represent revenue from all production, sales, services and related activities of reporting establishments. Non-operating revenues such as rent, interest and dividends and the sale of used fixed assets are excluded.

(a) 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 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. (See notes on "Establishment").

Such shipments are net of returned goods, and value figures at the establishment exclude discounts, returns, allowances, sales taxes and excise duties, returnable containers, and charges for outward transportation by common or contract carriers. Transportation or delivery expenses incurred by the reporting establishments' own carriers are not deducted.

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 form B.13 "Customs Canada, Export Entry" has been completed, are treated as shipments.

In four industries, viz. Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair, where work on principal products extends over a relatively long period, the value of production, rather than the value of shipments, is recorded. For these industries value of production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on units delivered in the year under review. Adjustments to the value of shipments are also made for firms in these industries and in some other industries which operate on the basis of progress payments. The latter are treated as sales and not as inventory, so that for firms which use a progress payments account, an adjustment to the value of shipments is made for the net change in this account during the year.

(b) Shipments of goods not of own manufacture

These figures represent the net selling value at the establishment (less discounts, returns, allowances, sales taxes and excise duties 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 goods on a rental basis value of shipments represents the book value of such goods. All sales of consignment goods from other countries are included.

(c) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs and alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishments' 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 establishments' own employees, such as revenue from goods produced for rental (the book value of such goods are included as part of factory shipments), servicing revenues, commissions on sales (when not included in value of sales), revenue from company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishments' 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 inventory

Values represent the book value of manufacturing inventory owned in Canada. The value of inventory held for which progress payments have been received is treated as shipments and is not included in inventory owned. 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. Inventory owned abroad has already been reported as shipments and is excluded.

(b) Inventory of goods purchased for re-sale

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by reporting establishments and held at the plants and at any warehouses or selling outlets which are treated as extensions of establishments. Inventory owned in transit in Canada or on consignment in Canada is included.

Because of changes in classification, the receipt of revised data, the inclusion of new establishments or the removal of old establishments which did not operate during the latest year, the opening inventory for the latest year does not necessarily coincide with the closing inventory of the preceding year.

Value Added

(a) By manufacturing activities

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

(b) By total activities

Figures consist of value added by manufacturing activities plus value added by non-manufacturing activities and is compiled by deducting the cost of goods purchased for re-sale and the cost of other materials and supplies used from the value of shipments of goods not of own manufacture plus other revenue, adjusted for changes in the value of inventories of goods purchased for re-sale.

"Value added" is sometimes referred to as net production. However, to arrive at the National Accounts concept of net production, or "Gross domestic product at factor cost", it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected in 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.

Short Forms

Since 1949, in order to ease the reporting burden for smaller firms, a one-page short form has been used asking for only a limited amount of detail. For purposes of publication, missing data were estimated on the basis of appropriate ratios. Beginning with the 1959 census, the general limit for short forms was raised from \$50,000 (the limit used since 1949) to \$100,000 value of shipments and a new medium form was used. This form is a shortened version of the long form in that some of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the

short and medium forms there are lower cut-offs for a number of industries in which the smaller firms account for a larger share of total shipments.

Prior to 1961, the short form was limited to a question on the principal items of factory shipments. In the 1961 and 1962 censuses, in addition to the question on shipments of goods of own manufacture, general questions on employment and payroll and on total revenue were added on all short forms. The other elements of principal statistics, viz. value of materials, fuel and electricity and inventories, were estimated by using ratios based on the change in the value of shipments reported in 1961 and 1962. This was done to permit the complete compilation of basic industry statistics by industry and by geographic location. The proportions of the estimated data was generally less than 5 per cent of the total in each category of principal statistics.

Beginning with the 1963 census, general questions on total purchases of materials, fuel and electricity and on total inventory were added on the short forms. The two questions, however, were designed so that the data can be easily derived from respondents' regular accounting records. This will permit a complete tabulation of principal statistics without the necessity of estimating missing items and will result in increased accuracy for rural area statistics where small firms account for a relatively important part of industrial output.

The addition of extra questions on the short form in recent years has also permitted an increase in the cut-off limits for short forms in many industries. This has meant that many more firms are now receiving the short form instead of the long or medium form. It has also resulted in the withdrawal of the medium form in a number of industries, thus further simplifying collection and tabulation procedures.

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