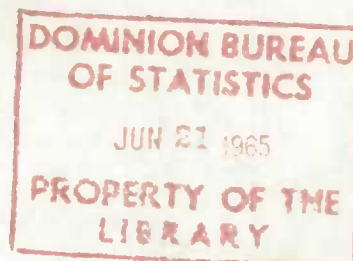


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MANUFACTURERS OF ELECTRICAL INDUSTRIAL EQUIPMENT

1962

ANNUAL CENSUS
OF MANUFACTURES

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SYMBOLS

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- .. figures not available.
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MANUFACTURERS OF ELECTRICAL INDUSTRIAL EQUIPMENT 1962

Data presented in this report under the heading of Manufacturers of Electrical Industrial Equipment 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 Manufacturers of Electrical Industrial Equipment covers the operations of establishments primarily engaged in manufacturing electric motors, generators and other electric power equipment for use in the generation, transmission and utilization of electric energy. Important products of this industry are steam turbine generator sets, motors (except railway, motor vehicle and aircraft), generators, transformers, switchgear, pole-line hardware, lightning arresters, electric welding equipment, electric meters. Establishments primarily engaged in manufacturing electric wire and cable are in Industry No. 338—Manufacturers of Electric Wire and Cable.

The introduction of the final stage of the establishment concept in the Annual Census of Manufactures 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. For the most part the changes in the manufacturing activity of the industry under review resulting from the implementation of the final stage of the establishment concept were of a relatively minor nature as reflected in the comparative series of statistics included in Tables 1 and 1 A.

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	77	15,474	61,089	9,142	44,003	24,616	105,091	2,624	115,008	307,679	..
1958	84	11,891	52,081	8,645	47,822	20,536	99,903	2,218	99,114	233,890	130,370
1959	88	10,855	44,834	6,963	38,776	17,818	83,610	2,682	93,046	227,153	139,395
1960	100	10,187	44,116	6,892	40,032	17,079	84,148	2,602	84,892	230,188	140,131
1961	97	9,941	43,786	6,463	37,160	16,404	80,945	2,365	86,812	218,881	129,315

See footnotes following Table 3 A.

TABLE 1 A. Principal Statistics - Manufacturing Activity and Total Activity,¹ 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

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 ⁴
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Quebec	16	978	2,040	3,678	221	8,938	19,297	9,602	"	"	1,626	7,574	10,508
Ontario	70	8,562	18,657	38,785	2,080	73,819	191,747	116,156	"	"	14,427	72,757	121,400
Manitoba	2	171	396	614	39	1,956	4,417	2,395	-	-	270	1,011	2,407
Saskatchewan	2												
Alberta	2												
British Columbia	6	145	289	708	25	1,842	3,490	1,487	-	-	235	1,153	1,509
Totals	98	9,856	21,382	43,786	2,365	86,555	218,951	129,640	"	"	16,558	82,495	135,824
1962													
Quebec	15	1,126	2,381	4,271	233	8,627	21,606	12,772	-	-	1,751	7,877	13,378
Ontario	73	9,556	20,539	45,428	2,061	84,415	223,443	140,533	"	"	15,809	82,412	144,699
Manitoba	2	299	624	1,041	47	3,181	6,613	3,436	-	-	399	1,558	3,478
Saskatchewan	2												
Alberta	4												
British Columbia	7	150	365	764	30	2,332	4,462	2,006	-	-	233	1,286	2,014
Totals	103	11,131	23,909	51,504	2,371	98,555	256,124	158,749	"	"	18,192	93,133	163,568

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 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	5	10	15	24	2	64	148	83	"	"	16	34	79
\$ 10,000 to \$ 24,999													
25,000 "													
50,000 "													
100,000 "	9	85	158	280	20	599	1,224	648	-	-	178	962	1,014
200,000 "	18	309	603	1,044	55	2,764	6,543	3,763	-	-	460	1,855	3,958
500,000 "	16	656	1,388	2,291	105	5,286	11,166	5,695	-	-	1,023	3,845	5,847
1,000,000 "	27	2,830	5,905	11,065	666	30,942	65,081	32,440	-	-	4,684	21,082	33,553
5,000,000 and over	10	5,902	13,186	28,862	1,511	46,417	133,807	86,484	-	-	9,737	52,109	89,736
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	361	2,282	1,096
Totals	98	9,858	21,382	43,786	2,365	86,555	218,951	129,640	"	"	16,558	82,495	135,824

TABLE 1 B. Principal Statistics classified by Size Groups based on Shipments of Goods of Own Manufacture, 1961 and 1962 - Concluded

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 ⁶	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	
1962													
Under \$10,000	7	17	30	53	3	163	222	84	—	—	28	96	93
\$ 10,000 to \$ 24,999													
25,000 " 49,999													
50,000 " 99,999		9	41	86	153	7	357	724	401	11	58	217	417
100,000 " 199,999		9	65	129	196	7	690	1,282	627	—	91	316	638
200,000 " 499,999	21	318	660	1,111	60	2,833	6,199	3,309	—	—	506	2,119	3,736
500,000 " 999,999	15	669	1,343	2,163	108	5,445	10,909	5,390	—	—	950	3,439	5,749
1,000,000 " 4,999,999	31	3,149	6,902	12,891	592	35,779	74,583	40,133	—	—	5,075	23,156	41,851
5,000,000 and over	11	6,872	14,759	34,938	1,594	53,289	162,204	108,805	—	—	11,115	61,158	109,866
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	369	2,631	1,218
Totals	103	11,131	23,909	51,504	2,371	98,555	256,124	158,749	11	11	18,192	93,133	163,568

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 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 ⁶	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	6	17	32	54	3	210	313	104	11	11	37	80	103
\$ 10,000 to \$ 24,999													
25,000 " 49,999		11	54	106	179	5	402	758	394	11	76	265	403
50,000 " 99,999		7	54	109	191	12	330	771	438	—	146	822	788
100,000 " 199,999		15	262	486	914	60	3,019	5,401	2,128	—	476	1,939	2,330
200,000 " 499,999	23	725	1,556	2,778	113	6,762	14,655	7,588	—	—	1,107	4,601	7,824
500,000 " 999,999	13	738	1,483	2,595	169	9,248	18,339	9,090	—	—	1,286	5,098	9,261
1,000,000 " 4,999,999	18	3,716	7,796	15,198	743	32,673	76,837	43,013	—	—	5,873	27,448	44,062
5,000,000 and over	5	4,290	9,814	21,675	1,261	33,911	101,878	66,885	—	—	7,206	39,961	69,957
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	361	2,282	1,096
Totals	98	9,856	21,382	43,786	2,365	86,555	218,951	129,640	11	11	16,558	82,495	135,824
1962													
Under \$10,000	4	11	18	26	3	75	102	32	11	11	17	48	42
\$ 10,000 to \$ 24,999	5	11	24	48	1	172	247	95	—	—	17	70	91
25,000 " 49,999	6	29	57	110	5	429	660	257	11	11	50	182	272
50,000 " 99,999	12	97	206	338	13	869	1,780	853	—	—	136	551	863
100,000 " 199,999	18	281	571	982	63	2,701	5,644	2,753	—	—	439	1,834	2,997
200,000 " 499,999	17	661	1,336	2,153	102	6,054	12,070	6,125	—	—	949	3,491	6,675
500,000 " 999,999	16	995	2,165	3,916	169	13,680	25,715	12,221	—	—	1,608	7,086	12,939
1,000,000 " 4,999,999	19	3,472	7,463	14,715	747	33,993	77,957	44,412	—	—	5,801	27,922	46,008
5,000,000 and over	6	5,573	12,069	29,217	1,268	40,583	131,949	92,002	—	—	8,606	49,317	92,462
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	369	2,631	1,218
Totals	103	11,131	23,909	51,504	2,371	98,555	256,124	158,749	11	11	18,192	93,133	163,568

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 ³	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁵		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	20	36	61	4	219	349	131	"	"	31	87	127
\$ 10,000 to \$ 24,999	10	51	103	173	4	392	721	367	"	"	72	258	379
25,000 " 49,999	5	35	68	122	4	152	472	288	—	—	61	211	291
50,000 " 99,999	14	194	347	684	54	2,314	4,218	1,868	—	—	397	1,793	2,039
100,000 " 199,999	27	875	1,840	3,135	139	8,410	17,501	8,634	—	—	1,351	5,464	8,914
200,000 " 499,999	11	624	1,271	2,369	126	8,137	15,799	7,667	—	—	1,087	4,446	7,842
500,000 " 999,999	19	3,767	7,904	15,367	773	33,019	78,013	43,799	—	—	5,992	27,994	45,180
1,000,000 " 4,999,999	5	4,290	9,814	21,875	1,261	33,911	101,878	66,885	—	—	7,206	39,961	69,957
5,000,000 and over .....	...	...	...	...	...	...	...	...	...	...	361	2,282	1,096
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	361	2,282	1,096
Totals	98	9,856	21,382	43,786	2,365	86,555	218,951	129,640	"	"	16,558	82,495	135,824
1962													
Under \$10,000	4	11	18	26	3	75	102	32	—	—	17	48	42
\$ 10,000 to \$ 24,999	5	11	24	48	1	172	247	95	"	"	17	70	91
25,000 " 49,999	6	29	57	110	5	429	660	257	—	—	50	182	272
50,000 " 99,999	12	97	206	338	13	869	1,780	853	"	"	136	551	863
100,000 " 199,999	18	281	571	982	63	2,701	5,644	2,753	—	—	439	1,834	2,997
200,000 " 499,999	17	662	1,336	2,153	102	6,054	12,070	6,125	—	—	949	3,491	6,675
500,000 " 999,999	16	995	2,165	3,916	169	13,680	25,715	12,221	—	—	1,608	7,086	12,939
1,000,000 " 4,999,999	19	3,472	7,463	14,715	747	33,993	77,957	44,412	—	—	5,801	27,922	46,008
5,000,000 and over	6	5,573	12,069	29,217	1,268	40,583	131,949	92,002	—	—	8,806	49,317	92,462
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	369	2,631	1,218
Totals	103	11,131	23,909	51,504	2,371	98,555	256,124	158,749	"	"	18,192	93,133	163,568

See footnotes following Table 3 A.

TABLE 1 E. Principal Statistics classified by Size Groups based on Total Employed,¹² 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 ³	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁵		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 5 employees	5	8	14	22	3	293	614	333	—	—	14	58	332
5- 14 employees	22	118	231	405	18	1,234	2,726	1,575	"	"	182	662	1,622
15- 49 "	27	554	1,097	2,015	110	6,634	13,796	7,193	—	—	867	3,848	7,721
50- 99 "	13	555	1,164	2,037	99	6,277	11,840	5,219	—	—	961	4,002	5,119
100-199 "	10	810	1,773	3,179	182	7,865	16,811	8,466	—	—	1,376	6,031	9,262
200-499 "	14	2,661	5,458	10,613	565	25,787	58,662	32,316	—	—	4,352	19,882	32,956
500 employees and over	7	5,150	11,645	25,514	1,388	38,465	114,502	74,539	—	—	8,445	45,730	77,717
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	361	2,282	1,096
Totals	98	9,856	21,382	43,786	2,365	86,555	218,951	129,640	"	"	16,558	82,495	135,824
1962													
Under 5 employees	6	10	20	34	3	184	360	191	—	—	18	70	192
5- 14 employees	21	111	221	417	18	1,400	2,658	1,376	"	"	166	660	1,433
15- 49 "	28	551	1,188	2,152	109	7,075	14,068	6,571	—	—	776	3,411	6,827
50- 99 "	16	790	1,692	2,907	110	9,060	17,199	8,570	—	—	1,228	5,178	9,055
100-199 "	11	1,010	2,180	3,998	224	12,653	23,677	11,068	—	—	1,637	7,250	12,059
200-499 "	13	2,458	5,230	9,944	497	22,183	52,699	31,663	—	—	3,969	18,031	32,939
500 employees and over	8	6,201	13,377	32,053	1,409	46,000	145,464	99,310	—	—	10,029	55,901	99,845
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	369	2,631	1,218
Totals	103	11,131	23,909	51,504	2,371	98,555	256,124	158,749	"	"	18,192	93,133	163,568

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 ⁴
		Number	Man-hours paid	Wages					Number	Withdrawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Individual ownerships	2	13	24	40	1	66	152	85	11	11	16	45	89
Partnerships	1												
Incorporated companies	95	9,843	21,358	43,745	2,364	86,489	218,799	129,554	—	—	16,181	80,169	134,640
Cooperatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	361	2,282	1,096
Totals	98	9,856	21,382	43,786	2,365	86,555	218,951	129,640	11	11	16,558	82,495	135,824
1962													
Individual ownerships	1	11,131	23,909	51,504	2,371	98,555	256,124	158,749	11	11	17,823	90,502	162,350
Partnerships	1												
Incorporated companies	101	—	—	—	—	—	—	—	—	—	—	—	—
Cooperatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	369	2,631	1,218
Totals	103	11,131	23,909	51,504	2,371	98,555	256,124	158,749	11	11	18,192	93,133	163,568

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 Concept³

Item	1961	1962
	\$'000	
Manufacturing activity:		
Value of shipments — Goods of own manufacture	218,951	256,124
Add: Closing inventory — Goods in process	27,093	24,985
Finished goods	17,932	18,714
Deduct: Opening inventory — Goods in process	24,688	22,354
Finished goods	20,729	17,795
Gross output — Manufacturing activity	218,559	259,675
Deduct: Cost of materials and supplies used in manufacturing activity	86,555	98,555
Cost of fuel and electricity used	2,385	2,371
Value added — Manufacturing activity	129,640	158,749
Non-manufacturing activities:		
Value of shipments — Goods not of own manufacture .....	..	33,990
Add: All other revenue .....	..	723
Closing inventory — Goods purchased for resale	2,311	2,476
Deduct: Purchases of goods for resale as such .....	..	28,634
Opening inventory — Goods not of own manufacture	2,247	2,089
Cost of all other materials and supplies used .....	..	1,647
Value added — Non-manufacturing activities	6,184	4,819
Total value added	135,824	163,568

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				Adminis- trative and office ^{6,9}		Sales, and distribution ⁹		Total employees ^{7,9}		Production and related workers		Adminis- trative and office	Sales, and distri- bution	Total salaries and wages
	Manufacturing ⁴		Other ⁹												
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Manufac- turing	Other			
1961	number										\$'000				
Quebec	773	205	..	..	..	..	..	..	1,258	368	3,678	..	..	..	7,574
Ontario	7,181	1,381	..	..	..	..	..	..	11,779	2,648	38,785	..	..	..	72,757
Manitoba	156	15	..	..	..	..	..	..	234	36	614	..	..	..	1,011
Saskatchewan															
Alberta	130	15	..	..	..	..	..	..	206	29	708	..	..	..	1,153
British Columbia															
Totals	8,240	1,616	..	..	..	..	..	..	13,477	3,081	43,786	..	..	..	82,495
1962	number										\$'000				
Quebec	876	250	3	2	398	109	90	23	1,367	384	4,271	14	2,888	703	7,877
Ontario	8,017	1,539	19	2	4,046	1,175	806	205	12,888	2,921	45,428	98	30,733	6,153	82,412
Manitoba	279	20	7	—	67	19	6	1	359	40	1,041	31	439	47	1,558
Saskatchewan															
Alberta	137	13	—	—	49	11	18	5	204	29	764	—	363	159	1,286
British Columbia															
Totals	9,309	1,822	29	4	4,560	1,314	920	234	14,818	3,374	51,504	143	34,423	7,063	93,133

See footnotes following Table 3 A.

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

Basis: Revised Standard Industrial Classification and New Establishment Concept²

Month	Establishments reporting monthly detail	
	Male	Female
	number	
January	8,450	1,684
February	8,564	1,684
March	8,713	1,654
April	8,798	1,684
May	8,987	1,699
June	9,204	1,775
July	9,236	1,772
August	9,370	1,781
September	9,438	1,822
October	9,390	1,738
November	9,455	1,749
December	9,392	1,827
Average for establishments reporting monthly detail (collected only for large establishments)	9,090	1,741
Average for small establishments (only annual averages collected)	219	81
Average for all establishments	9,309	1,822

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 re-sale 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 Confidential data.

¹² 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:			
Aluminum:			
Castings	lb.	1,271,491	932
Wire rods	"	132,796	87
Sheets and strip	"	585,368	330
Other .....	...		832
Brass and bronze:			
Castings	lb.	1,334,921	1,070
Wire rods	"	287,802	170
Sheets and strip	"	380,634	253
Other .....	...		181
Copper:			
Wire rods	lb.	875,374	624
Sheets and strip	"	1,855,912	1,085
Tubing and pipe	"	341,039	220
Wire, enamelled	"	8,413,464	5,905
Wire, other insulated .....	...		4,271
Other .....	...		2,459
Insulating varnishes, japans, enamels and lacquers .....	...		353
Insulators, porcelain and glass .....	...		2,175
Iron and steel (except alloy):			
Casting:			
Iron	ton	5,568	2,526
Steel	"	1,242	898
Steel bars and rods	"	15,470	2,548
Steel sheets and strip:			
Plain	"	31,707	4,848
Galvanized	"	288	51
Steel wire	"	860	200
Structural steel	"	4,554	770
Other (except alloy) .....	...		878
Alloy steel:			
Stainless .....	...		330
Silicon sheets and strips	ton	27,243	9,990
Other alloy including tool steel .....	...		581
Lead	lb.	330,563	60
Mica	"	87,239	103
Motors, electric:			
Under 1 h.p.	No.	12,480	92
1 h.p. and over a.c. or d.c.	"	2,121	38
Paints, stains, lacquers .....	...		433
Resins, synthetic .....	...		649
Resistance wire, ribbon and strip	lb.	11,575	21
Sulphuric acid	"	439,440	19
All other materials and components used ² .....	...		46,819
2. Containers and other packaging materials and supplies used			1,578
3. Operating, maintenance and repair supplies used (excluding fuel)			3,708
4. Amount paid out to others for work done on materials owned by establishments			668
Total			98,555

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 \$2,890,000.

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 1,134	17
(b) Imported	34,725	382
Sub-bituminous coal (from Alberta mines only)	—	—
Anthracite coal	ton 45	1
Lignite coal	—	—
Coke	—	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal. 271,088	101
Fuel oil including kerosene or coal oil	" 3,011,975	337
Wood	cord 312	3
Gas:		
(a) Liquefied petroleum gases	Imp. gal. 67,229	16
(b) Other manufactured gas	—	—
(c) Natural gas	M cu.ft. 182,213	161
Other fuel .....	...	5
Electricity purchased	kwh. 145,666,537	1,260
Steam purchased .....	...	33
2. Estimate for small establishments for which no data were collected:		
Fuel and electricity .....	...	54
3. All establishments:		
Total fuel and electricity used .....	...	2,371

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	Value
	\$'000
1. Products:	
Electrical industrial equipment:	
Industrial control equipment	28,412
Converter equipment	7,755
Electric generators and parts	7,181
Electric motors and parts	39,761
Transformers and parts	57,639
Electrical switchgear and protective equipment (except telephone switchboards)	43,965
Electric welding apparatus and welding rod	6,104
Cutouts and fuses	2,578
Instruments and meters	10,422
Pole line hardware	7,752
Miscellaneous electrical equipment:	
Industrial electric heating equipment	754
Lighting equipment	1,293
Telecommunication equipment other than domestic radio and television receiving sets	6,832
Rectifiers (other than power) (semi-conductor and/or electron tube type) (see Table 8H) .....	..
Miscellaneous electrical products	2,133
All other products	27,536
2. Amount received in payment for work done on materials and products owned by others	3,997
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	(2,168)
Net adjustment for establishments receiving progress payments ²	4,198
Total adjusted value of shipments and work done	256,124

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						
Quebec	2,580	1,460	1,953	5,994	887	6,880
Ontario	16,594	20,148	15,440	52,182	1,202	53,384
Manitoba	673	395	185	1,253	—	1,253
Saskatchewan						
Alberta						
British Columbia	418	351	217	985	—	985
Totals ⁴	20,266	22,354	17,795	60,414	2,089	82,503
Closing:						
Quebec	2,147	1,774	1,666	5,587	862	6,449
Ontario	22,458	22,331	16,823	61,612	1,526	63,138
Manitoba	838	529	104	1,471	—	1,471
Saskatchewan						
Alberta						
British Columbia	493	351	121	966	88	1,053
Totals ⁴	25,936	24,985	18,714	69,635	2,476	72,110

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 Industries, 1961 and 1962¹

A. Electric Generators and Parts, 1961

Item	Number	Total rating	Value
\$'000			
A.c. generators (except for vehicle and marine use) including horizontal water-wheel driven synchronous generators but not including vertical water-wheel synchronous generators:			
Up to and including 100 kw.	565	..	949
101 to 500 kw.	12	..	202
501 to 1,500 kw.			
1,501 and above			
A.c. vertical water-wheel driven generators, all ratings	8	..	5,253
Accessories and parts for a.c. generators .....	...	...	778
Steam or gas turbo-driven a.c. generators 5,001 kw. and above .....	...	...	7,182
Total .....	...	...	7,182

B. Electric Motors² and Parts, 1962

Item	Number	Total rating	Value
\$'000			
A.c. motors (except for railway and vehicle use):			
Single phase induction:			
1/3 h.p. and under (except shaded pole or universal motors)	957,467	219,884	12,902
1/2 h.p. and 3/4 h.p.	89,366	53,137	2,203
1 h.p. to 5 h.p. inclusive-open type	11,340	21,576	851
1 h.p. to 5 h.p. inclusive-enclosed type	1,630	3,262	157
Polyphase induction:			
1/3 h.p. and under	4,205	1,098	132
1/2 h.p. and 3/4 h.p.	11,127	6,852	417
1 h.p. to 5 h.p. inclusive-open type	22,382	46,275	1,286
1 h.p. to 5 h.p. inclusive-enclosed type	10,731	27,235	1,007
6 h.p. to 25 h.p. inclusive-open type	6,509	77,103	1,115
6 h.p. to 25 h.p. inclusive-enclosed type	6,605	86,147	1,652
26 h.p. to 100 h.p. inclusive-open type	1,930	93,729	1,158
26 h.p. to 100 h.p. inclusive-enclosed type	1,653	85,485	1,372
101 h.p. to 200 h.p. inclusive-open type	436	65,758	967
101 h.p. to 200 h.p. inclusive-enclosed type	192	27,928	560
201 h.p. to 1000 h.p. inclusive	405	175,006	2,262
1001 h.p. and over	42	74,610	1,083

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1961 and 1962¹ - Continued

B. Electric Motors¹ and Parts, 1962 - Concluded

Item	Number	Total rating h.p.	Value \$'000
Synchronous motors and condensers:			
Up to and including 500 h.p.	32	9,025	148
501 h.p. to 2000 h.p.	86	84,100	616
2001 h.p. and above	—	—	—
Accessories and parts for a.c. motors	—	—	1,004
Railway and vehicle motors, a.c. and d.c.	—	—	—
Shaded pole type motors, all ratings	471,853	—	1,774
Universal type motors, all ratings	76,369	—	338
D.c. motors and generators, including exciters, (except for railway and vehicle use):			
D.c. motors:			
1/3 kw. and under	—	—	1,966
1/2 kw. and 3/4 kw.	—	—	—
D.c. motors or generators:			
1 h.p. or kw. to 5 h.p. or kw.	82	261	64
6 h.p. or kw. to 25 h.p. or kw.	288	2,670	189
26 h.p. or kw. to 100 h.p. or kw.	343	19,549	1,125
101 h.p. or kw. to 200 h.p. or kw.	69	10,940	470
201 h.p. or kw. to 1000 h.p. or kw.	—	—	—
1001 h.p. or kw. and over	—	—	—
Accessories and parts for d.c. motors and generators	—	—	917
All other motors or generators ⁴	—	—	6,685
Totals .....	...	...	44,390

C. Transformers, by Types, 1962

Type	Number	Total rating kva.	Value \$'000
Distribution transformers - Dry type up to and including 200 kva. 1 phase, 15 kv. and below; except dry type transformers 2 kva. and below	7,723	201,549	2,249
Distribution transformers - Dry type, up to and including 225 kva. 3 phase, 15 kv. and below; except dry type transformers 1 kva. and below	2,085	118,152	1,537
Distribution transformers - Liquid filled type, up to and including 200 kva. 1 phase, 15 kv. and below	49,508	1,311,684	12,990
Distribution transformers - Liquid filled type, up to and including 225 kva. 3 phase, 15 kv. and below	1,122	67,708	832
Power transformers 7,500 kva. and less, up to and including 138 kv. class	1,530	2,225,068	10,383
Power transformers above 7,500 kva. at all voltages, also all kva. ratings in voltages above 138 kv. class	134	8,094,332	11,059
Feeder regulators:			
Single phase step voltage regulators .....	..	..	491
Three phase step voltage regulators with 750 kva. of regulation or less .....	..	..	336
Current transformers:			
Up to and including 15 kv.	27,304	..	1,325
Above 15 kv.			
Potential transformers:			
Up to and including 15 kv.	8,207	..	1,385
Above 15 kv.			
Metering outfits (combination of current and potential transformers in one enclosure):			
Up to and including 15 kv.	597	..	470
Above 15 kv.			
Luminous tube transformers .....	..	..	1,857
Ignition transformers (oil and gas)			
Radio and TV transformers:			
Air core	1,494,708	..	1,462
Powdered iron and ferrite core			
Laminated core			
Transformers for electronic equipment (other than radio and TV)	383,272	..	1,978
Fluorescent transformers and ballasts	2,285,061	..	10,270
Mercury lamp transformers	61,367	..	1,777
Bell ringing and chime transformers	—	—	—
Control and signalling transformers	60,511	..	481
General purpose dry type transformers, up to and including 2 kva.	—	—	—
All other transformers .....	..	..	4,846
Parts and supplies for transformers .....	..	..	1,198
Total .....	...	...	69,989

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1961 and 1962¹ - Continued
D. Electrical Switch Gear and Protective Equipment (Except Telephone Switchboards), 1962

Item	Value
	\$'000
Switchgear assemblies:	
Metalclad switchgear, 5 kv. and 15 kv. with drawout oil circuit breakers	2,008
Metalclad switchgear, 5 kv. and 15 kv. with drawout oilless circuit breakers (includes air and airblast breakers)	7,348
600 volt metal-enclosed switchgear (drawout or fixed breakers, but not including moulded case breakers)	4,775
Control desks, duplex and open switchboards and supervisory control	1,987
Other switchgear assemblies including cubicles, cubicle switchgear, bus trough (except 600 volts) station-type cubicle switchgear, fusegear (over 600 volts) etc., but not including capacitor assemblies	4,232
Power circuit breakers (sold apart from assemblies and not including sectionalizers or reclosers)-Indoor oil or oilless circuit breakers	4,692
Outdoor oil circuit breakers	
Outdoor oilless circuit breakers	
Low voltage air circuit breakers (sold apart from assemblies but not including moulded case breakers)	1,034
Disconnecting switches:	
Indoor type	759
Outdoor type	3,012
Lightning arresters:	
15 kv. and under	854
Over 15 kv.	
Power capacitors:	
Units (sold apart from assemblies)	6
Assemblies (including units)	6
Low voltage switchboards (fused or circuit breaker types)	2,257
Distribution, lighting and residential panelboards (with fuses or moulded case circuit breakers)	13,373
Industrial and residential enclosed safety switches and circuit breakers	4,776
Miscellaneous cabinets, wireways, gutters, surface raceways (excluding conduit and metallic tubing) and bus ducts including feeder, plug and trolley types	3,594
Oil circuit reclosers and sectionalizers, up to and including 15,000 volts and repair parts	6
Relays, switchgear type, protective, auxiliary, regulation, etc. (sold apart from switchgear assemblies)	1,364
Potheads	6
Other switchgear and protective equipment	6,241
Total	62,306

E. Electric Welding Apparatus and Welding Rod, 1953 - 62

Year	Welding apparatus		Welding rod ²	
	Electric arc welding equipment with controls	Other electric welding apparatus ³	Quantity	Value
	\$'000	\$'000	tons	\$'000
1953	1,584	2,253	12,919	3,728
1954	1,213	1,530	11,926	3,634
1955	1,546	1,837	15,100	4,600
1956	2,324	3,215	20,230	6,823
1957	2,426	1,738	20,199	7,675
1958	1,816	1,176	18,474	7,436
1959	1,975	2,300	21,777	8,459
1960	2,175	1,650	19,490	7,342
1961	1,861	2,068	21,236	9,053
1962	2,242	2,094	26,039	11,073

F. Industrial Control Equipment, 1962

Item	Value
	\$'000
A.c. single phase and d.c. full voltage fractional horsepower low voltage manual starting switches including horsepower rated snap switches 1 h.p., 250 v. max.	541
A.c. and d.c. full voltage single phase and 3 phase integral horsepower manual low voltage starters 7½ h.p., 600 v. max.	667
A.c. full voltage single speed and multispeed low voltage magnetic line starters size 0 and up, for squirrel cage motors, 600 v. max. (ampere rated starters for hermetic motors not included)	4,092
A.c. low voltage magnetic contractors size 0 and up, and a.c. or d.c. magnetic multipole relays including single-voltage, double-voltage and timing relays and thermal and magnetic relays intended for starting and running protection of motors, 600 v. max. (thermal overload relay heaters furnished separately not included)	2,025
A.c. reduced voltage manual low voltage starters for squirrel cage motors, 600 v. max. (synchronous and wound-rotor motor controllers not included)	250

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1961 and 1962¹ - Continued
F. Industrial Control Equipment, 1962 - Concluded

Item	Value
	\$'000
A.c. reduced voltage magnetic low voltage starters for squirrel cage motors, auto-transformer, resistor, reactor, part-winding and wye-delta types, 600 v. max. (synchronous, hermetic and wound-rotor motor controllers not included)	443
A.c. full voltage and reduced voltage ampere-rated low voltage controllers for hermetic motors, 600 v. max.	141
A.c. motor control centres consisting of factory assembled groups of low voltage combination magnetic starters, 600 v. max. (self-standing starter racks and assemblies not included)	4,554
A.c. high voltage class E-1 and E-2 induction and synchronous motor controllers, 5,000 v. max. incorporating short circuit current interrupting means higher than 10 times contactor ampere rating	1,462
A.c. low-voltage and unfused high voltage synchronous motor controllers and field panels	107
A.c. combined motor drives including mine hoist and paper-machine drives and liquid rheostats (packaged adjustable voltage drives not included)	325
All other a.c. motor control equipment including a.c. machine tool control and general purpose panels, wall, floor or machine mounted, consisting of grouped general purpose components, devices and starters; racked group control; a.c. magnetic crane and traffic bridge control and a.c. crane protective panels; a.c. magnetic low voltage and unfused high voltage wound-rotor motor control including magnetic secondary panels; a.c. high voltage contactors; low voltage firepump control; static adjustable voltage drives having static power conversion components; all other a.c. magnetic control n.o.p. all push button and indicating light stations larger than ordinarily listed by manufacturers. (Packaged adjustable voltage drives with rotating amplifiers and/or rotating converters, mine hoist drives and motor control centres not included)	2,385
D.c. low voltage magnetic contactors, controllers, starters and time starters including d.c. magnetic machine tool control, d.c. magnetic crane and traffic bridge control, d.c. crane protective panels, d.c. mill auxiliaries, and all other d.c. magnetic control n.o.p. (mine hoist drives not included)	544
D.c. mine and mill combined drives including steelmill, paper machine and rubber-mill drives, and static electronic and semi-conductor rectifier drives (d.c. mill auxiliaries not included)	0
A.c. and d.c. drum and cam switches and controllers, dial starters and rheostats and motor starting and speed controlling resistors mounted separately	461
Brakes with a.c. coils or d.c. coils, their clutches and actuators	242
Pushbutton and indicating light stations up to maximum grouping ordinarily listed by manufacturers, and pushbutton and indicating light components (not including pushbutton and indicating light stations)	1,494
Limit switches and all other pilot control equipment including pressure, vacuum, temperature, and liquid-level switches, plugging switches, speed switches, solenoids and terminal blocks. (Linestarter modification kits, pilot devices used in appliances, air-conditioning, refrigeration, heating and domestic installations not included)	1,025
Resistance welding and electronic control equipment including electronic and static control assemblies, electronic and static magnetic amplifiers, electronic relays, photoelectric controllers, voltage, speed, followup, position, inspection and gauging apparatus and solid-state control devices. (Packaged static adjustable voltage drives not included)	1,319
Renewal parts for industrial control equipment including modification, accessory and repair kits and separately furnished overload relay heaters	1,912
All other industrial control equipment	4,879
Total	28,868

G. Cutouts and Fuses, 1962

Item	Value
	\$'000
Cutouts and fuses:	
Open, semi-enclosed and enclosed distribution cutouts (601 volts and above), indoor and outdoor fused disconnect switches including porcelain housed, removable switch blades for use therewith (do not include fuse links therefor) and repair parts	1,462
Fuse links for distribution cutouts	332
Oil fuse cutouts including fuse links therefor and repair parts	10
Power fuses (solid material type) - Up to and including 600 volts	486
Power fuses 601 volts and above (solid material and current limiting types), fuse supports, fuse mountings and repair parts	
Fuse links for power fuses 601 volts and above (solid material and current limiting types)	
Cartridge fuses	2,093
Plug fuses	
Individual cutouts for cartridge and plug fuses	10
All other fuses	541
Renewal elements for cartridge fuses	10
Total	4,914

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1961 and 1962¹ - Concluded
H. Converter Equipment, 1962

Type	Number	Total rating kv.	Value \$'000
Motor-generator sets up to and including 150 kw. - Induction and synchronous types (including frequency changers)	2,836	10,235	990
Motor-generator sets larger than 150 kw. - Induction and synchronous types (including frequency changers)	50	58,295	3,401
Motor-generator sets - D.c. to d.c. and dynamotors			
Mercury arc power rectifier and excitation cubicles (does not include associated switchgear or transformers)			
Semi-conductor power rectifier equipment including plate and crystal junction types (does not include associated switchgear, transformers or commercial battery chargers):			2,965
5 kw. to 50 kw.			
Over 50 kw.			
Parts and supplies for converter equipment .....	...	...	399
Total of above items	-	-	7,755
Rectifiers for storage battery charging (semi-conductor and/or electron tube type)	-	-	2,062

I. Watt-hour Meters, 1953-62

Year	Quantity	Value	Year	Quantity	Value
	No.	\$'000		No.	\$'000
1953	411,523	6,936	1958	399,935	6,915
1954	434,189	7,368	1959	410,943	7,493
1955	471,354	7,053	1960	315,992	5,978
1956	534,742	8,019	1961	364,089	6,292
1957	469,188	7,951	1962	340,752	5,991

J. Pole Line Hardware, 1953-62

Year	Value	Year	Value
	\$'000		\$'000
1953	8,169	1958	12,303
1954	8,065	1959	12,251
1955	9,130	1960	11,146
1956	11,888	1961	10,617
1957	11,988	1962	11,962

¹ Includes shipments from other industries which manufacture, as a secondary activity, the commodities listed above.

² Electric motors and/or generators as indicated.

³ Included with "All other motors or generators".

⁴ Includes rotors and stators.

⁵ Included in "All other transformers".

⁶ Included with "Other".

⁷ Includes both gas and electric welding rod of ferrous type only.

⁸ Includes "Resistance welding equipment with controls".

⁹ Included with "All other industrial control equipment".

¹⁰ Included in "All other fuses".

TABLE 9. Capital and Repair Expenditures, 1960-62

Year	Capital expenditures			Repair expenditures			Total capital and repair expenditures		
	Construction	Machinery and equipment	Sub-total	Construction	Machinery and equipment	Sub-total	Construction	Machinery and equipment	Total
1960	772	5,056	5,828	1,194	3,514	4,708	1,966	8,570	10,536
1961	813	5,089	5,902	821	3,613	4,434	1,634	8,702	10,336
1962	1,472	5,115	6,587	1,143	3,540	4,683	2,615	8,655	11,270

Source: Business Finance Division. - DBS.

List of Establishments, 1962

Name	Location
Quebec:	
Associated Electrical Industries (Canada) Ltd.	St. Laurent
Beaupre Engineering Works Co.	Verdun
Brown Boveri (Canada) Ltd.	St. Johns
Canada Iron Foundries Ltd.	Lachine
Canadian General Electric Co. Ltd.	Quebec
Electrical Mfg. Co. Ltd.	Montmagny
Electrical Switch Gear Ltd.	St. Lambert
Federal Pacific Electric of Canada	Granby
Ferranti Packard Electric Ltd.	Three Rivers
J. & R. Electric Co.	Montreal
Kearney Corp. of Can. Ltd., James R.	Ste. Therese
Kloekner Moeller Canada Ltd.	Granby
Mackey Automation and Controls Ltd.	St. Michel
Ruam Enterprises Inc.	Montreal
Sangamo Co. Ltd.	Three Rivers
Ontario:	
Acme Electric Corp. Ltd.	Toronto
Al-Ma Equipment Co. Ltd.	Toronto
Allanson Manufacturing Corp. Ltd.	Toronto
Allen-Bradley Canada Ltd.	Galt
Ascor of Canada Ltd.	Scarborough
Bach-Simpson Ltd.	London
Berlet Electronics & Controls Ltd.	Galt
Bogue Electric of Canada Ltd.	Ottawa
Canadian Controllers Ltd.	Birchmount Rd.
Canadian General Electric Co. Ltd.	Guelph
Canadian General Electric Co. Ltd.	Toronto
Canadian General Electric Co. Ltd.	Peterborough
Canadian Sterling Electric	Hamilton
Canadian Westinghouse Co. Ltd.	Hamilton
Canadian Westinghouse Co. Ltd.	London
Canadian Westinghouse Co. Ltd.	Etobicoke
Cansfield Electrical Works Ltd.	Toronto
Carriere & MacFeeters Ltd.	North York
Clare Canada Ltd., C.P.	Toronto
Control Design & Mfg. Co.	Toronto
Controls Company Canada Limited	Toronto
Crompton Parkinson Electrical Ltd.	St. Thomas
Cutler-Hammer Can. Ltd.	Cainsville
Dominion Cutout Co. Ltd.	Scarborough
Dresser Electric Ltd.	Toronto
Electric Control & Eng. Co.	Windsor
Electronic Controls Ltd.	Richmond Hill
Fanner Electrical Products Ltd.	Belleville
Ferranti-Packard Electric Ltd.	Hamilton
Ferranti-Packard Electric Ltd.	St. Catharines
F.H. Welding Machines Ltd.	Toronto
Industrial & Machine Control Co.	Toronto
Industrial Transformer Products	Windsor
Inglis Company Limited, John	Scarborough
Insul-&Corp. (Canada) Ltd.	Toronto
I.T.E. Circuit Breaker (Canada) Ltd.	Rexdale
Jones & Moore Electric Co. Ltd.	Port Credit
Kearney Corp. of Canada Ltd., James R.	Toronto
Leland Electric Company Ltd.	Guelph
Lincoln Electric Co. of Canada Ltd.	Guelph
Line & Cable Accessories Ltd.	Leaside
Link Welder of Canada Ltd.	Newmarket
Lovatt Engineering Ltd.	Windsor
Marquette Equipment (Canada) Ltd.	Scarborough
Mechron Engineering Products Ltd.	Rexdale
McGraw-Edison (Canada) Ltd.	Ottawa
Moloney Electric Co. of Canada Ltd.	Scarborough
Murray-Jensen Mfg. Ltd.	Toronto
Nichols Limited, R.H.	Toronto
Osborne Electric Company Ltd.	Toronto
Pioneer Electric Eastern Ltd.	Etobicoke
Powertronic Equipment Ltd.	Toronto
Precision Welder & Flexopress (Canada) Ltd.	Toronto
Reliance Electric & Engineering (Canada) Ltd.	Welland
Reliance-Reeves-Master Ltd.	Stratford
Robbins & Myers Co. of Canada Ltd., The	Brantford
Robtrot of Canada Ltd.	Sandwich

List of Establishments, 1962 - Concluded

Name	Location
Ontario - Concluded:	
Sangamo Co., Ltd.	Leaside
S. & C. Electric Canada Ltd.	Toronto
Sola-Basic Products Ltd.	Etobicoke
Shoe Machine Parts Ltd.	Toronto
Slater Co. Ltd., N.	Hamilton
Square D. Company Canada Ltd.	Mt. Denis
Stegg Electric Ltd.	Belleville
Syntron (Canada) Ltd.	Stoney Creek
T. & H. Controls	Chatham
Trigon Associates Ltd.	Toronto
Volta Welders Ltd.	Walkerville
Vulcan Electric Products Limited	Toronto
Ward Leonard of Canada Ltd.	Scarborough
Weld-O-Matic Machines Ltd.	Hamilton
Weltronic Co. Canadian Division	Windsor
Western Controls Ltd.	Toronto
Manitoba:	
Pioneer Electric Limited	Winnipeg
Pioneer Electric Brandon Ltd.	Brandon
Saskatchewan:	
Pioneer Electric (Sask) Limited	Regina
Smith-Roles Ltd.	Saskatoon
Alberta:	
Nemco Electric Mfg. Ltd.	Edmonton
Petro-Automation Ind. Ltd.	Calgary
Pioneer Electric (Alberta) Ltd.	Red Deer
Power-Aid Ltd.	Drumheller
British Columbia:	
British Columbia Transformer Co. Ltd.	North Burnaby
Canadian Westinghouse Co. Ltd.	Vancouver
Federal Pacific Electric of Can.	Vancouver
I.T.E. Circuit Breaker (Can.) Ltd.	Vancouver
Research Industries Ltd.	Burnaby
Transco Mfg. Ltd.	Burnaby
Vancouver Electric Boxes Ltd.	Vancouver

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

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.

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.

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).



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(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.