

CATALOGUE No. 43-208

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ANNUAL



# BATTERY MANUFACTURERS

1961

The list of firms normally included in this report has been omitted from this issue, along with certain tables. See introductory text for details.

ANNUAL CENSUS  
OF MANUFACTURES

DOMINION BUREAU  
OF STATISTICS

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### SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.

## EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1961 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. Implementation of the new definition of the establishment in the 1961 Census has resulted in certain changes and necessitated some adjustments to the statistics for previous years in order to maintain comparability of the data. (See following note on "Establishment".)

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1961, are as follows:

### Period Covered

Firms 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 the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

### Establishment

The reporting unit in the Census of Manufactures is the **establishment**. Beginning with the 1961 Census, the establishment is defined as follows:

The smallest unit which is a separate operating entity capable of reporting all the following:

- Materials and supplies used,
- Goods purchased for resale as such,
- Fuel and power consumed,
- Number of employees and their pay,
- Inventories,
- Shipments or sales.

The establishment is to be distinguished from smaller subdivisions or departments which do not have records which 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 operations which were classifiable to different industries. Beginning with 1961, separate reports for such operations will be required only in cases where accounting records can provide all the elements of principal statistics enumerated above. 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.

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing operations. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were principally engaged in manufacturing operations. 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. Again adjustments to the industry statistics were made to reflect the removal of such reporting units for the period 1957-1960. These reporting units are now listed as establishments in other Bureau industry surveys, such as Wholesale Trade, Construction, etc. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

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 earlier.

Prior to 1961, the main emphasis in the Census of Manufactures was on manufacturing activity whereas, beginning with 1961, each establishment reports on the total operations carried out within its accounting boundaries (except income from investments such as rent, interest and dividends). However, data on different activities (manufacturing, selling, construction by own labour force etc.) are requested separately. The 1961 statistics in this report are confined to manufacturing activity in order to maintain comparability with previous years. In the 1962 reports it is planned to show both 1961 and 1962 data on the "total activity" basis in addition to the data on manufacturing operations.

### Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level, and clerical employees. Working owners and partners are also included in this category but will be shown separately in subsequent years.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, handling, warehousing and delivery staff. Employees on new construction work, in retail or wholesale operations, on outside piece work, etc, are not included.



Production workers are reported by months, 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. Figures on employment refer to the calendar year whether or not some establishments reported other data on a financial year basis.

### Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included with salaries, but will be shown separately in subsequent years. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

### Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the establishment including freight, duty, etc.

### Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the establishment, of materials, supplies and components actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants or reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

### Factory Shipments

Factory shipments generally refer to 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 establishment for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm which are treated as separate establishments are included. Goods bought or received as transfers and resold without further processing are not included. Values are requested

on f.o.b. establishment basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, aircraft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries 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 finished units delivered in the year under review.

### Inventories

Values represent the book value of manufacturing inventory. Figures consist of inventory at the plant and at warehouses or selling outlets which are treated as extensions of the plants for the purpose of reporting shipments.

### Value added by Manufacturing

Value added is compiled by deducting the cost of materials, 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). Value added is sometimes referred to as net production.<sup>1</sup>

### Standard Industrial Classification

The revised Standard Industrial Classification which was introduced with the 1960 Census of Manufactures provides for a breakdown of the universe into 140 industries arranged in 20 major groups compared with 135 industries in 17 major groups in the old classification which was used in the compilations for the years 1949 to 1959 inclusive. Full details 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. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Establishments engaged solely in repair work are not included in manufacturing industries (except in the case of furniture, shipbuilding, boat building, aircraft and railroad rolling stock industries) but establishments principally engaged in assembling parts into complete units are included.

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<sup>1</sup> To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of advertising, insurance and other business costs which are not collected in the annual Census of Manufactures. Value added figures for the primary industries, manufacturing and construction are published in D.B.S. publication 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 only for certain principal items of shipments. For purposes of publication, missing data were estimated on the basis of appropriate ratios. For the 1959 and 1960 censuses the general limit for short forms was raised from \$50,000 to \$100,000 value of shipments and a new intermediate 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 inter-

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

In the 1961 Census, in addition to the question on shipments of goods of own manufacture, 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, are generally estimated by using ratios based on the change in the value of shipments from year to year. This is to permit the complete compilation of basic industry statistics by industry and by geographic location. The proportion of the estimated data is generally less than 5 per cent of the total in each category of principal statistics.





# BATTERY MANUFACTURERS

1961

Data for 1961 presented in this report 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 1961 industry statistics—see item “Standard Industrial Classification” and “Establishment” in the Explanatory Notes section of this report. For statistical purposes the industry titled Battery Manufacturers in the revised Standard Industrial Classification covers the operations of establishments primarily engaged in manufacturing storage and primary batteries including wet and dry batteries.

The introduction of the new definition of establishment (reporting unit) in the 1961 Census of Manufactures has resulted in certain changes and

necessitated some adjustments to the statistics. The effect of these changes in the case of the industry under review is indicated in the comparative series presented in Table 1A and 1B. Table 1A shows data according to the “old” concept while Table 1B reflects the implementation of the “new” or revised Standard Industrial Classification and the New Establishment Concept for the years 1957 to 1961.

As a result of increased work loads and staff shortages it has been necessary to suspend publication of certain tables normally contained in this report. It is planned to resume publication of these tables in the 1962 reports. In general the tables affected are the following: Directory of firms—Imports—Exports—Capital and Repair Expenditures.

**TABLE 1 A. Principal Statistics, Significant Years 1949-59: Batteries Industry**

Basis: Standard Industrial Classification in use prior to 1960

Year and province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Value of factory shipments
	number			dollars			
1949 .....	24	2, 140	5, 232, 393	289, 978	18, 509, 992	12, 367, 069	31, 167, 039
1950 .....	26	2, 174	5, 555, 442	340, 595	21, 202, 084	13, 014, 927	34, 557, 606
1951 .....	25	2, 139	6, 139, 832	370, 256	23, 983, 736	13, 367, 364	37, 721, 356
1952 .....	26	2, 094	6, 455, 438	370, 708	25, 253, 692	15, 084, 340	40, 708, 740
1953 .....	26	2, 091	6, 979, 527	440, 680	19, 486, 735	15, 536, 192	35, 463, 607
1954 .....	31	2, 122	7, 256, 190	419, 830	19, 582, 999	14, 713, 016	35, 302, 822
1955 .....	36	2, 237	7, 872, 246	484, 022	23, 718, 135	15, 722, 359	40, 055, 423
1956 .....	36	2, 244	8, 017, 309	574, 170	25, 702, 818	14, 540, 125	41, 133, 182
1957 .....	34	2, 296	8, 948, 462	565, 613	24, 573, 500	18, 030, 192	41, 678, 716
1958 .....	31	2, 183	8, 494, 204	511, 447	22, 184, 794	15, 387, 640	39, 604, 763
1959 .....	29	2, 223	9, 133, 750	556, 318	23, 477, 934	19, 225, 772	42, 106, 864

**TABLE 1 B. Principal Statistics, Battery Manufacturers, by Provinces, 1957-61**

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year and province	Estab- lish- ments	Em- ployees	Saleries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Value of factory shipments
	number		dollars				
1957							
Newfoundland, Nova Scotia, Quebec and Ontario .....	18	1,745	7,146,186	451,565	18,266,126		30,860,957
Manitoba and Alberta .....	5	366	1,188,311	88,401	4,088,598		6,526,219
British Columbia .....	8	86	239,206	23,147	534,425	1	987,678
Canada .....	31	2,197	8,573,703	563,113	22,889,149		38,374,854
1958							
Newfoundland, Nova Scotia, Quebec and Ontario .....	16	1,689	6,705,274	401,815	16,707,749	10,739,029	28,660,677
Manitoba and Alberta .....	5	331	1,155,022	84,878	3,466,099	3,094,231	6,984,898
British Columbia .....	7	79	271,294	22,723	464,941	460,458	950,943
Canada .....	28	2,099	8,131,590	509,416	20,638,789	14,293,718	36,596,518
1959							
Newfoundland, Nova Scotia, Quebec and Ontario .....	15	1,684	7,131,852	427,090	17,038,208	13,814,799	30,606,836
Manitoba and Alberta .....	5	382	1,331,457	103,604	4,308,342	3,829,456	7,895,790
British Columbia .....	6	70	263,732	24,175	537,098	459,990	988,710
Canada .....	26	2,136	8,727,041	554,869	21,883,648	18,104,245	39,491,336
1960							
Newfoundland, Nova Scotia, Quebec and Ontario .....	14	1,596	7,069,715	381,984	16,126,700	12,986,693	29,098,983
Manitoba and Alberta .....	5	370	1,329,537	87,964	3,332,972	3,278,688	6,896,982
British Columbia .....	6	69	266,094	22,629	529,558	416,097	967,278
Canada .....	25	2,035	8,665,346	492,577	19,989,230	16,681,478	36,963,243
1961							
Newfoundland, Nova Scotia, Quebec and Ontario .....	16	1,578	7,379,394	389,738	15,936,849	15,031,434	31,201,517
Manitoba and Alberta .....	6	378	1,451,468	87,562	3,933,564	3,712,922	7,872,371
British Columbia .....	5	63	220,974	22,080	514,719	402,842	974,750
Canada .....	27	2,019	9,051,836	499,380	20,385,132	19,147,198	40,048,638

<sup>1</sup> Because of lack of inventory data "Value added" is not available for 1957.**TABLE 2. Inventories,<sup>1</sup> Battery Manufacturers, 1961**

	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
Opening:				
Newfoundland, Nova Scotia, Quebec and Ontario..	1,976,445	1,956,167	2,715,436	6,648,048
Manitoba and Alberta .....	731,601	409,747	620,502	1,761,850
British Columbia .....	201,193	29,044	95,966	326,203
Canada .....	2,909,239	2,394,958	3,431,904	8,736,101
Closing:				
Newfoundland, Nova Scotia, Quebec and Ontario..	2,150,109	2,073,748	2,754,359	6,978,216
Manitoba and Alberta .....	698,775	387,300	504,626	1,590,701
British Columbia .....	186,065	28,902	60,999	275,966
Canada .....	3,034,949	2,489,950	3,319,984	8,844,883

<sup>1</sup> (a) Book value of all manufacturing inventories owned and held at plant and plant warehouses.

(b) The opening inventory for 1961 differs from the closing inventory for 1960 because of the receipt of revised data, the inclusion of new establishments, the removal of figures for establishments which did not operate during 1961, changes in classification, and the implementation of the New Establishment Concept.



TABLE 3. Materials Used: Battery Manufacturers, 1961

Material	Quantity	Total cost at plant
		\$
Ammonium chloride (sal ammoniac) ..... lb.	1,384,300	85,517
Battery boxes and containers .....	...	3,546,291
Carbon plates, blanks, etc. ....	...	276,192
Carbon electrodes .....	...	192,432
Graphite ..... lb.	299,115	15,059
Insulating waxes .....	...	23,075
Lead oxide:		
Litharge ..... lb.	6,261,838	752,448
Red lead ..... "	162,533	21,270
Manganese dioxide ..... "	4,317,495	442,264
Sulphuric acid, 100% ..... "	7,821,236	127,543
Battery separators:		
Wood .....	...	27,651
Other .....	...	1,359,141
Zinc chloride ..... lb.	750,850	55,559
Iron and steel:		
Stampings ..... ton	10	4,484
Other forms .....	..	192,581
Non-ferrous metals (all forms):		
Antimony ..... lb.	400	104
Brass and bronze ..... "	23,250	21,248
Copper:		
Wire, bare ..... "	8,626	4,701
Wire, insulated .....	...	16,492
Other forms ..... lb.	33,431	13,801
Lead:		
Pig (pure) ..... "	20,639,365	2,090,580
Antimonial ..... "	23,151,132	2,659,379
Other forms ..... "	153,309	19,332
Mercury ..... "	2,204	5,998
Zinc (all forms) .....	...	722,525
Other non-ferrous metals ..... lb.	1,800	3,060
Asphalt and pitch .....	...	103,803
Paints, stains, lacquers, etc. ....	...	5,149
Containers and other packaging materials .....	...	791,445
Operating supplies .....	...	802,894
All other materials .....	...	6,003,114
<b>Total .....</b>	<b>...</b>	<b>20,385,132</b>

**TABLE 4. Factory Shipments of Dry Cell Batteries, 1961 (from All Industries)**

Type	Quantity	Selling value at plant
		\$
Dry cell:		
6-inch batteries ..... No. of cells	1,535,287	1,024,520
Radio batteries for portable sets .....	34,787,645	2,253,402
Radio batteries for non-portable sets .....	9,678,490	815,118
Flashlight batteries .....	35,278,820	4,057,838
Hearing-aid batteries:		
"A" batteries .....	}	31,074
"B" batteries .....		
All other dry batteries .....	...	1,427,982
<b>Total</b> .....	...	<b>9,609,934</b>

**TABLE 5. Factory Shipments of Electric Storage Batteries, by Types, 1961 (from All Industries)**

Type	Quantity	Selling value at plant
		\$
Automotive type (all types primarily designed to fit passenger cars):		
For initial installation ..... batteries	379,929	3,174,861
For replacement purposes .....	1,977,891	17,223,141
Heavy-duty transport, motor coach and diesel starting batteries:		
For initial installation .....	42,074	410,738
For replacement purposes .....	89,961	1,592,893
Marine .....	4,975	235,653
For farm lighting .....	7,206	140,782
For railway service (excluding railroad signalling but including diesel starting, air conditioning, car lighting) .....	16,159	759,258
For direct motive power (industrial truck, mine locomotive, etc.) .....	28,655	1,966,817
For all other purposes (aircraft, motorcycle, communication, etc.) .....	...	1,248,248
<b>Total</b> .....	...	<b>26,752,391</b>

**TABLE 6. Principal Statistics classified according to Type of Ownership: Battery Manufacturers, 1961**

Type	Establishments	Employees	Salaries and wages	Cost at plant of materials used	Value of factory shipments
	number			dollars	
Incorporated companies .....	27	2,019	9,051,836	20,385,132	40,048,638
<b>Totals</b> .....	<b>27</b>	<b>2,019</b>	<b>9,051,836</b>	<b>20,385,132</b>	<b>40,048,638</b>

**TABLE 7. Principal Statistics grouped according to Selling Value of Factory Shipments: Battery Manufacturers, 1961**

Establishments reporting value of factory shipments	Establishments	Employees	Salaries and wages	Cost at plant of materials used	Value of factory shipments
	number			dollars	
Under \$10,000 to \$ 49,999 .....	6	25	69,712	72,323	158,860
\$ 50,000 to \$999,999 .....	7	120	402,674	863,554	1,550,620
1,000,000 and over .....	14	1,874	8,579,450	19,449,255	38,339,158
<b>Totals</b> .....	<b>27</b>	<b>2,019</b>	<b>9,051,836</b>	<b>20,385,132</b>	<b>40,048,638</b>

TABLE 8. Employees and their Earnings: Battery Manufacturers, by Provinces, 1961

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
Newfoundland, Nova Scotia, Quebec and Ontario.....	379	131	768	300	1,578	2,999,369	4,380,025	7,379,394
Manitoba and Alberta .....	84	32	181	81	378	597,243	854,225	1,451,468
British Columbia .....	13	3	40	7	63	65,359	155,615	220,974
Canada .....	476	166	989	388	2,019	3,661,971	5,389,865	9,051,836

TABLE 9. Production Workers, by Months: Battery Manufacturers, 1961

Month	Establishments reporting monthly detail	
	Male	Female
January .....	953	351
February .....	934	370
March .....	935	393
April .....	928	412
May .....	960	414
June .....	977	425
July .....	1,010	417
August .....	1,018	406
September .....	1,045	383
October .....	1,051	375
November .....	1,035	369
December .....	1,001	361
Average for all establishments .....	989	388

TABLE 10. Fuel and Electricity Used: Battery Manufacturers, 1961

Kind	Quantity	Cost at plant
		\$
1. Establishments reporting commodity detail: <sup>1</sup>		
Bituminous coal — Imported .....	ton 464	5,491
Anthracite coal .....	" 749	8,636
Lignite coal .....	" 497	2,709
Gasoline (including gasoline used in cars and trucks) .....	Imp. gal. 14,341	5,029
Fuel oil including kerosene or coal oil .....	" 619,340	74,887
Gas: (a) Liquefied petroleum gases .....	" 68,491	30,023
(b) Natural gas .....	M cu.ft. 90,323	64,865
Other fuel .....	... 5,988	
Electricity purchased .....	kwh. 28,301,491	284,674
2. Estimate for establishments for which no data were collected: <sup>2</sup>		
Cost of fuel and electricity .....	...	17,078
3. All establishments:		
Total cost of fuel and electricity .....	...	499,380

<sup>1</sup> Large establishments.<sup>2</sup> Small establishments.



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