BOARD OF TRADE

S 42 [HA 25]

The Report on the Census of Production for 1954

Volume 4: Industry N

BATTERIES AND ACCUMULATORS

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The Report on the Census of Production for 1954

VOLUME 4 INDUSTRY N

BATTERIES AND ACCUMULATORS

THIS REPORT on the Batteries and Accumulators Industry relates to establishments engaged wholly or mainly in the manufacture of dry batteries, including radio and flash lamp batteries, and accumulators for all purposes.

Establishments in this industry in Northern Ireland were excluded in 1948; no production was recorded there by larger establishments in this industry for 1951 or 1954.

This industry corresponds to minimum list heading 75 in the Standard Industrial Classification.

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IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

The following notes describe terms in general use in the tables of the report. More detailed explanations of the terms used and a description of the scope and method of taking the census are given in the separate booklet entitled 'The Report on the Census of Production for 1954 - Introductory Notes' (price 1s. 6d.

Industrial Classification: Establishments are classified to industries according to the nature of their output and, as far as possible, in conformity with the Standard Industrial Classification. Certain products are identified as the principal products of individual industries, the principal products for a given industry being of a similar nature or commonly associated in production. The principle of classification normally followed is that an establishment is classified to an industry if its output of the principal products of that industry accounted for a greater proportion of the value of its output than did its output of the principal products of any other industry.

Specialist producers normally comprise those establishments 50 per cent. or more of whose total output by value is accounted for by the characteristic products of the specialist group.

Intermediate products: For some industries figures are given showing the total quantities made during the year of intermediate products, i.e., products which may be further processed in the establishments in which they are produced.

Larger establishments: The information given in the report relates mainly to 'larger establishments', i.e., establishments of firms employing on the average more than 10 persons. In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g., a mine or factory). Offices, warehouses, laboratories and other ancillary places of business situated apart from the producing works are not regarded as separate establishments and are included in the return for the works.

Small firms are those employing on the average 10 or fewer persons.

The estimates for the industry as a whole given in Table 1 are normally obtained by increasing the other items shown in the same proportion as total employment.

Gross output (production) is the total value of goods made and other work done during the year: it is obtained by adjusting the value of sales and work done during the year for changes in the value of stocks of products on hand for sale and work in progress.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used, the amount paid for work given out, and, for 1951 and 1954, any transport payments made. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents; rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits.

Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. The value of sales is the net selling value, i.e., the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the

Materials and fuel: The total cost of materials and fuel purchased includes all purchases during the year of materials for use in production, and of fuel (includ-

ing oil, gas and electricity) for all purposes; packing materials, including the full cost of returnable cases when first purchased; workshop and office materials; water charges; materials for repairs to buildings, plant and vehicles when carried out by firms' own work-people included in their returns; consumable tools; and parts for machinery purchased as replacements, Purchases of goods for merchanting are excluded. The cost of materials and fuel used, given in Table 2, is obtained by adjusting purchases for changes during the year in the value of stocks.

Stocks: Firms were required to give stocks of materials and fuel, products on hand for sale, and work in progress, at income tax values.

Customs and Excise Duty paid on materials purchased is normally included in the cost of materials. Finished goods are similarly valued as they were sold, duty-paid or duty-free. The net amount of any duty paid is deducted in arriving at net output.

Employment: Total employment includes working proprietors, administrative, technical and clerical employees, and operatives, but excludes outworkers, canteen employees and persons engaged in merchanting or any other activity not covered by a firm's return, who are shown separately as excluded employees. Employees are persons on the pay-roll (i.e., persons whose National Insurance cards were held by employers), whether employed full-time or part-time.

Working proprietors are proprietors of businesses other than limited companies, together with members of their families who worked in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded. For Northern Ireland directors of limited companies (other than those paid by fee only) are also included.

Administrative, technical and clerical employees include directors, other than those paid by fee only (except in Northern Ireland); managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

Operatives include all other classes of employees, i.e., broadly speaking, all manual workers.

Outworkers are persons employed by the firm who work on materials supplied by the firm in their own homes.

Wages and salaries include all overtime payments, bonuses and commissions without any deductions for income tax, insurances, contributory pensions etc. They exclude payments to working proprietors.

Capital expenditure includes expenditure on new building work, and on plant, machinery and vehicles, charged to capital account during the year, including any transport and installation costs involved. It includes expenditure in respect of establishments in Great Britain which had not begun production before the end of the year (which has not previously been included in the Census of Production reports for individual industries).

Symbols used:

- .. for not available
- for nil or negligible (less than half the fine) digit shown).

Where figures are rounded, e.g., given to the nearest £ thousand, there may be apparent slight discrepancies between the sums of constituent items and the totals shown. In some cases, figures have been combined with others of a similar nature where publication of separate details might disclose information relating to an individual undertaking.

Industry summary: Estimates for the industry as a whole

TABLE 1

		United Kingdom	Scotland	Wales	
D	1948	1951	1954	195 4 (a)	1954 (g)
	£ million	£ million	£ million	£ million	£ million
Gross output (production)	21.8	33.3	32.9		
Net output	9.4	11.4	14.0		
Total stocks and work in progress At beginning of year Change during year	4.3	6.1	5.9	••	
Capital expenditure less disposals (b)	0.5	0.6	0.5		
Wages and salaries	4.8	6.1	7.4		
Total employment (including	Thousands	Thousands	Thousands	Thousands	Thousands
working proprietors)	16.6	17.0	17.3		

(a) Owing to the risk of disclosure of information relating to individual firms separate particulars for S∞tland and Wales cannot be given.

(b) Capital expenditure on new building work, plant, machinery and vehicles (including (except in 1948) that incurred in Great Britain for establishments not yet in production), less amounts received for plant, machinery and vehicles disposed of.

Summary of returns received

TABLE 2

		Unit	Great Britain	United Kingdom		
		UNIC	1948	1951	1954	
TRMS EMPLOYING ON AVERAGE	MORE THAN 10 PERSONS					
Number of establishments		No.	59	53	50	
Total value of sales and wor	k done	£'000	20,673	31.131	31,631	
Products on hand for sale	(at beginning of year	"	1,904	3,037	3,240	
and work in progress	change during year		+ 540	+ 1,312	+ 504	
Gross output (production) (c			20,972	32,444	32,135	
Purchases of materials and i	in a l		10.001			
	(at beginning of many	"	12,301	21,981	17,945	
Stocks of materials and fuel	change during year	"	+ 2,227	2,865	2,560	
Cost of materials and fuel u			11,982	+ 1,137	+ 85	
Payment for work done on mat			11, 362	20,844	17,860	
Payment for transport (b)			241	474	15 573	
Net output						
	(N-	8,978	11,124	13,686	
Average number of employees	{ operatives others	No.	12,843	12,949	12,887	
Total employment (d)	Cothers		3,081(c)	3,570	4,007	
Net output per person employ	ed (d)	3	15,926	16,520	16,895	
mer output per person omprey		-	564	673	810	
W	(of operatives	£,000	3,355	4,252	4.994	
Wages and salaries	of operatives of others		1,297	1.695	2,227	
				2,000	2,227	
Capital expenditure						
New building work (e)			58	132	112	
Plant and machinery	{ acquisitions (e)		409	440	430	
	disposals (acquisitions (e)	"	24	53	90	
Vehicles	disposals	"	35	52	95	
	(araboadra	"	8	6	12	
IRMS EMPLOYING ON AVERAGE	10 OR FEWER PERSONS					
Number of returns		No.	138	90(5)	T 0	
Total employment, includin	a working	1,0.	130	82 (f)	76	
proprietors			602	434(f)	353	
			002	404(1)	333	

(a) For the year 1948 gross output excludes payments for transport services outwards on finished goods sold.

For subsequent years gross output includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services.

(b) Payments to other firms and undertakings and to firms' own separate transport organisations. For the year 1948 payments cover only transport outwards of finished goods sold. For subsequent years they cover payments for transport of both finished goods sold and materials and fuel purchased.

(c) Number in week ended September 25, 1948.

(d) Including working proprietors.

(e) Excluding expenditure for establishments not yet in production.

(f) Excluding Northern Ireland. No information about small firms was collected in Northern Ireland for 1951.

(85258)

Analysis by size, 1954

Larger establishments in the United Kingdom

	Estab-	Gross	Net	Emplo	yees	Wages and	salaries	Capital	Net output per person
Average number employed (a)	lish- ments	ish- output output		Others	expenditure (b)	employed (a)			
	Number	£' 000	£, 000	Number	Number	£'.000	£, 000	£, 000	£
11 - 24(c)	11	426	148	122	41	54	20	7	910
25 - 49	9	817	288	212	73	92	51	61	1,006
50 - 99	6	1.447	450	390	116	166	58	23	889
100 - 199	6	1.536	597	636	168	229	101	77	743
200 - 299	4	1,195	538	803	207	294	101	59	533
300 - 499	4	3,453	1.321	1,100	403	464	217	36	879
500 - 749	3	2,687	1,393	1,489	438	530	263	25	723
1,000 and over	7	20,575	8,951	8,135	2,561	3,163	1,416	348	837
Total	50	32,135	13,686	12,887	4,007	4.994	2,227	637	810

(a) Including working proprietors.
 (b) Capital expenditure on new building work and on acquisition of plant, machinery and vehicles.
 Excluding expenditure for establishments not yet in production.
 (c) Including a small number of establishments with fewer than 11 persons employed, particulars of which were included with those for larger establishments on a single return.

Analysis according to specialisation within the industry, 1954 Larger establishments in the United Kingdom

TADIE A

TABLE 4	1			
		Specialist p	roducers of	
	Unit	Primary batteries and cells, and parts thereof other than carbons	Accumulators, and parts and accessories	Total
Number of establishments Total value of sales and work done Sales of characteristic products Products on hand for sale and beginning of year and work in progress change during year Gross output (production) Purchases of materials and fuel Stocks of materials and fuel at beginning of year change during year Cost of materials and fuel at beginning of year change during year Cost of materials and fuel used Payment for work done on materials given out Payment for transport Net output Average number of employees others Total employment (b) Net output per person employed (b)	No. £'000	21 11.929 9.222 879 + 183 12.112 6.316 1.077 + 118 6.198 383(a) 5.531 7.374 1.605 8.979 616	29 19.702 17.973 2.360 + 321 20.023 11.629 1.482 - 33 11.663 205(a) { 8.155 5.513 2.402 7.916 1.030	\$0 31,631 3,240 + 504 32,135 17,945 2,560 + 85 17,860 15,573 13,686 12,887 4,007 16,895
Wages and salaries { of operatives of others	£.000	2,296 855	2,698 1,372	4,994
Capital expenditure New building work (c) Plant and machinery Vehicles Cacquisitions (c) disposals acquisitions (c) disposals		30 224 75 47 1	82 206 14 48 10	112 430 90 95 12

⁽a) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

BATTERIES AND ACCUMULATORS

Sales of the principal products of the industry, including sales of these products by establishments classified to other industries

Larger establishments in the United Kingdom

TABLE 5

	1951			1954		
.7	Quanti ty	Value	Quantity	Value	Entries	
Primary batteries and cells	Th.cells	£,000	Th.cells	£.000	Number	
Complete	849,865	8.467 327	877,462	9.027 292	} 12	
Parts, other than carbons (a)		998		654	11	
Accumulators						
Complete						
Portable	Th. batteries		Th. batteries			
For motor vehicle starting, lighting and ignition	1,758	8,543 4,109	1,826	8,149 3,994	23	
For traction	Th.cells 268	1.769	Th.cells 320	2,165	11	
For radio	Th. batteries 393	240	Th. batteries 247	159	12	
Other portable	Th.cells 710	1,556	Th.cells 1,785	2.867	12	
Stationary	293	1,215	401	2,253	12	
Unclassified	213	1,965	-	-		
Parts and accessories (a)		3,725		3,048	23	
Waste products other than scrap metals		19		42	13	
Repair and maintenance work on customers machinery and plant	1	49 (b) {		60 (c)	8	
Research and development work	Y	10(0)		205	6	
Total		32,983		32,915		
Sales in other industries (see Table 6)		5,124		5,369		
Principal products of this industry sold by establishments in the industry		27,859		27,546	32	

(a) Excluding sales of battery and cell cases by establishments classified to other industries.

(b) Amount charged exclusive of the value of goods made and recorded as output.

(c) Amount charged.

Sales of principal products of the industry by establishments classified to other industries

Larger establishments in the United Kingdom

TABLE 6

	Contract Contract	Principal industries in		
	Quantity	Value	Entries	which produced (a)
		£,000	Number	
Primary batteries and cells, and parts other than carbons		707	6	1L, 4K, 4M, 11A
Accumulators, and parts and accessories	••	4,662	11	4K. 4M
Total		5,369		

⁽a) The volume number and industry references given are to the industries shown in the list at the back of this report.

⁽b) Including working proprietors.(c) Excluding expenditure for establishments not yet in production.

Sales in the industry of other than principal products

Larger establishments in the United Kingdom

TABLE 7

	1954		
	Quantity	Value	
		£*000	
Electrical goods, other than batteries and accumulators		2,366	
Other goods		1,085	
Scrap metals sold		572	
Work done, other than repair, maintenance, research and development work (a)		62	
Total		4,085	

⁽a) Amount charged.

TABLE 8 - Total make of intermediate products
This table is not applicable to the industry.

Purchases of materials and fuel, 1954 Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th.cwt.	£.000
Materials		
Iron and steel		
Drop forgings		
Wrought tubes and fittings for wrought tubes		
Wire and wire manufactures, including wire cables and ropes	1.3	4
Transmission and conveyor chains	The second second	
Other iron		
Castings in the rough or machined. except machined cast <u>i</u> ngs elsewhere specified	2.1	3 6
Other steel (alloy and non-alloy)		
Ingots, blooms, billets and slabs, and sheet and tinplate bars	11.3	32
Angles, shapes, sections, bars, rods (including wire rods) and girders, beams and joists (not fabricated)		32
Plates and sheets, and hoop and strip (including tape)	36.0	115
Castings in the rough or machined, except machined castings elsewhere specified		2
Springs, laminated and other types		
Aluminium and aluminium alloys in all forms, except finished parts, wire and scrap	2.1	22
Brass and other alloys of copper, including nickel silver and cupro-nickel, but excluding other nickel alloys		
Plates, sheets and strip	0.3	5
Other descriptions, except finished parts, wire and scrap	2.9	39 28
Copper in all forms, except finished parts and scrap	15.9	213
Lead and alloys of lead (including soft solder) in all forms, except finished parts and scrap	753.8	4.040
Zinc and alloys of zinc, except brass, in all forms, except finished parts and scrap	261.9	1.355

TABLE 9 (contd.)

To the state of th	Quantity	Cost
Materials (contd.)	Th.cwt.	£. 000
Uninsulated wire, cables and flexibles of non-ferrous		
metals except copper	-	1
Glass in all forms	15.1	139
Mica	••	49
Bitumen and bitumastic compound	•	1
bitumen did bitumastic compound	52.3	55
Paint, enamel and varnish, including emulsion paints,	Th.gal.	
cellulose-based paints and lacquers	48.5	75
	Th.cwt.	
Plastics materials in all forms, except finished parts	17.2	257
	••	37
Porcelain and other ceramics in all forms	0.5	6
Rubber, including hard rubber, balata, gutta percha and		4
synthetic rubber in all forms including finished parts	59.8	1,324 581
Timber (excluding timber for packing, i.e. for making into cases, drums, etc., or for repairing returnable cases.		
and veneers)	Th.cu.ft.	
Hardwood and softwood	162.5	165
Di	Th.sq.ft.	
Plywood, including block-board, batten-board and laminboard	53.1	
The state of the second of the	Th.1b.	2
Yarn, thread, tape and cloth, not oiled or otherwise coated	33.9	16
or impregnated with insulating materials	••	8
Electrical insulating materials not elsewhere specified		22
Insulated wires, cables, flexibles, strips and strands		75
Purchased components		
Batteries and accumulators		143
Electrical machinery and parts thereof		
Measuring and control instruments		49
Other purchased electrical components		432
Other finished parts not elsewhere specified		
Wholly or mainly of plastics materials		746
Other, except those of rubber and glass		491
	Th.gal.	401
Lubricating oils and greases, including cutting oils		
and emulsions	33.6	8
Replacement parts for plant, machinery and vehicles and accessories bought as replacement		0.40
Consumable tools, including engineers' small tools, jigs,		242
fixtures and measuring instruments, bought as replacement		73
Packing materials		
	Th.cu.ft.	
Timber and wooden crates, packing cases, etc.	346.7	236
Paper, including transparent cellulose wrapping, and		59
paperboard and containers made from these materials.		
including fibreboard packing cases		254
Other packing materials		141
All other purchased materials		5,625

TARIF 9 (contd.)

TABLE 9 (contd.)	Quantity	Cost
	Th.tons	£,000
Fuel and electricity		
Coal	42.0	176
Coke	8.1	45
Liquid fuels (including creosote/pitch mixtures)		
For use in internal combustion engines	Th.gal.	
Motor spirit (petrol) for use in road vehicles and derv. fuel	379	77
Other	7	the ball the latest
For burning in furnaces, boilers, kilns, etc.	595	27
Gas purchased (a)	Th.therms	
From Gas Boards	1,247	73 43
From other sources, including other departments of the same firms		1
Electricity purchased (a)	Th.kWh.	
From Electricity Boards	67.701	319
From other sources, including other departments of the same firms	161	1
All other purchased fuel		•
Total cost		17,945

(a) Owing to the risk of disclosure of information relating to individual firms, the total quantity of electricity generated, and gas produced at firms own establishments cannot be given.

Average number of employees, and wages, salaries and superannuation payments (a)

Larger establishments in the United Kingdom

TA	BLE	10

	1951	1954
	Number	Number
Average number of employees		
Operatives	12,949	12,887
Administrative, technical and clerical employees	3,570	4,007
Total	16,519	16,894
	€.000	£.000
Wages and salaries paid to		
Operatives	4,252	4,994
Administrative, technical and clerical employees	1,695	2.227
Total	5,947	7,221
	2	£
Wages and salaries per head		
Operatives	328	388
Administrative, technical and clerical employees	475	556

TABLE 10 (contd.)

70	1951	1954
Superannuation and other pension funds for employees and dependents		£.000
Employers' contributions		363
Employees covered		Number
	••	8,895
Pension, etc. payments to former employees and		£,000
dependents		19

(a) The following persons, not included above, were also employed by larger establishments in this industry ('other workers' includes, for example, employees engaged in merchanting):

	1951	· 1954
Canteen workers	Number	Number
Males		
Females	100	4
1 Cmules	126	110
Total	130	114
	100	114
Other workers		
Males	65	32
Females	57	35
Total	122	67
Total excluded employees	050	
rotar excluded employees	252	181

Employment in a specified week (a)

Larger establishments in the United Kingdom

T	A	R	H.	1

	1951		1954			
	Males	Females	Total	Males	Females	Total
Working proprietors	1	-	1	1	-	,
Operatives	6.715	6.758	13,473	6,656	6,755	13,411
Administrative, technical and clerical employees	2,088	1.518	3,606	2.397	1.659	4.056
Total employees	8,803	8,276	17,079	9,053	8,414	17,467

(a) Week ended September 22, 1951, or October 30, 1954.

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