

48 Copper, brass and other copper alloys

This Report on the Copper, Brass and Other Copper Alloys Industry relates to establishments engaged wholly or mainly in refining copper, making copper alloys (brass, bronze etc), and in the production in copper and its alloys of ingots, bars, billets, sheets, strip, foil, circles, sections, rods, pipes, tubes, etc, and of die castings. The production of engineers' castings, stampings and pressings is included but wire drawing and the production of finished goods such as hollow-ware are excluded.

This industry corresponds to minimum list heading 322 in the Standard Industrial Classification (Revised 1968) which has been used for the first time as a basis of classification in the 1968 Census.

The industry formed part of the Non-ferrous Metals Industry (Part 40) in the Reports on the last detailed Census of Production for 1963 and the remainder is now the subject of two other Reports for 1968, Aluminium and Aluminium Alloys (Part 47) and Miscellaneous Base Metals (Part 49).

Throughout this Report the figures given for 1963 have been reclassified as far as possible, according to the Standard Industrial Classification (Revised 1968) so that data for 1963 and 1968 are on the same industrial basis. However the reclassification of small firms which provided limited information only has been arbitrary.

There were no larger establishments in this industry in Northern Ireland in 1963 and 1968.

METHOD OF CLASSIFICATION

The classification of returns to this industry followed the standard procedure as outlined in the notes on page (i). A different procedure was used in classifying returns to the sub-divisions of the industry shown in Table 4. Returns in which combined sales of copper, brass and other copper alloys manufactures were less than one-tenth of their sales of such metals in unwrought or partly wrought form were classified as 'Smelters and refiners' and all other returns were classified as 'Fabricators and founders'.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which appear on pages (i) to (iv).

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(c) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).

(d) Administrative, technical and clerical employees.

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

(f) Acquisitions less disposals.

TABLE 1 Industry summary, 1963 and 1968

United Kingdom (a) (b)

	Unit	All establishments	
		1963	1968
Number of enterprises	No.	396	425
Number of establishments	"	465	506
Gross output	£'000	334,718	580,693
Net output	"	79,536	108,738
Net output per head	£	1,602	2,241
Sales and work done	£'000	316,095	533,359
		14,955	36,878
Purchases	"	239,132	432,390
	"	14,387	35,856
	"	1,639	2,577
Payments to other organisations	"	2,151	2,354
	"		179
Stocks and work in progress			
Total stocks and work in progress	"	+ 5,796	+ 11,859
	"	51,005	90,107
Goods on hand for sale	"	+ 599	+ 3,621
	"	11,064	23,693
Work in progress	"	+ 3,070	+ 6,835
	"	18,249	35,731
Materials, stores and fuel	"	+ 2,127	+ 1,403
	"	21,692	30,682
Number employed on average during the year	Th.	49.6	48.5
	"	37.9	36.3
	"	11.3	11.9
Wages and salaries	£'000	29,097	36,254
	"	11,511	16,385
Capital expenditure (e)			
Total	"	9,066	9,304
New building work	"	2,045	1,307
Land and existing buildings (f)	"	420	- 182
Plant and machinery (f)	"	6,107	7,535
Vehicles (f)	"	495	643

(a) For 1968, estimates for establishments not making satisfactory returns and for small establishments, from which only employment data were collected, accounted for 8 per cent. of the total figures in which they were incorporated: of this, unsatisfactory returns accounted for 2 per cent. For 1963 the comparable figures were 6 per cent. and 1 per cent. respectively.

(b) The following information relates to small establishments (employing fewer than 25 persons) in this industry. It includes an estimate for small establishments not making satisfactory returns.

	1963	1968
Number of establishments	238	269
Average number employed:		
Working proprietors	338	291
Other persons employed	2,233	2,905

Footnotes continued on page 48/2.

TABLE 2 Analysis by size of establishment within the industry, 1968

(i) Output and employment

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Estab-lish-ments	Enter-prises (b)	Total number employed on average during the year (a)	Gross output	Net output	Net output per head
1-5	73	72	256	..	..	..
6-10	75	75	592	..	..	..
11-24	121	120	2,092	..	..	..
25-49	51	47	1,895	17,650	3,983	2,102
50-99	49	47	3,391	25,090	6,306	1,860
100-199	37	32	5,045	64,722	11,340	2,248
200-299	17	13	4,260	58,070	9,170	2,153
300-399	6	3	2,202	39,694	5,859	2,661
400-499	4	4	1,808	53,786	5,031	2,783
500-749	9	6	5,456	48,663	11,927	2,186
750-999	4	4	3,551	58,098	8,213	2,313
1,000 and over	6	6	16,765	166,002	37,652	2,246
Unsatisfactory returns	54	53	1,199	..	..	..
Total	506	425	48,512	580,693(c)	108,738(c)	2,241(c)

(ii) Employees, wages and salaries

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Employees		Wages and salaries		Wages and salaries per head	
	Oper-atives	Others (d)	Oper-atives	Others (d)	Oper-atives	Others (d)
	Number	Number	£'000	£'000	£	£
1-5	..	..	..	..	..	..
6-10	..	..	..	..	..	..
11-24	..	..	..	..	..	..
25-49	1,500	363	1,369	534	913	1,472
50-99	2,718	639	2,299	810	846	1,267
100-199	4,063	975	4,158	1,360	1,023	1,395
200-299	3,425	832	3,206	1,070	936	1,286
300-399	1,549	653	1,592	910	1,028	1,394
400-499	1,480	328	1,493	435	1,009	1,326
500-749	4,318	1,138	4,486	1,357	1,039	1,193
750-999	2,808	743	3,057	875	1,089	1,177
1,000 and over	11,505	5,259	11,712	7,738	1,018	1,471
Unsatisfactory returns	..	..	..	..	..	..
Total	36,251(c)	11,865(c)	36,254(c)	16,385(c)	1,000(c)	1,381(c)

(a) Including working proprietors.

(b) The sum of the figures for the size groups exceeds the total for the industry to the extent that enterprises made returns for establishments in more than one size group.

(c) Including estimates for establishments employing fewer than 25 persons and for establishments not making satisfactory returns.

(d) Administrative, technical and clerical employees.

TABLE 3 Percentage analysis of employees, by age and sex, 1969 (a)

All establishments: United Kingdom

Ages	Males	Females	All employees
	Per cent.	Per cent.	Per cent.
Under 18	2	1	3
18 and over	77	20	97
All ages	79	21	100

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) at June 1969, the earliest date for which the information is available on the basis of the Standard Industrial Classification, (Revised 1968).

Footnotes to Table 4.

- (a) Some establishments employing fewer than 25 persons were included in returns for larger establishments. These amounted to 11 establishments in 1968 and 14 in 1963.
- (b) The method of classifying returns to sub-divisions of the industry is explained in the notes; the characteristic products of each sub-division are identified in Table 5.
- (c) The sum of the figures for the sub-divisions exceeds the total for the industry to the extent that enterprises made returns for more than one sub-division.
- (d) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).
- (e) Characteristic products relate only to sub-divisions of the industry.
- (f) For sub-divisions of the industry, this is the ratio of sales of characteristic products to total sales of goods produced and work done. For the industry as a whole, this is the ratio of total sales of principal products by the industry to total sales of goods produced and work done.
- (g) Administrative, technical and clerical employees.
- (h) Excluding expenditure for establishments not yet in production.
- (i) Acquisitions less disposals.

TABLE 4 Analysis of larger establishments, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom (a)

	Unit	Sub-divisions of the industry (b)				Total	
		Smelters and refiners 01		Fabricators and founders 02			
		1963	1968	1963	1968	1963	1968
Number of enterprises (c)	No.	31	20	126	116	151	132
Number of establishments	"	42	26	176	168	218	194
Gross output	£'000	52,965	124,546	262,441	408,135	315,406	532,681
Net output	"	6,939	10,961	68,008	88,787	74,947	99,748
Net output per head	£	1,628	3,182	1,600	2,163	1,602	2,241
Sales and work done	£'000	49,676	99,253	248,181	390,007	297,857	489,260
Sales of characteristic products	"	2,785	24,275	11,307	9,554	14,092	33,829
Index of specialisation (f)	Per cent.	92	96	80	79	89	89
Purchases	£'000	44,789	89,330	180,547	307,310	225,335	396,640
Payments to other organisations	"	105	257	1,439	2,107	1,544	2,364
Stocks and work in progress	"	+	+	+	+	+	+
Goods on hand for sale	"	470	56	94	3,266	564	3,321
Work in progress	"	34	962	2,859	5,308	2,893	6,270
Materials, stores and fuel	"	2,097	318	93	969	2,004	1,287
Number employed on average during the year	No.	4,263	3,445	42,512	41,056	46,775	44,501
Wages and salaries	£'000	2,625	2,831	24,963	30,641	27,587	33,472
Wages and salaries per head	£	760	1,068	767	994	767	1,000
Capital expenditure (h)	£'000	194	310	1,733	889	1,927	1,199
Land and existing buildings	"	1	53	579	219	580	349
Plant and machinery	"	394	1,051	5,619	6,120	6,013	7,171
Vehicles	"	81	136	546	664	627	799

For notes to this table - see page 48/5.

TABLE 5 Sales of principal products of the industry by larger establishments, including sales by establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom

Industry sub-division (a)		1963		1968		Enterprises	Entries
		Quantity	Value	Quantity	Value		
01	Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys, and cadmium copper) (b)	Th. tons	£'000	Th. tons	£'000	Number	Number
01	Ingots, blocks, slabs, billets, bars (including wire bars), other refinery shapes and cast strip	78.1	14,922	68.4	25,554	30	38
01	Brass including manganese bronze	56.4	12,888	45.6	21,945	22	25
01	Other						
01	Continuous castings not included above						
01	Brass including manganese bronze						
01	In bar and rod	2.8	1,398	2.3	1,170	6	6
01	In tube			1.3	699	6	6
01	In plates or strip						
01	Other						
01	In bar and rod	4.1	2,192	18.7	9,452	5	5
01	In tube	..	592	..	2,885	11	11
01	In plates or strip						
02	Plates, sheets, foil, strip, discs and circles	82.6	24,308	69.4	36,863	23	27
02	Round brass rods	110	25,466	70.6	29,003	9	11
02	Shapes and angles	19.5	5,670	15.6	6,901	10	11
02	Other rods, sections and wire not in coils	9.0	3,523	19.8	9,669	11	14
02	Castings (other than continuous) and pressings and stampings not elsewhere specified						
02	Machined castings						
02	Propellers and propeller blades for ships	7.7	4,470	3.8	3,320	5	6
02	Other	..	994	3.3	3,620	52	55
02	Rough castings sold as such	9.4	4,448	15.3	8,793	105	114
02	Stampings and pressings which are the products of drop stamping or hot pressing	20.8	8,367	21.2	13,316	36	41
02	Pressings in sheet metal	2.2	1,918	2.1	2,488	108	109
02	Other	..	1,793	..	1,619	..	..
02	Tubes						
02	Solid drawn of circular section	22.4	10,633	..	16,930	17	18
02	Other	..	2,739	..	2,341	8	8
02	Powder of brass and other copper alloys	8.8	3,714	6.2	4,379	40	46
02	Other manufactures of brass and other copper alloys not elsewhere specified	..	2,596	..	6,693	..	..
	Total brass and other copper alloys and manufactures thereof	434	123,918	364	177,173	..	..
		..	10,740	..	36,193	..	..

Continued on next page

TABLE 5 (continued)

Industry sub-division (a)	1963		1968			
	Quantity	Value	Quantity	Value	Enterprises	Entries
	Th. tons	£'000	Th. tons	£'000	Number	Number
01	Copper (including cadmium copper) (c)					
	Unwrought: ingots, blocks, slabs, ingot bars, wire bars, billets, cakes, cathodes and anodes (including rough copper of 94 per cent. copper content or over)					
	Blister (including rough copper)	12.8	3,096	7.6	3,442	* *
	Electrolytic	33.5	7,954	52.5	26,771	8 10
	Fire refined	115	27,644	71.4	36,587	7 10
	Continuous castings		(d)	..	4,466	* *
02	High conductivity strip and foil	33.3	12,276	17.4	11,183	11 13
02	Plates, sheets or strip (other than high conductivity)					
	3/8 inch thick and over	4.4	1,346	1.7	1,396	5 5
	Other sheets, strip, foil, discs and circles	42.4	14,238	54.2	33,985	12 15
02	Rods, sections, shapes and angles, and wire not in coils					
	Wire rods					
	High conductivity	123	31,953	105	55,562	6 8
	Other	0.4	141	..	428	* *
	Shapes and angles	2.0	1,066			
	Other rods, sections and wire not in coils					
	Rolled	52.3	13,771	13.0	7,254	* *
	Extruded	4.0	1,380	10.9	6,742	8 9
02	Tube shells	24.8	5,598	22.2	11,194	7 10
02	Tubes					
	Solid drawn of circular section	77.4	29,584	56.3	40,381	17 23
	Other	..	424	..	5,244	7 7
02	Copper castings (other than continuous castings and engineers' and mechanics' goods, etc) (e)	..	464	..	2,098	19 19
02	Copper powder	0.8	280	1.5	932	* *
02	Other manufactures of copper not elsewhere specified	5.0	1,770	10.5	5,133	} 26 30
		..	556(f)	..	2,144	
	Total copper and manufactures thereof	531	152,098	424	240,563	}
		..	1,445	..	14,380	
	Other products		1,412		149	10 12
	Waste products					
	Scrap metals					
	Copper	31.3	6,441	25.9	11,328	41 52
	Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys)	17.6	2,563	20.4	6,277	73 88
	Lead	1.0	59	1.8	160	10 13
	Zinc	0.7	42	0.2	11	7 8
	Other scrap metals	..	306	..	1,124	60 74
	Concentrates metallic residues, wastes etc not elsewhere specified	..	1,591	..	2,547	} 28 42
	Other waste products			..	126		11 12

TABLE 5 (continued)

Industry sub-division (a)	1963		1968			
	Quantity	Value	Quantity	Value	Enterprises	Entries
		£'000		£'000	Number	Number
	Work done					
	Repair work	133		117	*	*
02	Casting of ingots, billets, etc of brass and other copper alloys	901		682	10	11
02	Rolling of copper, brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys)	237		134	13	14
	Other work done	592		457	19	23
	Total	302,478		491,420	..	..
	Sales in other industries (see Table 6)					
		36,232		56,964	..	..
	Principal products of this industry sold by establishments in the industry					
		266,245		434,455	132	171(g)

(a) The number given is that of the sub-division of which the item is a characteristic product. The sales shown are total sales by larger establishments, not merely sales by establishments classified to the sub-division.

(b) For 1963 cadmium copper was not specifically excluded.

(c) For 1963 cadmium copper was not specifically included.

(d) Not separately distinguished for 1963.

(e) For 1963 continuous castings were not specifically excluded.

(f) For 1963 includes unclassified 'other rods, sections and wire not in coils'.

(g) This figure represents the total number of returns made for larger establishments in this industry which is less than the total number of establishments shown in Table 4 on account of combined returns covering more than one establishment.

TABLE 6 Sales of principal products of the industry by larger establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963		1968			Principal industries in which produced (a)
	Quantity	Value	Quantity	Value	Entries	
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys, and cadmium copper)	Th. tons	£'000	Th. tons	£'000	Number	
Ingots, blocks, slabs, billets, bars, (including wire bars), other refinery shapes and cast strip	9.6	2,117	3.3	1,819	10	47,49,80
Continuous castings not included above	2.0	1,043	0.7	485	11	45,47,52
	..	327				
Plates, sheets, foil, strip, discs and circles	0.9	458	0.8	794	4	49,93
Round brass rods and other rods, sections and wire not in coils	5.5	1,490	1.1	827	7	47,49,91
Castings (other than continuous) and pressings and stampings not elsewhere specified						
Machined castings	2.2	1,033	1.6	1,349	32	45,47,80,82
	..	147	..	400		
Rough castings	2.4	1,173	2.7	2,095	72	44,46,47,82
	..	100	..	1,087		
Stampings and pressings which are the product of drop stamping or hot pressing	4.2	2,178	1.5	734	20	65,82,95,97
	..	..	..	535		
Pressings in sheet metal	1.0	975	0.6	715	94	47,93,97,150
	..	1,134	..	926		
Other manufactures of brass and other copper alloys, not elsewhere specified	..	2,081	..	3,138	19	45,49,82,97
Total brass and other copper alloys and manufactures thereof	27.8	10,467	12.3	8,818	..	
	..	3,789	..	6,086		
Copper (including cadmium copper):						
Unwrought: ingots, blocks, slabs, ingot bars, wire bars, billets, cakes, cathodes and anodes, including rough copper of 94 per cent. copper content or over	16.3	3,888	14.7	7,520	8	27,49,72
High conductivity strip and foil	11.4	3,893	5.5	4,016	5	72,91
Plates, sheets or strip (other than high conductivity): rods, sections, shapes and angles, and wire not in coils	46.5	11,656	47.1	25,055	8	49,72,91,93
Copper castings (other than continuous castings and engineers' and mechanics' goods, etc)	..	157	..	686	11	47,63
Other manufactures of copper not elsewhere specified	..	2,382	..	4,783	17	27,45,72,96
Total copper and manufactures thereof	72.6	19,394	67.3	36,573	..	
	..	2,582	..	5,488		
Total		36,232		56,964	..	

(a) The references given are to the list of industries at the front of this report.

TABLE 7 Sales of other than principal products by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963	1968
	Value	Value
	£'000	£'000
Metallic compounds and other chemical products	1,276	179
Metal manufactures		
Of iron and steel		
Castings of steel, ingots, tubes, etc	280	691
Stampings and pressings	472	858
Iron castings (including patterns)	445	665
Miscellaneous metal manufactures	4,595	7,599
Of aluminium and aluminium alloys	2,980	5,472
Mechanical engineering products	2,047	2,510
Wire		
Wire in coils		
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys, and cadmium copper)		
Circular section, thinner than No. 20 gauge	553	1,543
Circular section, No. 20 gauge and thicker		
Of brass	751	529
Of other alloys of copper	309	1,590
Copper wire	1,946	11,448
Other wire and wire manufactures (including stranded wire)	761	2,359
Jewellery, plate and precious metal refining products	1,221	2,015
Engineers' and mechanics' goods	5,946	9,244
Other products	6,652	6,984
Services rendered to other organisations (a)	1,378	1,119
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	13,555	33,285
Canteen takings	537	544
Total	45,704	88,634

(a) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered to other organisations.

TABLE 8 Production of certain principal products of the industry by larger establishments, 1963 and 1968

This table is not applicable to this industry.

TABLE 9 Purchases by larger establishments of selected principal products of the industry 1968 (a)

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

Standard Industrial Classification	Purchasing industry (b)	Brass and other copper alloys (including nickel silver and cupro-nickel but excluding all other nickel alloys and cadmium copper)		Copper (including cadmium copper)	
		Quantity	Cost	Quantity	Cost
Minimum List Heading		Th. tons	£'000	Th. tons	£'000
321	Aluminium and aluminium alloys	3.9	1,818		(c)
322	Copper, brass and other copper alloys	80.8	34,556	366	181,564
333	Pumps, valves and compressors	29.6	13,380		(c)
		..	1,944		
339/9	Miscellaneous (non-electrical) machinery	4.1	2,315		(c)
		..	417		
349	General mechanical engineering	17.0	7,916		(c)
		..	1,060		
354	Scientific and industrial instruments and systems	11.2	5,082		(c)
		..	1,643		
361	Electrical machinery	11.8	6,559	17.9	11,457
362	Insulated wire and cables	..	1,709	224	114,543
363	Telegraph and telephone apparatus and equipment	4.3	2,985		(c)
364	Radio and electronic components	..	3,535		(c)
368	Electric appliances primarily for domestic use	4.4	2,902	5.4	4,273
		..	369	..	1,121
369	Miscellaneous electrical goods	13.6	7,430		(c)
		..	1,199		
370	Shipbuilding and marine engineering	2.7	1,749		(c)
		..	570		
381	Motor vehicle manufacturing	23.7	11,176	9.5	4,883
393	Bolts, nuts, screws, rivets etc	9.2	4,007		(c)
394	Wire and wire manufactures	6.4	2,667	31.0	15,260
		..	110		
396	Jewellery and precious metals	..	2,833	9.6	4,726
399/8	Miscellaneous metal goods	62.9	27,062	15.4	9,661
		..	228		
500	Construction		(c)	19.4	8,430
				..	7,898
	Other industries	31.3	14,698	191	29,405
		..	2,567	..	2,937
	Total	317	146,302	889	384,203
		..	18,186	..	11,957

(a) The figures include purchases of imported as well as of home produced goods.

(b) Specified census industries for which purchases are one per cent. or more of the total of at least one of the commodities shown.

(c) Included in the total for 'Other industries'.

TABLE 10 Purchases by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom

	1963		1968	
	Quantity	Cost	Quantity	Cost
	Th. tons	£'000	Th. tons	£'000
Materials for use in production				
Aluminium and aluminium alloys				
Ingots and notch bars - virgin	..	162	3.8	862
Ingots, notch bars and sticks - secondary	..	188	1.1	220
Blocks, slabs, billets and wire bars	2.0	384	2.0	476
Sheets, plates, strip, blanks, discs, circles, slugs and foil	0.1	24	0.4	137
Bars (other than notch bars and wire bars), rods, angles, shapes, sections and tubes	..	178	1.0	421
All other descriptions except finished parts, wire and scrap	..	25	3.4	900
Antimony ore and concentrates	0.1	28	..	5
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys and cadmium copper) (a)				
Ingots, blocks, slabs, billets, bars (including wire bars), rods and cast strip (b)	65.5	13,458	53.5	22,034
Plates, sheets, strip (other than broken down strip), discs, circles and foil	9.0	2,514	6.7	2,809
Other descriptions including broken down strip and tube shells but excluding finished parts, wire and scrap	16.6	4,196	20.6	9,714
Copper unwrought (including cadmium copper): ingots, blocks, slabs, bars, billets, cakes, cathodes and anodes (including rough copper of 94 per cent. copper content or over) (c)				
Blister (including rough copper) (d)	307	71,820	43.3	19,711
Electrolytic (d)			210	105,124
Fire refined	156	37,468	65.5	32,714
High conductivity copper rods and strip	2.1	569	1.2	692
Copper plates, sheets, strip, discs and circles (other than of high conductivity)	4.7	1,267	3.3	1,723
Other descriptions of copper including broken down copper cake and tube shells but excluding finished parts, wire and scrap	21.1	5,882	43.1	21,599
Lead unwrought in pigs, ingots, blocks, bars, slabs and cakes				
Imported refined and re-melted lead (e)	6.3	382	3.5	350
English refined lead including lead refined from imported bullion	5.1	303	1.5	156
Other descriptions of lead and lead alloys except finished parts, wire and scrap	0.5	83	0.6	93
Magnesium ore, magnesia, magnesium and magnesium alloys (excluding finished parts, wire and scrap)	..	18	0.1	48
Nickel and nickel alloys (excluding nickel silver and cupro-nickel), in all forms except finished parts, wire and scrap	1.6	1,073	2.6	2,627
	Th.cwt.		Th.cwt.	
Tin ore and concentrates and tin in all forms except finished parts, wire and scrap	25.8	1,061	31.7	2,166
Zinc and zinc alloys	Th. tons		Th. tons	
Zinc of not less than 99.99 per cent. purity	16.7	1,384	14.3	1,700
Other electrolytic and refined zinc, and low grade prime western, debased and G.O.B. zinc	49.0	3,877	44.0	5,134
Re-melted	1.1	81	0.6	66
Other descriptions except finished parts, wire and scrap	..	53	1.0	159

Continued on next page

TABLE 10 (continued)

	1963		1968	
	Quantity	Cost	Quantity	Cost
Materials for use in production (continued)	Th. tons	£'000	Th. tons	£'000
Alloying materials not elsewhere specified (eg silicon, cadmium chrome, manganese, cobalt)	4.7	1,423	2.5	1,328
Scrap (including all forms of scrap material purchased, not elsewhere specified)				
Aluminium and aluminium alloys	0.1	12	10.8	1,761
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys and cadmium copper) (a)	176	27,415	225	61,488
Copper (including cadmium copper) (c)	162	28,473	168	73,948
Lead	7.2	418	2.2	199
Zinc	1.5	87	1.5	100
Zinc base alloys	..	25	..	24
Other	..	2,203	..	1,795
Iron and steel in all forms except finished parts, wire and scrap	8.1	1,022	18.3	1,580
Explosive powders		(f)	Th. cwt. 5.1	233
Lubricating oils and greases	Th. gal. 299	82	Th. gal. 1,370	311
	..	128	..	62
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement				
Tyres and other spare parts for firms' own road goods vehicles	..	3,202	..	147
Other	..	..	..	3,413
All other materials for use in production	..	7,096	..	9,627
Packaging materials				
Wrapping and packing paper (including paper coated with plastics and any laminates incorporating paper but not metal)	..	..	..	73
Other packaging materials of paper and paperboard (including moulded pulp units and labels, but excluding boxes, cartons, packing cases, drums, canisters, bags and multiwall paper sacks and paper and board for converting into packaging materials)	..	92	..	77
	Thousands		Thousands	
Metal barrels, kegs and drums	63.7	30	67.5	37
Containers wholly or mainly of wood (including plywood boxes and drums), baskets and wickerwork crates	..	277	..	178
All other packaging materials	..	281	..	553
Fuel and electricity (g)	Th. tons		Th. tons	
Coal	142	562	60.6	374
Coke (including screenings) and manufactured fuel	24.9	249	14.5	181
	Th. gal.		Th. gal.	
Derv fuel and motor spirit for use in road vehicles	1,263	223	1,280	333
Other liquid fuels (including creosote/pitch mixtures, etc, and liquefied petroleum gases)	27,407	1,249	36,449	1,700
	Th. therms		Th. therms	
Gas	19,451	1,228	18,403	1,236

TABLE 10 (continued)

	1963		1968	
	Quantity	Cost	Quantity	Cost
Fuel and electricity (g) (continued)	Th. kWh	£'000	Th. kWh	£'000
Electricity	560,491	3,082	575,753	4,138
All other fuels		(f)	..	103
Total cost of materials and fuel		225,335		396,640
Goods purchased for merchanting		13,091		32,384
Canteen purchases		465		507
Total cost of purchases		238,892		429,531

(a) For 1963 cadmium copper was not specifically excluded.

(b) For 1963 rods were not specifically included.

(c) For 1963 cadmium copper was not specifically included.

(d) For 1963 described as 'Other than fire refined'.

(e) For 1963 imported refined lead was described as 'Imported virgin lead (excluding lead bullion)'.

(f) Not recorded separately for 1963.

(g) Owing to the risk of disclosure relating to individual firms the total quantity of electricity generated in firms own establishments in 1968 and 1963 cannot be given.

TABLE 11 Transport costs and employment of larger establishments, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	Unit	1963	1968
Average number mainly employed on transport	No.	729	796
Transport costs			
Wages and salaries	£'000	590	987
Derv fuel and motor spirit	"	223	333
Tyres and other spare parts for road goods vehicles	"	..	147
Payments to other organisations for transport	{ by road by rail and other means excluding postal services	2,027	2,160
Costs of operating road goods vehicles			
Insurance	"	34	47
Vehicle licences	"	39	84
Depreciation	"	245	516
Payments to other organisations for repairs and maintenance	"	111	121
Total	"	3,268(a)	4,560

(a) Excluding tyres and other spare parts for road goods vehicles, not collected separately for 1963.

TABLE 12 Payments for certain services, etc by larger establishments, 1963 and 1968 (a)

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	Amounts payable	
	1963	1968
Repairs and maintenance to	£'000	£'000
Buildings	371	344
Road goods vehicles	111	121
Plant, machinery and other capital equipment	1,394	1,928
Insurance, licensing and depreciation of road goods vehicles (b)	318	647
Rates, excluding water rates	913	1,387
Hire of plant and machinery	73	248
Postage, telephone, telegrams, cables and telex (c)	446	641
Total	3,625	5,316

(a) No deduction is made for these payments to arrive at the figures of net output given in this report.

(b) For details see Table 11.

(c) Excluding telex for 1963.

TABLE 13 Percentage analysis of twelve-month periods covered by returns from larger establishments, 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

Year ended	Percentage of total returns received	Percentage of total number employed
1968	Per cent.	Per cent.
April (a)	1.8	0.4
May	0.0	0.0
June	4.1	0.9
July	6.4	20.8
August	1.2	0.1
September	6.4	3.0
October	1.8	1.2
November	1.2	0.3
December	54.4	59.7
1969		
January	2.9	2.4
February	2.4	0.8
March	16.2	10.1
April (b)	1.2	0.3
	100	100

(a) From 6 April.

(b) To 5 April.