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Business Monitor

A publication of the Government Statistical Service

**Report on the
Census of Production**

**Industrial (including
process) plant and
steelwork**



Department of Industry
Business Statistics Office

Special Note for Purchasers

Commencing with the 1971 Census, the Census of Production reports are being numbered in a uniform series embracing all industrial inquiries in the Business Monitor series. These Business Monitors have a code P (for production) followed first by A (indicating that it is an annual series) or Q (quarterly) or M (monthly); and then by a number indicating the minimum list heading, or sub-division of a minimum list heading, of the Standard Industrial Classification (revised 1968).

The Census of Production (PA) reports are available on standing order (details on application to Her Majesty's Stationery Office, P.O. Box 569, London SE1 9NH. Telephone 01-928 6977), although they are not included in the global subscription arrangements for the Business Monitor series.

Government Statistical Service

A service of statistical information and advice is provided to the Government by specialist staffs employed in the statistics divisions of individual Departments. Statistics are made generally available through their publications and further information and advice on them can be obtained from the Departments concerned.

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PA341

Business Monitor

A publication of the Government Statistical Service

**Report on the
Census of Production
1972**

**Industrial (including
process) plant and
steelwork**

Presented by the Secretary of State for Industry
to Parliament in pursuance of the Statistics of Trade Act 1947
(10 & 11 Geo.6 Cha.39 sec 7)

Department of Industry
Business Statistics Office

London: Her Majesty's Stationery Office 1975

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PA341 INDUSTRIAL (INCLUDING PROCESS) PLANT AND STEELWORK

The information in this report relates to establishments classified to the Industrial (including process) plant and steelwork industry, minimum list heading 341 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

Manufacturing steam raising boilers of all types and accessories such as mechanical stokers, but not marine boilers and hot water boilers cast in sections; process plant and other industrial plant including lime and cement kilns, gas plant, sintering plant, metallurgical and other furnaces and other metal manufacturing plant (excluding rolling mills), de-greasing and coating plant, chemical, petro-chemical and oil refining plant, nuclear reactors, water and sewage treatment plant; structural iron and steelwork for buildings and bridges (including similar work in other metals) and prefabricated buildings of steel and other metals; heavy iron and steelwork (including similar work in other metals) other than for structural uses, including storage tanks, spheres, process pressure vessels, heat exchangers, pipes, chimneys, bunkers, bins and hoppers. Parts of industrial (including process) plant and steelwork are included but industrial hollow-ware is not. Contractors responsible for the design, engineering, procurement, construction and commissioning of complete plants for process industries such as chemicals, petro-chemicals, oil refining and gas are included, (but firms and consulting engineers responsible for only some of these functions are excluded).

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which commence on page (iii).

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TABLE 1

PA341 2

Input and output, 1970, 1971 and 1972
All United Kingdom establishments classified to the industry (a)

	Unit	1970	1971	1972
Enterprises	Number	1,482	1,484	1,462
Establishments	"	1,618	1,695	1,622
Sales of goods produced and work done	£'000	888,892	1,006,967	989,922
Services rendered to other organisations (b)	"	7,550		
Goods merchanted or factored	"	31,697	43,038	39,246
Canteen takings	"	1,113	930	909
Total sales and work done	"	929,253	1,050,935	1,044,853
Increase during the year, work in progress and goods on hand for sale	"	81,649	82,559	83,812
Gross output	"	1,010,902	1,133,494	1,128,665
Cost of purchases	"	478,905	537,136	525,161
Increase during the year, stocks of materials, stores and fuel	"	8,755	- 3,804	- 582
Payments to other organisations for work done on materials given out	"	91,324	73,587	61,106
for transport by road	"	7,890	8,425	7,895
for transport by rail, water, air and Post Office parcel services	"	1,885	2,219	1,463
Total costs	"	571,249	625,171	596,206
Net output	"	439,654	508,323	532,459
Total employment (including working proprietors) (c)	Thousands	174.8	173.7	156.2
Net output per head	£	2,516	2,927	3,409

(a) For 1972, estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons, accounted for 26 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 18 per cent.

(b) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered.

(c) Average number employed (full and part time; see table 6) during the year (including working proprietors) by the establishment.

TABLE 2

PA341 3

Capital expenditure and stocks, 1970, 1971 and 1972

All United Kingdom establishments classified to the industry (a)

	1970	1971	1972	£'000
Capital expenditure (b)				
New building work	4,329	4,995	5,727	
Land and existing buildings				
Acquisitions	1,036	2,052	2,119	
Disposals	1,270	2,612	907	
Plant and machinery				
Acquisitions	13,005	14,235	13,796	
Disposals	2,183	3,675	1,220	
Vehicles				
Acquisitions	3,666	4,341	4,429	
Disposals	1,418	1,668	1,583	
Total net capital expenditure (c)	17,165	17,668	22,360	
Increase in stocks and work in progress, 1970, 1971 and 1972 and value of stocks and work in progress at end of 1972	Increase	Increase	Increase	Value at end of year
Materials, stores and fuel	8,755	- 3,804	- 582	50,678
Work in progress	80,309	82,585	82,607	710,089
Goods on hand for sale	1,340	- 26	1,205	9,725
Total	90,404	78,755	83,231	770,492

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

(b) Capital expenditure in respect of manufacturing establishments where production had not commenced before the end of the year, is included.

(c) Acquisitions less disposals.

TABLE 3

Analysis of establishments by size, 1972
All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab-lish-ments (c)		Total employment (b)		Employees		Wages and salaries		Wages and salaries per head		Total sales and work done (e)	Gross output	Net output	Net output per head	Capital expenditure (net) (f)	Total stocks and work in progress at end of year
	Number	Number	Number	Number	Operatives	Others (d)	Operatives	Others (d)	Operatives	Others (d)						
1-10	459	458	3,510	23,221	11,746	8,683	£'000	£'000	£	£	£'000	£'000	£	£'000	£'000	£'000
11-24	513	506	8,888	35,853	19,291	15,772	1,642	1,816	1,544	1,816	186,117	189,904	2,689	5,097	37,606	
25-49	187	183	6,893	11,516	6,132	9,282	1,598	1,913	1,659	1,913	110,153	109,396	3,082	2,817	19,392	
50-99	199	190	13,987	27,524	21,978	21,978	1,987	2,058	1,987	2,058	63,754	63,684	2,823	2,234	16,518	
100-199	126	120	16,655	77,734	58,846	58,846	1,756	1,970	1,756	1,970	207,082	207,857	3,373	4,248	75,921	
200-299	42	40	10,552	39,131	28,593	28,593	171,918	112,010	171,918	112,010	477,747	557,824	3,948	7,964	621,055	
300-749	58	51	27,997	97,892	56,870	56,870	532,459	3,409	532,459	3,409	1,044,853	1,128,665	3,409	22,360	770,492	
750 and over	38	28	67,724	156,206	156,206	156,206										
Total	1,622	1,462	156,206	97,892	56,870	56,870										

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

(b) Average number employed (full and part time; see table 6) during the year (including working proprietors) by the establishment.

(c) Some enterprises control establishments in more than one size group: the sum of the figures for the size groups will therefore exceed the total for the industry.

(d) Administrative, technical and clerical employees.

(e) Including sales of goods merchanted or factored, canteen takings and services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered).

(f) Acquisitions less disposals.

PA341 4

TABLE 4

Regional distribution of employment, net capital expenditure and net output, 1972
All United Kingdom establishments classified to the industry

PA341 5

Area	Average number employed (a)		Net capital expenditure (b)		Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (c)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	Estimated net output	Average number employed as a percentage of total average number employed in the region	Net output as percentage of total of the industry in the United Kingdom
Standard regions of England							
North	21.0	13.4	3,330	14.8	58,889	69.8	11.1
Yorkshire and Humberside	11.4	7.3	1,219	5.4	22,307	71.0	4.2
East Midlands	9.9	6.4	1,073	4.8	19,656	70.5	3.7
East Anglia	1.2	0.8	178	0.8	981	35.7	0.2
South East	32.1	20.6	4,483	20.1	90,331	57.0	16.9
South West	3.0	2.0	712	3.2	4,925	59.1	0.9
West Midlands	27.7	17.7	3,275	14.7	45,201	63.5	8.5
North West	22.5	14.4	2,896	13.0	51,088	71.3	9.6
England	129.0	82.6	17,167	76.8	293,379	65.1	55.1
Wales	5.3	3.4	1,080	4.8	10,550	58.8	2.0
Scotland	21.0	13.4	3,912	17.5	29,190	51.2	5.5
Great Britain	155.3	99.4	22,160	99.1	333,119	63.0	62.6
Northern Ireland	0.9	0.6	200	0.9	1,783	81.1	0.3
Unallocated (d)	-	-	-	-	197,557	-	37.1
United Kingdom	156.2	100.0	22,360	100.0	532,459		100.0

(a) Average number employed (full and part time; see table 6) during the year (including working proprietors) by the establishment.

(b) New building work plus acquisitions less disposals of land and existing buildings, plant and machinery and vehicles.

(c) Where a census return covered addresses in two or more regions an estimate was made of the net output attributable to the region only where more than 80 per cent of the establishment's employees were located in the region. The estimate was made by assuming that net output at each address covered by a return was proportionate to employment at the address. The establishment's residual net output was included in unallocated net output.

(d) Includes estimates of net output for establishments not making satisfactory returns and establishments employing less than 25 employees, and unallocated net output of establishments covering addresses in two or more regions.

TABLE 3

Analysis of establishments by size, 1972
All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab-lish-ments (c)		Total employment (b)		Employees		Wages and salaries		Wages and salaries per head		Total sales and work done (e)	Gross output	Net output	Net output per head	Capital expenditure (net) (f)	Total stocks and work in progress at end of year
	Number	Enter-prises (c)	Number	Total employment (b)	Operatives	Others (d)	Operatives	Others (d)	Operatives	Others (d)						
1-10	459	458	3,510	23,221	8,683	15,772	1,544	1,816	1,642	1,913	186,117	189,904	89,494	2,689	5,097	37,606
11-24	513	506	8,888	11,746	4,852	9,282	1,598	1,838	1,598	1,838	110,153	109,396	51,332	3,082	2,817	19,392
25-49	187	183	6,893	7,206	3,337	6,132	1,659	1,927	1,659	1,927	63,754	63,684	29,790	2,823	2,234	16,518
50-99	199	190	13,987	16,588	11,405	21,978	77,734	2,058	1,987	2,058	207,082	207,857	94,436	3,373	4,248	75,921
100-199	126	120	16,655	39,131	28,593	58,846	171,918	1,970	1,756	1,970	477,747	557,824	267,407	3,948	7,964	621,055
200-299	42	40	10,552	97,892	56,870	112,010	1,756	1,970	1,756	1,970	1,044,853	1,128,665	532,459	3,409	22,360	770,492
300-749	58	51	27,997													
750 and over	38	28	67,724													
Total	1,622	1,462	156,206	97,892	56,870	112,010	171,918	1,970	1,756	1,970	1,044,853	1,128,665	532,459	3,409	22,360	770,492

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

(b) Average number employed (full and part time; see table 6) during the year (including working proprietors) by the establishment.

(c) Some enterprises control establishments in more than one size group: the sum of the figures for the size groups will therefore exceed the total for the industry.

(d) Administrative, technical and clerical employees.

(e) Including sales of goods merchanted or factored, canteen takings and services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered).

(f) Acquisitions less disposals.

PA341 4

TABLE 4

Regional distribution of employment, net capital expenditure and net output, 1972
All United Kingdom establishments classified to the industry

PA341 5

Area	Average number employed (a)		Net capital expenditure (b)		Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (c)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	Estimated net output	Average number employed as a percentage of total average number employed in the region	Net output as percentage of total of the industry in the United Kingdom
Standard regions of England							
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East Midlands	9.9	6.4	1,073	4.8	19,656	70.5	3.7
East Anglia	1.2	0.8	178	0.8	981	35.7	0.2
South East	32.1	20.6	4,483	20.1	90,331	57.0	16.9
South West	3.0	2.0	712	3.2	4,925	59.1	0.9
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North West	22.5	14.4	2,896	13.0	51,088	71.3	9.6
England	129.0	82.6	17,167	76.8	293,379	65.1	55.1
Wales	5.3	3.4	1,080	4.8	10,550	58.8	2.0
Scotland	21.0	13.4	3,912	17.5	29,190	51.2	5.5
Great Britain	155.3	99.4	22,160	99.1	333,119	63.0	62.6
Northern Ireland	0.9	0.6	200	0.9	1,783	81.1	0.3
Unallocated (d)	-	-	-	-	197,557	-	37.1
United Kingdom	156.2	100.0	22,360	100.0	532,459		100.0

(a) Average number employed (full and part time; see table 6) during the year (including working proprietors) by the establishment.

(b) New building work plus acquisitions less disposals of land and existing buildings, plant and machinery and vehicles.

(c) Where a census return covered addresses in two or more regions an estimate was made of the net output attributable to the region only where more than 80 per cent of the establishment's employees were located in the region. The estimate was made by assuming that net output at each address covered by a return was proportionate to employment at the address. The establishment's residual net output was included in unallocated net output.

(d) Includes estimates of net output for establishments not making satisfactory returns and establishments employing less than 25 employees, and unallocated net output of establishments covering addresses in two or more regions.

TABLE 5

PA341 6

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 25 or more persons, 1972

Accounting year ended	Percentage of total returns received	Percentage of total number employed
	per cent	per cent
1972 April (a)	2.5	1.4
May	0.8	0.2
June	5.2	2.5
July	2.7	1.7
August	1.5	0.8
September	5.0	3.3
October	2.9	2.0
November	2.1	0.5
December	42.1	51.6
1973 January	2.5	1.8
February	2.3	1.1
March(b)	30.4	33.1
	100.0	100.0

(a) From 6th April

(b) Including returns made for twelve-month period ended 1st to 5th April 1973

TABLE 6

Percentage analysis of employees, by full and part time employment and sex, 1972 (a)

Sex	Full time	Part time	All employees
	per cent	per cent	per cent
Male	89	1	90
Female	8	2	10
	97	3	100

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) in the United Kingdom at mid-June, 1972

TABLE 7

PA341 7

Sales of principal products of the industry by establishments employing 25 or more persons, including sales by establishments classified to other industries, 1972 (a)

	1972	
BOILERS AND BOILER-HOUSE PLANT FOR STEAM GENERATION (EXCLUDING HOT WATER BOILERS FOR CENTRAL HEATING, LOCOMOTIVE OR MARINE BOILERS, BURNERS AND FURNACES):		
WATER TUBE BOILERS:		
COMPLETE:		
CONVENTIONAL FIRED	£ THOUS	47,158
NUCLEAR FIRED	£ THOUS	10,837
BOILER DRUMS, SOLD SEPARATELY	£ THOUS	703
SHELL BOILERS, COMPLETE:		
FOR HOT WATER	£ THOUS	2,440
FOR STEAM	£ THOUS	9,769
OTHER BOILERS AND PARTS (INCLUDING SECTIONAL BOILERS FOR STEAM, LOCOMOTIVE TYPE BOILERS FOR STATIONARY PURPOSES AND WASTE HEAT BOILERS: BUT EXCLUDING SECTIONAL BOILERS FOR CENTRAL HEATING) (b)	£ THOUS	11,021
BOILER-HOUSE PLANT, SOLD SEPARATELY:		
FUEL ECONOMISERS, FEED WATER HEATERS AND STEAM SUPER HEATERS, COMPLETE AND PARTS	£ THOUS	8,827
INDUSTRIAL AIR HEATERS, RECUPERATORS AND REGENERATORS, COMPLETE AND PARTS	£ THOUS	4,880
OTHER BOILER-HOUSE PLANT, COMPLETE AND PARTS (INCLUDING BOILER FIRING PLANT AND MECHANICAL STOKERS, BUT EXCLUDING FURNACES AND BURNERS)	£ THOUS	22,054
TOTAL SALES OF BOILERS AND BOILER-HOUSE PLANT	£ THOUS	117,689
OTHER INDUSTRIAL, INCLUDING PROCESS, PLANT:		
FURNACES, KILNS AND FURNACES FOR STRIP PROCESSING LINES:		
BLAST AND STEELMAKING FURNACES	£ THOUS	4,555
FURNACES FOR STRIP PROCESSING LINES	£ THOUS	4,771
ELECTRICALLY HEATED FURNACES AND KILNS:		
LOW TEMPERATURE OVENS	£ THOUS	435
MELTING, DIRECT ARC AND ELECTRO-SLAG AND INDUCTION (EXCLUDING HIGH FREQUENCY INDUCTION MICRO-WAVE AND DI-ELECTRIC TYPES)	£ THOUS	5,527
HEAT TREATMENT AND OTHER	£ THOUS	12,667
FUEL FIRED FURNACES AND KILNS:		
HEAT TREATMENT	£ THOUS	7,101
LOW TEMPERATURE OVENS	£ THOUS	1,298
MELTING	£ THOUS	1,924
PROCESSING KILNS (CEMENT, LIME, ROTARY AND VERTICAL)	£ THOUS	1,096
RE-HEATING AND FORGING	£ THOUS	4,669
TOTAL SALES OF FURNACES AND KILNS	£ THOUS	44,041
WATER, EFFLUENT AND SEWAGE TREATMENT PLANT (EXCLUDING CIVIL WORK):		
WATER TREATMENT PLANT (E.G. CLARIFICATION, SETTLEMENT, FILTRATION, BASE EXCHANGE, ION EXCHANGE, REVERSE OSMOSIS, DIALYSIS, DOSING AND DE-AERATION):		
FOR INDUSTRIAL USE	£ THOUS	8,597
FOR MUNICIPAL USE	£ THOUS	8,483

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OTHER INDUSTRIAL INCLUDING PROCESS PLANT: (CONTINUED)

FUEL FIRED FURNACES AND KILNS:		
EFFLUENT AND SEWAGE TREATMENT PLANT (E.G. SCREENING COMMUNITION, GRIT EXTRACTION, SEDIMENTATION, BIO- LOGICAL FILTRATION, AERATION, SLUDGE TREATMENT AND TERTIARY TREATMENT):	£ THOUS	2,974
FOR INDUSTRIAL USE	£ THOUS	11,528
FOR MUNICIPAL USE	£ THOUS	
TOTAL SALES OF WATER, EFFLUENT AND SEWAGE TREATMENT PLANT	£ THOUS	31,582
REFUSE DISPOSAL PLANT:		
INCINERATORS	£ THOUS	4,261
OTHER DISPOSAL PLANT	£ THOUS	5,164
OTHER PLANT:		
AIR AND GAS CLEANSING PLANT (EXCLUDING AIR CONDITION- ING EQUIPMENT)	£ THOUS	9,775
ELECTRO-PLATING PLANT AND MACHINERY	£ THOUS	4,664
GRAIN PROCESSING MACHINERY AND PLANT (INCLUDING RICE MILLING MACHINERY)	£ THOUS	7,233
TOTAL SALES OF REFUSE DISPOSAL AND OTHER PLANT	£ THOUS	31,097
TOTAL SALES OF OTHER INDUSTRIAL, INCLUDING PROCESS PLANT	£ THOUS	106,720
FABRICATED IRON AND STEELWORK OTHER THAN CONSTRUCTIONAL STEELWORK BUT INCLUDING SIMILAR WORK IN OTHER METALS:		
HEAT EXCHANGE EQUIPMENT (EXCLUDING INDUSTRIAL AIR HEATERS AND ECONOMISERS):		
COLUMNS, REFORMERS, CRACKERS AND FRACTIONATORS	£ THOUS	4,047
EVAPORATORS	£ THOUS	2,538
HEAT EXCHANGERS AND CONDENSERS (SHELL TUBE, PLATE AND AIR-COOLED)	£ THOUS	27,309
FABRICATED CONTAINERS ASSOCIATED WITH NUCLEAR EQUIPMENT	£ THOUS	2,490
OTHER FABRICATED CONTAINERS AND ENCLOSURES (EXCLUDING TRANSPORT CONTAINERS):		
BUNKERS, BINS AND SILOS FOR SOLIDS	£ THOUS	4,365
PRESSURE VESSELS AND SPHERES	£ THOUS	22,231
STORAGE TANKS AND WATER TOWERS OVER 300 LITRES	£ THOUS	26,877
OTHER, FABRICATED IRON AND STEELWORK:		
CHIMNEYS, DUCTS AND FLUES	£ THOUS	6,340
FABRICATED PIPES AND PENSTOCKS	£ THOUS	15,646
OTHER (INCLUDING BUOYS AND FLOTATION VESSELS)	£ THOUS	32,157
STEEL TUBULAR SCAFFOLDING AND FITTINGS	£ THOUS	8,143
TOTAL SALES OF FABRICATED IRON AND STEELWORK	£ THOUS	152,143
CONSTRUCTIONAL STEELWORK INCLUDING SIMILAR WORK IN OTHER METALS AND PORTABLE PRE-FABRICATED AND TEMPORARY STRUC- TURES, FOR:		
BRIDGES, VIADUCTS, ELEVATED ROADWAYS, ETC	£ THOUS	15,145
TUNNELS	£ THOUS	846
DOCKS, HARBOURS, JETTIES, SLUICE GATES, ETC	£ THOUS	2,790
POWER STATIONS:		
CONVENTIONAL	£ THOUS	6,085
NUCLEAR	£ THOUS	6,090

1972

CONSTRUCTIONAL STEELWORK INCLUDING SIMILAR WORK IN OTHER
METALS AND PORTABLE PRE-FABRICATED AND TEMPORARY STRUC-
TURES, FOR: (CONTINUED)

DOMESTIC BUILDINGS:		
FLATS	£ THOUS	361
OTHER	£ THOUS	2,817
FACTORY BUILDINGS	£ THOUS	39,647
COMMERCIAL BUILDINGS	£ THOUS	14,478
EDUCATIONAL BUILDINGS	£ THOUS	8,193
HOSPITAL BUILDINGS	£ THOUS	1,162
AGRICULTURAL BUILDINGS	£ THOUS	4,734
TOWERS	£ THOUS	7,073
OTHER FABRICATED CONSTRUCTIONAL STEELWORK (INCLUDING PLANT SUPPORTS AND STEEL SHUTTERING)	£ THOUS	47,755
TOTAL SALES OF CONSTRUCTIONAL STEELWORK	£ THOUS	157,176
TOTAL SALES OF INDUSTRIAL (INCLUDING PROCESS) PLANT AND STEELWORK EXCLUDING WASTE PRODUCTS, WORK DONE, AND UNCLASSIFIED SALES		
	£ THOUS	533,728
WASTE PRODUCTS	£ THOUS	601
WORK DONE:		
VALUE OF ERECTION AND INSTALLATION WORK ON MACHINERY AND PLANT (INCLUDING NON-CONSTRUCTIONAL STEELWORK, BUT EXCLUDING HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT, COMPLETE PROCESS PLANTS AND CONSTRUCTIONAL STEELWORK):		
BOILERS AND BOILER-HOUSE PLANT	£ THOUS	6,958
INDUSTRIAL (INCLUDING PROCESS) PLANT	£ THOUS	14,785
OTHER FABRICATED IRON AND STEELWORK	£ THOUS	13,565
BUILDING AND CIVIL ENGINEERING WORK CARRIED OUT (INC- CLUDING THE ERECTION AND INSTALLATION OF HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT BUT NOT OF COMPLETE PROCESS PLANTS, NOR OF INDUSTRIAL PLANT AND MACHINERY AND NON-CONSTRUCTIONAL STEELWORK)		
RESEARCH AND DEVELOPMENT WORK DONE FOR CUSTOMERS, INCLUDING GOVERNMENT DEPARTMENTS, FOR WHICH PAYMENT IS RECEIVABLE	£ THOUS	5,945
REPAIR AND JOBBING WORK	£ THOUS	391
OTHER WORK DONE ON MATERIALS SUPPLIED BY THE CUSTOMER	£ THOUS	22,306
	£ THOUS	3,934
TOTAL VALUE OF WORK DONE	£ THOUS	67,884
UNCLASSIFIED SALES	£ THOUS	17,846
TOTAL SALES OF PRINCIPAL PRODUCTS OF MLH 341 (EXCLUDING MLH 341.3) (INDUSTRIAL (INCLUDING PROCESS) PLANT AND STEELWORK) AND WORK DONE	£ THOUS	620,059

Source: Business Monitor (PQ341) - Quarterly Statistics

(a) Sales are deliveries on sale for home or abroad. Forward sales are excluded. Values are net selling values; purchase tax, trade discounts and commissions are excluded.

(b) 'Other boilers and parts' include thermal liquid heating units.

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Reprographic Unit, Cardiff
Dd.289565 K7 Cdf 630 10/75

Notes

These notes give the main information needed for interpreting the figures in the industry reports, (more detailed information about the census is given in a separate booklet—"Introductory Notes", Part PA 1001 of the Report on the Census of Production for 1972).

GENERAL INFORMATION *Changes made for 1972*

There were only minor changes in the scope of certain industry reports compared with 1971. Any such changes are explained in the introductions to the industry reports concerned or by footnotes to the tables.

Industrial classification

The Annual Censuses of Production are conducted on the Business Statistics Office's Production Register. Normally establishments on the Register are classified to industries on the basis of major activity in conformity with the Standard Industrial Classification (revised 1968). Generally an establishment is classified to an industry if its sales of the principal products of that industry accounts for a greater proportion of its total sales than its sales of the principal products of any other industry; classification is generally based on an establishment's returns to the quarterly production inquiry. Where this is not possible—for example where a quarterly production inquiry has not been introduced—the classification of an establishment reflects its return to the Census of Production, 1968. Establishments for which information is not available either from the quarterly inquiries or the 1968 Census are classified on the basis of the description of the business given by the establishments to the Business Statistics Office, for instance, in the course of registration.

Coverage

Detailed census returns were generally sought only from establishments employing on average 25 or more persons, but in some industries where firms employing less than 25 persons account for a relatively high proportion of total employment and output the exemption limit was lowered to 11. Census returns were also sent to establishments whose employment was not known to the Business Statistics Office at the time of dispatch.

TERMS USED IN THE CENSUS REPORT

Average number employed

Establishments were required to state the number of persons on the payroll (i.e. whose national insurance cards were held by them) on the average during the year of return, whether full-time or part time employees. Separate figures were required for (a) administrative, technical and clerical employees and (b) all other employees (operatives). Averages could be calculated from figures relating to the last week of each calendar month. Establishments were also required to state the number of working proprietors where appropriate and these are included in total employment figures. Outworkers (i.e. persons employed by establishments who worked in their own homes etc. on materials supplied by the establishments) are excluded.

The figures include persons engaged on merchanting or factoring and canteen workers where particulars in respect of these activities could not be excluded from the return.

Working Proprietors

These include all persons regarded as "self employed" for national insurance purposes and members of their families who worked in the business without receiving a wage or salary; but such persons who worked less than half the normal number of working hours are excluded. Directors working in the business but not in receipt of a definite wage, salary or commission are included under this heading: directors paid by fee only are not included.

Employees

Administrative, technical and clerical employees include managing and other directors in receipt of a definite wage, salary or commission, managers, superintendents and works foremen; research, experimental development, technical and design employees (other than operatives); draughtsmen and tracers; editorial staff, staff reporters, canvassers, competition and advertising staff; travellers; and office (including works office) employees.

Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include those employed in and about the factory or works; operatives employed in power houses, transport work (including roundsmen), stores, warehouses, shops and canteens; inspectors, viewers and similar workers; maintenance workers and cleaners. Operatives engaged in outside work of erecting, fitting etc. are also included, but out-workers are excluded.

Capital expenditure

Capital expenditure during the year in respect of manufacturing units where production had not started before the end of the year is included in the figures for both 1970, 1971 and 1972.

Establishments were asked to include in the value of capital expenditure, amounts received under the Local Employment Acts, 1960 to 1971 and any investment grants received under the Industrial Development Act, 1966 or regional development grants under the Industry Act, 1972.

(a) New building work

This represents the cost incurred during the year of new building and other constructional work (including office buildings, canteens and the like used in connection with the business covered by the return, but not dwelling houses for employees). The value is that charged to capital account during the year of return; it includes expenditure on new buildings or on the extension or reconstruction of old buildings, the value of works of a capital nature carried out by the establishment's own staff and the cost of any newly constructed buildings purchased. Figures shown include any legal charges, stamp duties, agents' commissions, etc.

(b) Land and existing buildings

The items shown are the capital cost of freeholds purchased and the capital cost of premium payable for leaseholds acquired (excluding the value of any assets acquired in taking over an existing business), and the amounts receivable for any freeholds or leaseholds disposed of. The value is that charged to capital account during the year of return.

(c) Plant, machinery and vehicles

The items shown are the value of plant and machinery and of vehicles acquired, both new and second-hand, and the amount received for items disposed of during year. The value of plant and machinery acquired includes plant, etc., which firms produced for their own use in connection with the business covered by the return. The value of plant, etc., acquired is the expenditure charged to capital account during the year of return less any discounts received, but including the cost of transport and installation. No deduction is made for depreciation, amortization or obsolescence. The proceeds of items disposed of during the year exclude amounts written off for items scrapped.

Enterprise

The term enterprise is used in this report to mean one or more establishments under common ownership or control (as defined in the Companies Act 1948) making returns to the census. An enterprise may consist of a single establishment, or of more than one establishment owned by one legal unit, usually a company, or of a number of establishments owned by a parent company and subsidiary company or companies. Information about the relationship between constituent companies of enterprises was obtained mainly from published sources such as the Stock Exchange Year Book supplemented by information from company reports and information supplied by establishments. The information available is not complete but covers the largest and most important groups of industrial establishments and is believed sufficient to provide a worthwhile basis for analysis.

Establishment

The definition of an establishment in 1970, 1971 and 1972 was that of the Standard Industrial Classification (revised 1968): "the smallest unit which can provide the information normally required for an economic census, for example, employment, expenses, turnover, capital formation". Sometimes activities which are conducted as a single business are carried on at a number of addresses, termed local units. Where the activities of such a business are closely integrated, and detailed census information is not available for each unit, it is treated as a multi-unit establishment and a single return accepted. Separate figures are obtained, however, of employment and net capital expenditure at each unit.

Gross output

Gross output measures the total value of production (including work done) by establishments during the year. It is calculated as follows:—

Value of sales and work done
Plus/Less: Increase/decrease in value of stocks of goods on hand for sale
Plus/Less: Increase/decrease in value of work in progress
= Gross output.

Net output

Net output represents the value added to materials by the process of production (including the margin on selling any merchanted or factored goods). It is calculated as follows:—

Gross output
Less: Purchases adjusted for change in value of stocks of fuel and raw materials
Less: Payments for work given to other establishments
Less: Payments for transport
Less: Net amount of any duties, subsidies, allowances and levies payable
= Net output.

Net output per person employed

The figures of net output per person employed are derived by dividing the net output by the average number of persons employed (full time and part time) on all activities covered by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding outworkers.

Purchases

Purchases include the cost of materials and components bought for use in production; of fuel and electricity for all purposes; of packaging materials including the cost of returnable cases and containers when first purchased; of workshop materials, office materials and materials for repairs to establishment's own buildings, plants and vehicles when carried out by their own work people included in the returns; of consumable tools; and of parts for machinery purchased during the year as replacements. Water charges are also included. In general, purchases of goods for merchenting or factoring and canteen supplies are included. Materials supplied by customers for processing are excluded, as are all purchases charged to capital account.

The values shown include any duty paid (less rebate, etc.) but exclude trade discounts allowed. The cost of transport is included only if included in the cost of materials as invoiced: amounts paid to transport organisations, including an establishment's own separate transport organisations for delivery of materials and fuel are, therefore, excluded. Materials purchased overseas are included at the c.i.f. cost plus any duty payable if the cost of transport from the docks was not included in the invoiced price, but at their full delivery cost if invoiced "carriage paid home". Materials and fuel transferred from another department of the establishment not covered by the same return are included at the estimated selling value recorded by the other department.

Sales

Sales are in respect of goods made by the business covered by the return, goods made for it by outworkers or by other establishments from materials given out to them (sometimes described as goods made on commission) and waste products. Any machinery or other capital items produced for use in the business covered by the return are included, the value being that adopted in the establishment's asset accounts. Goods sold without being subjected to any manufacturing process (i.e. merchanted or factored) and canteen takings are included.

The value shown for sales is the net selling value, defined as the amount charged to customers whether on an ex-works or delivered basis excluding any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc.; the net amount charged for packaging materials is included. Goods charged on a delivered basis to customers overseas are included at the f.o.b. value.

Goods produced in one establishment and transferred to another establishment of the same firm not covered by the return were treated as sales by the producing establishment and valued as far as possible as if they had been sold to an independent purchaser. Goods transferred to wholesale or retail selling organisations for which separate accounts were kept were valued on the same basis.

To the extent that sales of finished products of one establishment constitute the materials purchased by another, total figures of

the value of sales (and of materials and fuel purchased) include an element of duplication. In some industries, e.g. motor vehicle manufacturing, and woollen and worsted, this duplication is substantial; and aggregates for a number of industries contain significant amounts of duplication. For work done on commission, sub-contract work, etc., the value shown is the total amount charged for the work, including the value of any materials bought and used in such work.

Services rendered

This represents the amounts charged for hiring out plant, machinery and other goods, providing transport, or for any technical or other services rendered to other organisations. It includes amounts credited for similar services rendered to other establishments of the same enterprise not covered by the return.

Standard Industrial Classification

Industry classification is based on the Standard Industrial Classification (revised 1968). It is published by HM Stationery Office together with a separate index in the form of an alphabetical list of industries.

Stocks and work in progress

Values are given of stocks of goods on hand for sale, and of materials and fuel, at the end of the year of return, including any stocks of goods held for merchenting or factoring. Values of the change during the year are also shown. The values include duty in the case of dutiable goods held out of bond.

The value of work in progress at the end of, and the change during the year are also usually shown. This excludes any progress payments made to sub-contractors, and no deduction is made on account of progress payments received.

Transport payments

These represent the total amount paid or credited during the year for both outwards transport of finished goods sold and inwards transport of materials and fuel purchased. They include payment to other establishments, and to any separate transport organisation of the same establishment not covered by the return, but exclude the value of transport services provided by the business covered by the return. The items included are payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, i.e. railways, road haulage, canals, coastwise shipping, air, etc. Payments made for sea and air freight on goods sold to customers overseas and on materials and fuel purchased from overseas suppliers are excluded.

Wages and salaries

These are amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions, etc. The value of any payments in kind, travelling expenses, lodging allowances, etc. and employers' contributions to national insurances and pension schemes is excluded.

Work given out

The figures shown represent the total amount paid for work done by other establishments (whether part of the same enterprise or not) on materials supplied to them. They do not include payments to individual outworkers or payments for business and other services.

SYMBOLS USED

The following symbols are used throughout the report:

- .. not available
- nil or less than half the final digit shown
- * figures cannot be shown owing to the risk of disclosing information about individual enterprises
- R revised

ROUNDING OF FIGURES

Figures in the tables have, where necessary, been rounded to the nearest final digit; there may be an apparent slight discrepancy between the sum of the constituent items and the total shown.

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