EUROPEAN
COAL AND STEEL COMMUNITY

COMMISSION

# Investment in the Community Coalmining and Iron and Steel Industries

REPORT ON THE 1969 SURVEY
Position as at January 1, 1969

JULY 1969

# CONTENTS



## ANNEXES

# I—GENERAL REMARKS

It is the annual practice of the Commission of the European Communities to conduct a survey of past and future investment by ECSC enterprises as at January 1 of the year concerned, and its foreseeable effects on production potential. The annual survey covers all but a few very small enterprises, whose combined share of total production has in any case never amounted to more than 1% for coal, 1.1% for crude steel and 2.2% for rolled products.

The figures from the previous surveys for the years 1954-1964 are recapitulated in a Summary Report issued in August 1966 entitled "Investment in the Community Coalmining and Iron and Steel Industries: Recapitulative Report on the 1956-1965 Surveys". The statistical annexes to the present publication therefore show only the figures from 1964 onwards.

**Annex I** to each year's Report sets forth the **basic definitions** adopted. In particular, it specifies that investment projects have been classified in three categories, according as they were on January 1 (1969 in this case) of that year already completed or in progress (Category A), approved (Category B), or merely planned (Category C). Since, in the case of the iron and steel industry projects, merely "planned" can as a rule be quite easily dropped or deferred if necessary, the Category C projects dealt with in the Reports are those of the extractive industries (coal and iron ore) only.

**Annex II** contains tables showing for each sector actual and estimated **capital expenditure** and its impact on the **production potential.**

## a) Capital expenditure

Capital expenditure entered by Community enterprises on the credit side of their balance-sheets from January 1, 1954 onwards is recorded for the purposes of the annual surveys in European Monetary Agreement (EMA) units of account, the unit of account being to date equal in value to the United States dollar (see Annex I,1). It is true that computation in dollars does not reflect changes over a period in the cost of capital goods and in the wage costs involved by their installation; nevertheless, some general observations hold good.

Since the first annual investment survey, actual annual expenditure reached about 1,240m. dollar units of account. Whereas the 1968 estimate of 1,124m. is in the region of this average, developments in the mining and coal and steel industries were entirely different.

**Collieries'** expenditure including plants producing BKB and low-temperature brown-coal coke reached 277m. dollars in 1968 and expenditure is expected to stay at the same level in 1969; although the present level is slightly higher than that of 1966 and 1967, it is still below three-quarters of the annual average observed since 1954.

On a lower scale, an almost identical trend occurred in the **iron-ore mines** where expenditure amounted to 21m. dollars in 1968 and is estimated at 26m. in 1969; the present level is also about three-quarters of the average for 1954-1967.

Capital expenditure in the **iron and steel industry** went up almost steadily from 1954 to 1963 during which period the totala nnual expenditure rose from 453m. to 1,480m. dollars, or over three times the first amount. On the other hand, from 1963 to 1967 capital expenditure gradually fel back to 730m., or a 50% reduction in four years. As last year's survey already indicated, the downward trend has now been halted. Expenditure in 1968 is estimated at 822; this level will also be substantially exceeded in 1969 and no doubt during the years immediately following.

*TABLE 1*

**Capital Expenditure in the Community Industries, 1954—1970**

*'000,000 dollars (EMA units of account)*

| Sector | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B+C) (1) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-1959 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 (2) |
| Coalmining industry ... | 434 | 371 | 380 | 366 | 325 | 291 | 278 | 250 | 243 | 277 | 272 | 250 |
| Plants producing BKB and low-temperature brown-coal coke..... | 5 | 6 | 4 | 6 | 9 | 8 | 8 | 4 | 5 | 4 | 4 | 4 |
| Iron-ore mines ..... | 39 | 43 | 52 | 47 | 28 | 24 | 25 | 17 | 16 | 21 | 26 | 14 |
| Iron and steel industry .. | 581 | 775 | 1,123 | 1,230 | 1,480 | 1,315 | 932 | 848 | 730 | 822 | 1,099 | 837 |
| **Total** | **1,059** | **1,195** | **1,559** | **1,649** | **1,842** | **1,638** | **1,243** | **1,119** | **994** | **1,124** | **1,401** | **1,105** |

(1) The estimates for the iron and steel industry relate only to expenditure on projects already in progress (A) or approved (B) at 1 January 1969, not to those merely contemplated (C).

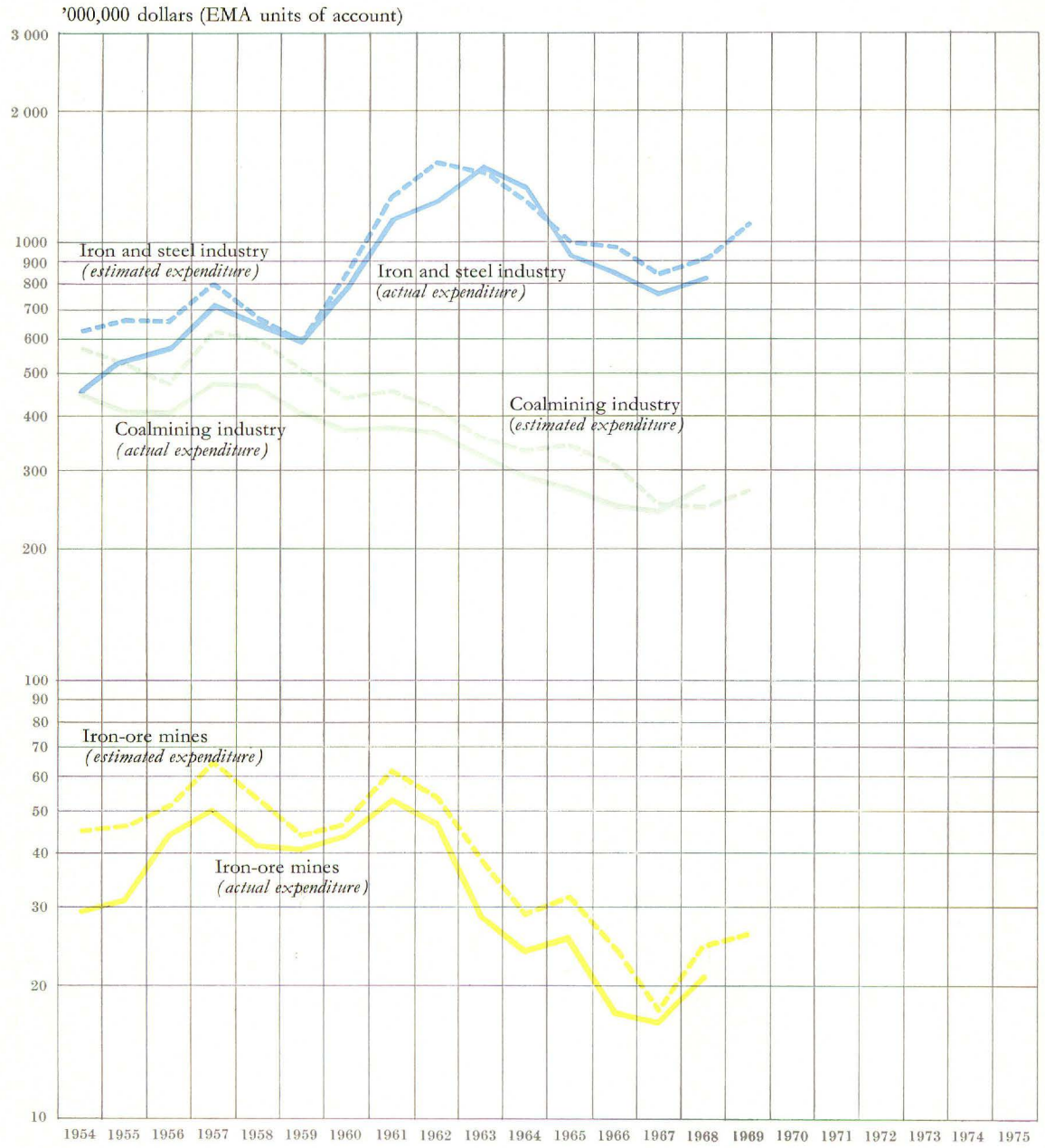
(2) On January 1, 1969 the enterprises were still unable to give a complete estimate of their actual expenditure in 1970. Accordingly, the estimates shown in all tables of this Report are less accurate for 1970 than for 1969.

The figures for the years 1967 and 1968 do not altogether tally with those given in last year's Report, inasmuch as it is normally the case that

(a) for 1967 the expenditure figures returned before the balance-sheets were closed are corrected when the next survey is drawn up;

*FIGURE 1*

**Comparison of Actual Capital Expenditure and Estimated Capital Expenditure as at the Beginning of Each Year**



(b) for the past year (1968) actual expenditure differs to varying extents from the estimates submitted on January 1; the 1968 survey had suggested that capital expenditure in that year would total 1,180m. dollars, but the figure was in fact only 1,124m. Overall, therefore, the estimates proved 95% correct: 112% for coal, 88% for iron-ore and 91% for steel (see Fig. 1).

The trend shown by the figures in Table 1 and the curves in Fig. 2A is shown in the following table with reference to the period 1954-1959 which was a relatively stable one in both the iron and steel and mining industries.

*TABLE 2*

**General Trend in Investment in Recent Years**

*Indices*

| Sector | Projects effected | | | | | | | | | | Projects planned for 1969 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-1959 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | |
| Coalmining industry ... | 100 | 85 | 88 | 84 | 75 | 67 | 64 | 58 | 56 | 64 | 63 |
| Iron-ore mines ..... | 100 | 110 | 133 | 121 | 72 | 62 | 64 | 44 | 41 | 54 | 67 |
| Iron and steel industry . | 100 | 133 | 193 | 212 | 255 | 226 | 160 | 146 | 126 | 141 | 189 |
| **All ECSC industries** | **100** | **113** | **148** | **156** | **174** | **155** | **117** | **106** | **94** | **106** | **132** |

## b) Production potential

The collieries' declarations indicate that the **hard-coal** production potential surveyed will only contract by 10.4m. tons from 1968 to 1972, which could bring it by the latter date to 184.8m. tons This reduction is slight compared with that made in Community collieries since 1959, viz. 67.3m. tons of which 19.1m. occurred in 1967 and 15.3m. in 1968.

The downward trend in the production potential of coalmines is levelling off and to judge from the collieries' declarations as at January 1, 1969 the same tendency will probably continue in the years to come. But these declarations cannot affect any decision taken by the new organization responsible for managing the majority of German collieries.

**Iron-ore** production potential, which had shown a marked reduction in recent years, appears to be stabilized. After a decrease of 23.6m. tons of iron-ore since 1962, including 6.2m. in 1967 and 2.4m. in 1968, it seems likely that the potential will only shrink slightly in 1969. According to the producers' calculations, there is likely to be an upward movement in the future in view of the basic capital commitments in Lorraine.

The Community **iron and steel industry,** encouraged by the improved economic situation, expects to speed up development. After restricting its expansion to 2.8m. tons in 1968, the annual production potential of crude steel will probably reach 17.4m. tons in each of the four succeeding years and total 132.2m. tons in 1972.

*TABLE 3*

**Actual Production and Production Potential in the Community Industries**

| Product | Actual Production | | | Production potential | | |
|---|---|---|---|---|---|---|
| | 1952 ('000,000 metric tons) | Average cumulative annual movement (%) | 1968 ('000,000 metric tons) | 1968 ('000,000 metric tons) | Average cumulative annual movement (%) | 1972 ('000,000 metric tons) |
| Hard coal(1) ..... | 237.4 | —1.9 | 175.9 | 195.2 | —1.4 | 184.8 |
| Iron ore ..... | 65.3 | +0.5 | 71.2 | 81.9 | +0.6 | 85.7 |
| Pig-iron ..... | 34.7 | +4.7 | 72.1 | 85.0 | +3.0 | 95.5 |
| Crude steel ..... | 41.8 | +5.5 | 98.6 | 114.8 | +3.6 | 132.2 |

(1) Exclusive of "small mines" (see Annex I, p.38.).

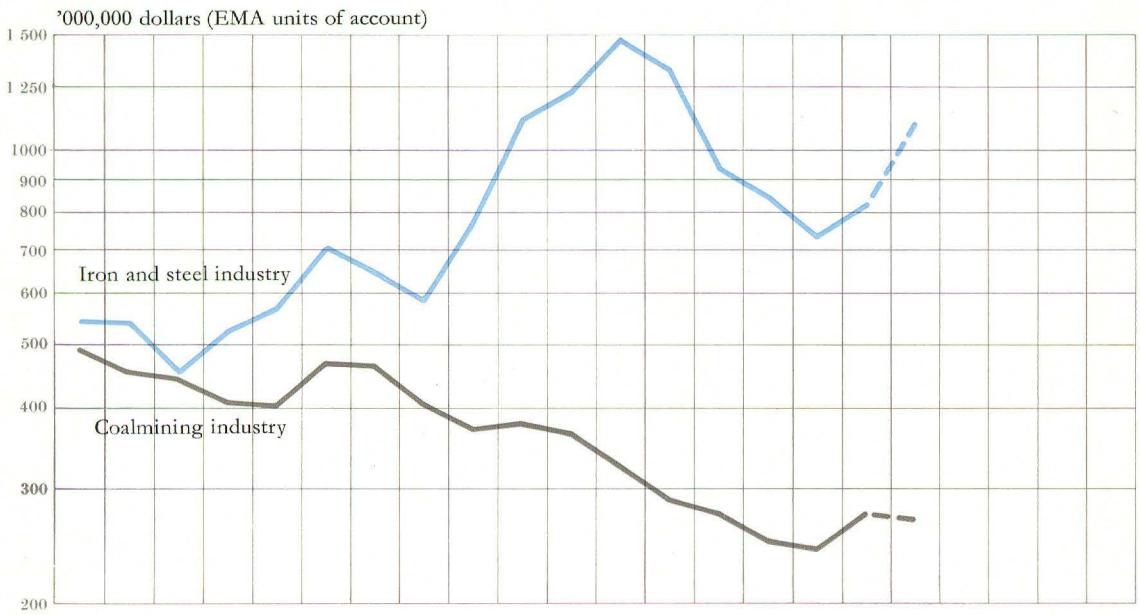
In order to interpret the production-potential figures correctly, it must be borne in mind that the sum of the potentials declared by the individual mines and plants is bound to be slightly above the maximum production actually achievable in the Community, by reason of unforeseeable incidents or circumstances which, in the course of any one year, may make it impossible for some of them to attain their maximum, even where their sales position as such is satisfactory.

Thus, even during the best years, actual production has never exceeded 96% or so of the sum of the individual production potentials declared. On the other hand, there is nothing to stop it going down in bad years to any level, however low. In 1968 production capacity rose in all sectors to a level not recorded since 1965.

*FIGURE 2*

**Investment in the Coalmining and Iron and Steel Industries**

A—Capital expenditure




B—Actual production and production potential

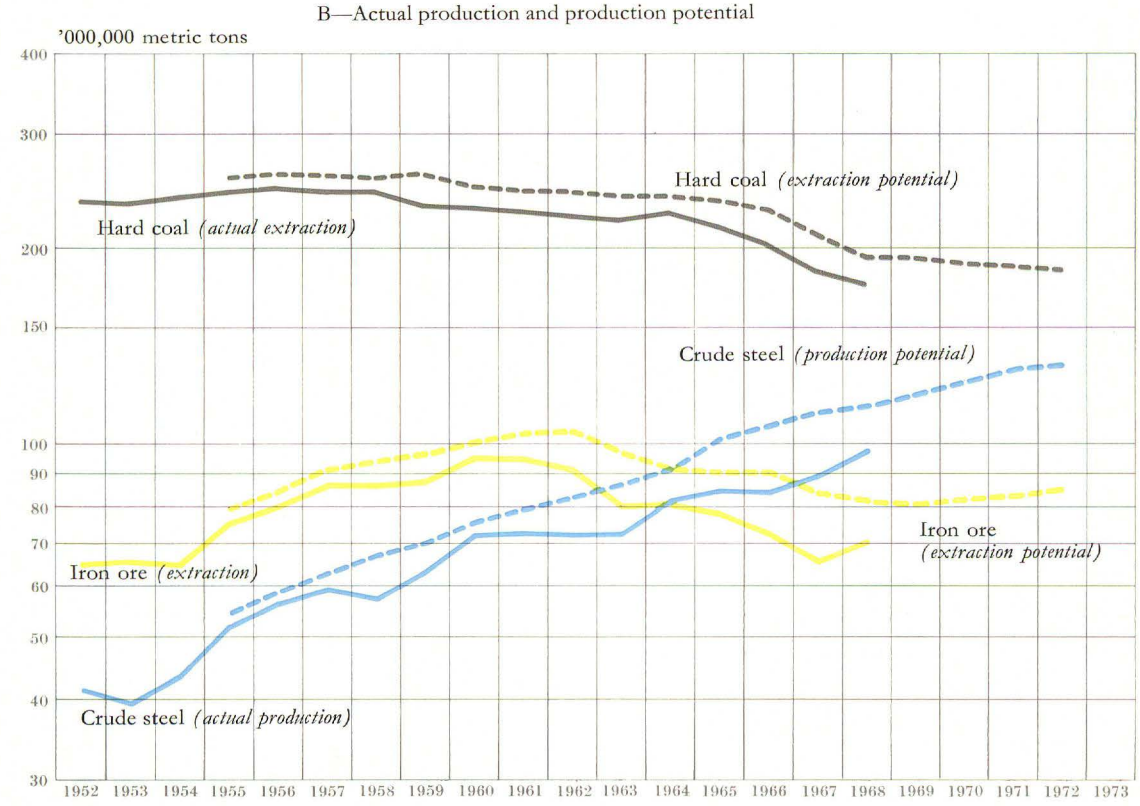


*TABLE 4*

**Community Ratios of Actual Production to Production Potential**

%

| Product | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hard coal ..... | 94.9 | 94.6 | 95.1 | 94.8 | 89.3 | 92.6 | 92.7 | 92.0 | 91.7 | 94.0 | 91.1 | 88.9 | 87.9 | 90.1 |
| Coke ..... | 93,2 | 96.5 | 96.1 | 92.2 | 84.3 | 85.7 | 85.3 | 85.0 | 84.2 | 90.2 | 92.7 | 88.9 | 87.1 | 92.0 |
| Iron-ore ..... | 95.4 | 95.1 | 94.9 | 91.3 | 90.9 | 94.6 | 91.7 | 87.6 | 81.9 | 88.3 | 87.0 | 80.7 | 78.2 | 86.9 |
| Pig-iron ..... | 96.3 | 96.0 | 94.7 | 87.9 | 88.3 | 94.3 | 90.9 | 85.5 | 81.0 | 88.2 | 83.8 | 77.0 | 79.2 | 84.8 |
| Crude steel ..... | 95.8 | 96.1 | 94.1 | 85.7 | 89.6 | 95.6 | 91.7 | 87.3 | 83.4 | 90.0 | 84.3 | 78.7 | 80.0 | 85.9 |

## II—THE COALMINING INDUSTRY

A slight upward trend was noticeable in capital spending in 1968 in the Community coalmining industry which was up about 12% on the 1966 and 1967 levels. After a continuous downward movement up to 1966, producers' forecasts as at January 1, 1969 suggest that their expenditure in 1969 and 1970 will be fairly near the 1968 figure.

*TABLE 5*

**Capital Expenditure in the Coalmining Industry 1954—1970**

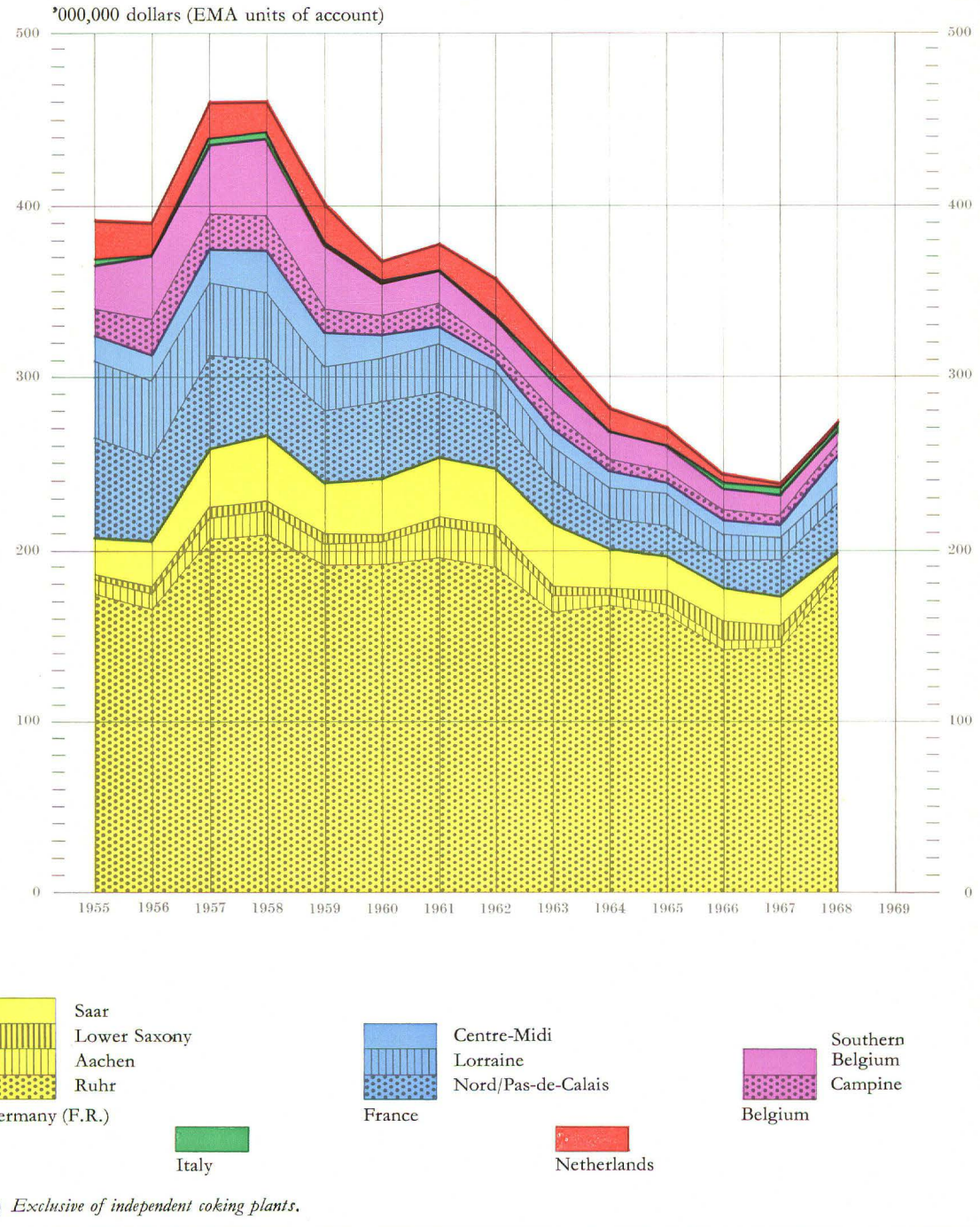
*'000,000 dollars (EMA units of account)*

| Sector | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B+C) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-1959 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
| Collieries | 253.9 | 226.0 | 235.4 | 220.5 | 217.5 | 202.9 | 190.4 | 162.8 | 139.9 | 123.6 | 129.7 | 108.4 |
| Coking plants, mine-owned | 57.5 | 33.7 | 43.1 | 35.9 | 19.0 | 17.3 | 15.8 | 13.2 | 10.2 | 15.4 | 17.5 | 24.7 |
| Coking plants, independent (1) | 10.8 | 1.6 | 1.4 | 5.1 | 3.5 | 5.9 | 5.0 | 5.3 | 3.8 | 4.6 | 5.0 | 0.8 |
| Briquetting-plants | 5.0 | 7.1 | 3.4 | 5.1 | 9.5 | 9.1 | 7.5 | 7.3 | 4.8 | 1.2 | 1.2 | 2.7 |
| Pithead power-stations and other power-generating plants | 107.0 | 102.6 | 96.9 | 99.9 | 75.8 | 55.5 | 58.9 | 61.2 | 84.4 | 132.7 | 118.7 | 113.5 |
| **Total** | **434.2** | **371.0** | **380.2** | **366.5** | **325.3** | **290.7** | **277.6** | **249.8** | **248.1** | **277.5** | **272.1** | **250.1** |
| Plants producing BKB and low-temperature brown-coal coke | 5.0 | 6.0 | 3.8 | 6.0 | 9.0 | 8.3 | 7.9 | 3.8 | 5.0 | 3.6 | 4.3 | 3.8 |

(1) Less the French nationalized gas industry (Gaz de France) from 1957.

*FIGURE 3*

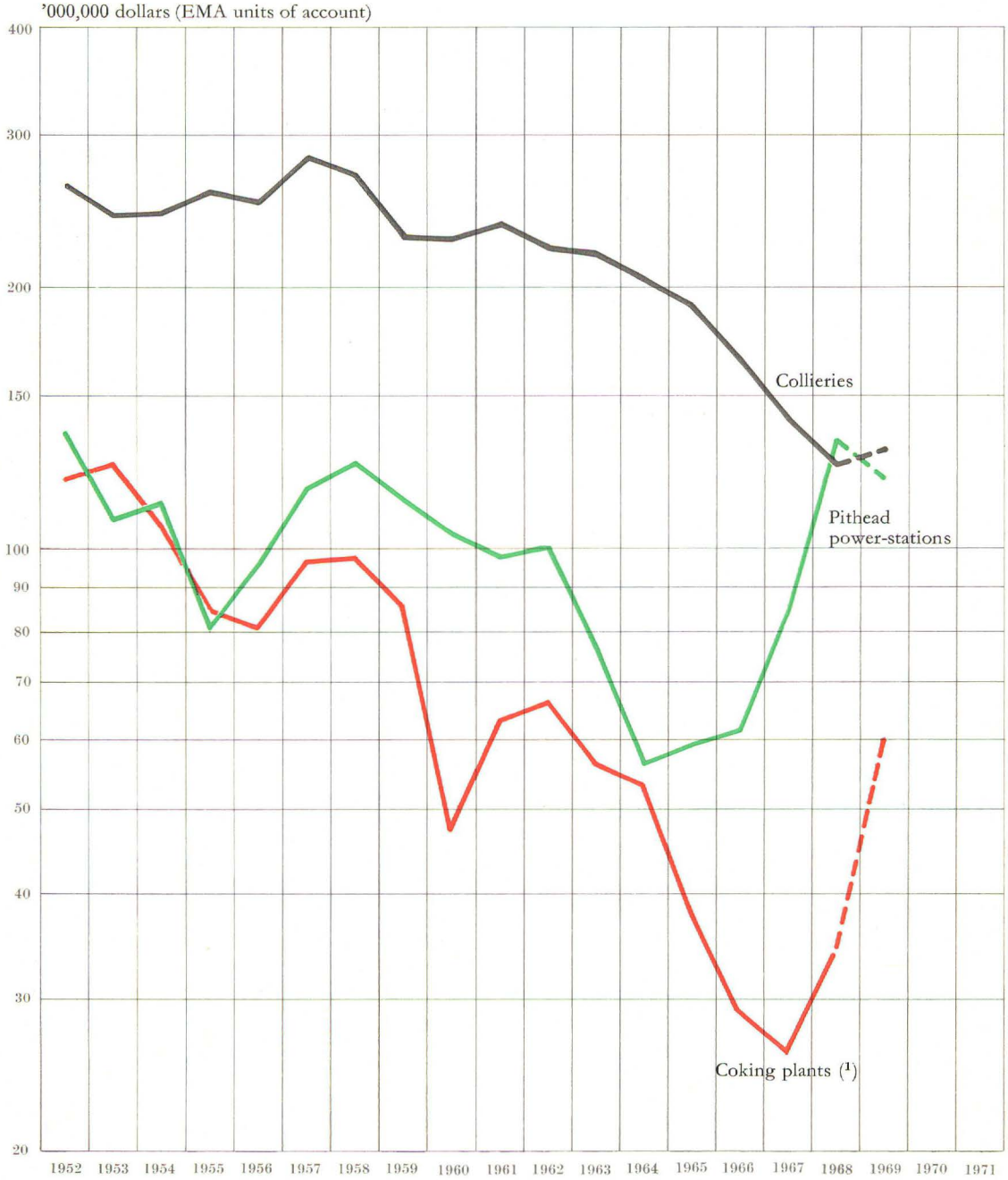
**Capital Expenditure in the Hard-Coal Industry (1)**




(1) *Exclusive of independent coking plants.*

*FIGURE 4*

**Capital Expenditure in the Coalmining Industry**




(1) Mine-owned, steelworks-owned and independent coking plants.

### a) Pits

The shrinkage in capital expenditure on the pits continued in 1968. Their share in the industry's total investment, which in 1965 was 69%, was back to 44% in 1968. Specific expenditure per ton produced, which in 1954-1959 worked out at approximately 1.05 dollars, has gone down progressively to 0.76 in 1967 and 0.70 in 1968. This is the average for the Community overall: only the Ruhr and the Belgian coalfields came above it, while the Aachen and Dutch Limburg coalfields registered the lowest figures.

*TABLE 6*

**Capital Expenditure on Collieries, 1954—1968**

*'000,000 dollars (EMA units of account)*

| Type of installation | 1954-1959 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|---|---|---|---|---|---|---|---|---|---|---|
| Shafts and underground workings .. | 56.3 | 48.7 | 42.6 | 37.0 | 41.3 | 38.3 | 35.3 | 25.8 | 20.0 | 19.1 |
| Mechanical equipment below ground | 56.8 | 52.7 | 58.3 | 56.4 | 56.5 | 59.8 | 56.6 | 51.4 | 50.5 | 46.0 |
| Haulage and winding equipment ... | 21.4 | 25.8 | 24.4 | 21.3 | 16.6 | 14.7 | 14.8 | 15.4 | 15.2 | 13.4 |
| *Coal extraction* ..... | *134.5* | *127.2* | *125.3* | *114.7* | *114.4* | *112.8* | *106.7* | *92.6* | *85.7* | *78.5* |
| Screening and washing ..... | 56.7 | 45.4 | 49.3 | 47.3 | 42.1 | 37.2 | 32.3 | 29.1 | 20.4 | 12.5 |
| Other surface installations ..... | 32.9 | 32.9 | 35.1 | 33.9 | 35.7 | 30.2 | 27.8 | 21.8 | 19.3 | 18.3 |
| Buildings, etc. ..... | 29.8 | 20.5 | 25.7 | 24.6 | 25.3 | 22.7 | 23.6 | 19.3 | 14.5 | 14.3 |
| *Surface installations* ..... | *119.4* | *98.8* | *110.1* | *105.8* | *103.1* | *90.1* | *83.7* | *70.2* | *54.2* | *45.1* |
| **Total** | **253.9** | **226.0** | **235.4** | **220.5** | **217.5** | **202.9** | **190.4** | **162.8** | **139.9** | **123.6** |

The shrinkage in the annual extraction potential is slowing down somewhat; producers do not expect it to total more than 10.4m. tons from 1968 to 1972. The extraction potential for 1972, 184.8m. tons is still high considering the probable markets.

*TABLE 7*

**Movement of Hard-Coal Extraction Potential (1)**

*'000,000 metric tons*

| Extraction | | Extraction potential | | | | |
|---|---|---|---|---|---|---|
| 1952 | 1968 | 1968 | 1969 | 1970 | 1971 | 1972 |
| 237.4 | 175.9 | 195.2 | 192.9 | 189.5 | 187.1 | 184.8 |

(1) As in previous years, mines producing only small tonnages are excluded (see Annex I, para. IIa, p. 38). Their combined production in 1968 amounted to about 0.2 million tons.

The anticipated 1972 potential of 184.8m. tons is very much less than the 1968 figure for the French, Dutch and southern Belgian coalfields which is being reduced by an annual total of 18.3m. tons; the French coalfields alone expect their potential to fall by 11.6m. tons p.a. despite their previous resistance to the downward trend. But this movement seems to have reached its limit in most German coalfields and the Campine; from the present date to 1972 the annual extraction potential may well go up by 6.3m. tons in the Ruhr alone.

As a result of these opposing trends, the net reduction in annual extraction potential is expected to total 10.4m. tons from 1968-1972. This figure is slight compared with the reductions recorded in previous years, particularly the 19.1m. ton drop in 1967 and 15.3m. in 1968.

The number of working days per annum on which the actual and expected production potential are based is 265 in the French coalfields, 250 in Germany (295 in the Saar), 254 in the Netherlands, and 242 in most of the Belgian collieries.

## b) Coking plants

Compared with 1967 and even 1966, capital expenditure on the mine-owned coking plants (see Table 5) went up sharply in 1968, reaching 15.4m. dollars or not far below the annual average of 57.5m. noted from 1954 to 1959. The present upswing should continue during the years to come and is therefore applicable to practically all capital expenditure on the Ruhr coalfield and the much smaller figure relating to the Saar and the Nord/Pas-de-Calais. Specific expenditure per ton of coke produced was down from 1.3 dollars in 1954-1959 to 0.3 in 1967; in 1968 it reached 0.4.

Expenditure on the independent coking plants, estimated to average about 10.8m. dollars a year from 1954 to 1959, fell to an insignificant level outside the Italian seaboard, where coke can be made economically from American fines. In 1968, expenditure was around 4.6m. dollars (3.7 in Italy) and the 1969 forecasts are of the same order.

Mainly as a result of the development in plants on the Italian seabord, capital expenditure on the steelworks-owned coking-plants remained substantial up to 1964. After marking time for some years expenditure will soon go up again thanks to the construction of new coke ovens on the Community seaboard, although the companies' decisions were only obtained in France and Italy.

The trend in capital expenditure on the steelworks-owned coking plants is shown in Table 8 below, which supplements Table 5 and provides an overall picture of the Community's coking industry.

Per ton of coke produced, expenditure is now at the same level as in the mine-owned coking plants, viz. $0.5 in 1967 and $0.6 in 1968.

*TABLE 8*

**Capital Expenditure on Steelworks-Owned Coking Plants, 1954—1970(1)**

*'000,000 dollars (EMA units of account)*

| Actual expenditure | | | | | | | | | | Estimated expenditure | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 1969 | | 1970 | |
| 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | A+B | A+B+C | A+B | A+B+C |
| 22.9 | 11.5 | 18.3 | 25.0 | 33.8 | 29.7 | 17.2 | 10.4 | 11.5 | 13.7 | 36.6 | 37.8 | 26.2 | 30.9 |

(1) Cf. Table 16, under "The Iron and Steel Industry" (1969 and 1970 estimates for Categories A and B only).

Only an insignificant percentage of the expenditure on the carbonization sector in 1968 (mine-owned, independent and steelworks-owned plants together), went on the construction of new coke ovens, whereas in 1967 the figure was over a quarter. The construction of new coke ovens should help to increase this percentage for the current year at least.

*TABLE 9*

**Capital Expenditure on Mine-Owned, Independent and Steerlworks-Owned Coking Plants, 1954—1968**

*'000,000 dollars (EMA units of account)*

| Type of installation | 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|---|---|---|---|---|---|---|---|---|---|---|
| Coke ovens ..... | 37.9 | 20.7 | 26.6 | 29.2 | 28.0 | 17.6 | 12.2 | 9.9 | 10.6 | 8.5 |
| *of which:* | | | | | | | | | | |
| New plant ..... | (21.6) | (9.6) | (13.7) | (14.4) | (21.2) | (12.4) | (5.3) | (4.1) | (6.7) | (1.7) |
| Renovations and replacements ..... | (16.3) | (11.1) | (12.9) | (14.8) | (6.8) | (5.2) | (6.9) | (5.8) | (3.9) | (6.8) |
| Gas producers ..... | 2.4 | 0.9 | 0.6 | 2.1 | 0.7 | 3.6 | 1.7 | 0.3 | 0.1 | 0.2 |
| Coke-oven gas and by-product plants ..... | 29.1 | 13.1 | 18.2 | 18.1 | 10.8 | 11.8 | 9.2 | 6.8 | 4.9 | 14.0 |
| Miscellaneous ..... | 21.8 | 12.1 | 17.4 | 16.6 | 16.8 | 19.9 | 15.0 | 11.8 | 9.9 | 11.0 |
| **Total** | **91.2** | **46.8** | **62.8** | **66.0** | **56.3** | **52.9** | **38.1** | **28.8** | **25.5** | **33.7** |

In 1968, the annual production potential of the mine-owned plants fell a further 1.5m. tons compared with the previous year; according to the forecasts up to 1972, there will be a further reduction totalling over 3m. tons. On the other hand, the slight shrinkage in expenditure on steelworks-owned coking plants in 1968 will probably soon change to an expansion in production potential exceeding 2m. tons. The production potential of mine-owned, independent and steelworks-owned plants together in 1972 should therefore be 1m. tons below the 1968 potential.

*TABLE 10*

**Movement of Coke Production Potential**

*'000,000 metric tons*

| Category | Actual production | | Production potential | | | | |
|---|---|---|---|---|---|---|---|
| | 1952 | 1968 | 1968 | 1969 | 1970 | 1971 | 1972 |
| Mine-owned plants ..... | 42.2 | 39.7 | 43.5 | 42.0 | 41.4 | 41.7 | 40.4 |
| Independent plants ..... | 3.2 | 3.7 | 3.9 | 3.7 | 3.7 | 3.7 | 3.7 |
| Steelworks-owned plants (1) ..... | 15.8 | 21.7 | 23.4 | 23.5 | 24.5 | 25.1 | 25.7 |
| **Total** | **61.2** | **65.1** | **70.8** | **69.2** | **69.6** | **70.5** | **69.8** |

(1) Cf. Table 17, under "The Iron and Steel Industry." The production-potential figures above for the steelworks-owned plants are calculated on the same basis as for the other types of plant, *i. e.* including all three categories (A, B and C).

Table VIII in Annex II contains some technical data on the operation of coking plants (coal input, coke output, gas consumed and produced).

### c) Briquetting plants

Capital spending on hard-coal briquetting has always been low. The slight upturn due to the construction of desmoking plants in France and Belgium between 1963 and 1966 is now over.

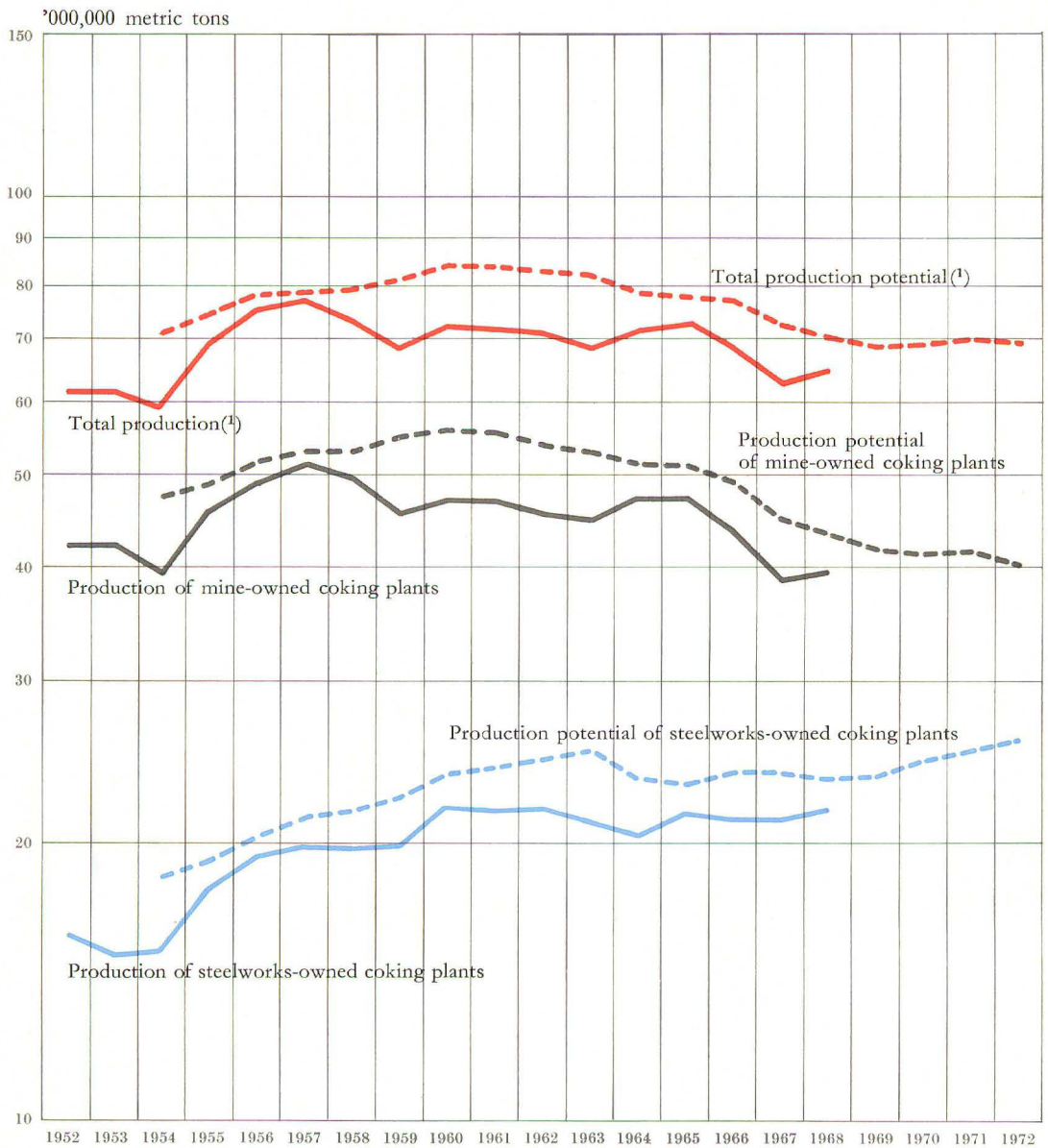
Briquetting potential overall (smokeless and non-smokeless briquettes together) is expected to decrease by a further 1.2m. in 1969, and to remain at this level until 1972.

### d) Pithead power stations

Capital expenditure under this head, which averaged slightly over 100m. dollars a year from 1954-1962, worked out in 1968 at 132.6m., after having more or less marked time for five years. The present increase in expenditure is bound to continue for several years where it has been decided to build a number of large power stations, viz. in the Ruhr and the three large French coalfields.

*FIGURE 5*

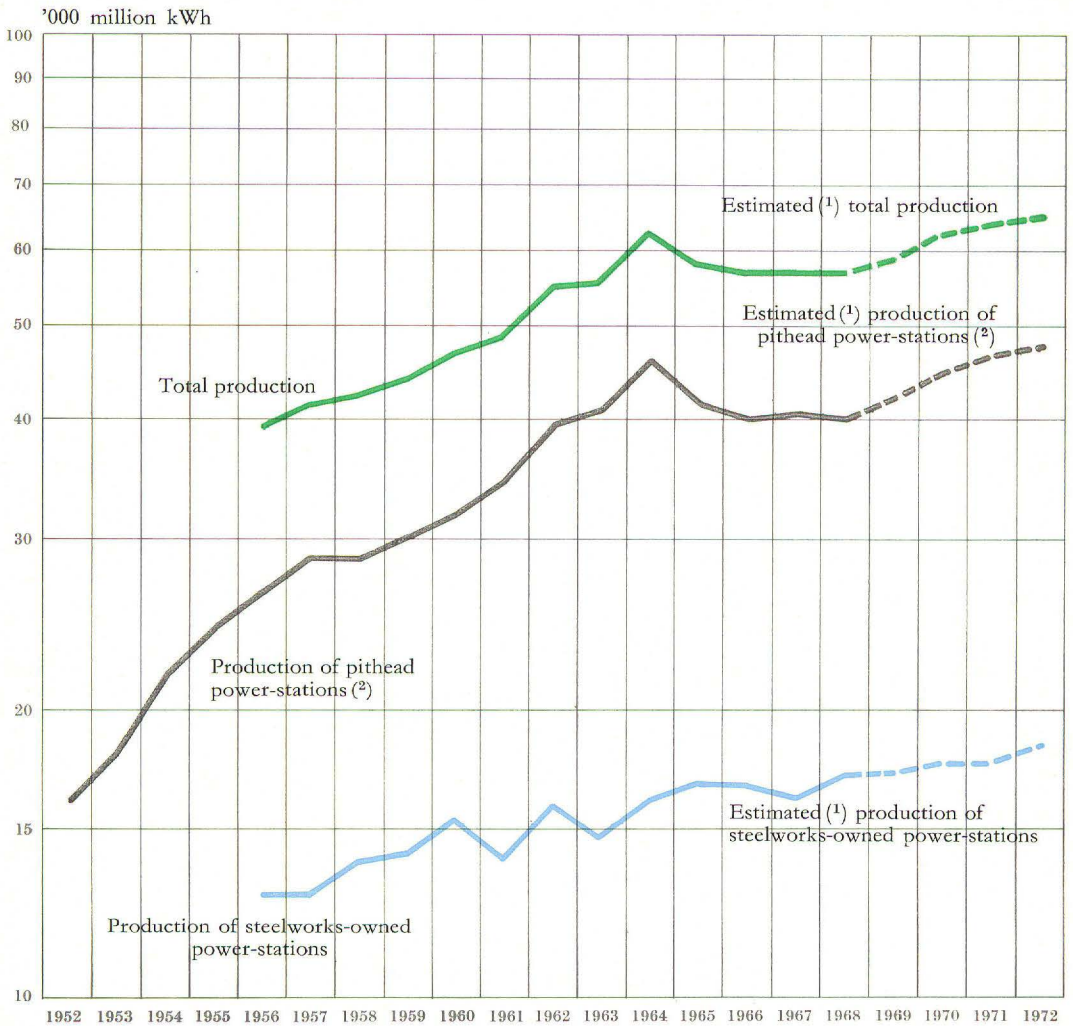
**Production and Production Potential of Coking Plants**




(1) Mine-owned, steelworks-owned and independent coking plants.

*FIGURE 6*

**Electric Power Production**




(1) For 1969 and following years energy production figures have been estimated on the basis of the maximum electric capacity as in mid-year assuming the same number of load-hours as in 1968, i.e. 3,853 hours per annum for the pithead power-stations and 4,972 hours per annum for the steelworks-owned power-stations.

(2) Pithead power-stations proper and other power-stations plant at mines.

*TABLE 11*

**Capital Expenditure on Pithead Power-Stations and other Power-Generating Plant at Mines, 1954—1968**

*'000,000 dollars (EMA units of account)*

| Type of installation | 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|---|---|---|---|---|---|---|---|---|---|---|
| Steam-raising plant | 40.2 | 36.4 | 28.2 | 40.3 | 25.2 | 17.2 | 20.1 | 25.6 | 39.7 | 59.2 |
| Power-generating plant and distribution switchgear | 33.4 | 42.5 | 43.8 | 34.4 | 24.1 | 14.4 | 14.2 | 19.3 | 27.1 | 50.1 |
| Buildings | 9.6 | 7.5 | 10.1 | 9.4 | 11.7 | 8.8 | 7.2 | 5.2 | 6.7 | 6.9 |
| Electricity distribution networks | 9.8 | 7.0 | 5.7 | 6.0 | 5.6 | 3.2 | 3.9 | 3.0 | 2.4 | 3.2 |
| Compressed-air plant | 5.3 | 2.7 | 1.4 | 0.3 | 2.1 | 2.3 | 1.1 | 0.7 | 0.8 | 0.7 |
| Miscellaneous | 8.6 | 6.5 | 7.7 | 9.5 | 7.1 | 9.6 | 12.4 | 7.4 | 7.7 | 12.5 |
| **Total** | **106.9** | **102.6** | **96.9** | **99.9** | **75.8** | **55.5** | **58.9** | **61.2** | **84.4** | **132.6** |

Thanks to these new installations, installed capacity will expand rather faster than previous surveys suggested. In the steelworks-owned stations (here mentioned to provide a full picture of the power-generating position in both Community industries) the slow-down is mainly owing to the continuing decrease in the coke rate at the blast furnaces in consequence of the production of blast-furnace gas.

*TABLE 12*

**Electricity Production and Maximum Electric Capacity of the Pithead and Steelworks-Owned Power-Stations**

| | Production ('000,000,000 kWh) | | Maximum electric capacity (MW) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Beginning of | | | | | |
| | 1956 | 1968 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 |
| Pithead stations | 26.8 | 39.9 | 10,183 | 10,569 | 11,262 | 11,967 | 12,199 | 12,481 |
| Steelworks-owned stations | 12.6 | 16.9 | 3,452 | 3,347 | 3,495 | 3,501 | 3,501 | 3,776 |

Assuming they continue working at the 1968 rates of 4,972 and 3,853 load-hours respectively, the pithead stations' output of electric current should rise between 1968 and 1972 from 39,900m. to 47,500m. kWh and the steelworks-owned stations' from 16,900m. to 18,100m.

Tables XI, a, and b, in Annex II give some technical data on the operations of the pithead stations (specific consumption in calories per kWh, consumption of low-grade coal, load-hours per annum). It should be noted that their specific consumption is still falling. In 1968 the rate was only 2,871 kcal/kWh, although the coal employed consisted of 88% of low-grade matter (reckoned ton for ton).

**e) Plants producing BKB and low-temperature brown-coal coke**

Very little is being spent on the brown-coal briquette (BKB) plants and it seems that the same level will be maintained in the years to come. The production potential was 9.6m. tons in 1968 and will probably fall to about 2.4m. tons in the next four years.

The last low-temperature brown-coal coke plants ceased production in 1967.

## III—THE IRON-ORE MINES

Capital spending in the Community iron-ore industry has been falling constantly since 1962. Although higher than the 1966 and 1967 figures, the 1968 expenditure is reaching the 1963-1965 level, itself far below that of preceding years. According to producers' forecasts, expenditure will probably go up again slightly in 1969. Only in Lorraine is further expenditure being planned on a considerable scale.

*TABLE 13*

**Capital Expenditure in the Iron-Ore Industry, 1954—1970**

*'000,000 dollars (EMA units of account)*

| Type of installation | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B+C) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
| Mining of ore ..... | 21.3 | 26.1 | 30.8 | 26.1 | 19.6 | 18.2 | 17.8 | 12.4 | 11.8 | 13.5 | 20.4 | 11.2 |
| Preparation of ore at mine .. | 8.9 | 7.5 | 9.6 | 8.1 | 3.9 | 2.3 | 2.1 | 2.2 | 1.6 | 4.5 | 2.0 | 1.0 |
| Various surface installations. | 9.0 | 9.6 | 12.0 | 12.4 | 4.7 | 3.4 | 5.7 | 2.7 | 2.6 | 2.9 | 3.6 | 2.3 |
| **Total** | **39.2** | **43.2** | **52.4** | **46.6** | **28.2** | **23.9** | **25.6** | **17.3** | **16.0** | **20.9** | **26.0** | **14.5** |

From 1952 to 1960 Community production of crude ore rose progressively from 65.3m. to 95.9m. tons, i.e. at an average cumulative rate of 4.9%; for Lorraine the increase was 6.6% p.a., from 37.7m. to 62.7m. From 1960 to 1967, as a result of competition from overseas ores, the Community's production went down by 30m. tons. In 1968, extraction rose by 5m. tons.

Lorraine producers' combined share of Community potential gradually rose from 65% in 1960 to 69% in 1967 and 73.5% in 1968.

*TABLE 14*

**Movement of Crude-Ore Extraction Potential**

*'000,000 metric tons*

| Actual extraction | | Extraction potential | | | | |
|---|---|---|---|---|---|---|
| 1952 | 1968 | 1968 | 1969 | 1970 | 1971 | 1972 |
| 65.3 | 71.2 | 81.9 | 81.3 | 82.6 | 83.8 | 85.7 |

Community potential reached its peak in 1962, with 105.5m. tons. Over the next six years it fell by 23.6m. in all: 8.3m. in Lorraine, 5.3m. in Lower Saxony, 1m. in Luxembourg, and 9m. in the various minor orefields. Although a further fall in expected in 1969, it should afterwards level off in most orefields, and Lorraine, and to a lesser extent Luxembourg, should show some upward trend in potential.

## IV—THE IRON AND STEEL INDUSTRY

From 1963 to 1967, when the bulk of the expenditure on the series of major projects approved in 1960-61 was effected, investment activity in the Community iron and steel industry has been tending steadily downward: since the level observed in 1967, there has been an upward tendency which should be even more marked in the near future.

As regards the breakdown of this total by areas, it can be seen from the annexed tables, and in particular from the recapitulation in Table XV, that compared with the previous year the rise was greatest in the Netherlands, Lorraine and northern France, and rather less in Germany, while there were greater or larger reductions in Belgium, Luxembourg and the Italian coastal areas.

As regards the breakdown by sectors, the drop in expenditure which since 1963 became apparent in the case of the general services—always a particularly costly item in new plants—and the pig-iron production side, especially burden preparation. A certain upturn has developed in the crude-steel sector in consequence of the continuous development of the oxygen steelmaking process. Expenditure on the rolling-mills in 1968 showed a marked upward trend which could increase still further in future years. In 1968, the shares of these four types of plants in the overall expenditure were 16% for general services, 15% for pig-iron production, 19% for crude-steel production and 50% for rolled products, as compared with 20%, 17%, 20% and 43% respectively in 1967.

*TABLE 15*

**Capital Expenditure in the Iron and Steel Industry, 1954—1970**

*'000,000 dollars (EMA units of account)*

| Type of installation | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
| *Plant for production of :* | | | | | | | | | | | | |
| pig-iron | 143.3 | 172.2 | 218.8 | 233.2 | 258.4 | 222.7 | 160.4 | 132.5 | 130.6 | 126.8 | 214.3 | 148.9 |
| crude steel | 84.1 | 95.4 | 162.8 | 152.4 | 175.0 | 158.3 | 124.7 | 122.1 | 143.8 | 152.0 | 159.1 | 101,6 |
| rolled products | 249.8 | 350.3 | 532.4 | 597.6 | 726.4 | 634.3 | 425.5 | 405.0 | 317.7 | 408.2 | 544.9 | 469.5 |
| *General services* | 103.8 | 157.3 | 209.1 | 247.1 | 319.7 | 300.0 | 221.7 | 188.5 | 138.1 | 135.1 | 180.6 | 116.8 |
| **Total** | **581.0** | **775.2** | **1,123.1** | **1,230.3** | **1,479.5** | **1,315.3** | **932.3** | **848.1** | **730.2** | **822.1** | **1,098.9** | **836.8** |

The following subsections examine one by one the four main categories of investment and their effects on production potential.

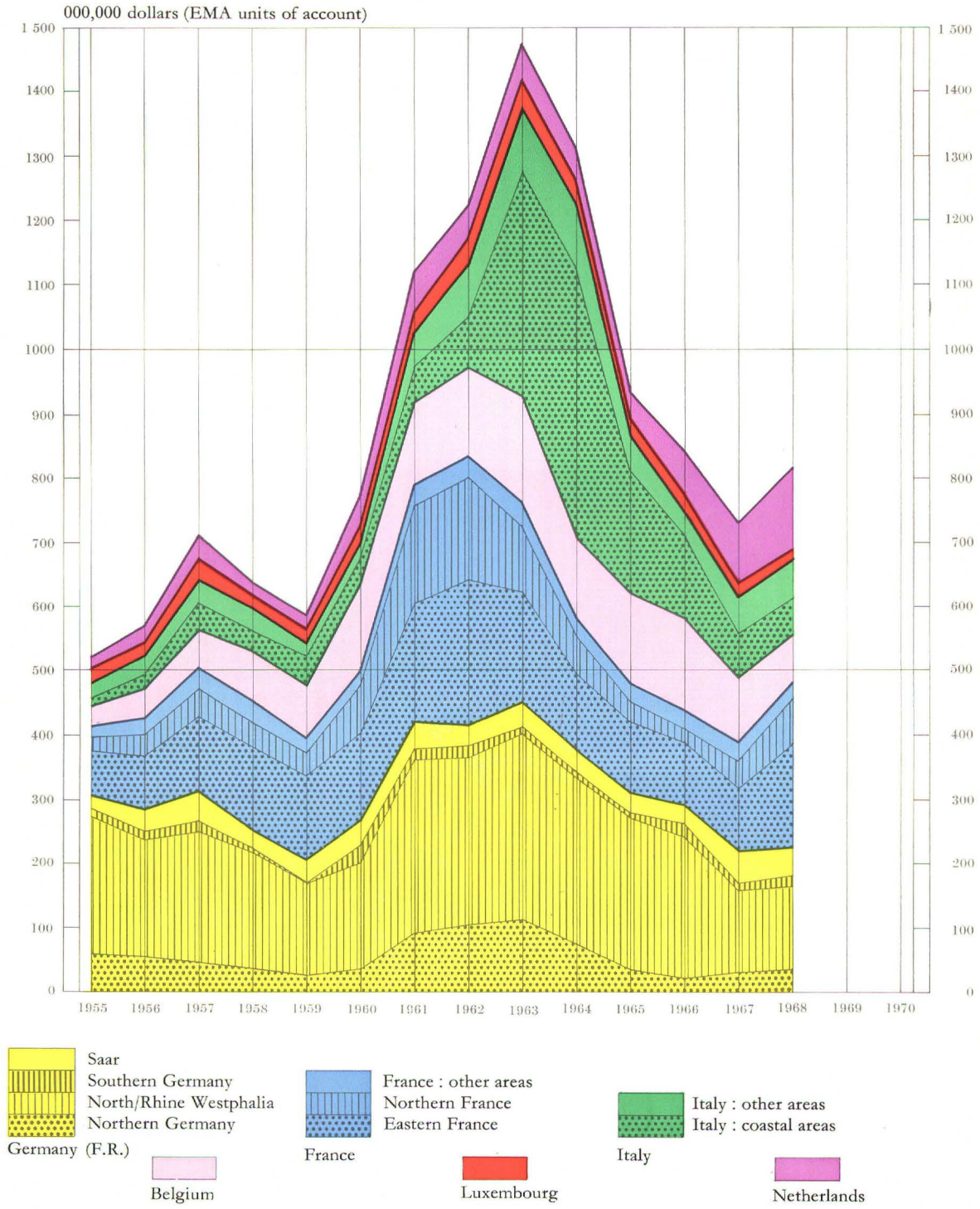
### a) Pig-iron production

Although expenditure in absolute terms remained at the same level, the amounts devoted to pig-iron production plant (steelworks-owned coking plants, burden-preparation, installations and blast-furnaces), which had accounted for 32% of all expenditure in 1958-59, remained at 15% in 1968, which was the same level as in recent years. The proportion will rise substantially to about 20% in 1969.

Expenditure on the industry's coking plants remained fairly low in 1968, but large projects have now been announced in northern France and the Italian coastal area. Less and less work is being done on sinter and blast-furnace capacity, most enterprises being reluctant to embark on projects for pelletization. Expenditure on burden-preparation installations and blast-furnaces is back to round about the same level as in 1954-1959.

*FIGURE 7*

**Capital Expenditure in the Iron and Steel Industry**




22a

*FIGURE 8*

**Capital Expenditure in the Iron-Ore Mines and Iron and Steel Industry**

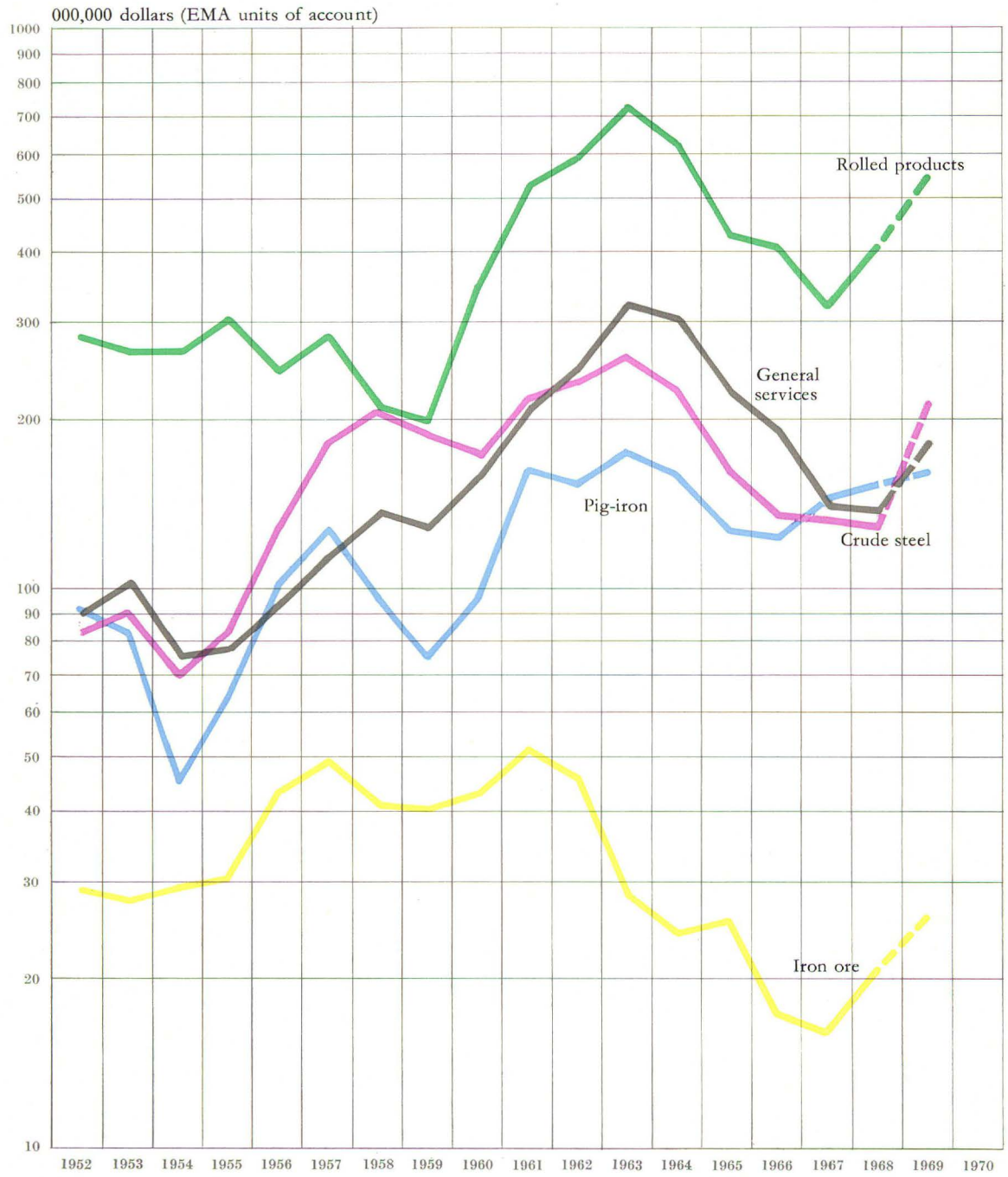


*TABLE 16*

**Capital Expenditure on Pig-Iron Production Plant, 1954—1970**

*'000,000 dollars (EMA units of account)*

| Type of installation | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-1959 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
| Steelworks-owned coking-plants ..... | 22.9 | 11.5 | 18.3 | 25.0 | 33.8 | 29.7 | 17.2 | 10.4 | 11.5 | 13.7 | 36.6 | 26.2 |
| Burden preparation ..... | 42.7 | 73.7 | 93.3 | 110.9 | 123.2 | 85.0 | 52.0 | 45.0 | 43.8 | 44.8 | 74.5 | 60.0 |
| Blast-furnaces ..... | 77.7 | 87.0 | 107.2 | 97.3 | 101.4 | 108.0 | 91.2 | 77.1 | 75.3 | 68.3 | 103.2 | 62.7 |
| **Total** | **143.3** | **172.2** | **218.8** | **233.2** | **258.4** | **222.7** | **160.4** | **132.5** | **130.6** | **126.8** | **214.3** | **148.9** |

As was noticed in Section II (see Table 10), the **industry's coke** production potential is expected to increase by 2.3m. tons between 1968 and 1972 (though of this 1.1m. tons is represented by projects still only contemplated). Notwithstanding the new North Sea and Mediterranean schemes, expansion in this sector will be insufficient to offset the reduction in mine-owned coking potential.

Sinter potential went up from 88.8m. tons in 1967 to 93.5m. in 1968, while pig-iron potential increased from 82.8m. tons in 1967 to 84.9m. in 1968, reflecting a further inprovement in burden-preparation installations. Over half the iron used in the blast furnaces may henceforth be in the form of Community-sintered ore. Few of the main installations are now located in areas using low-grade ores.

Pig-iron potential is expected to increase fairly substantially, by close on 12%, between 1968 and 1972, as a result of action being taken to enlarge the hearth diameter of a good many blast-furnaces and the fact that it will be possible to use considerably larger amounts of high-grade ore and sinter.

*TABLE 17*

**Movement of Pig-Iron Production Potential**

*'000,000 metric tons*

| Product | Actual production | | Production potential | | | | |
|---|---|---|---|---|---|---|---|
| | 1952 | 1968 | 1968 | 1969 | 1970 | 1971 | 1972 |
| Coke (steelworks-owned plant)(1) | 15.8 | 21.7 | 23.4 | 23.5 | 24.4 | 24.4 | 24.6 |
| Sinter | 15.6 | 81.0 | 93.5 | 95.6 | 103.5 | 110.0 | 112.8 |
| Pig-iron | 34.7 | 72.1 | 85.0 | 88.1 | 91.3 | 94.0 | 95.5 |

(1) Cf. Table 10 under "The Coalmining Industry." The production-potential figures above for all three types of plant concerned in the production of pig-iron are based only on investment projects in progress or approved (Categories A and B).

## b) Steel production

Expenditure on **basic-Bessemer** and **open-hearth** steelmaking plant is still on the downgrade and will become negligible in the years ahead.

After the decline in 1966, expenditure on **electric-furnace** capacity rose somewhat to not far off the 1961-1964 level of 20m. dollars; the forecasts for 1969 are the absolute maximum. Most of it was effected in southern Germany, central France and especially in the continental areas of Italy.

The rapid expansion in **oxygen-steelmaking** capacity continues, accounting in 1968 for 81% of the industry's total investment in crude-steel production plant. Expenditure was highest in northern Germany, the Ruhr, Lorraine and the Netherlands.

*TABLE 18*

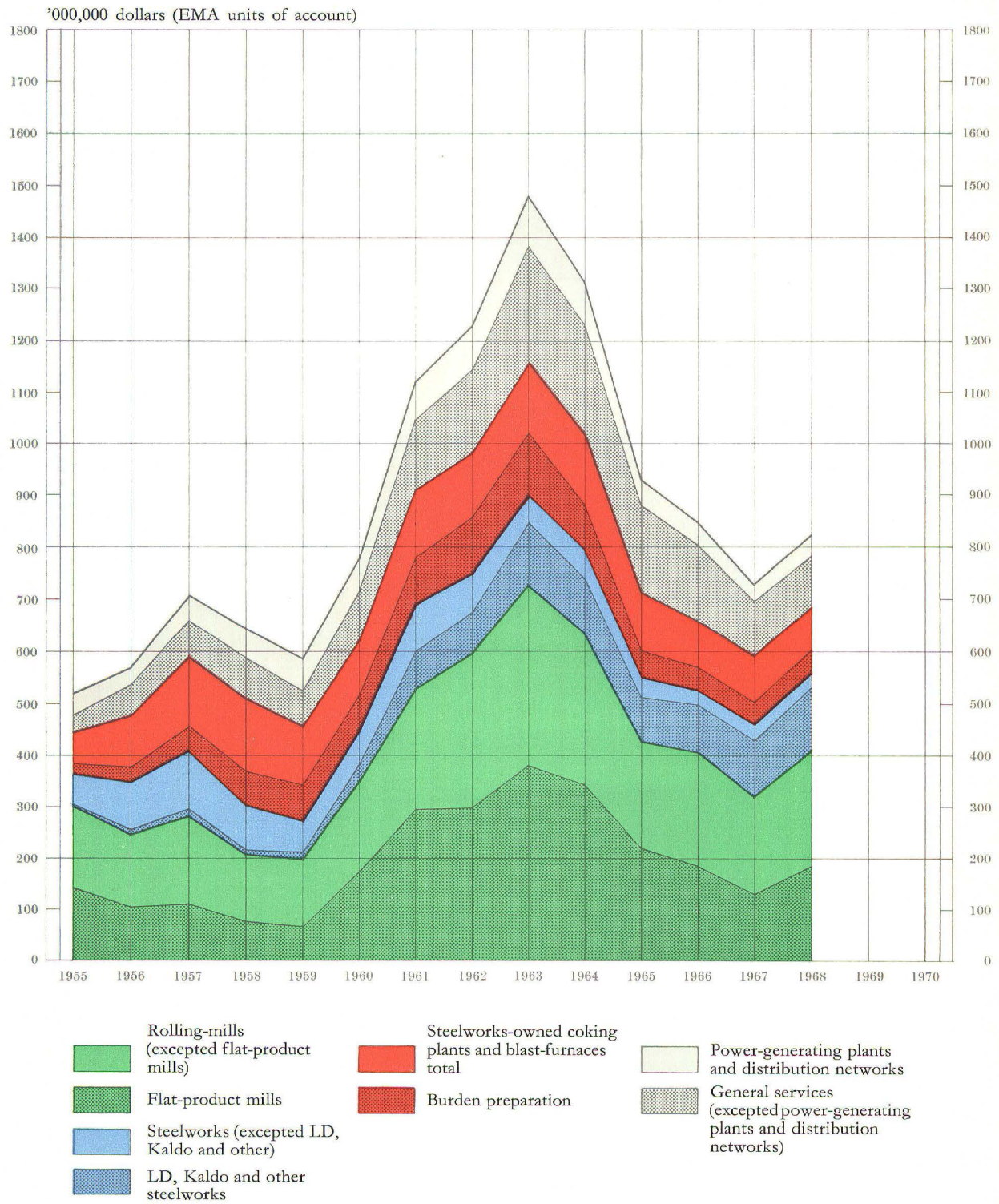
**Capital Expenditure on Steelmaking Plant, 1954—1970**

*'000,000 dollars (EMA units of account)*

| Production process | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
| **Basic Bessemer** | 30.4 | 21.2 | 24.2 | 23.0 | 18.4 | 9.2 | 10.2 | 10.2 | 12.9 | 5.6 | 6.5 | 1.6 |
| **Open-hearth** | 33.5 | 29.1 | 44.8 | 30.2 | 18.5 | 22.7 | 13.0 | 8.7 | 3.9 | 6.6 | 5.3 | 1.7 |
| **Electric-furnace** | 13.0 | 11.1 | 21.8 | 21.1 | 18.1 | 19.9 | 16.5 | 10.4 | 16.8 | 16.5 | 24.0 | 17.8 |
| **LD, Kaldo, etc.** | 7.2 | 34.0 | 72.0 | 78.1 | 120.0 | 106.5 | 85.0 | 92.8 | 110.2 | 123.3 | 123.3 | 80.5 |
| **Total** | 84.1 | 95.4 | 162.8 | 152.4 | 175.0 | 158.3 | 124.7 | 122.1 | 143.8 | 152.0 | 159.1 | 101.6 |

*FIGURE 9*

**Breakdown of Capital Expenditure in the Iron and Steel Industry**



Mainly thanks to large-scale expenditure on oxygen steelmaking, Community crude-steel production potential should increase from 114.8m. tons in 1968 to 132.2m. in 1972, a rise of 15%.

The annual production potential anticipated for the following four years should therefore increase by 17.4m. tons of crude steel. The annual potential of oxygen steelmaking should itself increase by 31.2m. tons, and electric-furnace capacity by 1.2m. tons; however, this rise of 32.4m. tons will probably be partly offset by reduction estimated at 9m. tons for basic Bessemer and 6m. for open-hearth (15m. altogether).

*TABLE 19*

**Movement of Crude-Steel Production Potential**

*'000,000 metric tons*

| Production process | Actual production | | Production potential | | | | |
|---|---|---|---|---|---|---|---|
| | 1952 | 1968 | 1968 | 1969 | 1970 | 1971 | 1972 |
| Basic Bessemer ..... | 23.0 | 27.8 | 32.9 | 30.3 | 25.9 | 24.9 | 23.9 |
| Open-hearth ..... | 15.2 | 25.6 | 29.4 | 27.5 | 26.0 | 24.0 | 23.4 |
| Electric-furnace ..... | 3.3 | 12.9 | 15.1 | 15.7 | 16.1 | 16.3 | 16.3 |
| LD, Kaldo, etc. ..... | 0.3 | 32.3 | 37.4 | 46.0 | 57.8 | 65.8 | 68.6 |
| **Total** | **41.8** | **98.6** | **114.8** | **119.5** | **125.8** | **131.0** | **132.2** |

Although the bulk of the industry's expenditure on the crude-steel side is now going on LD, Kaldo and other plants, the estimated incidence varies considerably from one part of the Community to another.

There is an increasing number of areas where producers hope by 1972 to have over half the potential in oxygen steelmaking. Although the following figures should not be considered as the sole characteristic of the degree of competitivity in steelmaking in the various Community areas, they deserve to be quoted here (the figures in brackets represent actual production by these processes in 1968): Netherlands 76% (62%), Italian seaboard 73% (54%), northern Germany 71% (36%), northern France 64% (47%), Ruhr 64% (44%), Belgium 62% (39%). In 1972 the proportion of the Luxembourg, Lorraine and Saar steelworks should not exceed 38%, 28% und 20 % respectively. In all other parts of the Community practically no interest has as yet been shown in oxygen steelmaking.

For the Community as a whole, oxygen-blown plant will account in 1972 for more than the basic Bessemer, open-hearth and electric-furnace plants together.

*TABLE 20*

**Shares of the Different Steelmaking Processes in 1952, 1968 and 1972**

%

| Production process | Actual production | | Production potential | |
|---|---|---|---|---|
| | 1952 | 1968 | 1968 (actual share) | 1972 (estimated share) |
| Basic Bessemer | 55.0 | 28.2 | 28.7 | 18.1 |
| Open-hearth | 36.4 | 26.0 | 25.6 | 17.7 |
| Electric-furnace | 7.9 | 13.1 | 13.1 | 12.3 |
| LD, Kaldo, etc. | 0.7 | 32.7 | 32.6 | 51.9 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** |

This makes a cumulative average annual increase of 16.4% from 1968 to 1972 for the oxygen steels and a decrease of about 6% for basic Bessemer and over 8% for open-hearth (as against 5.7% anticipated in 1967 for the period ending in 1971). All these figures suggest a considerable speed-up in the rate of technical conversion begun some years ago.

*TABLE 21*

**Average Annual Movement of the Different Steelmaking Processes**

%

| Production process | Average annual movement in actual production, 1952-68 | Estimated average annual movement in production potential 1968-72 |
|---|---|---|
| **Pig-iron (for comparison)** | + 4.7 | + 3.0 |
| Basic Bessemer | + 1.2 | — 8.3 |
| Open-hearth | + 3.3 | — 5.9 |
| Electric-furnace | + 8.9 | + 1.9 |
| LD, Kaldo, etc. | + 32.1 | + 16.4 |
| **Total, crude steel** | + 5.5 | + 3.6 |

*FIGURE 10*

**Actual Production and Production Potential of the Iron and Steel Industry**

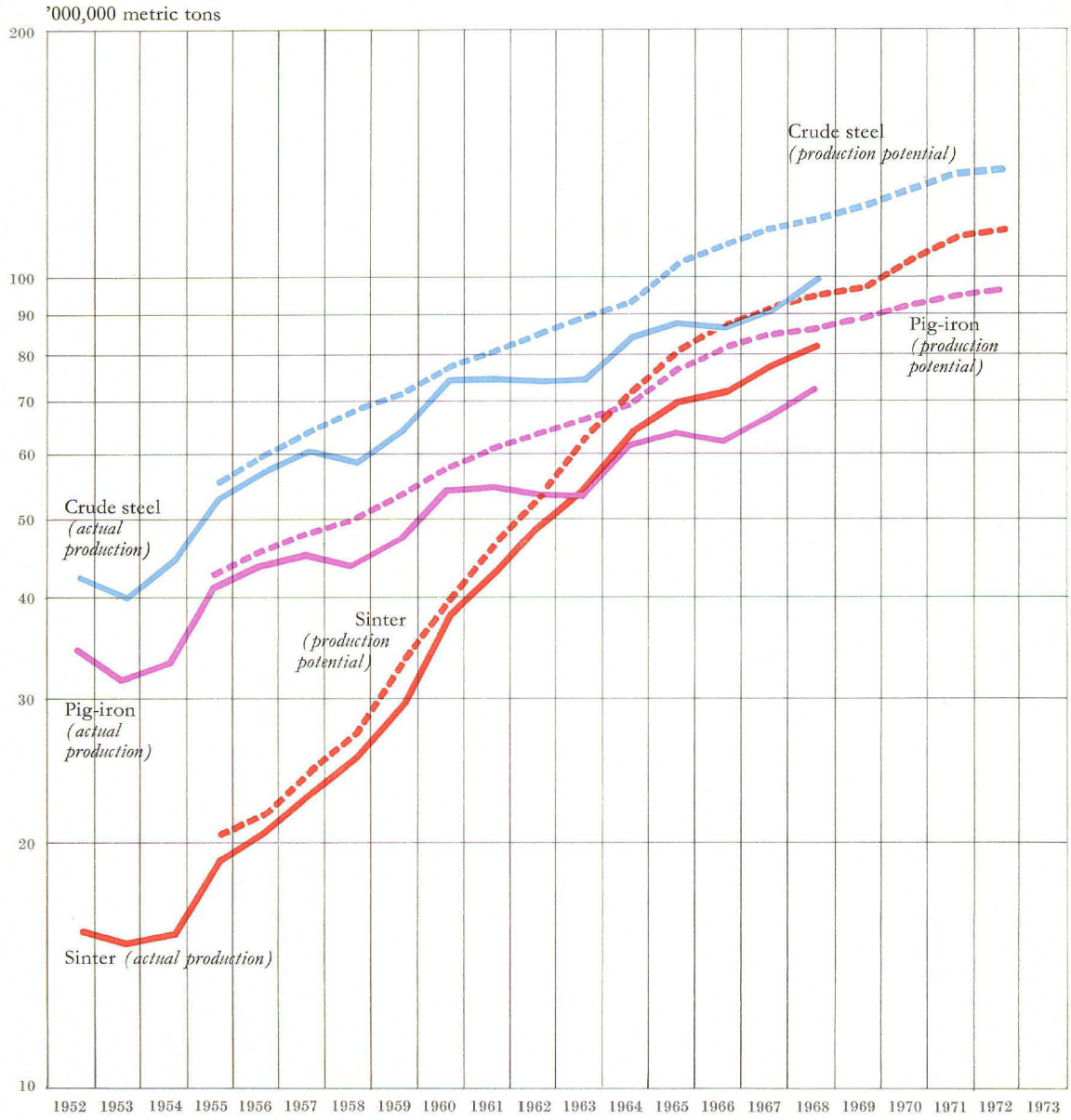
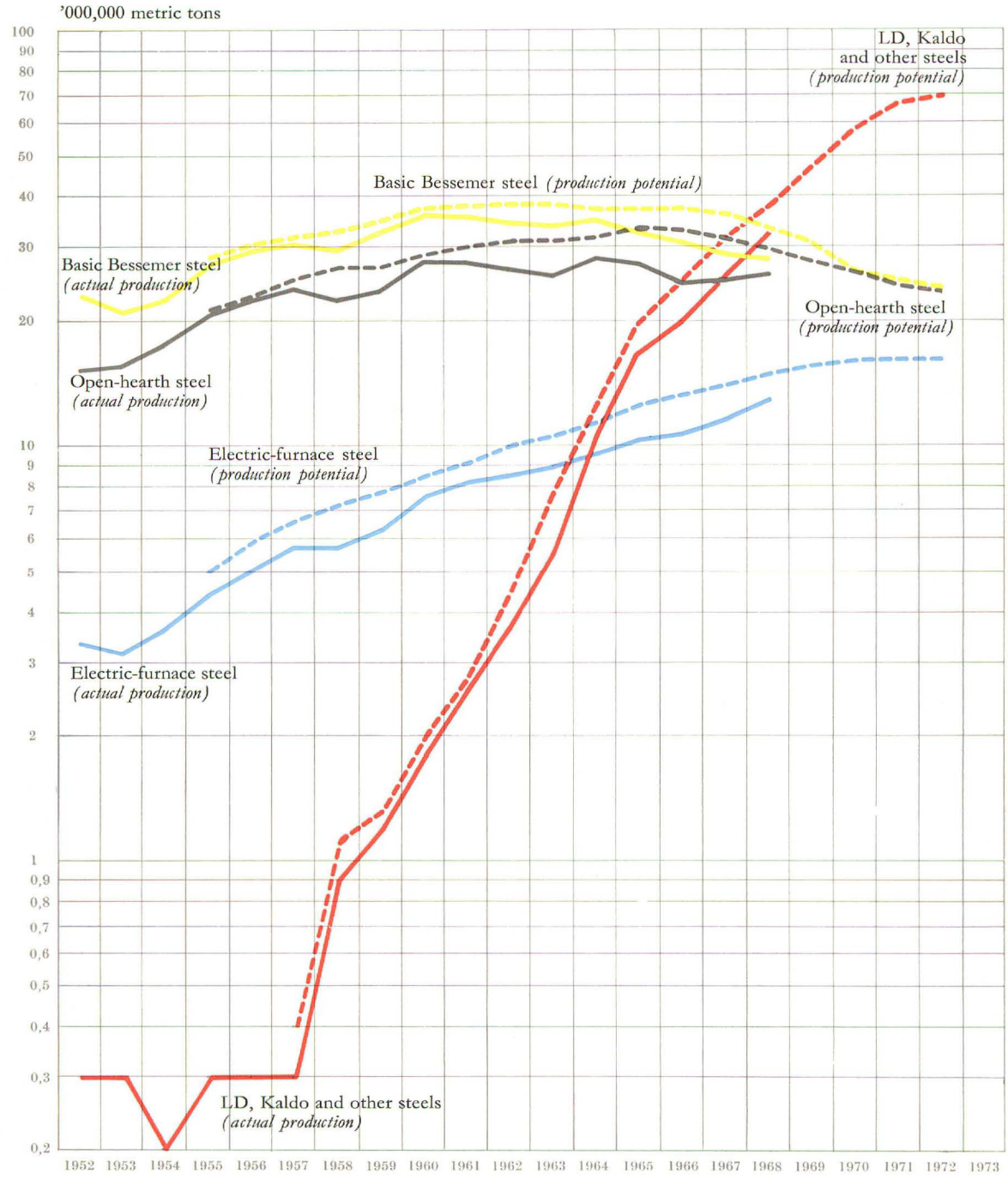


*FIGURE 11*

**Actual Production and Production Potential of Crude Steel by Production Process**



The annual production potential in the next four years will increase at a cumulative average rate of 3.6%. This rate, although reduced by the closure of much out-of-date plant, is higher than that suggested by the 1968 survey (2.6%) and not far off that resulting from the 1967 and 1966 surveys (respectively 3.1% and 3.7%), although it is lower than that of the preceding surveys. The rate forecast for pig-iron potential will not exceed the 3% average, although many advance projects (Cat. C) reported to the Commission could still be completed before 1972.

**c) Production of semis and rolled products**

Capital expenditure on continuous casting installations, rolling mills and ancillary plant accounted for 45%-49% of all the industry's expenditure from 1963 to 1966. After dropping to 43% in 1967, the proportion rose to about 50% in 1968.

From 1960 to 1965 more than twice as much was spent on the flat-products mills as on the section mills. In 1966 and 1967 the difference was not quite so marked; it occurred again in 1968 and will no doubt be much greater in 1969 and even more so in 1970.

Community capacity in wide hot-strip and cold-strip mills should increase very rapidly.

Special mention should be made of the continuous-casting installations required for producing the semis needed by the section mills and especially heavy plate and strip mills. The rise in expenditure which in 1967 was even more than 50% of that devoted to blooming and slabbing mills, declined somewhat in 1968 to about a quarter, although a substantial rise is expected in 1969. Practically all the plants in question are situated in Germany (Ruhr and Saar) and Italy.

*TABLE 22*

**Capital Expenditure on Production Capacity for Semis and Rolled Products, 1954—1970**

*'000,000 dollars (EMA units of account)*

| Type of mill | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
| Heavy and medium section mills | 33.5 | 55.0 | 66.4 | 66.0 | 74.6 | 54.9 | 52.4 | 51.3 | 33.9 | 35.1 | 33.1 | 24.1 |
| Small-bar mills | 29.9 | 19.2 | 26.2 | 27.5 | 48.8 | 67.3 | 44.3 | 49.6 | 23.7 | 18.9 | 32.1 | 22.1 |
| Wire mills | 11.0 | 16.2 | 28.4 | 51.0 | 40.0 | 24.1 | 12.8 | 15.4 | 21.3 | 29.8 | 11.4 | 5.8 |
| *Total, section mills* | *74.4* | *90.4* | *121.0* | *144.5* | *163.4* | *146.3* | *109.5* | *116.3* | *78.9* | *83.8* | *76.6* | *52.0* |
| Hoop and strip mills | 8.8 | 4.3 | 5.5 | 8.6 | 8.2 | 4.8 | 10.0 | 13.6 | 12.7 | 15.1 | 10.0 | 6.4 |
| Plate and universal mills | 29.0 | 24.8 | 35.4 | 46.2 | 64.0 | 32.2 | 23.1 | 33.2 | 20.5 | 34.0 | 59.8 | 50.7 |
| Hot sheet mills | 2.9 | 3.7 | 6.0 | 2.1 | 2.3 | 0.8 | 1.2 | 0.7 | 0.6 | 0.8 | 0.3 | — |
| Cold sheet mills | 1.4 | 0.4 | 0.7 | 0.4 | 0.1 | 0.4 | 0.5 | 0.1 | 3.2 | 10.9 | 2.0 | — |
| Hot wide-strip mills | 27.0 | 27.5 | 67.0 | 65.5 | 158.7 | 147.0 | 86.6 | 78.8 | 63.2 | 85.4 | 54.2 | 34.6 |
| Cold wide-strip mills | 38.8 | 114.8 | 178.6 | 175.9 | 147.1 | 159.3 | 97.6 | 59.6 | 30.7 | 39.1 | 156.1 | 203.3 |
| *Total, flat-products mills* | *107.9* | *175.5* | *293.2* | *298.7* | *380.4* | *344.5* | *219.0* | *186.0* | *130.9* | *185.3* | *282.4* | *295.0* |
| *Blooming and slabbing mills* | *35.5* | *43.6* | *74.8* | *91.3* | *108.7* | *78.6* | *44.1* | *43.4* | *52.5* | *88.1* | *83.5* | 56.9 |
| *Continuous-casting installations* | . | . | . | *2.3* | *4.1* | *5.6* | *10.0* | *13.1* | *28.2* | *19.2* | *30.5* | *29.6* |
| *Miscellaneous (including coating plants)* | *32.1* | *40.8* | *43.4* | *60.8* | *69.8* | *59.3* | *42.9* | *46.2* | *27.2* | *31.7* | *71.9* | *36.0* |
| **Total** | **249.9** | **350.3** | **532.4** | **597.6** | **726.4** | **634.3** | **425.5** | **405.0** | **317.7** | **408.1** | **544.9** | **469.5** |

*FIGURE 12*

**Sections and Flat Products**

A—Capital expenditure


B—Actual production and production potential

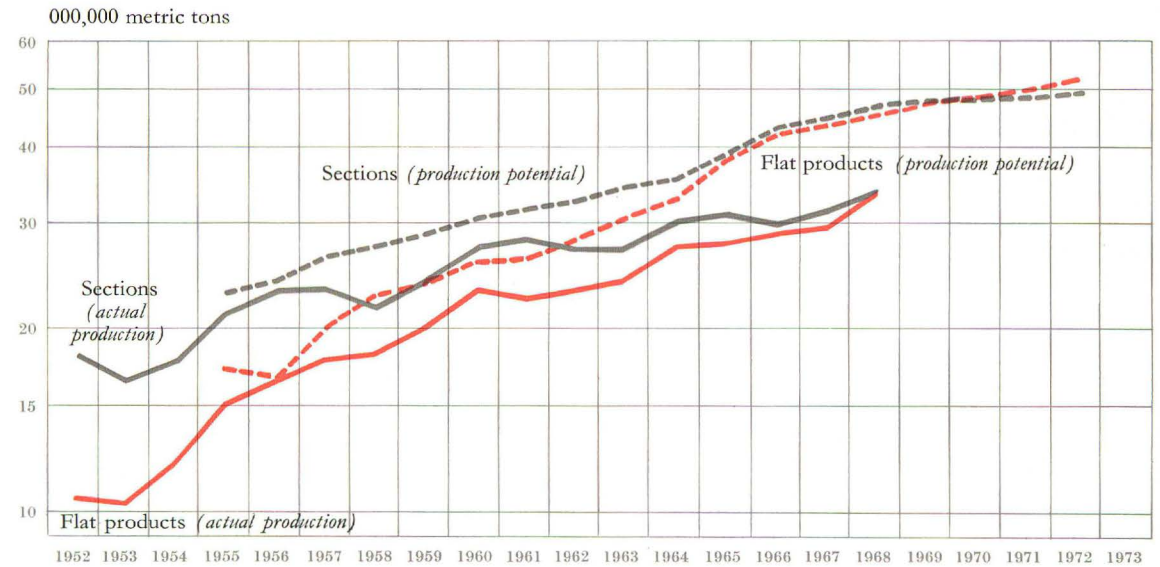
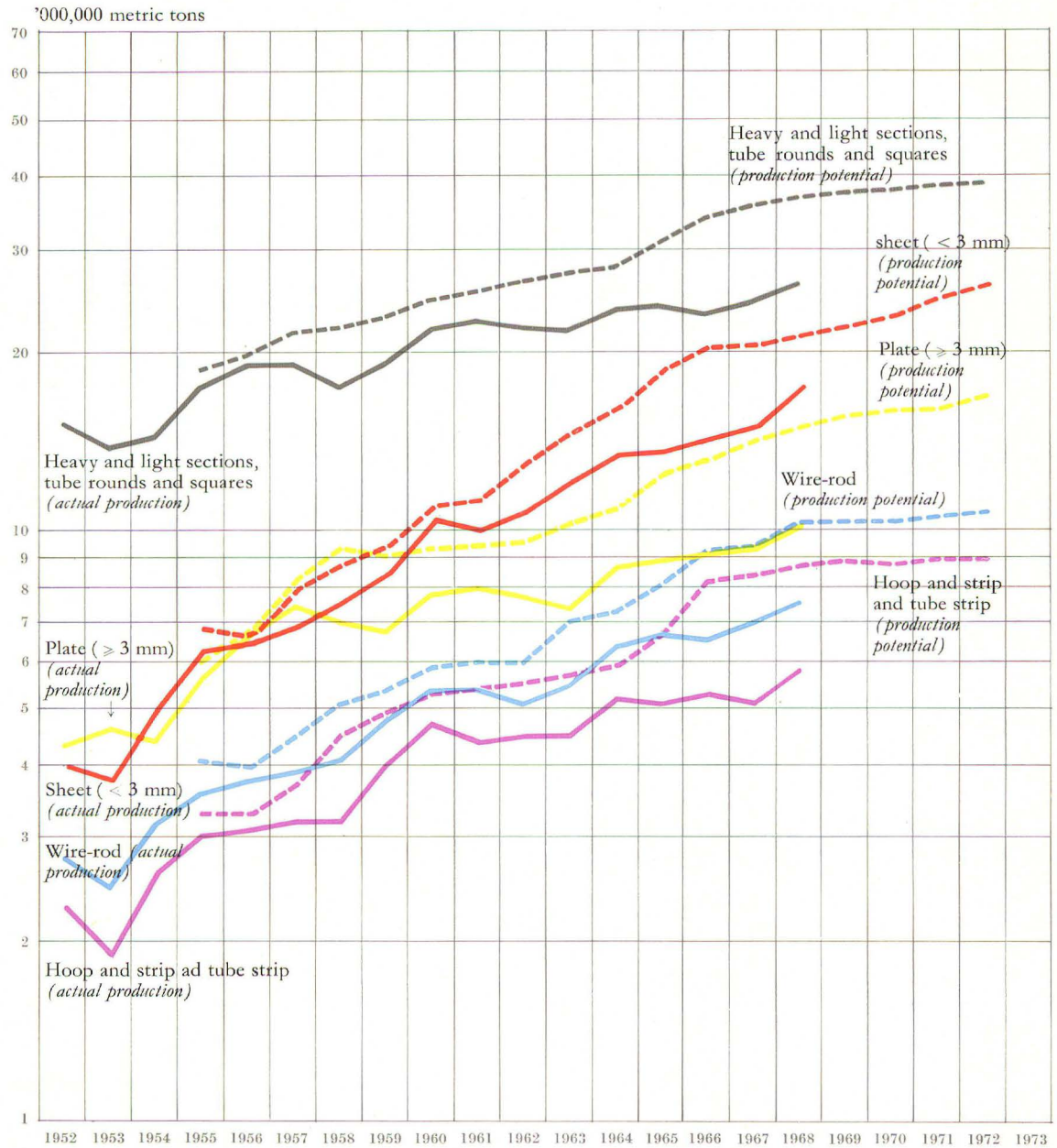


*FIGURE 13*

**Actual Production and Production Potential for the Various Categories of Finished Rolled Product**



Since ECSC's inception, actual production of finished rolled products has increased at an average of 5.4%, 4% for sections and 7.5% for flats. The estimated rates for the future are lower; contrary to what was expected from the results of the previous survey, expenditure on flats will be substantially enough to enable the corresponding capacities to rise at a far greater rate (3.6%) than expenditure on section mills (1.2%).

*TABLE 23*

**Average Annual Movement of the Different Types of Finished Products**

| Product | Actual production | | | Production potential | | |
|---|---|---|---|---|---|---|
| | 1952 ('000,000 tons) | Average cumulative annual movement (%) | 1968 ('000,000 tons) | 1968 ('000,000 tons) | Average cumulative annual movement (%) | 1972 ('000,000 tons) |
| Heavy and light sections, incl. tube rounds and squares ..... | 15.2 | + 3.4 | 25.9 | 36.3 | + 1.3 | 38.2 |
| Wire-rod ..... | 2.8 | + 6.4 | 7.6 | 10.3 | + 0.7 | 10.6 |
| *Total, sections* | *18.0* | + *4.0* | *33.5* | *46.6* | + *1.2* | *48.8* |
| Hoop and strip and tube strip .... | 2.3 | + 5.9 | 5.8 | 8.7 | + 0.6 | 8.9 |
| Plate of 3mm. and over(1) ..... | 4.3 | + 5.5 | 10.2 | 15.0 | + 3.2 | 17.0 |
| Hot-rolled sheet under 3mm.(1) .. | 3.1 | — 8.8 | 0.8 | 1.2 | — 7.5 | 0.9 |
| Cold-reduced sheet under 3mm. .. | 0.8 | + 21.0 | 16.8 | 20.1 | + 5.6 | 25.0 |
| *Total, flats (1)* | *10.5* | + *7.5* | *33.6* | *45.0* | + *3.6* | *51.8* |
| **Total, rolled products (1)** | **28.5** | + **5.4** | **67.1** | **91.6(2)** | + **2.4** | **100.6** |
| (*of which:* products rolled in continuous and semi-continuous mills) ..... | (.) | (.) | (44.8) | (59.1) | (+ 4.2) | (69.5) |

(1) Exclusive of coils rating as end products in respect of which the production potential would increase from 5.4 to 6m. tons from 1968 to 1972.

(2) The figure may seem rather high compared with the crude steel production potential and there is a possibility that producers and re-rollers may have overestimated the amounts of steel available for their own mills.

The share of flats in total rolling potential, which stood in 1952 at 37%, has increased by 1968 to 49%, but should exceed 51% in 1972.

The proportion of steel to be rolled in continuous and semi-continuous mills, which in 1960 did not exceed one-half, is now 64%, and should rise by 1972 to 69%.

The figures given in the two preceding paragraphs do not include the production of coils considered as semis. A point to note, however, is that a growing proportion is being taken, by both the industry's Community and foreign customers, in a form equivalent to end-products. But this separation into semis and finished product makes it difficult to give a survey of this material. According to the particulars supplied by the enterprises covered by the survey, the production of "end-product" coils seems likely to increase to about 6m. tons in 1972 (in 1968, actual production amounted to 4.2m. tons as against an estimated potential of 5.4m.). Reckoned in with the finished-products total of 100.6m. tons in Table 23, the estimate of the production potential of flats in 1972 would be 51%-57% of the rolling potential overall, with a corresponding increase in the proportion of steel for rolling in continuous and semi-continuous mills.

**d) General services**

All previous surveys showed particularly marked increases in the proportion of expenditure going on general services up to 1965, when it reached 24%. Since then it has been progressively declining to about 16% in 1968.

For a long period, expenditure on power-generating plant accounted for a considerable part of the total spent on general services. There has been a progressive slow-down here owing to the smaller amounts of blast-furnace gas being produced in consequence of the reduction in the coke rate.

Although not reaching the 1963 and 1964 ceilings, when many new integrated plants were under construction in the Community, miscellaneous expenditure on general services continues to exceed 100m. dollar units of account and includes in particular civil-engineering operations and buildings, workshops and laboratories. A further increase in this item may be expected when projects for the construction of two new integrated plants on the Community seaboard are put in hand.

*FIGURE 14*

**Breakdown of Total Production of Finished Rolled Products by Types of Products**

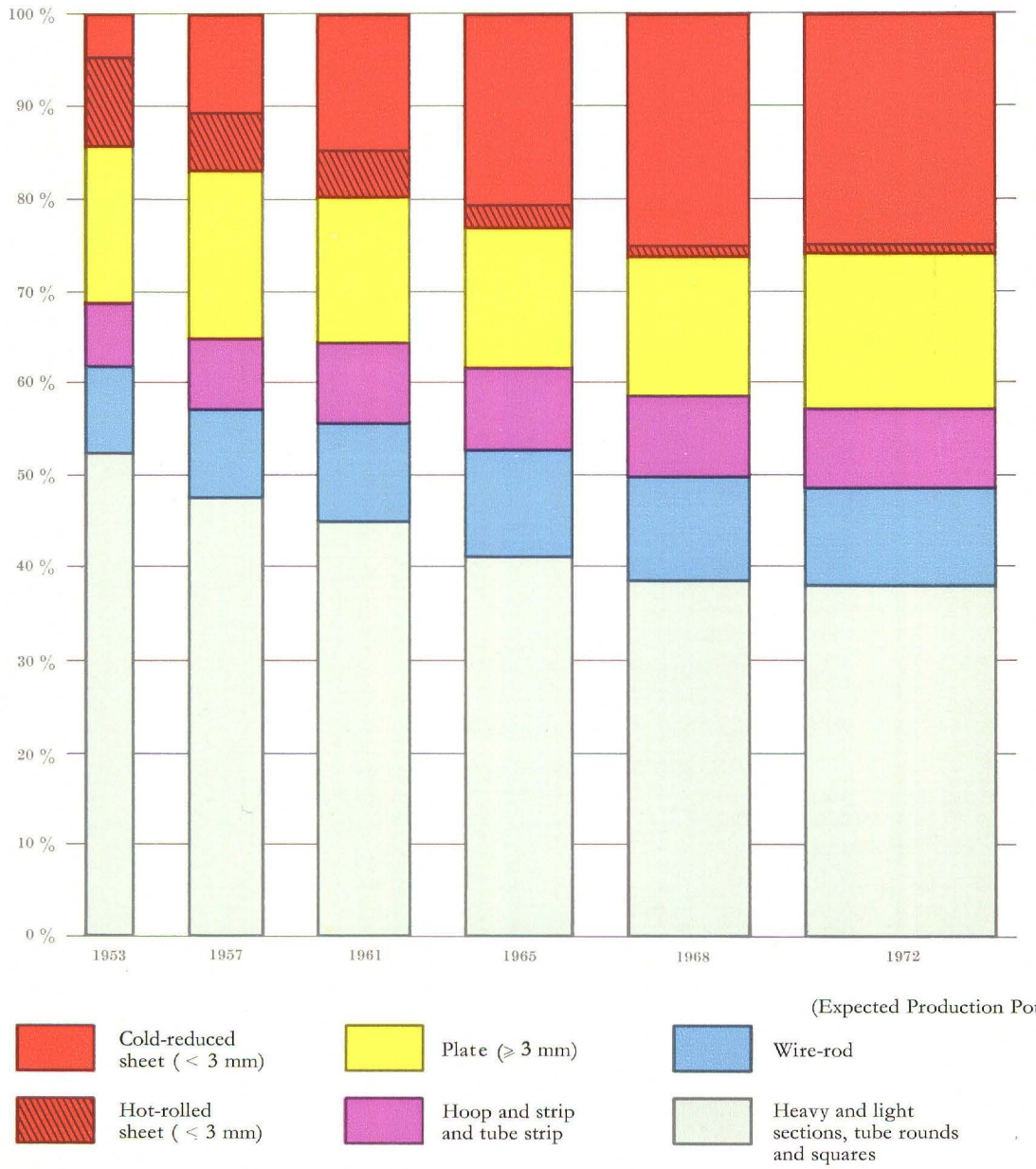


*TABLE 24*

**Capital Expenditure on the General Services of the Iron and Steel Industry, 1954—1970**

*'000,000 dollars (EMA units of account)*

| Type of installation | Actual expenditure | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1954-59 (annual average) | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
| Power-generating plant and distribution networks .. | 45.5 | 60.7 | 71.7 | 84.2 | 93.6 | 86.3 | 55.7 | 43.1 | 33.5 | 33.7 | 43.1 | 21.7 |
| Miscellaneous ..... | 58.3 | 96.6 | 137.4 | 162.9 | 226.1 | 213.7 | 166.0 | 145.4 | 104.7 | 101.4 | 137.6 | 95.0 |
| **Total** | **103.8** | **157.3** | **209.1** | **247.1** | **319.7** | **300.0** | **221.7** | **188.5** | **138.2** | **135.1** | **180.7** | **116.7** |

## V—CONCLUSIONS

According to the collieries' declarations during the present survey, 1968 was marked by an interruption in the general decline in the production potential of **hard coal** in nearly all Community coalfields. After the slight improvement in the Campine, the extraction potential should tend to increase in the Ruhr, Saar and Lower Saxony coalfields, from 1969 onward, but on the other hand the French, Dutch and southern Belgian coalfields are contracting still faster. The result of these opposing trends is an estimated net reduction of the annual extraction potential from 1968 to 1972 of 10.4m. tons. This figure is inconsiderable compared with the reductions registered during previous years, especially 19.1m. tons in 1967 and 15.3m. in 1968. Experience in recent years has shown that the estimates of cuts were usually lower than the actual closures.

With this reservation, the Community hard-coal extraction potential announced for 1972 should reach 184.8m. tons. It is a moot problem whether sufficient markets can be found without continuing a Community system of State-aid to collieries, so as to switch disposals to the thermal power-stations and the iron and steel industry.

In the year ahead, the fuel requirements of the **power-stations** will remain at the same level, mainly owing to measures taken some years ago in Germany and France where individual or co-operative power-stations directly or indirectly run by Community collieries plan to increase their installed power by about 20% from the beginning of 1968 to the beginning of 1973.

On the other hand, Community **coking plants** forecast a total reduction of about 1m. tons in their annual production potential from 1968 to 1972; a drop of 3m. announced by mine-owned coking plants will be partially offset by an expansion of 2m. tons in the coastal steelworks-owned plants. Having regard to the lifetime of ECSC coking plants, this net reduction in overall coke production potential will probably lead to further expenditure in this sector in the near future.

After a contraction leading to a progressive reduction in annual expansion of 25m. tons in seven years, Community **iron-ore** production in 1968 was 5m. tons up on the previous years.

As regards the trend in future annual extraction potential, the mines announced on 1 January 1968 a reduction of 2.7m. tons for 1971 as compared to 1967; on the other hand, on 1 January 1969 they announced an expansion of 3.8m. tons for 1972 as compared to 1968. But this expected upswing only relates to Lorraine and to a lesser extent Luxembourg, and the outlying orefields continue to slow down production. The pig-iron production potential for a number of areas that have always been minette-ore consumers will not follow the same trend.

Expenditure in the Community's **iron and steel industry** has also gone up since 1968. The 1969 forecast suggests a considerable rise which may be even more pronounced in subsequent years if

projects for the construction of two new integrated plants on the Community seaboard are carried out. Even without these projects, the Community production potential announced will probably go up from 114.8m. tons of steel in 1968 to 132.2m. in 1972. This is an approximate rise of 15%, or an average cumulative rate of increase of 3.6% per annum.

This rate of 3.6% is all the more remarkable in that it results from extra expenditure on new plant and closure of plants or even works now out-of-date or located in unfavourable areas. This double trend is revealed by the substantial modernization of the Community's iron and steel industry as a result of large-scale structural changes. Following mergers and co-operation agreements, the number of decision-making centres has continued to fall considerably and an increasing proportion of Community steel is now being produced by fewer steelworks.

Increased expenditure was noted in practically every region of the Community, as also in 1968 and as forecast for 1969. In 1968, the upward movement was most marked in France (Lorraine and North) and the Netherlands, and in 1969 it will chiefly relate to Germany (the Ruhr), Belgium and the Italian seaboard. The production potential of the chief Community iron and steel entreprises will rise at an average rate of about 15% during 1968-1972, except, for the Dutch and Luxembourg industries, which will respectively remain well above and well below this average.

A feature of the estimated 1972 **crude steel** potential is the large and rapidly growing proportion represented by the oxygen steels, namely 52% for the Community overall, as against 18% for basic Bessemer, 18% for open-hearth and 12% for electric-furnace; the shares in 1968 were 33% for oxygen steels, compared with 28%, 26% and 13% for the various traditional steels. In view of their share on the aggregate production potential in 1972, oxygen steelmaking plants are expected to account for about three-quarters of the installed potential in the Netherlands, the Italian seaboard and northern Germany, and nearly two-thirds of the installed potential in northern France, the Ruhr and Belgium; the shares of the other iron and steel industries will hardly exceed one-third of the aggregate potential.

The iron and steel industries' expenditure in the **rolling-mill** sector is increasingly focused on flat products. As was already the case from 1960-1965, the amount spent on these products is over twice the expenditure on section mills. This difference will no doubt be greater in 1969 and even more so in 1970. This means that by this date the Community production potential of finished flat products will for the first time exceed that of finished sections. It will be interesting to see whether the increased capacity resulting from the simultaneous starting of new projects for the production of wide strip, and particularly cold strip, will not overstock a market whose rate of development, however imposing, has always remained at about the same level.

# ANNEXES

I—Basic definitions

II—Statistical tables

## I—BASIC DEFINITIONS

To ensure that the figures obtained shall be comparable, the High Authority and subsequently the Commission of the European Communities have adopted the following definitions.

### *I—INVESTMENT*

#### (a) Capital expenditure

*Capital expenditure* means all expenditure shown or to be shown on the credit side of the balance-sheet as fixed assets in the year under review, except in respect of the collieries and pithead power-stations where the expenditure to be shown is that which would have been, or would be, entered on the credit side of the balance-sheet in accordance with Document AM 43 *(Directives relatives au calcul de l'amortissement des biens investis dans l'industrie charbonnière de la C.E.C.A.)*, drawn up by the study committee of the coal producers of Western Europe (CEPCEO).

*The term does not, however, cover the financing of workers' housing schemes, financial participation and all investment not directly connected with ECSC-Treaty products* (chemical and synthetic products other than the conventional by-products of coking-plants, castings, tubes, etc.).

#### (b) Classification of investment projects

As regards the trend in capital expenditure and related production potential, the same breakdown of capital schemes as that used in the questionnaires submitted to the enterprises has been adopted, viz.

A—*Projects completed or in progress before January 1, 1969;*

B—*Projects approved but not yet in progress on January 1, 1969;*

C—*Other projects planned to be started between January 1, 1969 and December 31, 1971.*

*In the case of the iron and steel industry except for the capacity of the power-stations the figures in respect of category C projects have been disregarded.*

#### (c) Unit of account

The unit adopted is the *dollar* unit of account of the European Payments Union (EPU) and subsequently that of the *European Monetary Agreement* (EMA). Their equivalents in national currencies are given in the following table:

| Country | Currency | Up to and including 1956 | 1957 | 1958 | 1959 and 1960 | 1961 | 1962 and onwards |
|---|---|---|---|---|---|---|---|
| Germany (Fed. Rep.) ..... | DM | 4.20 | 4.20 | 4.20 | 4.20 | 4.03(4) | 4.00 |
| Belgium/Luxembourg ..... | BF-LF | 50 | 50 | 50 | 50 | 50 | 50 |
| France(1) ..... | FF(2) | 350 | 377(3) | 420 | 4.937(2) | 4.937 | 4.937 |
| Italy ..... | Lire | 625 | 625 | 625 | 625 | 625 | 625 |
| Netherlands ..... | Fl. | 3.80 | 3.80 | 3.80 | 3.80 | 3.65(5) | 3.62 |

(1) And Saar up to July 5, 1959.
(2) N.F. as from January 1, 1959.
(3) Mean between official rate of exchange in force from January 1 to August 11, 1957 (350) and that in force from August 12 to December 31, 1957 (420).
(4) Mean between official rate of exchange in force from January 1 to March 3, 1961 (4.20) and that in force from March 4 to December 31, 1961 (4.00).
(5) Mean between official rate of exchange in force from January 1 to March 3, 1961 (3.80), and that in force from March 4 to December 31, 1961 (3.62).

### (d) Capital goods price indices

The statistics for the annual investment surveys are compiled from the enterprises' declarations at the ruling prices for the year concerned, the figures being converted into dollar units of account at the official rates shown above.

Although it is extremely difficult to work out capital goods price indices applying to all the Community industries and countries, the High Authority's publication of 1963, *La C.E.C.A. 1952-1962; Résultats, Limites, Perspectives*, suggests (p. 104) a series of indices, based on 1961 = 100. The indices for the years 1962-66 (see following table) have been compiled by the same methods.

| 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 81.6 | 80.5 | 79.9 | 82.1 | 85.4 | 89.9 | 92.9 | 94.9 | 97.2 | 100.0 | 104.8 | 109.7 | 115.9 | 118.2 | 120.7 | 121.9 |

The figures in this report can thus be converted to 1961 prices by applying the index for the year concerned to the annual expenditures recorded.

## *II—MINING INDUSTRIES*

### (a) Coal

*Extraction potential* — The figures shown represent the net maximum output technically achievable, allowing for the performance capacity of the different installations at the collieries (underground, surface, washeries), and assuming that it is not impeded by marketing difficulties, strikes or manpower shortages.

A number of mines with a low output, including the German "small mines", have not been included as regards either capital expenditure or production potential. They accounted for a extraction in 1968 of only about 0.2 million metric tons, out of 175.9 million, *i.e.* 0.1%.

**(b) Coke**

*Production potential*—The figures shown represent the maximum annual coke production achievable with the plant in operation at a given date, taking into account the minimum coking time technically allowable for the normal composition of the coking blend, with due regard to the state of the ovens and the performance capacity of the ancillary and auxiliary installations. It is assumed that a ready market and unlimited raw material supplies are assured.

**(c) Pithead power-stations**

*Maximum electric capacity* of a power-station means the maximum electric power that could be produced throughout several hours of continuous operation with all plant in full working order and with adequate fuel stocks of normal quality, and assuming that there exist no restrictive external factors (fuel of inferior quality, shortage of cooling water, inadequacy of the network receiving the power produced, etc.), but taking full account of all plant limitations that may arise out of the maximum electric capacity of each component of the main plant and auxiliaries of the station.

The net output represents the maximum power that can be supplied, measured at the station bus-bars after deducting the electric power taken by the station auxiliaries and the losses in the station transformers, if any.

*Current produced* means the net production of electric current measured at the station bus-bars after deducting the electric current taken by the station auxiliaries and the losses in the station transformers, if any.

**(d) Iron ore**

*Extraction potential*—The figures shown represent the maximum continuous output which can be achieved by each mine, allowing for the performance capacity of the different installations (underground, surface, ore-preparation plant where the ore is sold only after treatment) and for estimated manpower availabilities during the year under consideration.

**(e) Geographical breakdown**

In the tables, the orefields other than those mentioned by name are:

| | |
|---|---|
| Central and Southern Germany: | Sauerland-Waldeck, Lahn-Dill, Taunus-Hunsrück, Upper Hesse; |
| Germany : other areas: | Dogger orefield, Kreide orefield. |

## *III—IRON AND STEEL INDUSTRY*

**(a) Production potential**

Sinter, pig-iron, crude-steel and rolled-products production potential means the *maximum production which can effectively be achieved by all the different sections of the plant together* allowing for possible bottlenecks in one section holding up all the others. This maximum possible production is defined as follows:

"Maximum possible production is the maximum production which it is possible to attain during the year under normal working conditions, with due regard for repairs, maintenance and the usual holidays, employing the plant available at the beginning of the year but also taking into account both additional production from any new plant installed and any existing plant to be finally taken off production in the course of the year. Production estimates must be based on the probable composition ratios of the charge in each plant concerned, on the assumption that the raw materials will be available."

In the case of steels produced mainly from pig-iron, the production potential is estimated in respect of the blast-furnaces and steelworks as a whole and not each steelworks individually.

The capital expenditure of a number of very small iron and steel works has not been included in this survey. It was assumed that the production potential of these enterprises would over the next few years remain at the level of actual production for 1968. The production potentials mentioned in this report therefore exceed those actually declared by a certain percentage which varies from sector to sector but does generally not exceed 1.1% for crude steel and 2.2% for finished rolled-products.

As the production potential of the *rolling-mills* is governed by the shape (section), thickness and width of the material fed into the mill (metal input) and the products to be obtained, we have proceeded on the assumption that, should no forecast be possible as to future steel-rolling conditions, it will be necessary to base estimates on the conditions obtained in 1968. The same applies to the apportionment of steel availabilities among the different types of mill.

**(b) Steelworks-owned power-stations**

See "Mining Industries", Section II,c, for definitions of maximum capacity and electric current.

**(c) Geographical breakdown**

In the tables, the producer regions other than those mentioned by name are:

| | |
|---|---|
| Northern Germany: | Länder Schleswig-Holstein, Lower Saxony, Hamburg, Bremen; |
| Southern Germany: | Länder Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria; |
| Eastern France: | Departments of Ardennes, Aube, Doubs, Haute-Marne, Meurthe-et-Moselle, Meuse, Vosges, Territoire de Belfort, Haute-Saône, Moselle, Bas-Rhin, Haut-Rhin; |
| Northern France: | Departments of Aisne, Nord, Oise, Pas-de-Calais, Seine, Région parisienne Seine-et-Marne, Somme; |
| France : other areas: | all other Departments. |

# II — STATISTICAL TABLES

## COAL



## IRON ORE



## STEEL

**HARD-COAL INDUSTRY**

**Total investment**

*TABLE I*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 68 for | on Jan. 1, 69 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Ruhr | 162.89 | 142.21 | 143.55 | 184.23 | 144.82 | 190.21 | 160.15 |
| Aachen | 6.05 | 6.44 | 4.16 | 4.14 | 4.26 | 3.42 | 4.26 |
| Lower Saxony | 8.15 | 11.72 | 7.88 | 1.49 | 1.20 | 2.60 | 2.39 |
| Saar | 19.94 | 17.67 | 17.29 | 9.66 | 13.46 | 5.85 | 5.44 |
| *Germany (F.R.)* | *197.03* | *178.04* | *172.88* | *199.52* | *163.74* | *202.08* | *172.24* |
| Campine(1) | 7.09 | 5.66 | 5.50 | 7.59 | 10.06 | 6.65 | 5.82 |
| Southern Belgium(1) | 14.12 | 12.68 | 11.77 | 7.15 | 11.77 | 7.50 | 4.54 |
| Dutch Limburg(1) | 10.70 | 5.04 | 2.55 | 1.82 | 1.33 | 0.77 | 0.89 |
| *Belgium* and the *Netherlands* | *32.18* | *24.43* | *20.64* | *17.71* | *24.50* | *15.61* | *11.26* |
| Nord/Pas-de-Calais | 17.22 | 16.15 | 21.39 | 27.40 | 27.61 | 20.31 | 21.31 |
| Lorraine | 18.14 | 14.20 | 12.73 | 11.31 | 11.71 | 11.98 | 23.00 |
| Centre-Midi | 7.52 | 8.65 | 7.49 | 15.32 | 11.84 | 17.52 | 21.52 |
| Independent plants(2) | 0.64 | 0.60 | 0.30 | — | — | — | — |
| *France* | *43.52* | *39.60* | *41.91* | *54.03* | *51.16* | *49.81* | *65.83* |
| *Italy* | *4.89* | *7.75* | *7.67* | *6.20* | *7.58* | *4.55* | *0.76* |
| **Total** | **277.62** | **249.82** | **243.10** | **277.46** | **246.98** | **272.05** | **250.09** |

(1) Exclusive of mine-owned and independent coking-plants, which are, however, included in the total for Belgium and the Netherlands.
(2) Briquetting plants only.

**HARD-COAL COLLIERIES**

**Investment**

*TABLE II*

**Capital Expenditure by Coalfields**

*'000.000 dollars (EMA units of account)*

| Coalfield | Actual expenditure | | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 68 for | on Jan. 1, 69 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Ruhr | 114.38 | 98.80 | 78.75 | 69.90 | 70.44 | 86.84 | 67.71 |
| Aachen | 5.27 | 4.26 | 2.36 | 2.34 | 2.88 | 2.33 | 3.44 |
| Lower Saxony | 2.66 | 1.60 | 0.88 | 1.13 | 1.01 | 2.35 | 1.89 |
| Saar | 13.62 | 8.54 | 9.33 | 5.23 | 6.59 | 4.22 | 4.50 |
| *Germany (F.R.)* | *135.93* | *113.20* | *91.32* | *78.60* | *80.92* | *95.74* | *77.54* |
| Campine | 4.51 | 4.71 | 5.49 | 7.56 | 10.01 | 6.65 | 5.82 |
| Southern Belgium | 7.55 | 5.06 | 5.72 | 5.84 | 8.92 | 6.97 | 3.73 |
| *Belgium* | *12.06* | *9.77* | *11.21* | *13.40* | *18.93* | *13.62* | *9.55* |
| *Netherlands* (Limburg) | *7.04* | *3.63* | *2.08* | *1.54* | *1.08* | *0.71* | *0.81* |
| Nord/Pas-de-Calais | 13.33 | 13.51 | 13.07 | 11.42 | 11.36 | 8.38 | 9.01 |
| Lorraine | 16.03 | 13.09 | 12.24 | 10.61 | 10.96 | 7.77 | 8.27 |
| Centre-Midi | 5.97 | 6.13 | 5.30 | 5.53 | 5.53 | 3.46 | 3.29 |
| *France* | *35.33* | *32.73* | *30.61* | *27.56* | *27.85* | *19.61* | *20.57* |
| *Italy* | — | *3.51* | *4.66* | *2.50* | *3.20* | — | — |
| **Total** | **190.36** | **162.84** | **139.88** | **123.60** | **131.98** | **129.68** | **108.47** |

**MINE-OWNED AND INDEPENDENT COKING-PLANTS (1)**

**Investment**

*TABLE III*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 68 for | on Jan. 1, 69 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| **Mine-owned coking-plants** | | | | | | | |
| Ruhr | 12.18 | 10.43 | 69.1 | 5.70 | 10.25 | 14.31 | 22.70 |
| Aachen | 0.06 | 0.16 | 0.23 | 1.60 | 1.19 | 0.32 | 0.23 |
| Lower Saxony | — | — | — | — | — | — | — |
| Saar | 0.99 | 0.18 | 0.33 | 3.98 | 4.11 | 1.23 | 0.71 |
| *Germany (F.R.)* | *13.23* | *10.77* | *7.47* | *11.28* | *15.55* | *15.86* | *23.64* |
| *Belgium* and *Netherlands* | *0.11* | *0.01* | — | *0.28* | *0.39* | *0.25* | — |
| Nord/Pas-de-Calais | 1.10 | 1.37 | 1.96 | 3.30 | 3.67 | 0.95 | 0.64 |
| Lorraine | 1.02 | 0.87 | 0.28 | 0.42 | 0.43 | 0.28 | 0.28 |
| Centre/Midi | 0.34 | 0.16 | 0.45 | 0.15 | 0.17 | 0.12 | 0.12 |
| *France* | *2.46* | *2.40* | *2.69* | *3.87* | *4.27* | *1.35* | *1.04* |
| **Total** | **15.80** | **13.18** | **10.16** | **15.43** | **20.21** | **17.46** | **24.68** |
| **Independent coking-plants** | | | | | | | |
| *Belgium* and *Netherlands* | *0.16* | *1.04* | *0.82* | *0.87* | *0.95* | *0.44* | *0.01* |
| *France*(2) | — | — | — | — | — | — | — |
| *Italy* | *4.89* | *4.24* | *3.01* | *3.70* | *4.38* | *4.55* | *0.76* |
| **Total** | **5.05** | **5·28** | **3.83** | **4.57** | **5.33** | **4.99** | **0.77** |
| **Grand Total** | **20.85** | **18·46** | **13.99** | **20.00** | **25.54** | **22.45** | **25.45** |

(1) Including low and medium-temperature coking-plants.
(2) Exclusive of Gaz de France.

**HARD-COAL BRIQUETTING-PLANTS**

**Investment**

*TABLE IV*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 68 for | on Jan. 1, 69 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Ruhr | 1.19 | 0.79 | 0.21 | 0.07 | 0.08 | 0.13 | 0.22 |
| Aachen | 0.04 | 1.67 | 1.46 | 0.06 | 0.03 | 0.06 | 0.11 |
| Lower Saxony | 0.02 | 0.05 | 0.01 | 0.05 | 0.02 | 0.03 | 0.11 |
| *Germany (F.R.)* | *1.25* | *2.51* | *1.68* | *0.18* | *0.13* | *0.22* | *0.44* |
| Campine | 2.46 | 0.94 | — | — | — | — | — |
| Southern Belgium | 0.54 | 0.17 | 0.17 | 0.18 | 1.67 | 0.21 | 0.79 |
| *Belgium* | *3.00* | *1.11* | *0.17* | *0.18* | *1.67* | *0.21* | *0.79* |
| *Netherlands* (Limburg) | *0.35* | *0.71* | *0.13* | *0.09* | *0.09* | *0.06* | *0.08* |
| Nord/Pas-de-Calais | 1.64 | 0.67 | 1.62 | 0.53 | 0.53 | 0.66 | 1.39 |
| Centre/Midi | 0.63 | 1.70 | 0.95 | 0.21 | 0.21 | 0.03 | — |
| Independent plants | 0.64 | 0.60 | 0.30 | — | — | — | — |
| *France* | *2.91* | *2.97* | *2.87* | *0.74* | *0.74* | *0.69* | *1.39* |
| **Total** | **7.51** | **7.30** | **4.85** | **1.19** | **2.63** | **1.18** | **2.70** |

**PITHEAD POWER-STATIONS (1)**

**Investment**

*TABLE V*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 68 for | on Jan. 1, 69 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Ruhr | 35.14 | 32.19 | 57.68 | 108.56 | 64.05 | 88.93 | 69.52 |
| Aachen<br>Lower Saxony<br>Saar | 11.48 | 19.37 | 14.73 | 0.90 | 3.09 | 1.33 | 1.10 |
| *Germany (F.R.)* | *46.62* | *51.56* | *72.41* | *109.46* | *67.14* | *90.26* | *70.62* |
| Campine | 0.12 | 0.01 | 0.01 | 0.03 | 0.05 | — | — |
| Southern Belgium | 6.03 | 7.45 | 5.88 | 1.13 | 1.18 | 0.32 | 0.02 |
| *Belgium* | *6.15* | *7.46* | *5.89* | *1.16* | *1.23* | *0.32* | *0.02* |
| *Netherlands* (Limburg) | *3.31* | *0.70* | *0.34* | *0.19* | *0.16* | — | — |
| Nord/Pas-de-Calais | 1.15 | 0.60 | 4.74 | 12.15 | 12.05 | 10.32 | 10.27 |
| Lorraine | 1.09 | 0.24 | 0.21 | 0.28 | 0.32 | 3.93 | 14.45 |
| Centre-Midi | 0.58 | 0.66 | 0.79 | 9.43 | 5.93 | 13.91 | 18.11 |
| *France* | *2.82* | *1.50* | *5.74* | *21.86* | *18.30* | *28.16* | *42.83* |
| *Italy* | — | — | — | — | — | — | — |
| **Total** | **58.90** | **61.22** | **84.38** | **132.67** | **86.83** | **118.74** | **113.47** |

(1) Pithead power-stations proper and other power-generating plant at mines.

## HARD COAL

### Extraction

*TABLE VI*

**Extraction and Extraction Potential by Coalfields**

*'000,000 metric tons*

| Actual extraction | Coalfield | Extraction potential | | | Expected extraction potential | | | |
|---|---|---|---|---|---|---|---|---|
| 1968 | | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
| 91.1 | Ruhr | 121.7 | 108.8 | 100.7 | 104.3 | 105.6 | 107.0 | 107.0 |
| 7.3 | Aachen | 8.4 | 8.4 | 8.2 | 7.5 | 7.4 | 7.4 | 7.4 |
| 2.4 | Lower Saxony | 2.0 | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 |
| 11.3 | Saar | 14.3 | 13.9 | 12.2 | 14.1 | 14.3 | 14.0 | 14.0 |
| *112.1* | *Germany (F.R.)* | *146.4* | *133.4* | *123.4* | *128.6* | *130.0* | *131.1* | *131.1* |
| 8.5 | Campine | 10.0 | 9.0 | 9.4 | 9.4 | 9.5 | 9.5 | 9.6 |
| 6.3 | Southern Belgium | 10.0 | 9.4 | 6.8 | 5.7 | 4.2 | 4.2 | 4.2 |
| *14.8* | *Belgium* | *20.0* | *18.4* | *16.2* | *15.1* | *13.7* | *13.7* | *13.8* |
| 6.7 | *Netherlands* (Limburg) | *11.4* | *9.3* | 8.6 | *5.8* | 5.2 | *4.7* | *4.5* |
| 19.7 | Nord/Pas-de-Calais | 25.7 | 24.1 | 22.2 | 19.9 | 18.0 | 16.0 | 14.5 |
| 13.8 | Lorraine | 15.5 | 15.2 | 15.2 | 14.7 | 14.0 | 13.6 | 13.2 |
| 8.4 | Centre/Midi | 9.9 | 9.4 | 9.2 | 8.4 | 8.2 | 7.6 | 7.3 |
| *41.9* | *France* | *51.1* | *48.7* | *46.6* | *43.0* | *40.2* | *37.2* | *35.0* |
| *0.4* | *Italy* | *0.7* | *0.7* | *0.4* | *0.4* | *0.4* | *0.4* | *0.4* |
| **175.9** | **Total** | **229.6** | **210.5** | **195.2** | **192.9** | **189.5** | **187.1** | **184.8** |

*N.B.* The above table does not take into account the extraction of some mines of small capacity (0.2 million metric tons in 1968 of which 0.1 million metric tons from the "small" German mines, which do not figure in the official production statistics).

**COKE**

**Production**

*TABLE VII a*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production(1) 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| | **Mine-owned coking-plants** | | | | | | | |
| 26.3 | Ruhr | 34.4 | 30.5 | 28.8 | 28.2 | 27.9 | 28.8 | 28.7 |
| 2.0 | Aachen(2) | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| — | Lower Saxony | — | — | — | — | — | — | — |
| 1.5 | Saar | 1.3 | 1.3 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| *29.8* | *Germany (F.R.)* | *37.6* | *33.7* | *32.6* | *32.0* | *31.7* | *32.6* | *32.5* |
| *2.0* | *Belgium* and the *Netherlands* | *3.4* | *2.4* | *2.1* | *1.0* | *1.0* | *1.0* | *0.2* |
| 4.5 | Nord/Pas-de-Calais | 5.2 | 5.2 | 5.1 | 5.3 | 5.0 | 4.4 | 4.0 |
| 2.6 | Lorraine | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 0.8 | Centre/Midi | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| *7.9* | *France* | *8.9* | *8.9* | *8.8* | *9.0* | *8.7* | *8.1* | *7.7* |
| **39.7** | **Total** | **49.9** | **45.0** | **43.5** | **42.0** | **41.4** | **41.7** | **40.4** |
| | **Independent coking-plants** | | | | | | | |
| *1.4* | *Belgium* and the *Netherlands* | *1.4* | *1.4* | *1.4* | *1.2* | *1.2* | *1.2* | *1.2* |
| — | *France* | — | — | — | — | — | — | — |
| *2.3* | *Italy* | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* |
| **3.7** | **Total** | **3.9** | **3.9** | **3.9** | **3.7** | **3.7** | **3.7** | **3.7** |
| | **Steelworks-owned coking-plant** | | | | | | | |
| *6.8* | *Germany (F.R.)* | *8.4* | *8.1* | *7.9* | *7.6* | *7.6* | *8.1* | *8.4* |
| *6.6* | *Belgium* and the *Netherlands* | *6.6* | *6.7* | *6.8* | *6.9* | *7.0* | *7.0* | *7.1* |
| *4.2* | *France* | *4.5* | *4.6* | *4.4* | *4.7* | *5.2* | *5.1* | *5.1* |
| *4.1* | *Italy* | *4.3* | *4.3* | *4.3* | *4.3* | *4.7* | *4.9* | *5.1* |
| 21.7 | Total | 23.8 | 23.7 | 23.4 | 23.5 | 24.5 | 25.1 | 25.7 |
| **65.1** | **Grand Total** | **77.6** | **72.6** | **70.8** | **69.2** | **69.6** | **70.5** | **69.8** |

(1) These figures are not the same as those published in the Commission's *Bulletin Statistique*, since certain coking-plants have been classified differently.

(2) Including electrode coke (126,000 metric tons produced in 1968).

**LOW- AND MEDIUM-TEMPERATURE COKE**

**Production**

*TABLE VII b*

**Production and Production Capacity**

*'000 metric tons*

| Actual production | Mine-, and steelworks-owned plants | Production potential | | | Expected production potential | | | |
|---|---|---|---|---|---|---|---|---|
| 1968 | | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
| 177 | Mine-owned plants ..... | 360 | 360 | 360 | 320 | — | — | — |
| — | Steelworks-owned plants ..... | — | — | — | — | — | — | — |

**COKING-PLANTS**

**Technical Data**

*TABLE VIII*

**Coal Input and Coke Output (Mine-Owned, Independent and Steelworks-Owned Coking-Plants)**

| Type of coal | 1966 (1) | | 1967 | | 1968 (1) | |
|---|---|---|---|---|---|---|
| | '000 metric tons | % | '000 metric tons | % | '000 metric tons | % |
| Group V(2) ..... | 65,877 | 75.7 | 61,124 | 72.9 | 61,885 | 73.4 |
| Group VI(2) ..... | 16,168 | 18.5 | 17,092 | 20.4 | 17,971 | 21.3 |
| Other groups ..... | 4,244 | 4.9 | 4,900 | 5.8 | 3,593 | 4.3 |
| Coke breeze and low-temperature coke breeze | 764 | 0.9 | 730 | 0.9 | 812 | 1.0 |
| **Total** | **87,053** | **100.0** | **83,846** | **100.0** | **84,261** | **100.0** |
| | '000 metric tons | output kg./t.(3) | '000 metric tons | output kg./t.(3) | '000 metric tons | output kg./t.(3) |
| Coke production ..... | 65,630 | 753.9 | 63,256 | 754.4 | 63,499 | 753.6 |
| | metric tons | % of total input | metric tons | % of total input | metric tons | % of total input |
| Oil input ..... | 55,204 | 0.063 | 27,463 | 0.033 | 32,315 | 0.038 |

(1) The 1966 and 1968 figures represent only part of the independent coking-plants.

(2) The breakdown between Groups V and VI is only approximate.

(3) Output of coke (ton for ton) for coal input (also ton for ton). The figure is of practical value; considerable variations may, however, arise as a result of variations in the moisture content of the coal input and the coke produced.

| | | 1966 | 1967 | 1968 |
|---|---|---|---|---|
| *a*) Coke-oven gas delivered ..... | '000,000 stand. cub. m. | 29,481 | 28,602 | 28 697 |
| *b*) Gas output ..... | stand. cub. metres per ton of wet-charged coal | 339 | 341 | 341 |
| *c*) Coke-oven gas delivered to outside enterprises or for consumption other than *d*) ..... | '000,000 stand. cub. m. | 19,925 | 19,666 | 19 281 |
| | % of *a*) ..... | (67.6) | (68.7) | (67.2) |
| *d*) Consumption for heating oven : | | | | |
| 1. Coke-oven gas ..... | '000,000 stand. cub. m. | 9,556 | 8,936 | 9 416 |
| | % of 4) ..... | (70.8) | (71.3) | (74,1) |
| 2. Producer gas ..... | '000,000 stand. cub. m. | 702 | 552 | 424 |
| | % of 4) ..... | (5.2) | (4.4) | (3,3) |
| 3. Blast-furnace and other gases .. | '000,000 stand. cub. m. | 3,237 | 3,050 | 2 874 |
| | % of 4) ..... | (24.0) | (24.3) | (22,6) |
| 4. Total consumption of gas for heating ovens ..... | '000,000 stand. cub. m | 13,495 (100.0) | 12,538 (100.0) | 12 714 (100,0) |
| *e*) Specific consumption in kcal./kg. of dry-charged coal (assuming an average moisture content of 8%) ..... | | 725 | 699 | 705 |

*N.B.* The gas volumes have been calculated on the basis of a calorific power of 4,300 Kilocalories per standard cubic metre.

## HARD-COAL BRIQUETTES

**Production**

*TABLE IX*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production | Area | Production potential | | | Expected production potential | | | |
|---|---|---|---|---|---|---|---|---|
| 1968 | | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
| 2.4 | Ruhr | 4.6 | 4.4 | 3.8 | 3.2 | 3.2 | 3.2 | 3.2 |
| 0.8 | Aachen | 0.8 | 0.9 | 1.0 | 1.1 | 1.1 | 1.2 | 1.2 |
| 0.5 | Lower Saxony | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| *3.7* | *Germany (F.R.)* | *6.0* | *5.9* | *5.4* | *4.9* | *4.9* | *5.0* | *5.0* |
| 0.0 | Campine | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| 0.7 | Southern Belgium | 2.3 | 1.8 | 1.8 | 1.6 | 1.5 | 1.7 | 1.7 |
| *0.7* | *Belgium* | *2.5* | *2.0* | *2.0* | *1.7* | *1.6* | *1.8* | *1.8* |
| *1.1* | *Netherlands* (Limburg) | *1.7* | *1.7* | *1.7* | *1.6* | *1.6* | *1.3* | *1.2* |
| 2.5 | Nord/Pas-de-Calais | 4.1 | 4.1 | 3.8 | 3.6 | 3.6 | 3.6 | 3.6 |
| 1.1 | Centre/Midi | 2.0 | 1.9 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 |
| 0.9 | Independent plants | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| *4.5* | *France* | *7.6* | *7.5* | *7.1* | *6.8* | *6.8* | *6.8* | *6.8* |
| **10.0** | **Total** | **17.8** | **17.1** | **16.2** | **15.0** | **14.9** | **14.9** | **14.8** |

*TABLE X*

**Output of Electric Current and Electric Capacity of Pithead Power-Stations(1) by Areas**

| Actual output '000,000 kWh. 1968 | Area | Actual electric capacity MW. | | | Expected electric capacity MW. | | | |
|---|---|---|---|---|---|---|---|---|
| | | Beginning 1967 | Beginning 1968 | Beginning 1969 | Beginning 1970 | Beginning 1971 | Beginning 1972 | Beginning 1973 |
| 18,981 | Ruhr | 4,499 | 4,483 | 4,805 | 5,507 | 5,977 | 5,969 | 5,969 |
| 4,176 | Aachen, Lower Saxony, Saar | 1,088 | 1,356 | 1,369 | 1,369 | 1,369 | 1,369 | 1,369 |
| *23,157* | *Germany (F.R.)* | *5,587* | *5,839* | *6,174* | *6,876* | *7,346* | *7,338* | *7,338* |
| 546 | Campine | 389 | 230 | 257 | 257 | 257 | 257 | 257 |
| 5,329 | Southern Belgium | 863 | 981 | 981 | 981 | 981 | 981 | 981 |
| *5,875* | *Belgium* | *1,252* | *1,211* | *1,238* | *1,238* | *1,238* | *1,238* | *1,238* |
| *2,217* | *Netherlands* (Limburg) | *470* | *441* | *465* | *456* | *456* | *456* | *456* |
| 4,440 | Nord/Pas-de-Calais | 1,406 | 1,406 | 1,406 | 1,406 | 1,641 | 1,641 | 1,641 |
| 2,745 | Lorraine | 729 | 729 | 729 | 729 | 729 | 729 | 1,011 |
| 1,502 | Centre-Midi | 557 | 557 | 557 | 557 | 557 | 797 | 797 |
| *8,687* | *France* | *2,692* | *2,692* | *2,692* | *2,692* | *2,927* | *3,167* | *3,449* |
| — | *Italy* | — | — | — | — | — | — | — |
| **39,936** | **Total** | **10,001** | **10,183** | **10,569** | **11,262** | **11,967** | **12,199** | **12,481** |

(1) Pithead power-stations proper and other power-generating plant at mines.

*TABLE XI a*

**Specific Consumption of Coal 1968(²)**

**PITHEAD POWER-STATIONS(¹)**

**Technical Data**

C = Output of electric current in '000,000 kWh.
P = Maximum electric capacity in '000 MW. (average at beginning 1968 - beginning 1969)
H = Load-hours per annum (1968)

} by type of specific consumption

| Specific consumption | < 3000 kcal/kWh | | | 3000-3499 kcal/kWh | | | 3500-3999 kcal/kWh | | | 4000-4999 kcal/kWh | | | ⩾ 5000 kcal/kWh | | | Total | | | Average consumption kcal./kWh. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country/Coalfield | C | P | H | C | P | H | C | P | H | C | P | H | C | P | H | C | P | H | |
| Ruhr | 14,038 | 3,321 | 4,227 | 2,480 | 550 | 4,509 | 1,356 | 363 | 3,736 | 877 | 273 | 3,212 | 230 | 48 | 4,792 | 18,981 | 4,555 | 4,167 | 2,930 |
| Aachen<br>Lower Saxony<br>Saar | 4,176 | 1,369 | 3,050 | — | — | — | — | — | — | — | — | — | — | — | — | 4,176 | 1,369 | 3,050 | 2,642 |
| *Germany (F.R.)* | *18,214* | *4,690* | *3,884* | *2,480* | *550* | *4,509* | *1,356* | *363* | *3,736* | *877* | *273* | *3,212* | *230* | *48* | *4,792* | *23,157* | *5,924* | *3,909* | *2,878* |
| Campine | 849 | 115 | 7,383 | 185 | 67 | 2,761 | 358 | 133 | 2,692 | — | — | — | — | — | — | 1,392 | 315 | 4,419 | 2,759 |
| Southern coalfields | 1,290 | 211 | 6,114 | 123 | 30 | 4,100 | 57 | 18 | 3,167 | 30 | 25 | 1,200 | — | — | — | 1,500 | 284 | 5,282 | 2,571 |
| *Belgium* | *2,139* | *326* | *6,561* | *308* | *97* | *3,175* | *415* | *151* | *2,748* | *30* | *25* | *1,200* | — | — | — | *2,892* | *599* | *4,828* | *2,661* |
| Nord/Pas-de-Calais | 3,834 | 718 | 5,340 | 407 | 214 | 1,902 | 73 | 194 | 376 | 126 | 280 | 450 | — | — | — | 4,440 | 1,406 | 3,158 | 2,638 |
| Lorraine | 2,710 | 674 | 4,021 | — | — | — | — | — | — | — | — | — | 35 | 55 | 636 | 2,745 | 729 | 3,765 | 2,950 |
| Centre-Midi | 147 | 25 | 5,880 | 797 | 250 | 3,188 | 376 | 171 | 2,199 | 168 | 91 | 1,846 | 14 | 20 | 700 | 1,502 | 557 | 2,697 | 3,417 |
| *France* | *6,691* | *1,417* | *4,722* | *1,204* | *464* | *2,595* | *449* | *365* | *1,230* | *294* | *371* | *792* | *49* | *75* | *653* | *8,687* | *2,692* | *3,227* | *2,871* |
| *Netherlands* | *1,694* | *331* | *5,118* | — | — | — | *408* | *105* | *3,885* | *115* | *29* | *3,966* | — | — | — | *2,217* | *465* | *4,768* | *3,076* |
| **Total** | **28,738** | **6,764** | **4,249** | **3,992** | **1,111** | **3,593** | **2,628** | **984** | **2,671** | **1,316** | **698** | **1,885** | **279** | **123** | **2,268** | **36,953** | **9,680** | **3,817** | **2,871** |

(¹) Pithead power-stations proper and other power-generating plant at mines.

(²) This table covers only power-stations proper and other power-generating plant which actually produced electric current from coal before January 1, 1969. Their load-hours per annum were calculated by dividing the annual output by the average maximum electric capacity (arithmetical mean between the electric capacity at the beginning of 1968 and 1969). A possible source of error arises where new power-stations had not yet been brought into operation and obsolete plant had not been closed down by July 1, 1968.

**PITHEAD POWER-STATIONS(1)**

**Technical Data**

*TABLE XI b*

**Specific Consumption of Coal 1966-1968**

| | 1966 | 1967 | 1968 | 1973 (Forecast) |
|---|---|---|---|---|
| Average specific consumption in kcal./kWh. | 2,897 | 2,872 | 2,871(2) | . |
| Consumption of secondary products in % of consumption of coal (ton for ton) | 89% | 85% | 88 % | . |
| Load-hours per annum | 4,029 | 4,095 | 3,817(2) | . |
| Ratio (at the beginning of the year) of maximum electric capacity to nominal installed capacity | 89.9% | 90.0% | 90.0% | 91.2% |

(1) Pithead power-stations proper and other power-generating plant at mines.
(2) See Table XI a for breakdown by coalfields.

**BKB AND LOW-TEMPERATURE BROWN-COAL COKE**

**Investment and Production**

*TABLE XII a*

**Capital Expenditure on Plants Producing BKB (Brown-Coal Briquettes) and Low-Temperature Brown-Coal Coke**

*'000,000 dollars (EMA units of account)*

| | Actual expenditure | | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Briquetting-plants ..... | 7.90 | 3.79 | 4.97 | 3.58 | 4.00 | 4.29 | 3.75 |
| Low-temperature coking-plants ..... | 0.02 | — | — | — | — | — | — |
| **Total** | **7.92** | **3.79** | **4.97** | **3.58** | **4.00** | **4.29** | **3.75** |

*TABLE XII b*

**Production and Production Potential for BKB and Low-Temperature Brown-Coal Coke**

*'000,000 metric tons*

| Production | | Production potential | | | Expected production potential | | | |
|---|---|---|---|---|---|---|---|---|
| 1968 | | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
| 8.2 | BKB ..... | 12.3 | 9.6 | 9.6 | 8.0 | 8.0 | 7.6 | 7.2 |
| — | Low-temperature-coke ..... | 0.6 | 0.4 | — | — | — | — | — |

*TABLE XIII*

**Capital Expenditure by Orefields**

*'000,000 dollars (EMA units of account)*

| Orefield | Actual expenditure | | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Salzgitter, Ilsede, Harzvorland | 4.03 | 1.09 | 0.52 | 0.73 | 0.68 | 0.97 | — |
| Osnabrück, Weser-Wiehengebirge | 0.11 | 0.17 | 0.01 | 0.08 | 0.15 | — | — |
| Siegerland-Wied | 0.16 | 0.17 | 0.20 | 0.08 | 0.03 | 0.02 | — |
| Central and Southern Germ. | | | | | | | |
| Other German fields | 1.50 | 0.65 | 0.37 | 0.78 | 1.32 | 1.68 | 1.23 |
| *Germany (F.R.)* | *5.80* | *2.08* | *1.10* | *1.67* | *2.18* | *2.67* | *1.23* |
| *Belgium* | — | — | *0.02* | — | — | — | — |
| Eastern France | 16.07 | 12.51 | 12.88 | 16.16 | 18.05 | 18.92 | 10.90 |
| Western France | 1.96 | 1.12 | 1.06 | 1.87 | 2.48 | 1.62 | 0.66 |
| France : Centre/Midi | 0.11 | 0.03 | 0.03 | 0.04 | 0.09 | 0.04 | 0.19 |
| *France* | *18.14* | *13.66* | *13.97* | *18.07* | *20.62* | *20.58* | *11.75* |
| *Italy* | *0.68* | *0.67* | *0.28* | *0.39* | *0.82* | *1.51* | *0.96* |
| *Luxembourg* | *0.97* | *0.91* | *0.61* | *0.80* | *0.68* | *1.26* | *0.53* |
| **Total** | **25.59** | **17.32** | **15.98** | **20.93** | **24.30** | **26.02** | **14.47** |

## IRON-ORE INDUSTRY

**Extraction**

*TABLE XIV*

**Extraction and Extraction Potential by Orefields**

*'000,000 metric tons*

| Actual extraction 1968 | Orefield | Extraction potential 1966 | 1967 | 1968 | Expected extraction potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 6,1 | Salzgitter, Ilsede, Harzvorland<br>Osnabrück, Weser-Wiehengebirge ..... | 8.6 | 7.5 | 7.2 | 6.6 | 6.6 | 6.6 | 6.6 |
| 0,4 | Siegerland-Wied .....<br>Central and Southern Germany | 0.7 | 0.5 | 0.4 | 0.3 | 0.3 | 0.1 | 0.1 |
| 1,2 | Other German fields ..... | 2.1 | 2.0 | 1.6 | 1.0 | 1.0 | 1.0 | 1.0 |
| *7,7* | *Germany (F.R.)* ..... | *11.4* | *10.0* | *9.2* | *7.9* | *7.9* | *7.7* | *7.7* |
| *0,1* | *Belgium* ..... | *0.2* | *0.2* | *0.1* | — | — | — | — |
| 52,3 | Eastern France ..... | 64.5 | *60.6* | 59.4 | 60.1 | 61.1 | 62.5 | 64.4 |
| 3,5 | Western France ..... | 4.7 | 4.7 | 4.4 | 4.6 | 4.6 | 4.6 | 4.6 |
| 0,0 | Centre/Midi ..... | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| *55,8* | *France* ..... | *69.4* | *65.4* | *63.9* | *64.8* | *65.8* | *67.2* | *69.1* |
| *1,2* | *Italy* ..... | *1.5* | *1.4* | *1.4* | *1.4* | *1.4* | *1.4* | *1.4* |
| *6,4* | *Luxembourg* ..... | *8.0* | *7.3* | *7.3* | *7.2* | *7.5* | *7.5* | *7.5* |
| **71,2** | **Tota** | **90.5** | **84.3** | **81.9** | **81.3** | **82.6** | **83.8** | **85.7** |

*TABLE XV*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 35.60 | 21.66 | 30.02 | 35.64 | 37.08 | 41.42 | 18.18 |
| North Rhine/Westphalia | 238.20 | 220.84 | 128.27 | 131.34 | 157.45 | 208.43 | 144.50 |
| Southern Germany ..... | 9.06 | 22.78 | 9.35 | 15.10 | 14.35 | 27.41 | 15.02 |
| Saar ..... | 28.70 | 29.05 | 55.93 | 46.09 | 55.83 | 36.32 | 20.77 |
| *Germany (F.R.)* ..... | *311.56* | *294.33* | *223.57* | *228.17* | *264.71* | *313.58* | *198.47* |
| *Belgium* ..... | *142.35* | *142.87* | *100.17* | *74.56* | *84.05* | *133.22* | *125.30* |
| Eastern France ..... | 111.45 | 99.91 | 99.36 | 162.39 | 148.40 | 150.52 | 111.21 |
| Northern France ..... | 30.93 | 22.42 | 42.97 | 67.38 | 76.59 | 91.98 | 52.75 |
| France : other areas .... | 27.53 | 25.23 | 28.08 | 26.51 | 28.62 | 40.71 | 24.42 |
| *France* ..... | *169.91* | *147.56* | *170.41* | *256.28* | *253.61* | *283.21* | *188.38* |
| Italy : coastal areas .... | 193.98 | 131.50 | 69.11 | 57.10 | 111.70 | 157.24 | 143.41 |
| Italy : other areas ..... | 52.29 | 35.09 | 56.53 | 62.70 | 60.80 | 63.99 | 55.33 |
| *Italy* ..... | *246.27* | *166.59* | *125.64* | *119.80* | *172.50* | *221.23* | *198.74* |
| *Luxembourg* ..... | *24.83* | *28.37* | *15.80* | *13.55* | *18.17* | *35.39* | *15.64* |
| *Netherlands* ..... | *37.32* | *68.35* | *94.61* | *129.76* | *112.45* | *112.34* | *110.24* |
| **Total** | **932.24** | **848.07** | **730.20** | **822.12** | **905.49** | **1098.97** | **836.77** |

**STEELWORKS-OWNED COKING-PLANTS**

**Investment**

*TABLE XVI a*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 0.26 | 0.10 | 0.03 | 0.08 | 0.03 | 0.31 | 0.11 |
| North Rhine/Westphalia | 0.10 | 0.50 | 0.31 | 1.11 | 0.67 | 0.31 | 0.19 |
| Southern Germany ..... | 0.03 | 0.02 | 0.06 | — | — | — | — |
| Saar ..... | 0.12 | 0.10 | 0.88 | 0.38 | 0.54 | 0.70 | 0.01 |
| *Germany (F.R.)* ..... | *0.51* | *0.72* | *1.28* | *1.57* | *1.24* | *1.32* | *0.31* |
| *Belgium* ..... | *1.91* | *2.18* | *1.27* | *0.44* | *0.14* | *0.20* | *0.12* |
| Eastern France ..... | 0.17 | 0.40 | 0.28 | 0.32 | 0.27 | 0.29 | — |
| Northern France ..... | 0.45 | 0.21 | 3.96 | 9.51 | 9.60 | 17.40 | 6.30 |
| France : other areas .... | 0.10 | 0.02 | 0.08 | 0.06 | 0.11 | 0.01 | — |
| *France* ..... | *0.72* | *0.63* | *4.32* | *9.89* | *9.98* | *17.70* | *6.30* |
| Italy : coastal areas .... | 12.49 | 5.47 | 1.72 | 1.03 | 5.63 | 17.24 | 19.41 |
| Italy : other areas ..... | — | — | — | — | — | — | — |
| *Italy* ..... | *12.49* | *5.47* | *1.72* | *1.03* | *5.63* | *17.24* | *19.41* |
| *Luxembourg* ..... | — | — | — | — | — | — | — |
| *Netherlands* ..... | *1.61* | *1.37* | *2.88* | *0.73* | *0.97* | *0.15* | *0.05* |
| **Total** | **17.24** | **10.37** | **11.47** | **13.66** | **17·96** | **36.61** | **26.19** |

*TABLE XVI b*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 1.16 | 0.35 | 0.16 | 1.22 | 3.29 | 2.95 | 3.51 |
| North Rhine/Westphalia | 3.16 | 1.95 | 2.56 | 2.44 | 3.47 | 9.37 | 15.19 |
| Southern Germany ..... | 0.24 | 0.06 | 0.16 | 0.01 | — | 0.03 | 0.01 |
| Saar ..... | 1.56 | 3.63 | 16.32 | 1.74 | 3.38 | 2.02 | 1.03 |
| *Germany (F.R.)* ..... | *6.12* | *5.99* | *19.20* | *5.41* | *10.14* | *14.37* | *19.74* |
| *Belgium* ..... | *5.11* | *11.41* | *6.89* | *3.64* | *5.26* | *3.57* | *1.82* |
| Eastern France ..... | 13.51 | 11.79 | 9.70 | 17.09 | 14.37 | 12.27 | 11.60 |
| Northern France ..... | 5.00 | 5.20 | 2.50 | 5.10 | 7.86 | 9.26 | 1.94 |
| France : other areas .... | 0.54 | 0.11 | 0.40 | 0.88 | 0.87 | 0.16 | 0.01 |
| *France* ..... | *19.05* | *17.10* | *12.60* | *23.07* | *23.10* | *21.69* | *13.55* |
| Italy : coastal areas .... | 19.91 | 9.61 | 3.47 | 6.04 | 4.79 | 5.68 | 10.83 |
| Italy : other areas ..... | 0.05 | 0.02 | 0.06 | 0.45 | 0.10 | 0.28 | 0.05 |
| *Italy* ..... | *19.96* | *9.63* | *3.53* | *6.49* | *4.89* | *5.96* | *10.88* |
| *Luxembourg* ..... | *0.62* | *0.43* | *0.28* | *0.85* | *0.03* | *10.18* | *9.90* |
| *Netherlands* ..... | *1.08* | *0.49* | *1.30* | *5.33* | *6.88* | *18.74* | *4.10* |
| **Total** | **51.94** | **45.05** | **43.80** | **44.79** | **50.30** | **74.51** | **59.99** |

**BLAST-FURNACES**

**Investment**

*TABLE XVI c*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany .... | 7.73 | 4.19 | 5.35 | 3.66 | 1.97 | 7.18 | 3.46 |
| North Rhine/Westphalia | 28.63 | 16.31 | 8.19 | 12.82 | 12.79 | 15.90 | 11.52 |
| Southern Germany .... | 0.59 | 0.49 | 0.66 | 0.81 | 0.92 | 0.69 | — |
| Saar ..... | 4.34 | 1.96 | 1.75 | 3.54 | 4.26 | 4.56 | 0.18 |
| *Germany (F.R.)* ..... | *41.29* | *22.95* | *15.95* | *20.83* | *19.94* | *28.33* | *15.16* |
| *Belgium* ..... | *11.26* | *16.22* | *12.89* | *9.06* | *9.39* | *13.94* | *8.75* |
| Eastern France ..... | 9.82 | 7.31 | 10.93 | 10.65 | 12.38 | 10.91 | 4.18 |
| Northern France ..... | 2.31 | 2.50 | 11.26 | 11.78 | 15.27 | 9.99 | 2.36 |
| France : other areas ... | 0.56 | 0.22 | 0.28 | 0.44 | 0.32 | 1.43 | 1.29 |
| *France* ..... | *12.69* | *10.03* | *22.47* | *22.87* | *27.97* | *22.33* | *7.83* |
| Italy : coastal areas ... | 18.14 | 12.81 | 9.90 | 11.24 | 13.00 | 21.77 | 13.98 |
| Italy : other areas .... | 0.25 | 0.27 | 0.56 | 0.77 | 0.68 | 0.86 | 0.68 |
| *Italy* ..... | *18.39* | *13.08* | *10.46* | *12.01* | *13.68* | *22.63* | *14.66* |
| *Luxembourg* ..... | *4.27* | *2.11* | *0.53* | *2.66* | *5.25* | *8.67* | *2.63* |
| *Netherlands* ..... | *3.29* | *12.67* | *13.02* | *0.91* | *1.89* | *7.24* | *13.67* |
| **Total** | **91.19** | **77.06** | **75.32** | **68.34** | **78.12** | **103.14** | **62.70** |

**STEELWORKS-OWNED COKING-PLANTS, BURDEN PREPARATION AND BLAST-FURNACES-TOTAL**

**Investment**

*TABLE XVI d*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 9.15 | 4.64 | 5.54 | 4.96 | 5.29 | 10.44 | 7.08 |
| North Rhine/Westphalia | 31.89 | 18.76 | 11.06 | 16.37 | 16.93 | 25.58 | 26.90 |
| Southern Germany ..... | 0.86 | 0.57 | 0.88 | 0.82 | 0.92 | 0.72 | 0.01 |
| Saar ..... | 6.02 | 5.69 | 18.95 | 5.66 | 8.18 | 7.28 | 1.22 |
| *Germany (F.R.)* ..... | *47.92* | *29.66* | *36.43* | *27.81* | *31.32* | *44.02* | *35.21* |
| *Belgium* ..... | *18.28* | *29.81* | *21.05* | *13.14* | *14.79* | *17.71* | *10.69* |
| Eastern France ..... | 23.50 | 19.50 | 20.91 | 28.06 | 27.02 | 23.47 | 15.78 |
| Northern France ..... | 7.76 | 7.91 | 17.72 | 26.39 | 32.73 | 36.65 | 10.60 |
| France : other areas .... | 1.20 | 0.35 | 0.76 | 1.38 | 1.30 | 1.60 | 1.30 |
| *France* ..... | *32.46* | *27.76* | *39.39* | *55.83* | 61.05 | *61.72* | *27.68* |
| Italy : coastal areas .... | 50.54 | 27.89 | 15.09 | 18.31 | 23.42 | 44.69 | 44.22 |
| Italy : other areas ..... | 0.30 | 0.29 | 0.62 | 1.22 | 0.78 | 1.14 | 0.73 |
| *Italy* ..... | *50.84* | *28.18* | *15.71* | *19.53* | *24.20* | *45.83* | *44.95* |
| *Luxembourg* ..... | *4.89* | *2.54* | *0.81* | 3.51 | *5.28* | *18.85* | *12.53* |
| *Netherlands* ..... | *5.98* | *14.53* | *17.20* | 6.97 | *9.74* | *26.13* | *17.82* |
| **Total** | **160.37** | **132.48** | **130.59** | **126.79** | **146.38** | **214.26** | **148.88** |

**BASIC BESSEMER STEELWORKS**

**Investment**

*TABLE XVII a*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 0.60 | 0.52 | 0.07 | 0.14 | 0.02 | — | — |
| North Rhine/Westphalia | 1.32 | 0.69 | 6.20 | — | 0.40 | — | — |
| Southern Germany ..... | 0.52 | 0.16 | 0.88 | 0.78 | 0.94 | 1.11 | — |
| Saar ..... | 1.61 | 1.37 | 0.96 | 0.40 | 0.73 | 0.41 | — |
| *Germany (F.R.)* ..... | *4.05* | *2.74* | *8.11* | *1.32* | *2.09* | *1.52* | — |
| *Belgium* ..... | *2.37* | *1.80* | *0.89* | *1.17* | *0.83* | *1.26* | *0.21* |
| Eastern France ..... | 2.32 | 3.33 | 2.88 | 3.00 | 3.71 | 3.51 | 1.36 |
| Northern France ..... | 0.20 | 0.20 | — | — | — | — | — |
| France : other areas .... | 0.11 | 0.08 | 0.04 | 0.03 | 0.08 | 0.08 | — |
| *France* ..... | *2.63* | *3.61* | *2.92* | *3.03* | *3.79* | *3.59* | *1.36* |
| Italy : coastal areas .... | — | — | — | — | — | — | — |
| Italy : other areas ..... | — | — | — | — | — | — | — |
| *Italy* ..... | — | — | — | — | — | — | — |
| *Luxembourg* ..... | *1.11* | *2.08* | *0.95* | *0.09* | *0.08* | *0.19* | — |
| *Netherlands* ..... | — | — | — | — | — | — | — |
| **Total** | **10.16** | **10.23** | **12.87** | **5.61** | **6.79** | **6.56** | **1.57** |

**OPEN-HEARTH STEELWORKS**

**Investment**

*TABLE XVII b*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 2.19 | 0.59 | 0.13 | 0.06 | 0.15 | 0.75 | 0.04 |
| North Rhine/Westphalia | 4.80 | 3.37 | 1.54 | 1.32 | 1.79 | 1.57 | 0.28 |
| Southern Germany ..... | 0.35 | 0.37 | 0.13 | 0.05 | 0.05 | 0.03 | — |
| Saar ..... | 0.46 | 0.32 | 0.32 | 1.35 | 0.16 | 0.34 | 0.28 |
| *Germany (F.R.)* ..... | *7.80* | *4.65* | *2.12* | *2.78* | *2.15* | *2.69* | *0.60* |
| *Belgium* ..... | *0.21* | *0.05* | *0.03* | *0.01* | *0.03* | — | — |
| Eastern France ..... | 1.03 | 0.86 | 0,37 | 0.84 | 0.76 | 0.87 | 0.32 |
| Northern France ..... | 0.20 | 0.67 | 0.21 | 0.30 | 0.23 | 0.14 | — |
| France : other areas .... | 0.07 | 0.03 | 0.06 | 0.05 | 0.20 | 0.12 | — |
| *France* ..... | *1.30* | *1.56* | *0.64* | *1.19* | *1.19* | *1.13* | *0.32* |
| Italy : coastal areas .... | 2.32 | 0.41 | 0.24 | 0.13 | 1.12 | 0.58 | 0.12 |
| Italy : other areas ..... | 0.90 | 1.35 | 0.85 | 1.94 | 1.56 | 0.76 | 0.55 |
| *Italy* ..... | *3.22* | *1.76* | *1.09* | *2.07* | *2.68* | *1.34* | *0.67* |
| *Luxembourg* ..... | — | — | — | — | — | — | — |
| *Netherlands* ..... | *0.52* | *0.63* | *—0.02* | *0.58* | *0.06* | *0.11* | *0.11* |
| **Total** | **13.05** | **8.65** | **3.86** | **6.63** | **6.11** | **5.27** | **1.70** |

**ELECTRIC-FURNACE STEELWORKS**

**Investment**

*TABLE XVII c*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 0.05 | — | 0.06 | — | — | — | — |
| North Rhine/Westphalia . | 2.51 | 1.21 | 1.68 | 1.82 | 3.89 | 4.61 | 2.72 |
| Southern Germany ..... | 0.51 | 0.38 | 0.10 | 4.00 | 3.00 | 0.45 | 0.15 |
| Saar ..... | — | 1.49 | 4.66 | 0.14 | 2.26 | 1.53 | — |
| *Germany (F.R.)* ..... | *3.07* | *3.08* | *6.50* | *5.96* | *9.15* | *6.59* | *2.87* |
| *Belgium* ..... | *0.34* | *0.23* | *0.17* | *0.63* | *0.93* | *3.10* | *7.04* |
| Eastern France ..... | 0.77 | 0.05 | 0.04 | 0.07 | 0.08 | 0.29 | 0.05 |
| Northern France ..... | 0.34 | 0.38 | 0.82 | 0.41 | 0.13 | 0.33 | 1.30 |
| France : other areas ..... | 6.30 | 3.58 | 2.53 | 2.71 | 5.05 | 8.57 | 3.97 |
| *France* ..... | *7.41* | *4.01* | *3.39* | *3.19* | *5.26* | *9.19* | *5.32* |
| Italy : coastal areas ..... | 1.41 | 0.85 | 0.25 | 0.06 | 0.73 | 0.04 | — |
| Italy : other areas ..... | 3.46 | 2.06 | 6.47 | 6.53 | 7.35 | 5.06 | 2.56 |
| *Italy* ..... | *4.87* | *2.91* | *6.72* | *6.59* | *8.08* | *5.10* | *2.56* |
| *Luxembourg* ..... | *0.01* | *0.01* | — | — | — | *0.02* | — |
| *Netherlands* ..... | *0.75* | *0.19* | *0.05* | *0.09* | — | — | — |
| **Total** | **16.45** | **10.43** | **16.83** | **16.46** | **23.42** | **24.00** | **17.79** |

**LD, KALDO AND OTHER STEELWORKS**

**Investment**

*TABLE XVII d*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 0.63 | 0.18 | 12.43 | 15.23 | 17.25 | 12.65 | 3.96 |
| North Rhine/Westphalia | 23.58 | 31.96 | 14.20 | 19.67 | 18.94 | 27.32 | 17.17 |
| Southern Germany ..... | — | — | — | — | — | — | — |
| Saar ..... | 0.36 | 3.26 | 10.19 | 9.10 | 8.64 | 2.73 | — |
| *Germany (F.R.)* ..... | *24.57* | *35.40* | *36.82* | *44.00* | *44.83* | *42.70* | *21.13* |
| *Belgium* ..... | *25.86* | *21.72* | *27.09* | *12.40* | *11.87* | *11.91* | *10.15* |
| Eastern France ..... | 2.51 | 3.36 | 7.84 | 21.72 | 21.12 | 22.79 | 2482 |
| Northern France ..... | 2.40 | 1.20 | 2.60 | 4.60 | 4.70 | 3.90 | 0.30 |
| France : other areas .... | 0.15 | 1.27 | 1.91 | 1.77 | 2.36 | 1.09 | 0.85 |
| *France* ..... | *5.06* | *5.83* | *12.35* | *28.09* | *28.18* | *27.78* | *25.97* |
| Italy : coastal areas .... | 18.16 | 8.37 | 7.52 | 9.00 | 11.81 | 31.81 | 20.33 |
| Italy : other areas ..... | — | — | 0.73 | 5.07 | 1.96 | 2.72 | 0.43 |
| *Italy* ..... | *18.16* | *8.37* | *8.25* | *14.07* | *12.98* | *34.53* | *20.76* |
| *Luxembourg* ..... | *9.79* | *12.59* | *7.73* | *1.64* | *2.22* | *2.81* | *0.08* |
| *Netherlands* ..... | *1.59* | *8.90* | *17.95* | *23.13* | *14.42* | *3.58* | *2.48* |
| **Total** | **85.03** | **92.81** | **110.19** | **123.33** | **114.50** | **123.31** | **80.57** |

**STEELWORKS TOTAL**

**Investment**

*TABLE XVII e*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 3.47 | 1.29 | 12.69 | 15.43 | 17.42 | 13.40 | 4.00 |
| North Rhine/Westphalia . | 32.21 | 37.23 | 23.62 | 22.81 | 25.02 | 33.50 | 20.17 |
| Southern Germany ..... | 1.38 | 0.91 | 1.11 | 4.83 | 3.99 | 1.59 | 0.15 |
| Saar ..... | 2.43 | 6.44 | 16.13 | 10.99 | 11.79 | 5.01 | 0.28 |
| *Germany (F.R.)* ..... | *39.49* | *45.87* | *53.55* | *54.06* | *58.22* | *53.50* | *24.60* |
| *Belgium* ..... | *28.78* | *23.80* | *28.18* | *14.21* | *13.66* | *16.27* | *17.40* |
| Eastern France ..... | 6.63 | 7.60 | 11.13 | 25.63 | 25.67 | 27.46 | 26.55 |
| Northern France ..... | 3.14 | 2.45 | 3.63 | 5.31 | 5.06 | 4.37 | 1.60 |
| France : other areas .... | 6.63 | 4.96 | 4.54 | 4.56 | 7.69 | 9.86 | 4.82 |
| *France* ..... | *16.40* | *15.01* | *19.30* | *35.50* | *38.42* | *41.69* | *32.97* |
| Italy : coastal areas ..... | 21.89 | 9.63 | 8.01 | 9.19 | 12.87 | 32.43 | 20.45 |
| Italy : other areas ..... | 4.36 | 3.41 | 8.05 | 13.54 | 10.87 | 8.54 | 3.54 |
| *Italy* ..... | *26.25* | *13.04* | *16.06* | *22.73* | *23.74* | *40.97* | *23.99* |
| *Luxembourg* ..... | *10.91* | *14.68* | *8.68* | *1.73* | *2.30* | *3.02* | *0.08* |
| *Netherlands* ..... | *2.86* | *9.72* | *17.98* | *23.80* | *14.48* | *3.69* | *2.59* |
| **Total** | **124.69** | **122.12** | **143.75** | **152.03** | **150.82** | **159.14** | **101.63** |

**BLOOMING AND SLABBING MILLS**

**Investment**

*TABLE XVIII a*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 1.53 | 1.25 | 1.20 | 1.57 | 1.53 | 1.88 | 3.58 |
| North Rhine/Westphalia | 6.59 | 13.11 | 8.15 | 9.41 | 9.22 | 9.01 | 7.04 |
| Southern Germany ..... | 0.56 | 3.48 | 0.45 | 0.13 | 0.13 | 0.49 | — |
| Saar ..... | 4.14 | 0.82 | 0.47 | 0.24 | 0.33 | 1.31 | 0.38 |
| *Germany (F.R.)* ..... | *12.82* | *18.66* | *10.27* | *11.35* | *11.21* | *12.69* | *11.00* |
| *Belgium* ..... | *10.95* | *10.29* | *7.89* | *9.09* | *8.63* | *3.33* | *0.46* |
| Eastern France ..... | 2.57 | 4.66 | 18.10 | 44.10 | 34.94 | 29.30 | 26.47 |
| Northern France ..... | 1.80 | 0.90 | 2.50 | 5.80 | 5.00 | 3.50 | 0.70 |
| France : other areas .... | 0.25 | 0.32 | 0.32 | 0.36 | 0.48 | 0.98 | 1.14 |
| *France* ..... | *4.62* | *5.88* | *20.92* | *50.26* | *40.42* | *33.78* | *28.31* |
| Italy : coastal areas..... | 8.96 | 5.33 | 5.62 | 2.60 | 4.08 | 13.41 | 8.77 |
| Italy : other areas ..... | 3.51 | 1.68 | 2.70 | 2.87 | 1.68 | 0.75 | 0.42 |
| *Italy* ..... | *12.47* | *7.01* | *8.32* | *5.47* | *5.76* | *14.16* | *9.19* |
| *Luxembourg* ..... | *0.06* | *0.16* | *0.15* | *0.78* | *1.00* | *2.72* | *0.69* |
| *Netherlands* ..... | *3.22* | *1.43* | *4.95* | *11.17* | *19.28* | *16.83* | *7.25* |
| **Total** | **44.14** | **43.43** | **52.50** | **88.12** | **86.30** | **83.51** | **56.90** |

**CONTINUOUS CASTING PLANTS**

**Investment**

*TABLE XVIII b*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | — | — | — | — | — | — | — |
| North Rhine/Westphalia .. | 9.55 | 9.56 | 12.58 | 4.73 | 7.31 | 12.93 | 8.52 |
| Southern Germany ..... | 0.02 | 0.20 | 0.05 | 1.16 | 1.02 | 3.09 | 0.63 |
| Saar ..... | 0.15 | 1.88 | 8.34 | 6.46 | 7.18 | — | — |
| *Germany (F.R.)* ..... | *9.72* | *11.64* | *20.97* | *12.35* | *15.51* | *16.02* | *9.15* |
| *Belgium* ..... | — | — | — | — | — | — | — |
| Eastern France ..... | 0.03 | — | — | — | 0.11 | 0.17 | — |
| Northern France ..... | — | — | 0.67 | 1.22 | 1.33 | 8.45 | 12.98 |
| France : other areas ..... | — | — | — | 0.95 | 1.03 | 0.64 | 0.36 |
| *France* ..... | *0.03* | — | *0.67* | *2.17* | *2.47* | *9.26* | *13.34* |
| Italy : coastal areas ..... | — | 0.41 | 0.01 | — | 0.96 | 3.09 | 4.11 |
| Italy : other areas ..... | 0.26 | 1.07 | 6.61 | 4.70 | 7.81 | 2.14 | 3.01 |
| *Italy* ..... | *0.26* | *1.48* | *6.62* | *4.70* | *8.77* | *5.23* | *7.12* |
| *Luxembourg* ..... | — | — | — | — | — | — | — |
| *Netherlands* ..... | — | — | — | — | — | — | — |
| **Total** | **10.01** | **13.12** | **28.26** | **19.22** | **26.75** | **30.51** | **29.61** |

**SECTION MILLS**

**Investment**

*TABLE XVIII c*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 3.79 | 2.86 | 0.87 | 0.48 | 1.11 | 1.19 | 1.05 |
| North Rhine/Westphalia | 22.45 | 16.07 | 18.08 | 11.76 | 14.55 | 11.40 | 5.13 |
| Southern Germany ..... | 0.93 | 2.35 | 0.33 | 4.27 | 3.93 | 5.29 | 3.23 |
| Saar ..... | 1.60 | 2.42 | 2.38 | 17.01 | 17.52 | 3.10 | 1.13 |
| *Germany (F.R.)* ..... | *28.77* | *23.70* | *21.66* | *33.52* | *37.11* | *20.98* | *10.54* |
| *Belgium* ..... | *4.93* | *3.62* | *2.70* | *5.17* | *7.38* | *14.72* | *18.68* |
| Eastern France ..... | 25.88 | 41.10 | 21.31 | 16.41 | 19.39 | 16.18 | 11.64 |
| Northern France ..... | 1.35 | 1.47 | 1.80 | 2.78 | 1.96 | 2.19 | — |
| France : other areas .... | 8.39 | 6.12 | 3.83 | 2.76 | 3.07 | 3.50 | 1.66 |
| *France* ..... | *35.62* | *48.69* | *26.94* | *21.95* | *24.42* | *21.87* | *13.30* |
| Italy : coastal areas .... | 20.57 | 22.49 | 11.54 | 4.29 | 6.82 | 2.86 | 1.37 |
| Italy : other areas ..... | 6.33 | 9.23 | 12.29 | 12.82 | 9.75 | 9.40 | 6.81 |
| *Italy* ..... | *26.90* | *31.72* | *23.83* | *17.11* | *16.57* | *12.26* | *8.18* |
| *Luxembourg* ..... | *5.42* | *2.58* | *0.38* | *0.86* | *1.97* | *6.73* | *1.27* |
| *Netherlands* ..... | *7.83* | *5.97* | *3.33* | *5.17* | *0.59* | *0.04* | *0.03* |
| **Total** | **109.47** | **116.28** | **78.84** | **83.78** | **88.04** | **76.60** | **52.00** |

**FLAT-PRODUCT MILLS**

**Investment**

*TABLE XVIII d*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 7.01 | 5.07 | 2.10 | 2.85 | 2.73 | 5.61 | 1.06 |
| North Rhine/Westphalia | 77.51 | 84.90 | 31.33 | 32.30 | 36.41 | 55.87 | 47.29 |
| Southern Germany ..... | 2.40 | 4.17 | 2.24 | 0.70 | 0.81 | 2.67 | 1.50 |
| Saar ..... | 0.48 | 0.43 | 0.42 | 0.42 | 1.55 | 10.43 | 16.02 |
| *Germany (F.R.)* ..... | *87.40* | *94.57* | *36.09* | *36.27* | *41.50* | *74.58* | *65.87* |
| *Belgium* ..... | *51.87* | *47.76* | *22.04* | *20.27* | *20.72* | *55.87* | *67.40* |
| Eastern France ..... | 13.93 | 4.40 | 6.86 | 11.85 | 9.90 | 24.22 | 13.83 |
| Northern France ..... | 10.68 | 4.67 | 10.42 | 19.67 | 21.61 | 17.74 | 20.60 |
| France : other areas .... | 6.04 | 5.41 | 8.17 | 9.13 | 6.63 | 13.64 | 9.07 |
| *France* ..... | *30.65* | *14.48* | *25.45* | *40.65* | *38.14* | *55.60* | *43.50* |
| Italy : coastal areas .... | 10.65 | 3.35 | 4.57 | 14.32 | 33.29 | 29.21 | 36.47 |
| Italy : other areas ..... | 29.87 | 12.41 | 14.38 | 15.45 | 18.89 | 23.68 | 30.26 |
| *Italy* ..... | *40.53* | *15.76* | *18.95* | *29.77* | *52.18* | *52.89* | *66.73* |
| *Luxembourg* ..... | *1.56* | *3.31* | *3.81* | *3.49* | *4.67* | *1.21* | *0.02* |
| *Netherlands* ..... | *7.03* | *10.12* | *24.52* | *54.90* | *47.24* | *42.25* | *51.43* |
| **Total** | **219.04** | **186.00** | **130.86** | **185.35** | **204.45** | **282.40** | **294.95** |

**ROLLING-MILLS TOTAL(1)**

**Investment**

*TABLE XVIII e*

**Capital Expenditure by Area**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 12.64 | 9.72 | 4.97 | 6.95 | 7.55 | 9.56 | 5.90 |
| North Rhine/Westphalia | 132.60 | 134.62 | 73.83 | 61.49 | 72.91 | 108.13 | 73.96 |
| Southern Germany ..... | 4.58 | 18.50 | 4.51 | 7.66 | 7.60 | 18.33 | 12.99 |
| Saar ..... | 8.62 | 6.95 | 13.95 | 25.61 | 27.25 | 17.43 | 18.05 |
| *Germany (F.R.)* ..... | *158.44* | *169.79* | *97.26* | *101.71* | *115.31* | *153.45* | *110.90* |
| *Belgium* ..... | *71.71* | *64.35* | *35.00* | *39.49* | *41.39* | *84.66* | *90.15* |
| Eastern France ..... | 47.95 | 54.49 | 49.28 | 77.45 | 68.84 | 74.52 | 53.20 |
| Northern France ..... | 15.07 | 7.33 | 16.26 | 30.80 | 32.43 | 39.00 | 34.78 |
| France : other areas .... | 17.10 | 16.10 | 19.75 | 17.41 | 15.35 | 24.10 | 17.29 |
| *France* ..... | *80.12* | *77.92* | *85.29* | *125.66* | *116.62* | *137.62* | *105.27* |
| Italy : coastal areas..... | 46.61 | 34.32 | 22.93 | 25.09 | 49.66 | 56.14 | 54.37 |
| Italy : other areas ..... | 41.85 | 25.88 | 38.74 | 39.14 | 40.70 | 39.92 | 41.85 |
| *Italy* ..... | *88.46* | *60.20* | *61.67* | *64.23* | *90.36* | *96.06* | *96.22* |
| *Luxembourg* ..... | *7.27* | *7.92* | *4.64* | *5.68* | *7.89* | *11.18* | *2.08* |
| *Netherlands* ..... | *19.49* | *24.83* | *33.86* | *71.41* | *67.44* | *61.96* | *64.89* |
| **Total** | **425.49** | **405.01** | **317.72** | **408.18** | **439.01** | **544.93** | **469.51** |

(1) Including ancillary and auxiliary plants.

**STEELWORKS-OWNED POWER-GENERATING PLANTS AND DISTRIBUTION NETWORKS**

**Investment**

*TABLE XIX a*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 3.55 | 1.89 | 1.93 | 4.61 | 3.54 | 2.69 | 0.34 |
| North Rhine/Westphalia | 10.12 | 7.03 | 7.36 | 13.05 | 24.47 | 16.60 | 10.80 |
| Southern Germany ..... | 1.10 | 0.79 | 0.77 | 0.34 | 0.69 | 5.32 | 1.00 |
| Saar ..... | 1.23 | 0.63 | 0.42 | 0.52 | 0.72 | 0.71 | 0.24 |
| *Germany (F.R.)* ..... | *16.00* | *10.34* | *10.48* | *18.52* | *29.42* | *25.32* | *12.38* |
| *Belgium* ..... | *13.62* | *13.97* | *7.46* | *2.29* | *5.70* | *5.50* | *2.31* |
| Eastern France ..... | 3.26 | 3.04 | 3.12 | 3.73 | 1.76 | 2.17 | 0.18 |
| Northern France ..... | 1.47 | 0.41 | 0.23 | 0.35 | 0.29 | 0.63 | 0.02 |
| France : other areas .... | 0.65 | 0.78 | 0.99 | 1.21 | 1.33 | 1.97 | 0.05 |
| *France* ..... | *5.38* | *4.23* | *4.34* | *5.29* | *3.38* | *4.77* | *0.25* |
| Italy : coastal areas .... | 16.65 | 5.20 | 0.94 | 0.01 | 0.62 | 0.43 | 0.35 |
| Italy : other areas ..... | 1.37 | 1.68 | 2.76 | 1.48 | 1.29 | 1.54 | 1.02 |
| *Italy* ..... | *18.02* | *6.88* | *3.70* | *1.49* | *1.91* | *1.97* | *1.37* |
| *Luxembourg* ..... | *0.50* | *1.50* | *0.47* | *0.60* | *0.52* | *0.10* | *0.06* |
| *Netherlands* ..... | *2.20* | *6.12* | *7.02* | *5.52* | *3.94* | *5.41* | *5.36* |
| **Total** | **55.72** | **43.04** | **33.47** | **33.71** | **44.87** | **43.07** | **21.73** |

**MISCELLANEOUS (IRON AND STEEL WORKS)**

**Investment**

*TABLE XIX b*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (propjects in progress, or aproved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 6.79 | 4.12 | 4.89 | 3.69 | 3.28 | 5.33 | 0.86 |
| North Rhine/Westphalia .. | 31.38 | 23.20 | 12.40 | 17.62 | 18.12 | 24.62 | 12.67 |
| Southern Germany ..... | 1.14 | 2.01 | 2.08 | 1.45 | 1.15 | 1.45 | 0.87 |
| Saar ..... | 10.40 | 9.34 | 6.48 | 3.31 | 7.89 | 5.89 | 0.98 |
| *Germany (F.R.)* ..... | *49.71* | *38.67* | *25.85* | *26.07* | *30.44* | *37.29* | *15.38* |
| *Belgium* ..... | *9.96* | *10.94* | *8.48* | *5.43* | *8.51* | *9.08* | *4.75* |
| Eastern France ..... | 30.11 | 15.28 | 14.92 | 27.52 | 25.11 | 22.90 | 15.50 |
| Northern France ..... | 3.49 | 4.32 | 5.13 | 4.53 | 6.08 | 11.33 | 5.75 |
| France : other areas ..... | 1.95 | 3.04 | 2.04 | 1.95 | 2.95 | 3.18 | 0.96 |
| *France* ..... | *35.55* | *22.64* | *22.09* | *34.00* | *34.14* | *37.41* | *22.21* |
| Italy : coastal areas ..... | 58.29 | 54.46 | 22.14 | 4.50 | 25.13 | 23.55 | 24.02 |
| Italy : other areas ..... | 4.41 | 3.83 | 6.36 | 7.32 | 7.16 | 12.85 | 8.19 |
| *Italy* ..... | *62.70* | *58.29* | *28.50* | *11.82* | *32.29* | *36.40* | *32.21* |
| *Luxembourg* ..... | *1.26* | *1.73* | *1.20* | *2.03* | *2.18* | *2.24* | *0.89* |
| *Netherlands* ..... | *6.79* | *13.15* | *18.55* | *22.06* | *16.85* | *15.15* | *19.58* |
| **Total** | **165.97** | **145.42** | **104.67** | **101.41** | **124.41** | **137.57** | **95.02** |

**GENERAL SERVICES (IRON AND STEEL WORKS) TOTAL**

**Investment**

*TABLE XIX c*

**Capital Expenditure by Areas**

*'000,000 dollars (EMA units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 10.34 | 6.01 | 6.82 | 8.30 | 6.82 | 8.02 | 1.20 |
| North Rhine/Westphalia . | 41.50 | 30.23 | 19.76 | 30.67 | 42.59 | 41.22 | 23.47 |
| Southern Germany ..... | 2.24 | 2.80 | 2.85 | 1.79 | 1.84 | 6.77 | 1.87 |
| Saar ..... | 11.63 | 9.97 | 6.90 | 3.83 | 8.61 | 6.60 | 1.22 |
| *Germany (F.R.)* ..... | *65.71* | *49.01* | *36.33* | *44.59* | *59.86* | *62.61* | *27.76* |
| *Belgium* ..... | *23.58* | *24.91* | *15.94* | *7.72* | *14.21* | *14.58* | *7.06* |
| Eastern France ..... | 33.37 | 18.32 | 18.04 | 31.25 | 26.87 | 25.07 | 15.68 |
| Northern France ..... | 4.96 | 4.73 | 5.36 | 4.88 | 6.37 | 11.96 | 5.77 |
| France: other areas ..... | 2.60 | 3.82 | 3.03 | 3.16 | 4.28 | 5.15 | 1.01 |
| *France* ..... | *40.93* | *26.87* | *26.43* | *39.29* | *37.52* | *42.18* | *22.46* |
| Italy: coastal areas ..... | 74.94 | 59.66 | 23.08 | 4.51 | 25.75 | 23.98 | 24.37 |
| Italy: other areas ..... | 5.78 | 5.51 | 9.12 | 8.80 | 8.45 | 14.39 | 9.21 |
| *Italy* ..... | *80.72* | *65.17* | *32.20* | *13.31* | *34.20* | *38.37* | *33.58* |
| *Luxembourg* ..... | *1.76* | *3.23* | *1.67* | *2.63* | *2.70* | *2.34* | *0.95* |
| *Netherlands* ..... | *8.99* | *19.27* | *25.57* | *27.58* | *20.79* | *20.56* | *24.94* |
| **Total** | **221.69** | **188.46** | **138.14** | **135.12** | **169.28** | **180.64** | **116.75** |

**SINTER**

**Production**

*TABLE XX*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 6.5 | Northern Germany | 7.9 | 8.4 | 8.4 | 8.8 | 9.9 | 9.9 | 9.9 |
| 20.0 | North Rhine/Westphalia | 21.4 | 20.8 | 22.0 | 21.1 | 25.2 | 26.0 | 27.3 |
| 0.3 | Southern Germany | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 |
| 5.5 | Saar | 6.1 | 6.1 | 6.5 | 6.8 | 7.3 | 7.3 | 7.3 |
| *32.3* | *Germany (F.R.)* | *35.8* | *35.7* | *37.2* | *36.9* | *42.6* | *43.4* | *44.7* |
| *9.0* | *Belgium* | *9.4* | *10.1* | *10.7* | *11.3* | *11.6* | *11.6* | *11.6* |
| 17.9 | Eastern France | 18.0 | 19.7 | 20.2 | 21.8 | 21.8 | 23.8 | 24.8 |
| 4.1 | Northern France | 3.7 | 4.3 | 5.0 | 5.0 | 5.0 | 5.3 | 5.3 |
| 0.8 | France: other areas | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 |
| *22.8* | *France* | *23.1* | *25.4* | *26.6* | *28.3* | *28.3* | *30.6* | *31.6* |
| 8.3 | Italy: coastal areas | 8.0 | 9.3 | *9.4* | 9.5 | 10.6 | 11.2 | 11.3 |
| 0.4 | Italy: other areas | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| *8.7* | *Italy* | *8.6* | *9.8* | *9.9* | *10.0* | *11.1* | *11.7* | *11.8* |
| *4.8* | *Luxembourg* | *5.6* | *5.7* | *5.7* | *5.7* | *5.7* | *7.2* | *7.2* |
| *3.4* | *Netherlands* | *3.2* | *3.3* | *3.4* | *3.4* | *4.2* | *5.5* | *5.9* |
| **81.0** | **Total** | **85.7** | **90.0** | **93.5** | **95.6** | **103.5** | **110.0** | **112.8** |

**PIG-IRON**

**Production**

*TABLE XXI*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 4.3 | Northern Germany ..... | 5.7 | 5.9 | 6.2 | 6.5 | 6.9 | 6.9 | 6.9 |
| 21.2 | North Rhine/Westphalia ..... | 23.3 | 23.6 | 24.0 | 23.7 | 24.8 | 25.5 | 25.9 |
| 1.0 | Southern Germany ..... | 1.8 | 1.7 | 1.4 | 1.2 | 1.2 | 1.2 | 1.2 |
| 3.8 | Saar ..... | 5.0 | 5.1 | 5.1 | 5.4 | 5.7 | 5.7 | 5.7 |
| *30.3* | *Germany (F.R.)* ..... | *35.8* | *36.3* | *36.7* | *36.8* | *38.6* | *39.3* | *39.7* |
| *10.5* | *Belgium* ..... | *10.2* | *11.3* | *12.2* | *12.5* | *13.0* | *13.6* | *14.0* |
| 11.7 | Eastern France ..... | 14.1 | 14.1 | 13.9 | 14.0 | 14.0 | 14.2 | 14.4 |
| 4.0 | Northern France ..... | 4.1 | 4.2 | 4.7 | 5.7 | 6.0 | 6.1 | 6.1 |
| 0.7 | France: other areas ..... | 1.1 | 1.0 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 |
| *16.4* | *France* ..... | *19.3* | *19.3* | *19.4* | *20.6* | *21.0* | *21.3* | *21.5* |
| 7.4 | Italy: coastal areas ..... | 7.3 | 8.1 | 8.1 | 9.0 | 9.6 | 10.1 | 10.2 |
| 0.4 | Italy: other areas ..... | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 |
| *7.8* | *Italy* ..... | *7.8* | *8.6* | *8.7* | *9.6* | *10.3* | *10.8* | *10.9* |
| *4.3* | *Luxembourg* ..... | *4.8* | *5.1* | *5.1* | *5.1* | *5.1* | *5.1* | *5.1* |
| *2.8* | *Netherlands* ..... | *2.4* | *2.6* | *2.9* | *3.5* | *3.3* | *3.9* | *4.3* |
| 72.1 | **Total** | **80.3** | **83.2** | **85.0** | **88.1** | **91.3** | **94.0** | **95.5** |

**BASIC BESSEMER STEEL**

**Production**

*TABLE XXII a*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 0.6 | Northern Germany ..... | 1.2 | 1.2 | 0.8 | 0.4 | — | — | — |
| 3.4 | North Rhine/Westphalia ..... | 7.4 | 6.4 | 3.8 | 2.8 | 0.8 | 0.8 | 0.8 |
| 0.7 | Southern Germany ..... | 1.0 | 1.0 | 1.0 | 1.0 | 0.3 | — | — |
| 3.0 | Saar ..... | 3.8 | 3.9 | 3.9 | 3.8 | 3.8 | 3.8 | 3.8 |
| *7.7* | *Germany (F.R.)* ..... | *13.4* | *12.5* | *9.5* | *8.0* | *4.9* | *4.6* | *4.6* |
| *6.5* | *Belgium* ..... | *7.1* | *7.4* | *7.5* | *6.9* | *6.3* | *5.5* | *5.2* |
| 9.1 | Eastern France ..... | 10.2 | 10.5 | 10.5 | 10.1 | 9.9 | 10.0 | 9.3 |
| 1.0 | Northern France ..... | 1.4 | 1.2 | 1.3 | 1.2 | 0.7 | 0.7 | 0.7 |
| 0.4 | France : other areas ..... | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| *10.5* | *France* ..... | *12.2* | *12.2* | *12.2* | *11.7* | *11.0* | *11.1* | *10.4* |
| — | Italy : coastal areas ..... | — | — | — | — | — | — | — |
| — | Italy : other areas ..... | — | — | — | — | — | — | — |
| — | *Italy* ..... | — | — | — | — | — | — | — |
| *3.1* | *Luxembourg* ..... | *4.3* | *4.0* | *3.7* | *3.7* | *3.7* | *3.7* | *3.7* |
| — | *Netherlands* ..... | — | — | — | — | — | — | — |
| **27.8** | **Total** | **37.0** | **36.1** | **32.9** | **30.3** | **25.9** | **24.9** | **23.9** |

**OPEN-HEARTH STEEL**

**Production**

*TABLE XXII b*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 2.9 | Northern Germany ..... | 3.4 | 3.6 | 3.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 10.2 | North Rhine/Westphalia ..... | 14.2 | 12.2 | 11.4 | 10.8 | 10.0 | 9.2 | 9.2 |
| 0.5 | Southern Germany ..... | 0.8 | 0.8 | 0.7 | 0.7 | 0.5 | 0.4 | 0.4 |
| 0.9 | Saar ..... | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 |
| *14.5* | *Germany (F.R.)* ..... | *19.5* | *17.7* | *16.4* | *14.7* | *13.7* | *12.8* | *12.8* |
| *0.2* | *Belgium* ..... | *0.5* | *0.5* | *0.4* | *0.4* | *0.4* | *0.4* | *0.3* |
| 2.2 | Eastern France ..... | 2.8 | 2.9 | 2.8 | 2.7 | 2.7 | 2.2 | 1.7 |
| 1.6 | Northern France ..... | 2.4 | 2.2 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 0.3 | France : other areas ..... | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| *4.1* | *France* ..... | *5.7* | *5.6* | *5.2* | *5.1* | *5.1* | *4.6* | *4.1* |
| 3.7 | Italy : coastal areas ..... | 3.7 | 3.9 | 3.9 | 3.7 | 3.2 | 2.6 | 2.6 |
| 2.0 | Italy : other areas ..... | 2.4 | 2.4 | 2.4 | 2.5 | 2.5 | 2.5 | 2.5 |
| *5.7* | *Italy* ..... | *6.1* | *6.3* | *6.3* | *6.2* | *5.7* | *5.1* | *5.1* |
| — | *Luxembourg* ..... | — | — | — | — | — | — | — |
| *1.1* | *Netherlands* ..... | *1.0* | *1.0* | *1.1* | *1.1* | *1.1* | *1.1* | *1.1* |
| **25.6** | **Total** | **32.8** | **31.1** | **29.4** | **27.5** | **26.0** | **24.0** | **23.4** |

**ELECTRIC-FURNACE STEEL**

**Production**

*TABLE XXII c*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 0.3 | Northern Germany | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 2.7 | North Rhine/Westphalia | 3.1 | 2.9 | 3.1 | 3.2 | 3.3 | 3.3 | 3.3 |
| 0.3 | Southern Germany | 0.2 | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 | 0.6 |
| 0.4 | Saar | 0.2 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| *3.7* | *Germany (F.R.)* | *3.8* | *3.8* | *4.1* | *4.4* | *4.5* | *4.5* | *4.6* |
| *0.4* | *Belgium* | *0.6* | *0.6* | *0.5* | *0.5* | *0.5* | *0.6* | *0.6* |
| 0.5 | Eastern France | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 0.3 | Northern France | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 |
| 1.2 | France - other areas | 1.4 | 1.5 | 1.5 | 1.5 | 1.6 | 1.6 | 1.5 |
| *2.0* | *France* | *2.3* | *2.4* | *2.5* | *2.5* | *2.6* | *2.7* | *2.6* |
| 0.4 | Italy : coastal areas | 0.6 | 0.7 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 |
| 6.0 | Italy : other areas | 5.9 | 6.1 | 7.0 | 7.3 | 7.4 | 7.4 | 7.4 |
| *6.4* | *Italy* | *6.5* | *6.8* | *7.6* | *7.9* | *8.1* | *8.1* | *8.1* |
| *0.1* | *Luxembourg* | *0.1* | *0.1* | *0.1* | *0.1* | *0.1* | *0.1* | *0.1* |
| *0.3* | *Netherlands* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* |
| **12.9** | **Total** | **13.6** | **14.0** | **15.1** | **15.7** | **16.1** | **16.3** | **16.3** |

**LD, KALDO AND OTHER STEELS**

**Production**

*TABLE XXII d*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expeted production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 2.1 | Northern Germany ..... | 1.8 | 1.9 | 3.3 | 5.2 | 6.2 | 6.2 | 6.2 |
| 12.8 | North Rhine/Westphalia ..... | 8.7 | 11.4 | 14.1 | 16.2 | 20.4 | 23.2 | 23.4 |
| — | Southern Germany ..... | 0.0 | — | — | — | 0.9 | 1.3 | 1.3 |
| 0.3 | Saar ..... | 0.3 | 0.4 | 0.4 | 0.9 | 1.3 | 1.3 | 1.3 |
| *15.2* | *Germany (F.R.)* ..... | *10.8* | *13.7* | *17.8* | *22.3* | *28.8* | *32.0* | *32.2* |
| *4.5* | *Belgium* ..... | *2.9* | *3.9* | *5.4* | *6.6* | *8.3* | *9.4* | *9.8* |
| 1.0 | Eastern France ..... | 1.1 | 1.1 | 1.1 | 1.4 | 2.7 | 3.7 | 5.1 |
| 2.6 | Northern France..... | 2.1 | 2.5 | 2.9 | 3.8 | 4.7 | 5.4 | 5.4 |
| 0.2 | France : other areas ..... | 0.0 | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 |
| *3.8* | *France* ..... | *3.2* | *3.7* | *4.2* | *5.5* | *7.7* | *9.5* | *10.9* |
| 4.9 | Italy : coastal areas ..... | 4.9 | 5.7 | 5.7 | 6.1 | 7.3 | 8.6 | 9.0 |
| 0.0 | Italy : other areas ..... | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.3 | 0.3 |
| *4.9* | *Italy* ..... | *4.9* | *5.7* | *5.7* | *6.1* | *7.5* | *8.9* | *9.3* |
| *1.6* | *Luxembourg* ..... | *0.7* | *1.6* | *1.9* | *2.0* | *2.0* | *2.0* | *2.0* |
| *2.3* | *Netherlands* ..... | *2.1* | *2.2* | *2.4* | *3.5* | *3.5* | *4.0* | *4.4* |
| **32.3** | **Total** | **24.6** | **30.8** | **37.4** | **46.0** | **57.8** | **65.8** | **68.6** |

**STEEL-TOTAL**

**Production**

*TABLE XXII e*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 5.9 | Northern Germany ..... | 6.7 | 7.0 | 7.6 | 8.1 | 8.7 | 8.7 | 8.7 |
| 29.1 | North Rhine/Westphalia ..... | 33.4 | 32.9 | 32.4 | 33.0 | 34.5 | 36.5 | 36.7 |
| 1.5 | Southern Germany ..... | 2.0 | 2.1 | 2.0 | 2.2 | 2.2 | 2.2 | 2.3 |
| 4.6 | Saar ..... | 5.4 | 5.7 | 5.8 | 6.1 | 6.5 | 6.5 | 6.5 |
| *41.1* | *Germany (F.R.)* ..... | *47.5* | *47.7* | *47.8* | *49.4* | *51.9* | *53.9* | *54.2* |
| *11.6* | *Belgium* ..... | *11.1* | *12.4* | *13.8* | *14.4* | *15.5* | *15.9* | *15.9* |
| 12.8 | Eastern France ..... | 14.7 | 15.1 | 150 | 14.8 | 15.9 | 16.5 | 16.7 |
| 5.5 | Northern France ..... | 6.2 | 6.2 | 6.5 | 7.3 | 7.7 | 8.5 | 8.5 |
| 2.1 | France : other areas ..... | 2.5 | 2.6 | 2.6 | 2.7 | 2.8 | 2.9 | 2.8 |
| *20.4* | *France* ..... | *23.4* | *23.9* | *24.1* | *24.8* | *26.4* | *27.9* | *28.0* |
| 9.0 | Italy : coastal areas ..... | 9.2 | 10.3 | 10.2 | 10.4 | 11.2 | 119 | 12.3 |
| 8.0 | Italy : other areas ..... | 8.3 | 8.5 | 9.4 | 9.8 | 10.1 | 10.2 | 10.2 |
| *17.0* | *Italy* ..... | *17.5* | *18.8* | *19.6* | *20.2* | *21.3* | *22.1* | *22.5* |
| *4.8* | *Luxembourg* ..... | *5.1* | *5.7* | *5.7* | *5.8* | *5.8* | *5.8* | *5.8* |
| *3.7* | *Netherlands* ..... | *3.4* | *3.5* | *3.8* | *4.9* | *4.9* | *5.4* | *5.8* |
| **98.6** | **Total** | **108.0** | **112.0** | **114.8** | **119.8** | **125.8** | **131.0** | **132.2** |

SECTIONS

Production

*TABLE XXIII a*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 1.4 | Northern Germany ..... | 2.6 | 2.8 | 2.9 | 3.0 | 3.0 | 3.0 | 3.0 |
| 7.9 | North Rhine/Westphalia ..... | 12.5 | 12.7 | 12.4 | 12.0 | 12.0 | 12.1 | 12.2 |
| 0.9 | Southern Germany ..... | 1.0 | 1.1 | 1.1 | 1.2 | 1.2 | 1.3 | 1.5 |
| 2.3 | Saar ..... | 3.7 | 3.6 | 3.6 | 3.8 | 3.8 | 3.8 | 3.8 |
| *12.5* | *Germany (F.R.)* ..... | *19.8* | *20.2* | *20.0* | *20.0* | *20.0* | *20.2* | *20.5* |
| *4.2* | *Belgium* ..... | 4.6 | *4.9* | *5.0* | *5.3* | *5.5* | *5.8* | *6.3* |
| 5.4 | Eastern France ..... | 6.0 | 6.1 | 6.9 | 6.7 | 6.9 | 7.0 | 6.7 |
| 1.3 | Northern France ..... | 1.8 | 1.6 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 |
| 1.1 | France : other areas ..... | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 |
| *7.8* | *France* ..... | *9.0* | *8.9* | *9.8* | *9.7* | *9.9* | *10.1* | *9.8* |
| 1.5 | Italy : coastal areas ..... | 1.5 | 1.9 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 4.7 | Italy : other areas ..... | 4.7 | 5.3 | 6.0 | 6.1 | 6.2 | 6.2 | 6.3 |
| *6.2* | *Italy* ..... | *6.2* | *7.2* | *8.3* | *8.4* | *8.5* | *8.5* | *8.6* |
| *2.2* | *Luxembourg* ..... | *2.5* | *2.7* | *2.7* | *2.7* | *2.8* | *2.8* | *2.8* |
| *0.6* | *Netherlands* ..... | *0.7* | *0.7* | *0.8* | *0.8* | *0.8* | *0.8* | *0.8* |
| **33.5** | **Total** | **42.8** | **44.6** | **46.6** | **46.9** | **47.5** | **48.2** | **48.8** |

**FLAT PRODUCTS(1)**

**Production**

*TABLE XXIII b*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 1.9 | Northern Germany | 2.7 | 3.1 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 9.6 | North Rhine/Westphalia | 14.2 | 14.4 | 14.7 | 15.0 | 15.3 | *15.7* | 16.0 |
| 1.5 | Southern Germany | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 | 1.7 | 1.7 |
| 0.8 | Saar | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 2.3 |
| *13.8* | *Germany (F.R.)* | *20.1* | *20.8* | *21.3* | *21.6* | *21.9* | *22.1* | *23.2* |
| *3.9* | *Belgium* | *4.0* | *4.7* | *4.9* | *5.2* | *5.4* | *6.2* | *6.3* |
| 4.5 | Eastern France | 5.0 | 5.0 | 5.0 | *5.2* | 5.6 | 5.6 | 5.6 |
| 2.4 | Northern France | 2.7 | 2.8 | 3.0 | 3.3 | 3.5 | 3.8 | 3.8 |
| 0.5 | France : other areas | 0.5 | 0.5 | 0.5 | 0.7 | 0.7 | 0.7 | 0.7 |
| *7.4* | *France* | *8.2* | *8.3* | *8.5* | *9.2* | *9.8* | *10.1* | *10.1* |
| 2.5 | Italy : coastal areas | 2.4 | 2.9 | 3.3 | 3.5 | 3.5 | 3.5 | 4.0 |
| 2.8 | Italy : other areas | 3.0 | 3.3 | 3.4 | 3.4 | 3.4 | 3.5 | 3.7 |
| *5.3* | *Italy* | *5.4* | *6.2* | *6.7* | *6.9* | *6.9* | *7.0* | *7.7* |
| *1.2* | *Luxembourg* | *1.4* | *1.5* | *1.5* | *1.5* | *1.5* | *1.5* | *1.5* |
| *2.0* | *Netherlands* | *1.9* | *1.7* | *2.1* | *2.2* | *2.3* | *2.7* | *3.0* |
| **33.6** | **Total** | **41.0** | **43.2** | **45.0** | **46.6** | **47·8** | **49.6** | **51.8** |

(1) Except coils (finished products).

**FINISHED ROLLED PRODUCTS-TOTAL(1)**

**Production**

*TABLE XXIII c*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 3.3 | Northern Germany ..... | 5.3 | 5.9 | 6.1 | 6.2 | 6.2 | 6.2 | 6.2 |
| 17.5 | North Rhine/Westphalia ..... | 26.7 | 27.1 | 27.1 | 27.0 | 27.3 | 27.8 | 28.2 |
| 2.4 | Southern Germany ..... | 2.8 | 3.0 | 3.0 | 3.1 | 3.1 | 3.0 | 3.2 |
| 3.1 | Saar ..... | 5.1 | 5.0 | 5.1 | 5.3 | 5.3 | 5.3 | 6.1 |
| *26.3* | *Germany (F.R.)* ..... | *39.9* | *41.0* | *41.3* | *41.6* | *41.9* | *42.3* | *43.7* |
| *8.1* | *Belgium* ..... | *8.6* | *9.6* | *9.9* | *10.5* | *10.9* | *12.0* | *12.6* |
| 9.9 | Eastern France ..... | 11.0 | 11.1 | 11.9 | 11.9 | 12.5 | 12.6 | 12.3 |
| 3,7 | Northern France ..... | 4.5 | 4.4 | 4.6 | 5.0 | 5.2 | 5.5 | 5.5 |
| 1.6 | France : other areas ..... | 1.7 | 1.7 | 1.8 | 2.0 | 2.0 | 2.1 | 2.1 |
| *15.2* | *France* ..... | *17.2* | *17.2* | *18.3* | *18.9* | *19.7* | *20.2* | *19.9* |
| 4.0 | Italy : coastal areas ..... | 3.9 | 4.8 | 5.6 | 5.8 | 5.8 | 5.8 | 6.3 |
| 7.5 | Italy : other areas ..... | 7.7 | 8.6 | 9.4 | 9.5 | 9.6 | 9.7 | 10.0 |
| *11.5* | *Italy* ..... | *11.6* | *13.4* | *15.0* | *15.3* | *15.4* | *15.5* | *16.3* |
| *3.4* | *Luxembourg* ..... | *3.9* | *4.2* | *4.2* | *4.2* | *4.3* | *4.3* | *4.3* |
| *2.6* | *Netherlands* ..... | *2.6* | *2.4* | *2.9* | *3.0* | *3.1* | *3.5* | *3.8* |
| **67.1** | **Total** | **83.8** | **87.8** | **91.6** | **93.5** | **95.3** | **97.8** | **100.6** |

(1) Except coils (finished products).

**HEAVY AND LIGHT SECTIONS (INCLUDING TUBE ROUNDS AND SQUARES)**

**Production**

*TABLE XXIV a*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 1.2 | Northern Germany | 2.4 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 |
| 5.5 | North Rhine/Westphalia | 9.5 | 9.7 | 9.2 | 8.8 | 8.8 | 8.9 | 9.0 |
| 0.8 | Southern Germany | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.2 |
| 1.9 | Saar | 3.1 | 3.0 | 2.9 | 3.1 | 3.1 | 3.1 | 3.1 |
| *9.4* | *Germany (F.R.)* | *15.9* | *16.3* | *15.7* | *15.6* | *15.6* | *15.8* | *16.0* |
| *3.2* | *Belgium* | *3.4* | *3·7* | *3.8* | *4.2* | *4.5* | *4.8* | *5.3* |
| 3.9 | Eastern France | 4.2 | 4.4 | 4.9 | 4.8 | 4.9 | 4.9 | 4.6 |
| 1.0 | Northern France | 1.5 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 0.8 | France: other areas | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| *5.7* | *France* | *6.6* | *6.6* | *7.2* | *7.1* | *7.2* | *7.2* | *6.9* |
| 1.3 | Italy: coastal areas | 1.3 | 1.6 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 4.1 | Italy: other areas | 3.9 | 4.4 | 4.9 | 5.0 | 5.1 | 5.1 | 5.2 |
| *5.4* | *Italy* | *5.2* | *6.0* | *6.9* | *7.0* | *7.1* | *7.1* | *7.2* |
| *1.9* | *Luxembourg* | *2.2* | *2.4* | *2.3* | *2.3* | *2.4* | *2.4* | *2.4* |
| *0.3* | *Netherlands* | *0.3* | *0.3* | *0.4* | *0.4* | *0.4* | *0.4* | *0.4* |
| 25.9 | Total | 33.6 | 35.3 | 36.3 | 36.6 | 37.2 | 37,7 | 38.2 |

**WIRE-ROD**

**Production**

*TABLE XXIV b*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 0.2 | Northern Germany | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 2.4 | North Rhine/Westphalia | 3.0 | 3.0 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 0.1 | Southern Germany | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 |
| 0.4 | Saar | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| *3.1* | *Germany (F.R.)* | *3.9* | *3.9* | *4.3* | *4.4* | *4.4* | *4.4* | *4.5* |
| *1.0* | *Belgium* | *1.2* | *1.2* | *1.2* | *1.1* | *1.0* | *1.0* | *1.0* |
| 1.5 | Eastern France | 1.8 | 1.7 | 2.0 | 1.9 | 2.0 | 2.1 | 2.1 |
| 0.3 | Northern France | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 |
| 0.3 | France : other areas | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 |
| *2.1* | *France* | *2.4* | *2.3* | *2.6* | *2.6* | *2.7* | *2.9* | *2.9* |
| 0.2 | Italy : coastal areas | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 0.6 | Italy : other areas | 0.8 | 0.9 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| *0.8* | *Italy* | *1.0* | *1.2* | *1.4* | *1.4* | *1.4* | *1.4* | *1.4* |
| *0.3* | *Luxembourg* | *0.3* | *0.3* | *0.4* | *0.4* | *0.4* | *0.4* | *0.4* |
| *0.3* | *Netherlands* | *0.4* | *0.4* | *0.4* | *0.4* | *0.4* | *0.4* | *0.4* |
| **7.6** | **Total** | **9.2** | **9.3** | **10.3** | **10.3** | **10.3** | **10.5** | **10.6** |

**HOOP AND STRIP AND TUBE STRIP**

**Production**

*TABLE XXIV c*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 0.1 | Northern Germany | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 2.2 | North Rhine/Westphalia | 4.0 | 3.8 | 3.9 | 3.9 | 3.9 | 4.0 | 4.0 |
| 0.0 | Southern Germany | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.3 | Saar | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| *2.6* | *Germany (F.R.)* | *4.5* | *4.3* | *4.4* | *4.4* | *4.4* | *4.5* | *4.5* |
| *0.4* | *Belgium* | *0.6* | *0.6* | *0.6* | *0.6* | *0.6* | *0.6* | *0.6* |
| 1.1 | Eastern France | 1.2 | 1.2 | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 |
| 0.0 | Northern France | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| 0.0 | France : other areas | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| *1.1* | *France* | *1.2* | *1.2* | *1.1* | *1.3* | *1.3* | *1.3* | *1.3* |
| 0.5 | Italy : coastal areas | 0.5 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 0.4 | Italy : other areas | 0.5 | 0.6 | 0.7 | 0.6 | 0.5 | 0.5 | 0.5 |
| *0.9* | *Italy* | *1.0* | *1.3* | *1.5* | *1.4* | *1.3* | *1.3* | *1.3* |
| *0.7* | *Luxembourg* | *0.8* | *0.9* | *0.9* | *0.9* | *0.9* | *0.9* | *0.9* |
| *0.1* | *Netherlands* | *0.1* | *0.1* | *0.2* | *0.2* | *0.2* | *0.3* | *0.3* |
| 5.8 | **Total** | 8.2 | 8.4 | 8.7 | 8.8 | 8.7 | 8.9 | 8.9 |

**PLATE ⩾ 3 mm. (INCLUDING WIDE FLAT STEEL) (1)**

**Production**

*TABLE XXIV d*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 0.7 | Northern Germany | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 3.7 | North Rhine/Westphalia | 5.5 | 5.9 | 6.0 | 6.2 | 6.3 | 6.3 | 6.3 |
| 0.1 | Southern Germany | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| 0.5 | Saar | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.9 |
| *5.0* | *Germany (F.R.)* | *7.8* | *8.3* | *8.5* | *8.7* | *8.8* | *8.7* | *9.5* |
| *1.1* | *Belgium* | *1.2* | *1.4* | *1.5* | *1.6* | *1.7* | *1.7* | *1.8* |
| 1.0 | Eastern France | 1.0 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | 1.2 |
| 0.7 | Northern France | 0.7 | 0.8 | 0.9 | 1.1 | 1.1 | 1.2 | 1.2 |
| 0.1 | France: other areas | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| *1.8* | *France* | *1.8* | *2.0* | *2.1* | *2.4* | *2.5* | *2.6* | *2.6* |
| 1.1 | Italy: coastal areas | 0.9 | 1.2 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 |
| 0.5 | Italy: other areas | 0.5 | 0.6 | 0.7 | 0.7 | 7.0 | 0.7 | 0.7 |
| *1.6* | *Italy* | *1.4* | *1.8* | *2.1* | *2.2* | *2.2* | *2.2* | *2.2* |
| *0.2* | *Luxembourg* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* |
| *0.5* | *Netherlands* | *0.5* | *0.4* | *0.5* | *0.5* | *0.5* | *0.6* | *0.6* |
| **10.2** | **Total** | **13.0** | **14.2** | **15.0** | **15.7** | **16.0** | **16.1** | **17.0** |

(1) Except coils (finished products).

**HOT-ROLLED SHEET**
**< 3 mm.(1)**

**Production**

*TABLE XXIV e*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | Northern Germany ..... | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.2 | North Rhine/Westphalia ..... | 0.6 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 |
| 0.1 | Southern Germany ..... | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| — | Saar ..... | 0.0 | — | — | — | — | — | — |
| 0.3 | *Germany (F.R.)* ..... | *0.8* | *0.6* | *0.4* | *0.3* | *0.3* | *0.2* | *0.2* |
| *0.1* | *Belgium* ..... | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| 0.1 | Eastern France ..... | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 0.1 | Northern France ..... | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| 0.1 | France: other areas ..... | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| *0.3* | *France* ..... | *0.5* | *0.4* | *0.4* | *0.3* | *0.3* | *0.3* | *0.3* |
| 0.1 | Italy: coastal areas ..... | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 0.0 | Italy: other areas ..... | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| *0.1* | *Italy* ..... | *0.3* | *0.3* | *0.2* | *0.2* | *0.2* | *0.2* | *0.2* |
| *0.0* | *Luxembourg* ..... | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* |
| *0.0* | *Netherlands* ..... | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* |
| **0.8** | **Total** | **1.8** | **1.5** | **1.2** | **1.0** | **1.0** | **0.9** | **0.9** |

(1) Except coils (finished products).

**COLD-REDUCED SHEET**
**< 3 mm.**

**Production**

*TABLE XXIV f*

**Production and Production by Areas**

*'000,000 metric ton*

| Actual production 1968 | Area | Production potential 1966 | 1967 | 1968 | Expected production potential 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|---|---|---|
| 1.1 | Northern Germany ..... | 1.4 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 3.5 | North Rhine/Westphalia ..... | 4.1 | 4.3 | 4.5 | 4.7 | 4.9 | 5.2 | 5.5 |
| 1.3 | Southern Germany ..... | 1.5 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| — | Saar ..... | — | — | — | — | — | — | — |
| *5.9* | *Germany (F.R.)* ..... | *7.0* | *7.6* | *8.0* | *8.2* | *8.4* | *8.7* | *9.0* |
| *2.3* | *Belgium* ..... | *2.0* | *2.5* | *2.6* | *2.8* | *2.9* | *3.7* | *3.7* |
| 2.3 | Eastern France ..... | 2.5 | 2.5 | 2.7 | 2.8 | 3.1 | 3.1 | 3.1 |
| 1.6 | Northern France ..... | 1.9 | 1.9 | 1.9 | 2.0 | 2.2 | 2.4 | 2.4 |
| 0.3 | France : other areas ..... | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 |
| *4.2* | *France* ..... | *4.7* | *4.7* | *4.9* | *5.2* | *5.7* | *5.9* | *5.9* |
| 0.8 | Italy : coastal areas ..... | 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 | 1.5 |
| 1.9 | Italy : other areas ..... | 1.9 | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.5 |
| *2.7* | *Italy* ..... | *2.7* | *2.8* | *2.9* | *3.1* | *3.2* | *3.3* | *4.0* |
| *0.3* | *Luxembourg* ..... | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* | *0.3* |
| *1.4* | *Netherlands* ..... | *1.3* | *1.2* | *1.4* | *1.5* | *1.6* | *1.8* | *2.1* |
| **16.8** | **Total** | **18.0** | **19.1** | **20.1** | **21.1** | **22.1** | **23.7** | **25.0** |

**HOT WIDE-STRIP MILLS**

**Investment**
(already included in the capital expenditure for the flat-product mills: Table XVIII d)

*TABLE XXV a*

**Capital Expenditure by Areas**

*'000,000 dollars (E.M.A. units of account)*

| Area | Actual expenditure | | | | Estimated expenditure (projects in progress, or approved) | | |
|---|---|---|---|---|---|---|---|
| | | | | | on Jan. 1, 1968 for | on Jan. 1, 1969 for | |
| | 1965 | 1966 | 1967 | 1968 | 1968 | 1969 | 1970 |
| Northern Germany ..... | 2.62 | 1.56 | 0.33 | 1.66 | 1.88 | 2.06 | 0.41 |
| North Rhine/Westphalia | 33.56 | 37.21 | 10.81 | 9.46 | 13.80 | 8.53 | 10.42 |
| Southern Germany ..... | — | — | — | — | — | — | — |
| Saar ..... | — | — | — | — | — | — | — |
| *Germany (F.R.)* ..... | *36.18* | *38.77* | *11.14* | *11.12* | *15.68* | *10.59* | *10.83* |
| *Belgium* ..... | *22.90* | *25.78* | *16.90* | *6.40* | *8.89* | *10.28* | *5.00* |
| Eastern France ..... | — | 1.09 | 2.17 | 3.07 | 3.69 | 2.61 | 1.02 |
| Northern France ..... | 4.50 | 1.70 | 7.10 | 11.80 | 11.20 | 5.80 | 0.50 |
| France : other areas .... | 0.06 | — | — | — | — | — | — |
| *France* ..... | *4.56* | *2.79* | *9.27* | *14.87* | *14.89* | *8.41* | *1.52* |
| Italy : coastal areas .... | 6.70 | 0.61 | 0.04 | 0.73 | 3.45 | 4.10 | 3.19 |
| Italy : other areas ..... | 14.53 | 4.09 | 3.34 | 1.59 | 1.51 | 1.29 | 2.34 |
| *Italy* ..... | *21.23* | *4.70* | *3.38* | *2.32* | *4.96* | *5.39* | *5.53* |
| *Luxembourg* ..... | *0.55* | *0.50* | *0.16* | — | *0.04* | 0.04 | — |
| *Netherlands* ..... | *1.15* | *6.31* | *22.34* | *50.70* | *43.24* | *19.54* | *11.72* |
| **Total** | **86.57** | **78.85** | **63.19** | **85.41** | **87.70** | **54.25** | **34.60** |

**COILS(1)**

**Production**

*TABLE XXV b*

**Production and Production Potential by Areas**

*'000,000 metric tons*

| Actual production | | Area | Production potential | | | Expected production potential | | | |
|---|---|---|---|---|---|---|---|---|---|
| Total | of which: coils (finished products) | | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
| 1968 | | | | | | | | | |
| 2.3 | 0.5 | Northern Germany ..... | 2.8 | 2.9 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 |
| 7.4 | 1.5 | North Rhine/Westphalia ..... | 6.3 | 7.5 | 8.2 | 8.6 | 9.0 | 9.7 | 9.7 |
| — | — | Southern Germany ..... | — | — | — | — | — | — | — |
| — | — | Saar ..... | — | — | — | — | — | — | — |
| *9.7* | *2.0* | *Germany (F.R.)* ..... | *9.1* | *10.4* | *11.2* | *11.7* | *12.1* | *12.8* | *12.8* |
| *3.8* | *0.6* | *Belgium* ..... | *2.8* | *4.0* | *4.3* | *4.9* | *5.4* | *5.9* | *5.9* |
| 2.6 | 0.1 | Eastern France ..... | 2.6 | 2.7 | 2.7 | 2.9 | 2.9 | 2.9 | 2.9 |
| 2.7 | 0.2 | Northern France ..... | 2.8 | 2.7 | 3.0 | 3.4 | 3.7 | 4.1 | 4.1 |
| — | — | France : other areas ..... | 0.1 | — | — | — | — | — | — |
| *5.3* | *0.3* | *France* ..... | *5.5* | *5.4* | *5.7* | *6.3* | *6.6* | *7.0* | *7.0* |
| 3.7 | 1.1 | Italy : coastal areas ..... | 3.4 | 4.1 | 4.1 | 4.2 | 4.8 | 4.8 | 4.8 |
| 0.8 | 0.0 | Italy : other areas ..... | 0.8 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| *4.5* | *1.1* | *Italy* ..... | *4.2* | *5.2* | *5.2* | *5·3* | *5.9* | *5.9* | *5.9* |
| *0.4* | *0.0* | *Luxembourg* ..... | *0.4* | *0.5* | *0.5* | *0.5* | *0.5* | *0.5* | *0.5* |
| *1.7* | *0.2* | *Netherlands* ..... | *1.6* | *1.6* | *1.7* | *2.1* | *3.1* | *3.7* | *4.0* |
| **25.4** | **4.2** | **Total** | **23.6** | **27.1** | **28.6** | **30.8** | **33.6** | **35.8** | **36.1** |

(1) Treaty products obtained by transformation of hot-rolled coils are included in the tables XXIII b and c, XXIV c, d, e and f.