

EUROPEAN
COAL AND STEEL COMMUNITY

THE HIGH AUTHORITY

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

REPORT ON THE 1965 SURVEY

Position as at January 1, 1965

JULY 1965

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I. GENERAL REMARKS

As in previous years, the High Authority has conducted a survey of past and future investment by Community enterprises as at January 1, 1965, and its foreseeable effects on production potential. The survey covers all but a few very small enterprises, which this year account among them for less than 0.4 % of the Community's total coal and crude-steel production.

Annex I following 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, 1965, 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 this Report are those of the extractive industries (coal and iron ore) only.

Annex II contains tables showing for each sector capital expenditure and production broken down by *producer areas*.

a) Capital Expenditure

Capital expenditure entered by Community enterprises on the credit side of their balance-sheets over the years 1954-64 totalled 14,200,000,000 dollar E.M.A. units of account (see *Annex, I, 1*), representing a yearly average of approximately 1,300,000,000.

It is true that computation in dollars does not accurately 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. During the past eleven years, investment in the extractive industries remained fairly steady until 1962, but dropped sharply in both of them in 1963 and 1964; investment in the iron and steel industry, on the other hand, rose almost continuously, flagging only in 1958-59 and again from 1964.

TABLE I
General Trend in Investment in Recent Years

| Sector | Projects completed | | | | Projects planned for 1965 |
|-------------------------------|-----------------------------|------|------|------|---------------------------|
| | 1954-61 (annual average) | 1962 | 1963 | 1964 | |
| Coalmining Industry | 100 | 87 | 80 | 71 | 84 |
| Iron-ore mines | 100 | 113 | 68 | 59 | 76 |
| Iron and steel industry | 100 | 183 | 220 | 192 | 147 |
| All E.C.S.C. industries | 100 | 145 | 162 | 142 | 121 |

In 1954 the breakdown of Community investment was 51 % for the extractive industries and 49 % for the iron and steel industry; in 1963 and 1964, as a result of the contrasting trends since then, the corresponding figures were 20 % and 80 %.

TABLE 2
Capital Expenditure in the Community Industries, 1954—1966

| Sector | Actual expenditure | | | | | | | | | | | Estimated expenditure (Categories A+B+C) ¹⁾ | |
|--|--------------------|------------|--------------|--------------|--------------|--------------|--------------|---------------------------|---------------------------|--------------|--------------|--|-------------------|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Coalmining industry | 445 | 408 | 405 | 471 | 469 | 406 | 371 | 380 ²⁾ | 366 ²⁾ | 325 | 294 | 346 | 284 |
| Plants producing B.K.B. and low-temperature brown-coal coke. | 5 | 8 | 4 | 2 | 5 | 5 | 6 | 4 | 6 | 9 | 8 | 8 | 4 |
| Iron-ore mines | 30 | 31 | 44 | 50 | 41 | 40 | 43 | 52 | 47 | 28 | 24 | 31 | 26 |
| Iron and steel industry | 453 | 524 | 570 | 708 | 644 | 587 | 775 | 1 123 | 1 230 | 1 480 | 1 291 | 992 ¹⁾ | 697 ¹⁾ |
| Total | 933 | 971 | 1 023 | 1 231 | 1 159 | 1 038 | 1 195 | 1 559²⁾ | 1 649²⁾ | 1 842 | 1 617 | 1 377 | 1 011 |

¹⁾ The estimates for the iron and steel industry relate only to expenditure on projects already in progress (A) or approved (B) at January 1, 1965, not to those merely planned (C).

²⁾ Corrected figures.

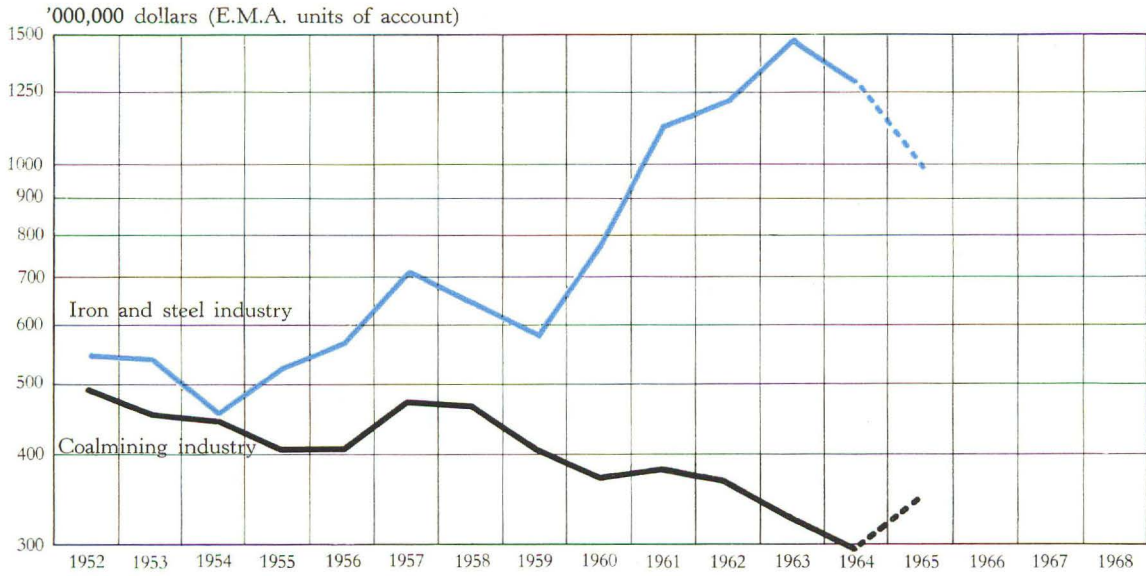
The figures for the years 1963 and 1964 differ somewhat from those given in last year's Report, inasmuch as it is normally the case that

- for the past year (1964), actual expenditure falls below the estimates submitted on January 1;
- for the previous year (1963) the expenditure figures returned before the balance-sheets were closed are corrected when the text survey is drawn up.

FIGURE 1

Investment in the Coalmining and Iron and Steel Industries

A — Capital expenditure



B — Actual production and production potential

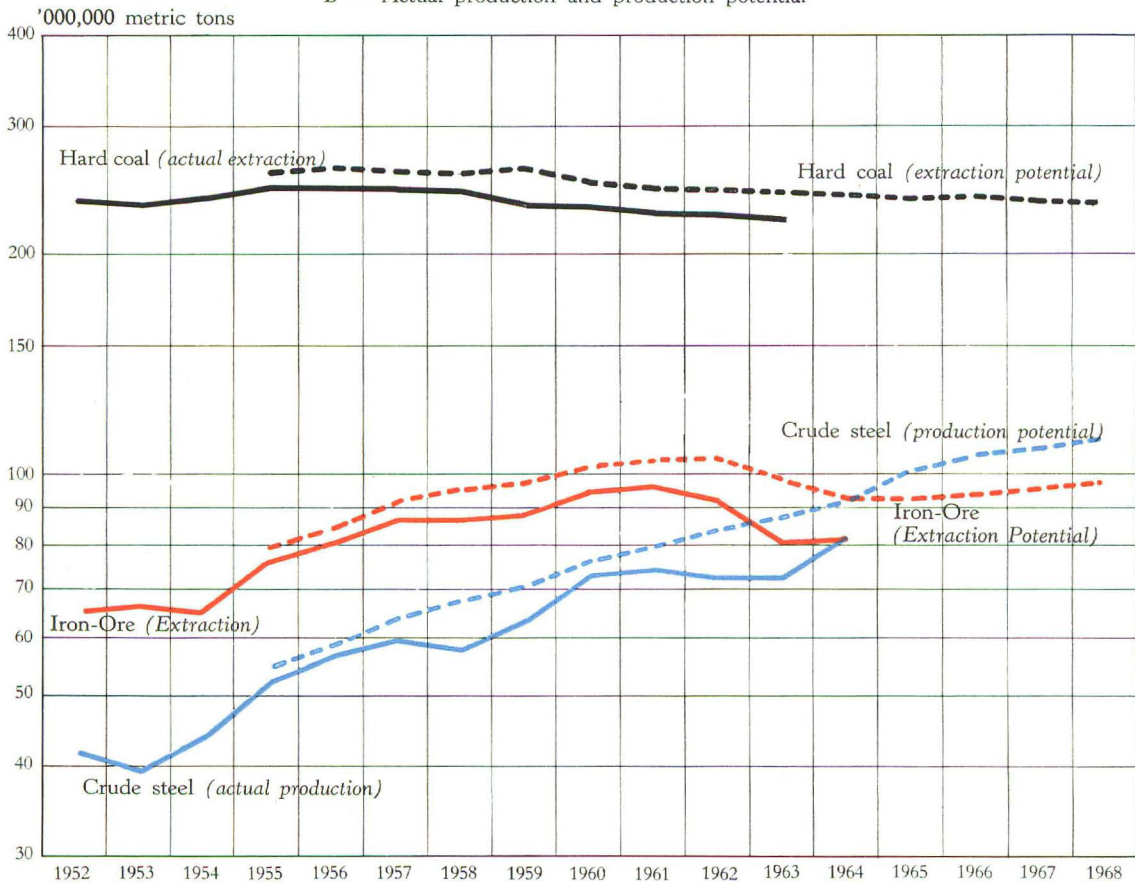
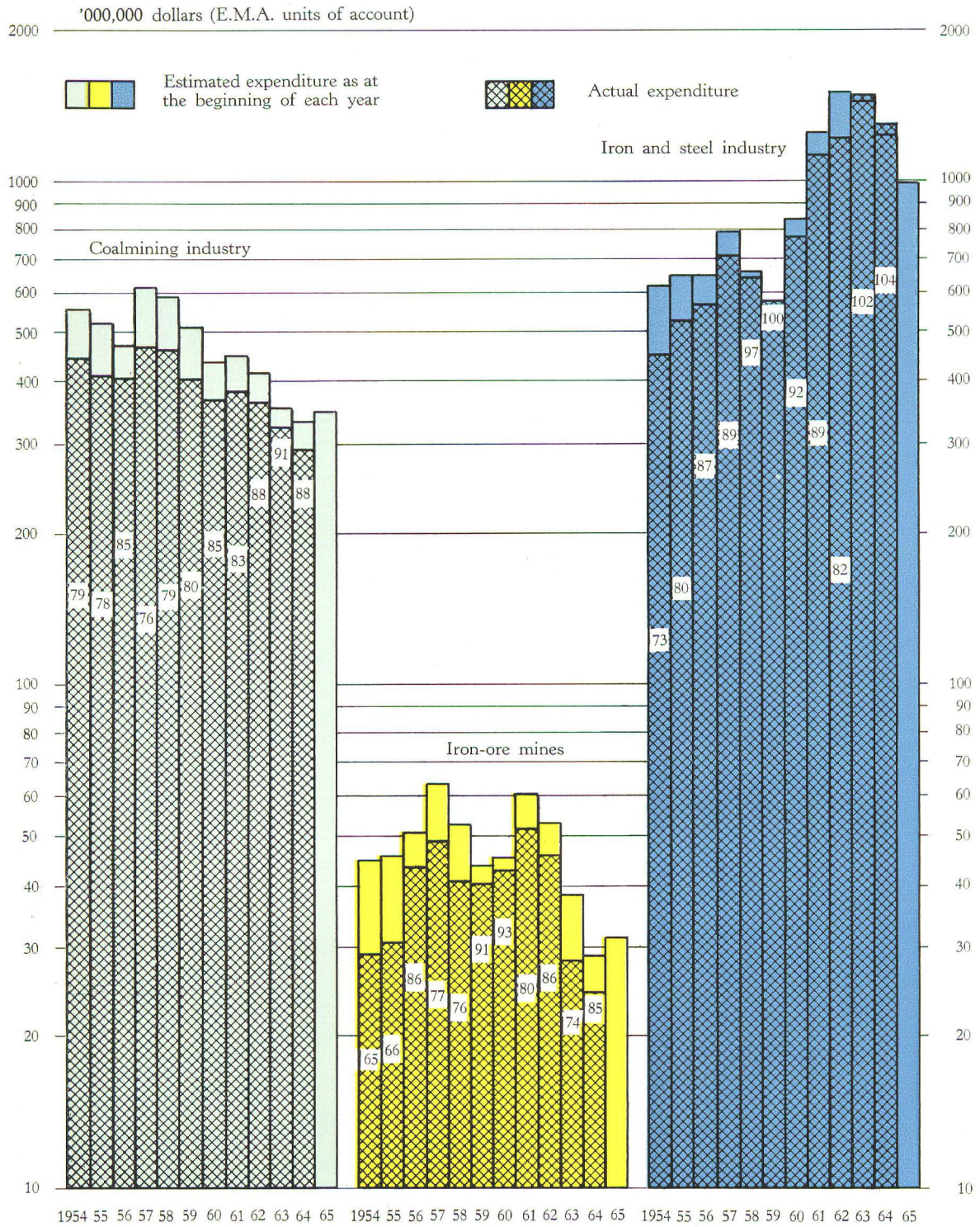


FIGURE 2

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

(Out-Turn Percentages)



The 1964 survey suggested that capital expenditure during the ensuing year would total 1,611,000,000 dollar units of account. Overall, this proved precisely correct, though in point of fact the estimate was slightly too high for the extractive industries and slightly too low for the iron and steel sector.

b) Production Potential

Hard-coal production potential may be expected to continue gradually contracting, mainly in consequence of impending colliery closures.

Iron-ore potential, after reaching a peak in 1962, fell off again by 12 % in two years. The shrinkage now seems to have been halted, as the further closures scheduled will be offset by the expansion still expected in the Lorraine orefield.

In the *iron and steel* industry the expansion made possible by the large-scale investment which has been and is still being effected should continue at a fair pace : the increase in crude-steel production potential from 1964 to 1968 is estimated at 21 % for the Community overall, and at rather over 100 % for the Italian seaboard.

TABLE 3

Actual Production and Production Potential
in the Community Industries

| Product | Actual production | | | Production potential | | |
|-------------------------------|--|---|--|--|---|--|
| | 1952 (^{'000,000} m.t.) | Mean annual rate of increase (in %) | 1964 (^{'000,000} m.t.) | 1964 (^{'000,000} m.t.) | Mean annual rate of increase (in %) | 1968 (^{'000,000} m.t.) |
| Hard coal ¹⁾ | 237.4 | -0.3 | 228.0 | 242.5 | -0.8 | 234.7 |
| Iron ore | 65.3 | +1.9 | 81.5 | 92.3 | +1.4 | 97.4 |
| Pig-iron | 34.7 | +4.8 | 60.7 | 68.8 | +4.7 | 82.7 |
| Crude steel | 41.8 | +5.8 | 82.7 | 91.9 | +5.0 | 111.8 |

¹⁾ Exclusive of "small mines" (see Annex I, page 33).

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 works 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 these enterprises to attain their maximum.

Thus, even during the best years, actual production has never exceeded 96 % of the sum of the individual production potentials declared. For practical purposes 96 % may be considered the highest rate of actual production achievable in the Community overall.

TABLE 4
Community Ratios of Actual Production
to Production Potential

| Product | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| Hard coal | 94.9 | 94.6 | 95.1 | 94.8 | 89.3 | 92.6 | 92.7 | 92.0 | 91.7 | 94.0 |
| Coke | 93.2 | 96.5 | 96.1 | 92.2 | 84.3 | 85.7 | 85.3 | 85.0 | 84.2 | 90.2 |
| Iron ore | 95.4 | 95.1 | 94.9 | 91.3 | 90.9 | 94.6 | 91.7 | 87.6 | 81.9 | 88.3 |
| Pig-iron | 96.3 | 96.0 | 94.7 | 87.9 | 88.3 | 94.3 | 90.9 | 85.5 | 81.0 | 88.2 |
| Crude steel | 95.8 | 96.1 | 94.1 | 85.7 | 89.6 | 95.6 | 91.7 | 87.3 | 83.4 | 90.0 |

II. THE COALMINING INDUSTRY

The figures at January 1, 1965, show a further decrease in investment in the coalmining industry: from 380,000,000 dollars in 1961, expenditure has fallen steadily to 366,000,000 dollars in 1962, 325,000,000 dollars in 1963 and 294,000,000 dollars in 1964. The renewed contraction last year is particularly noteworthy since 1964 was a comparatively good year for coal. The coalfields most affected were the Saar, Aachen and the Nord/Pas-de-Calais.

A certain upturn is expected in 1965, mainly in the Ruhr.

TABLE 5
Capital Expenditure in the Coalmining Industry,
1954—1966

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

| Sector | Actual expenditure | | | | | | | | | | | Estimated expenditure (Categories A+B+C) | |
|---|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------|---------------------------|--------------|--------------|--|--------------|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Collieries | 241.8 | 256.4 | 248.6 | 281.4 | 268.4 | 226.8 | 226.0 | 235.4 | 220.5 | 217.5 | 205.4 | 232.1 | 175.3 |
| Coking-plants, mine-owned ... | 67.9 | 52.2 | 46.2 | 59.5 | 63.4 | 55.8 | 33.7 | 43.1 | 35.9 | 19.0 | 17.2 | 20.3 | 24.8 |
| Coking-plants, independent ... | 19.5 | 12.3 | 11.1 | 8.6 | 8.8 | 4.7 | 1.6 | 1.4 | 5.1 | 3.5 | 5.9 | 8.0 | 3.9 |
| Briquetting-plants | 4.6 ¹⁾ | 7.3 | 4.5 | 4.7 | 3.5 | 5.4 | 7.1 | 3.4 | 5.1 | 9.5 | 9.0 | 10.3 | 7.0 |
| Pithead power-stations and other power-generating plant | 111.7 | 79.9 | 94.5 | 117.2 | 125.0 | 113.4 | 102.6 | 96.9 ¹⁾ | 99.9 ¹⁾ | 75.8 | 56.3 | 75.4 | 73.0 |
| Total | 445.5¹⁾ | 408.1 | 404.9 | 471.4 | 469.1 | 406.1 | 371.0 | 380.2¹⁾ | 366.5¹⁾ | 325.3 | 293.8 | 346.1 | 284.0 |
| Plants producing B.K.B. and low-temperature brown-coal coke | 5.3 | 8.1 | 4.5 | 2.3 | 5.0 | 4.8 | 6.0 | 3.8 | 6.0 | 9.0 | 8.1 | 7.8 | 3.6 |

¹⁾ Corrected figures.

a) Collieries

The decline in capital expenditure in 1964 was especially noticeable in this sector. Investment in the pits per metric ton extracted, which from 1952 to 1961 had averaged a steady 1.05 dollar and then dropped in 1962 and 1963 to 0.98 dollar, plunged in 1964 to 0.91 dollar. This is the figure for the Community overall: the French Centre/Midi and, especially, the Nord/Pas-de-Calais come a good deal lower still, while above-average rates were recorded for Lorraine (1.19 dollar) and for the German coalfields as a whole (1.00 dollar).

As before, a little more than half the sums invested went on coal extraction, and rather over 40 % on surface installations. Each subdivision of these two categories shows a decrease, with the exception of mechanical equipment below ground, on which the collieries are continuing to spend substantial amounts in pursuit of their drive for increased mechanization.

TABLE 6
Capital Expenditure on Collieries,
1954—1964

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

| Type of installation | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Shafts and underground workings .. | 43.5 | 54.9 | 57.5 | 63.8 | 67.0 | 51.1 | 48.7 | 42.6 | 37.0 | 41.3 | 39.7 |
| Mechanical equipment below ground | 49.0 | 53.8 | 57.7 | 68.2 | 62.9 | 49.3 | 52.7 | 58.3 | 56.4 | 56.5 | 61.3 |
| Haulage and winding equipment ... | 22.6 | 20.1 | 18.8 | 22.4 | 20.6 | 24.1 | 25.8 | 24.4 | 21.3 | 16.6 | 14.9 |
| Coal extraction | 115.1 | 128.8 | 134.0 | 154.4 | 150.5 | 124.5 | 127.2 | 125.3 | 114.7 | 114.4 | 115.9 |
| Screening and washing | 68.4 | 64.9 | 50.4 | 57.4 | 50.6 | 48.3 | 45.4 | 49.3 | 47.3 | 42.1 | 36.8 |
| Other surface installation | 31.4 | 35.1 | 34.4 | 36.1 | 33.0 | 27.6 | 32.9 | 35.1 | 33.9 | 35.7 | 29.6 |
| Buildings, etc. | 26.9 | 27.6 | 29.8 | 33.5 | 34.3 | 26.4 | 20.5 | 25.7 | 24.6 | 25.3 | 23.1 |
| Surface installations | 126.7 | 127.6 | 114.6 | 127.0 | 117.9 | 102.3 | 98.8 | 110.1 | 105.8 | 103.1 | 89.5 |
| Total | 241.8 | 256.4 | 248.6 | 281.4 | 268.4 | 226.8 | 226.0 | 235.4 | 220.5 | 217.5 | 205.4 |

The investment effected and in hand in the pits in production will not fully offset the numerous closures which have had to be put through since 1959 in consequence of the changed conditions of competition among the different energy products. The 1965 survey suggests that the industry's aggregate potential in 1968 will be some 8,000,000 tons less than in 1964.

TABLE 7
Development of Hard-Coal Production Potential⁽¹⁾

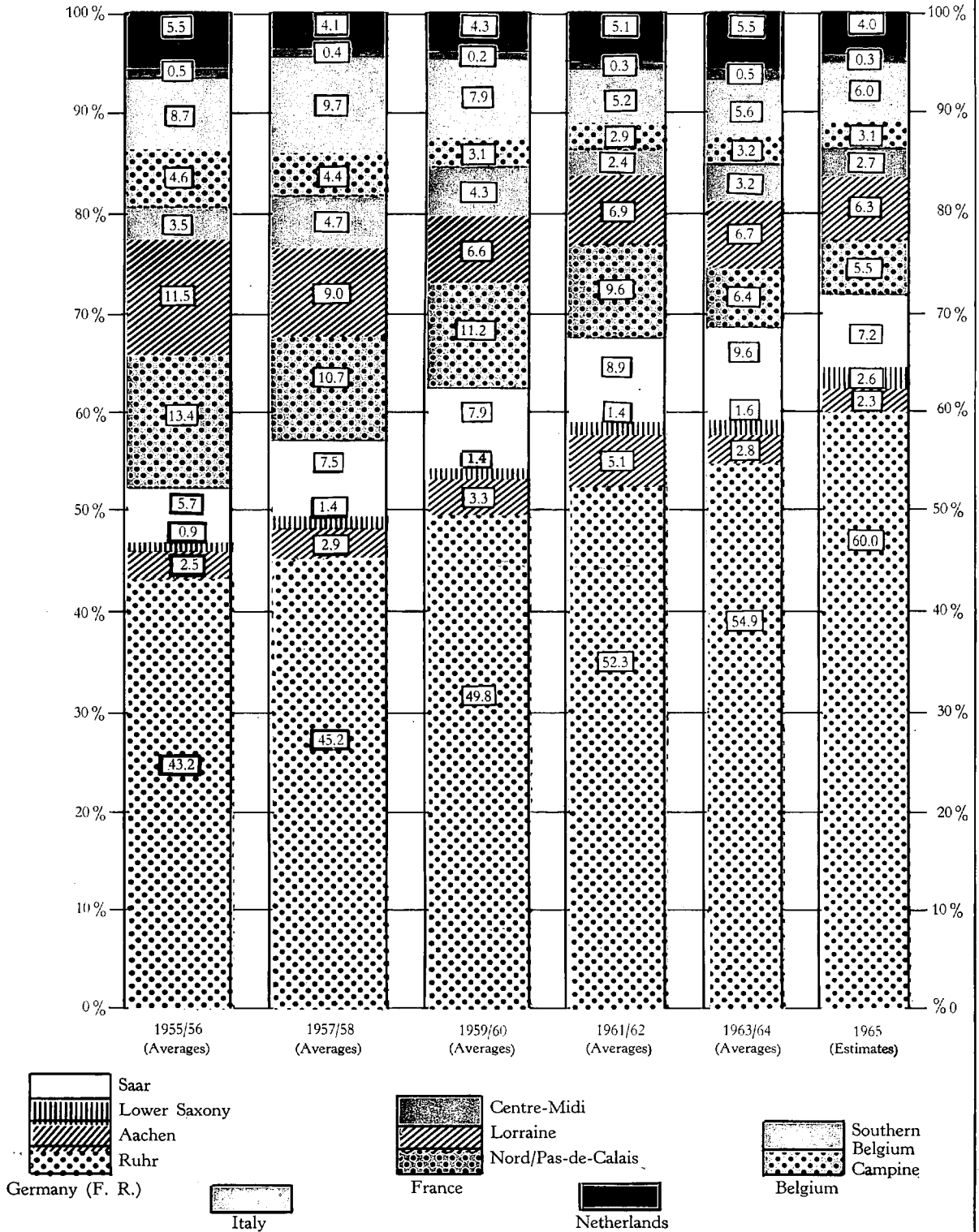
'000,000 metric tons

| Production | | Production potential | | | | |
|------------|-------|----------------------|-------|-------|-------|-------|
| 1952 | 1964 | 1964 | 1965 | 1966 | 1967 | 1968 |
| 237.4 | 228.0 | 242.5 | 237.6 | 238.1 | 236.5 | 234.7 |

(¹) As in previous years, mines producing only small tonnages are excluded; the total production of these small mines in 1964 amounted to approximately 900,000 metric tons.

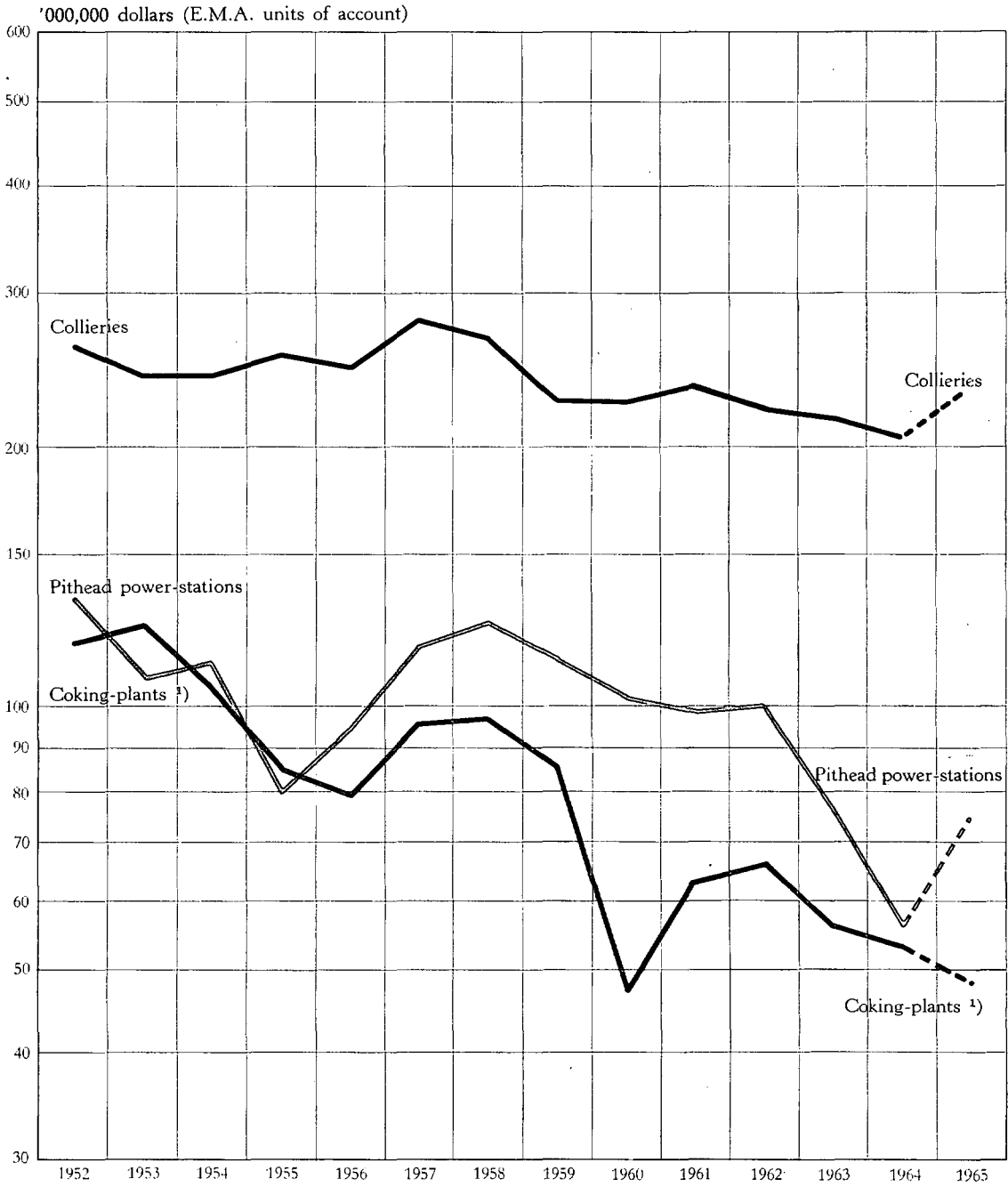
FIGURE 3

The 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.

Potential is expected to contract between 1964 and 1968 in almost all the Community coalfields; exceptions are Sulcis (Sardinia) and Aachen, where small increases are planned, while in Lorraine the position will remain unchanged. Decreases elsewhere include — 2,900,000 tons for the Nord/Pas-de-Calais, — 1,800,000 for the Saar, — 1,700,000 for the Centre/Midi, — 1,300,000 for the Ruhr, and — 1,100,000 for the Belgian and Dutch coalfields together.

The number of working days per annum on which the production potentials indicated are based varies from coalfield to coalfield : 287 in France, 260 in Germany (approximately 295 in the Saar), 254 in the Netherlands, 250-255 in most of the Belgian collieries.

b) Coking-Plants

The falling-off observed in 1962 in capital expenditure on mine-owned coking-plants became more marked in 1963 and 1964, when investment per ton of coke produced worked out at barely 0.4 dollar, as against 0.8 dollar in 1962, 0.9 dollar in 1961 and an average of 1.3 dollar over the years 1952-60. Forward estimates suggest no appreciable upturn, and a number of projects earlier contemplated have had to be scrapped or deferred.

Capital expenditure on the independent coking-plants continues small, except in Italy, where coke can be made economically from American fines.

Investment in the steelworks-owned coking-plants (here included to provide a full picture of the carbonization sector) remained high in 1964, owing to installation operations at the Italian coastal steelworks; this phase is, however, nearly over, as may be seen from the following table (which includes two sets of estimates for 1965 and 1966, the first covering only projects already in progress or approved, and the second also including projects merely planned).

TABLE 8
Capital Expenditure on Steelworks-Owned Coking-Plants,
1954—1966 ¹⁾

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

| Actual expenditure | | | | | | | | | | | Estimated expenditure | | | |
|--------------------|------|------|------|------|------|------|------|------|------|------|-----------------------|---------------|-------------|---------------|
| 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | | 1966 | |
| | | | | | | | | | | | Cat. A+B | Cat. A+B+C | Cat. A+B | Cat. A+B+C |
| 18.0 | 19.9 | 22.3 | 28.0 | 24.6 | 24.9 | 11.5 | 18.3 | 25.0 | 33.8 | 29.7 | 17.6 | 19.6 | 6.3 | 9.2 |

(¹) Cf. Table 16, under „The Iron and Steel Industry” (1965 and 1966 estimates for Categories A and B only).

Only one-third of the capital expenditure in the carbonization sector as a whole (mine-owned, independent and steelworks-owned plants together) went on the coke ovens themselves, while an increasing tendency emerged to concentrate more on ancillary installations.

TABLE 9
Capital Expenditure on Mine-Owned, Independent
and Steelworks-Owned Coking-Plants,
1954—1964

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

| Type of installation | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 |
|------------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Coke ovens | 46.5 | 32.2 | 32.3 | 41.8 | 41.7 | 32.7 | 20.7 | 26.6 | 29.2 | 28.0 | 17.4 |
| <i>of which:</i> | | | | | | | | | | | |
| New plant | (31.9) | (19.3) | (17.3) | (24.7) | (21.8) | (14.7) | (9.6) | (13.7) | (14.4) | (21.2) | (12.2) |
| Renewals and replacements | (14.6) | (12.9) | (15.0) | (17.1) | (19.9) | (18.0) | (11.1) | (12.9) | (14.8) | (6.8) | (5.2) |
| Gasproducers | 5.7 | 3.4 | 2.0 | 1.3 | 1.3 | 0.9 | 0.9 | 0.6 | 2.1 | 0.7 | 3.6 |
| Coke-oven gas and by-product plant | 27.1 | 28.9 | 25.9 | 34.8 | 29.6 | 28.3 | 13.1 | 18.2 | 18.1 | 10.8 | 11.8 |
| Miscellaneous | 26.0 | 19.9 | 19.4 | 18.1 | 24.2 | 23.5 | 12.1 | 17.4 | 16.6 | 16.8 | 19.9 |
| Total | 105.3 | 84.4 | 79.6 | 96.0 | 96.8 | 85.4 | 46.8 | 62.8 | 66.0 | 56.3 | 52.7 |

The 1968 production potential of the mine-owned plants is estimated at 1,400,000 tons less than the 1964 figure; the potential of the independent and steelworks-owned plant is likely to remain about the same. Overall, the 1965 survey indicates a contraction of 2 % in the course of the next four years.

TABLE 10
Development of Coke Production Potential

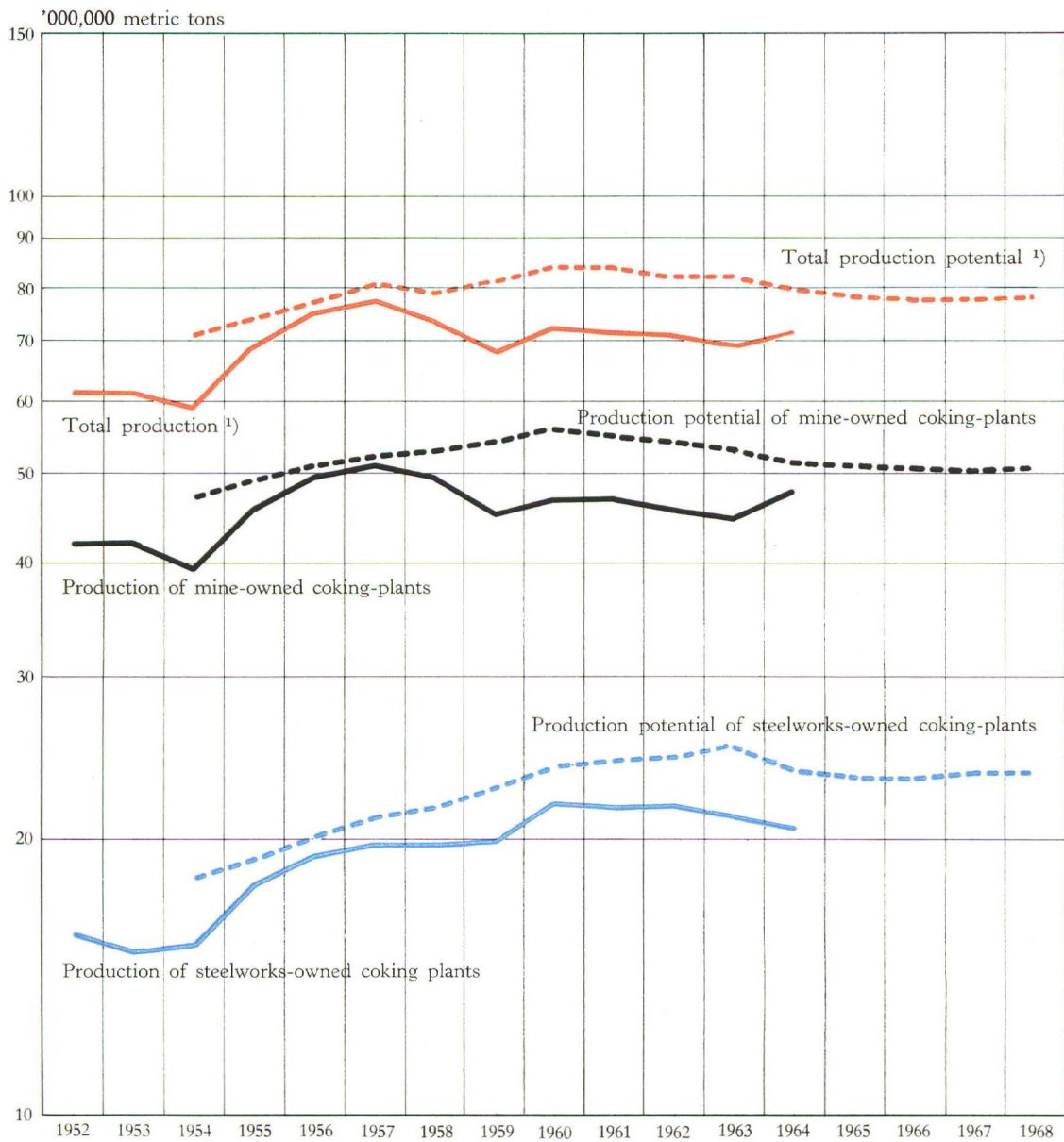
'000,000 metric tons

| Category | Actual production | | Production potential | | | | |
|---|-------------------|-------------|----------------------|-------------|-------------|-------------|-------------|
| | 1952 | 1964 | 1964 | 1965 | 1966 | 1967 | 1968 |
| Mine-owned plants | 42.2 | 47.8 | 51.7 | 51.4 | 50.4 | 50.1 | 50.3 |
| Independent plants | 3.2 | 3.4 | 3.9 | 3.8 | 3.9 | 4.0 | 4.0 |
| Steelworks-owned plants ¹⁾ | 15.8 | 20.2 | 23.6 | 23.1 | 23.1 | 23.3 | 23.3 |
| Total | 61.2 | 71.4 | 79.2 | 78.3 | 77.4 | 77.4 | 77.6 |

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 of projects (A, B and C).

FIGURE 5

Production and Production Potential of Coking-Plants



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

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

c) Briquetting-Plants

Capital expenditure is still lower in this sector, than elsewhere, though it shows a certain rise over the level in previous years.

Projects in hand are principally in the Campine and Nord/Pas-de-Calais, and relate for the most part to the production of smokeless ovoids, to be used to help make good the shortage of sized anthracite and low-volatile coals. Aggregate Community production potential may be expected to increase from 18,600,000 tons in 1964 to 19,900,000 in 1968.

d) Pithead Power-Stations

Capital expenditure under this head from 1954 to 1962 averaged slightly over 100,000,000 dollar units of account a year; in 1963, however, it went down to round about 76,000,000 units, and in 1964 to a mere 56,000,000 units. A number of extension projects in Lower Saxony, the Saar and Southern Belgium had to be deferred.

Most Community coalfields now consider themselves fairly adequately provided with pithead generating capacity. Apart from the deferred projects just mentioned (which the collieries responsible still intend to carry out at a later date), the only sizeable expansion planned for the next few years is in the Ruhr.

Investment activity continues to be concentrated mainly on the big power-stations, while the share of other generating plant at the mines is declining. The collieries are supplying more and more piped thermal energy, direct or through specialized agencies, towards the provision of heating and refrigeration for urban agglomerations and industry: expenditure specifically for this purpose by Community enterprises in 1964 totalled 6,100,000 dollars, as compared with 1,800,000 dollars in 1963.

TABLE II
Capital Expenditure on Pithead Power-Stations and Other
Power-Generating Plant at Mines, by Types of Installation,
1954—1964

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

| Type of installation | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 ¹⁾ | 1962 ¹⁾ | 1963 | 1964 |
|--|--------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------------|--------------------|-------------|-------------|
| Steam-raising plant | 47.2 | 30.2 | 30.5 | 39.8 | 45.8 | 47.7 | 36.4 | 28.2 | 40.3 | 25.2 | 17.3 |
| Power-generating plant and distribution switchgear | 30.3 | 24.3 | 31.0 | 38.3 | 38.6 | 38.1 | 42.5 | 43.8 | 34.4 | 24.1 | 14.4 |
| Buildings | 9.7 | 6.3 | 7.3 | 10.9 | 15.4 | 8.2 | 7.5 | 10.1 | 9.4 | 11.7 | 8.9 |
| Electricity distribution networks .. | 11.1 | 7.9 | 14.5 | 11.6 | 8.4 | 5.3 | 7.0 | 5.7 | 6.0 | 5.6 | 3.6 |
| Compressed-air plant | 7.6 | 5.5 | 4.8 | 5.2 | 4.9 | 3.7 | 2.7 | 1.4 | 0.3 | 2.1 | 2.4 |
| Miscellaneous | 5.8 | 5.7 | 6.4 | 11.4 | 11.9 | 10.4 | 6.5 | 7.7 | 9.5 | 7.1 | 9.7 |
| Total | 111.7 | 79.9 | 94.5 | 117.2 | 125.0 | 113.4 | 102.6 | 96.9 | 99.9 | 75.8 | 56.3 |

¹⁾ Corrected figures.

The result of this reduction in expenditure on the pithead power-stations will be a deceleration in the expansion of installed capacity; in consequence, the maximum electric capacity is now expected to increase by only about 14 % over the next four years.

The figures for the steelworks-owned power-stations (here included to provide a full picture of the power-generating position in both Community industries) are also rather lower than the enterprises' estimates in previous years, one reason being doubtless the fact that increased importation of high-grade ores is enabling to coke rate at the blast-furnaces to be reduced more and more. The maximum electric capacity of the steelworks-owned power-stations is expected to increase overall by only about 5 % between the beginning of 1965 and the beginning of 1969.

TABLE 12
Development of Maximum Electric Capacity

| | MW | | | | | |
|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Beginning of 1964 | Beginning of 1965 | Beginning of 1966 | Beginning of 1967 | Beginning of 1968 | Beginning of 1969 |
| Pithead power-stations | 9 734 | 9 733 | 9 758 | 10 200 | 10 921 | 11 233 |
| Steelworks-owned power-stations | 3 535 | 3 645 | 3 636 | 3 635 | 3 712 | 3 827 |

The pithead and steelworks-owned power-stations operated in 1964 at the high rates of 4,768 and 4,453 load-hours respectively : assuming they continued to do so, the pithead stations' output of electric current would rise between 1964 and 1968 from 46,300 to 52,800 million kWh, and the steelworks-owned stations' from 16,000 to 16,800 million.

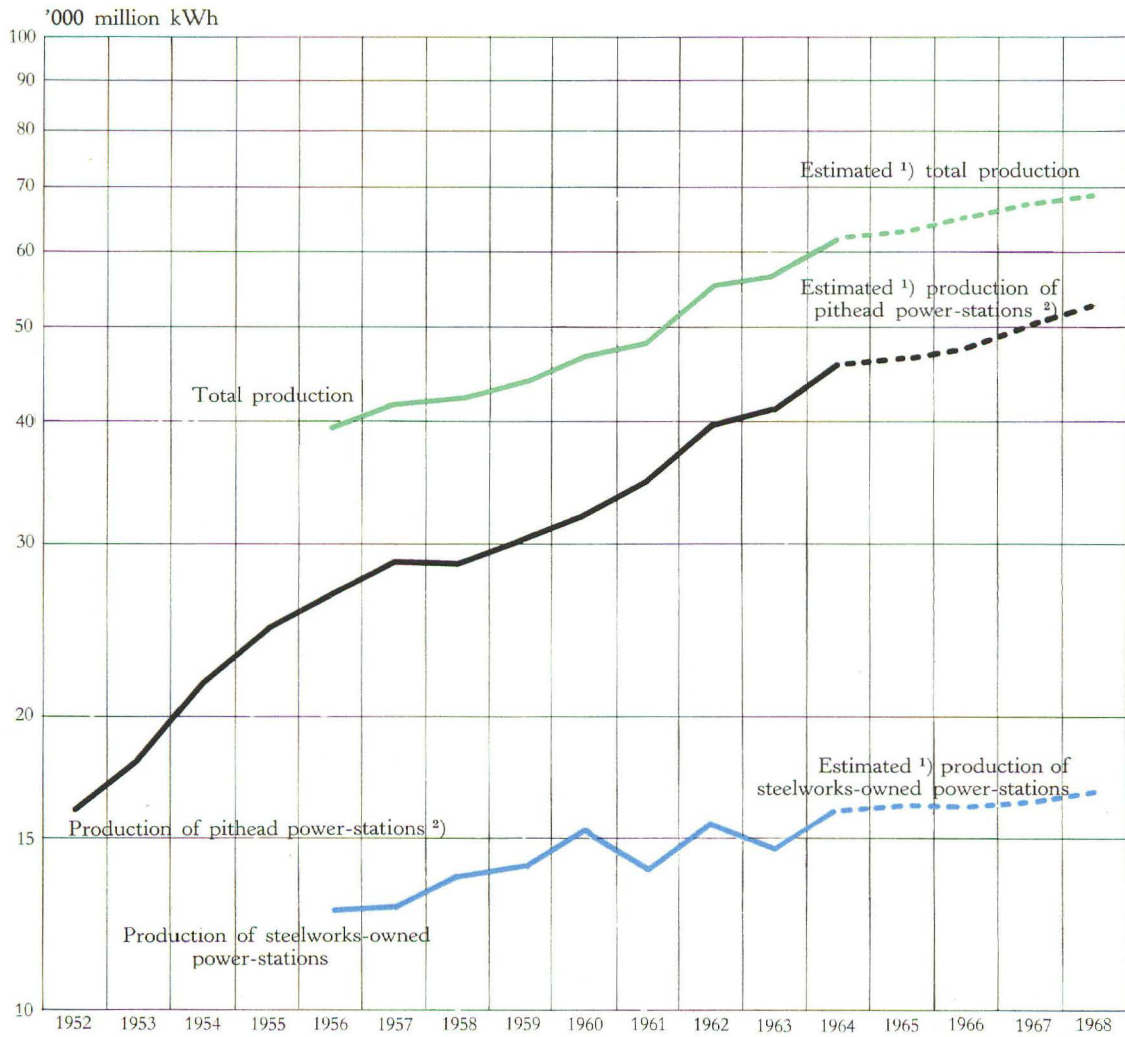
Tables XI annexed give some technical data on the operation of the pithead stations (specific consumption in calories per kWh, consumption of low-grade coal, load-hours per annum). For the first time, their specific consumption averaged less than 3,000 kcal/kWh, although as before the coal used to fuel them consisted 90 % of low-grade matter (reckoned ton for ton). 69.5 % of their 1964 production of current was sold to the grids, as compared with 68 % in 1963, 66 % in 1962, 61 % in 1961, 55 % in 1960 and 1959, and 50 % in 1958.

e) Plants Producing B.K.B. and Low-Temperature Brown-Coal Coke

Capital expenditure on the B.K.B. plants was comparatively high, and although their total potential is expected to contract slightly in 1965 it should remain pretty well unchanged after that.

Community production of low-temperature brown-coal coke, on the other hand, is likely to cease altogether by 1968.

FIGURE 6
Electric Power Production



¹⁾ For 1965 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 1964, i.e. 4,768 hours per annum for the pithead power-stations and 4,453 hours per annum for the steelworks-owned power-stations.
²⁾ Pithead power-stations proper and other power-stations plant at mines.

III. THE IRON-ORE MINES

Between 1956 and 1962 capital expenditure in the Community iron-ore industry never fell below 40,000,000 dollars a year, but in 1963 it slumped to 28,000,000 dollars, and in 1964 to 24,000,000 dollars. All the Community's orefields, large and small, are affected, including even Lorraine, where the expenditure recorded in 1964 was scarcely more than half that in 1961.

TABLE 13
Capital Expenditure in the Iron-Ore Industry,
1954—1965

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

| Type of installation | Actual expenditure | | | | | | | | | | | Estimated expenditure (Categories A+B+C) | |
|--|--------------------|------|------|------|------|------|------|------|------|------|------|--|------|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Mining of ore | 14.8 | 16.3 | 22.3 | 29.4 | 22.7 | 22.5 | 26.1 | 30.8 | 26.1 | 19.6 | 18.4 | 21.8 | 17.5 |
| Preparation of ore at mine ¹⁾ | 7.3 | 5.9 | 10.6 | 10.9 | 9.6 | 9.2 | 7.5 | 9.6 | 8.1 | 3.9 | 2.3 | 2.9 | 3.6 |
| Various surface installations | 7.4 | 8.5 | 11.0 | 9.5 | 8.9 | 8.6 | 9.6 | 12.0 | 12.4 | 4.7 | 3.6 | 6.7 | 4.8 |
| Total | 29.5 | 30.7 | 43.9 | 49.8 | 41.2 | 40.3 | 43.2 | 52.4 | 46.6 | 28.2 | 24.3 | 31.4 | 25.9 |

¹⁾ Corrected figures : two sinter strands installed at iron-ore mines are now included for calculating purposes under "blast-furnace burden preparation" (see Table 16).

From 1952 to 1961 Community production of crude ore increased progressively from 65,300,000 to 95,900,000 metric tons, *i.e.* at a cumulative average annual rate of 4.4 %. Since then, in face of stiffening competition from overseas ore, some uneconomic mines have had to be closed and a number of expansion schemes scrapped, with the result that actual production has fallen and the expected rate of growth been entirely falsified.

Production, having gone down from 95,900,000 tons in 1961 to 80,200,000 in 1963, rose again only slightly in 1964, to 81,500,000, despite the improvement in the steel market. Community potential contracted from 97,900,000 tons in 1963 to 92,300,000 in 1964 in consequence of various mine closures, mostly in Germany; the rate of growth from the present level is now put at only 1.4 % per annum up to 1968, and even this expansion is concentrated entirely in one orefield, Lorraine, all the rest being faced with further contraction.

TABLE 14
Development of Crude-Ore Extraction Potential

'000,000 metric tons

| Extraction | | Extraction potential | | | | |
|------------|------|----------------------|------|------|------|------|
| 1952 | 1964 | 1964 | 1965 | 1966 | 1967 | 1968 |
| 65.3 | 81.5 | 92.3 | 92.5 | 93.5 | 95.4 | 97.4 |

Lorraine ore accounted for about 65 % of the total Community production around 1959-60; in 1964 it accounted for 70 %, and its share in production potential is expected, according to the January 1, 1965, estimates, to reach 73 % in 1968.

IV. THE IRON AND STEEL INDUSTRY

From 1959 to 1963 capital expenditure in the Community iron and steel industry mounted very steeply indeed, owing largely to the implementation of a number of major projects approved during the boom years 1960-61. Disbursements on the operations then begun are, however, now approaching completion, except possibly at the Italian coastal plants, so that capital expenditure for 1964 indicates a decrease, which is likely to continue in 1965 and 1966, unless, improbably, it is decided to launch further big schemes not yet adopted.

The Luxembourg and Netherlands shares of the Community total remain more or less the same; the shares of the German, the Belgian and, in particular, the French industry have contracted sharply, but this is offset by the investment drive in Italy, especially in the coastal areas. Recorded expenditure in Italy in 1964 was well above that in Germany, although German production was nearly four times as great.

Expenditure on pig-iron, crude-steel and rolled-steel production respectively has decreased approximately parallel; expenditure on general services has kept up rather better. The shares of the first three sectors in the total in 1964 were 17 %, 12 % and 48 %, while the proportion going on general services reached the record figure of 23 %.

TABLE 15
Capital Expenditure in the Iron and Steel Industry,
1954—1966

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

| Type of installation | Actual expenditure | | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|--------------------------------|--------------------|-------|-------|-------|-------|-------|-------|---------|---------|---------|---------|--|-------|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| <i>Plant for production of</i> | | | | | | | | | | | | | |
| pig-iron | 69.8 | 82.9 | 130.5 | 183.5 | 206.1 | 186.8 | 172.2 | 218.8 | 233.2 | 258.4 | 222.9 | 167.2 | 106.3 |
| steel | 44.1 | 63.2 | 101.6 | 128.4 | 94.8 | 72.7 | 95.4 | 162.8 | 152.4 | 175.0 | 157.7 | 127.9 | 110.1 |
| rolled products ... | 265.1 | 301.1 | 244.9 | 282.4 | 207.0 | 198.6 | 350.3 | 532.4 | 597.6 | 726.4 | 615.8 | 497.0 | 378.2 |
| General services | 74.5 | 77.1 | 92.9 | 113.9 | 135.7 | 128.5 | 157.3 | 209.1 | 247.1 | 319.7 | 294.6 | 199.9 | 102.7 |
| Total | 453.5 | 524.3 | 569.9 | 708.2 | 643.6 | 586.6 | 775.2 | 1 123.1 | 1 230.3 | 1 479.5 | 1 291.0 | 992.0 | 697.3 |

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

a) Pig-Iron Production

The proportion of total expenditure devoted to pig-iron production plant, which in 1958-1959 amounted to 32 %, has fallen heavily : though certain very low forecasts have not been borne out, the figure in both 1963 and 1964 was only about 17.4 %, and the estimate for 1965 is 16.9 %.

Absolutely, expenditure on pig-iron production in 1964 was lower everywhere except in the Italian coastal plants. Steelworks-owned coking-plants, burden-preparation installations and the blast-furnaces themselves were all affected. The operations in Italy have now progressed to a stage at which investment in these three sectors will fall off there too in 1965.

TABLE 16

Capital Expenditure on Pig-Iron Production Plant,
by Types of Installation, 1954-1966

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

| Type of installation | Actual expenditure | | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|------------------------------------|--------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|--------------|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Steelworks-owned coking-plants ... | 18.0 | 19.9 | 22.3 | 28.0 | 24.6 | 24.9 | 11.5 | 18.3 | 25.0 | 33.8 | 29.7 | 17.6 | 6.3 |
| Burden preparation ¹⁾ | 11.6 | 21.1 | 31.5 | 51.5 | 66.7 | 73.5 | 73.7 | 93.3 | 110.9 | 123.2 | 85.3 | 63.8 | 48.2 |
| Blast-furnaces | 40.2 | 41.9 | 76.7 | 104.0 | 114.8 | 88.4 | 87.0 | 107.2 | 97.3 | 101.4 | 107.9 | 85.8 | 51.8 |
| Total | 69.8 | 82.9 | 130.5 | 183.5 | 206.1 | 186.8 | 172.2 | 218.8 | 233.2 | 258.4 | 222.9 | 167.8 | 106.3 |

¹⁾ Corrected figures : two sinter strands installed at iron-ore mines are included for calculating purposes under "burden preparation."

As regards the probable trend in *coke* production potential, the new capacity being installed along the Italian seaboard will not fully offset the effects of the forthcoming closures of steelworks-owned coking-plants in Germany. *Sinter* potential (taking all plant, irrespective of location, *i.e.* whether at steelworks, at mine, or possibly, in the future, at port of importation) may be expected to continue expanding in all regions, and particularly in Lorraine and the Italian coastal areas. The aggregate increase over the next four years is put at 29 %, and the resulting increase in availabilities of sinter will to a great extent account for the substantial rise of 20 % forecast in *pig-iron* production potential between 1964 and 1968.

FIGURE 7

The Capital Expenditure in the Iron and Steel Industry

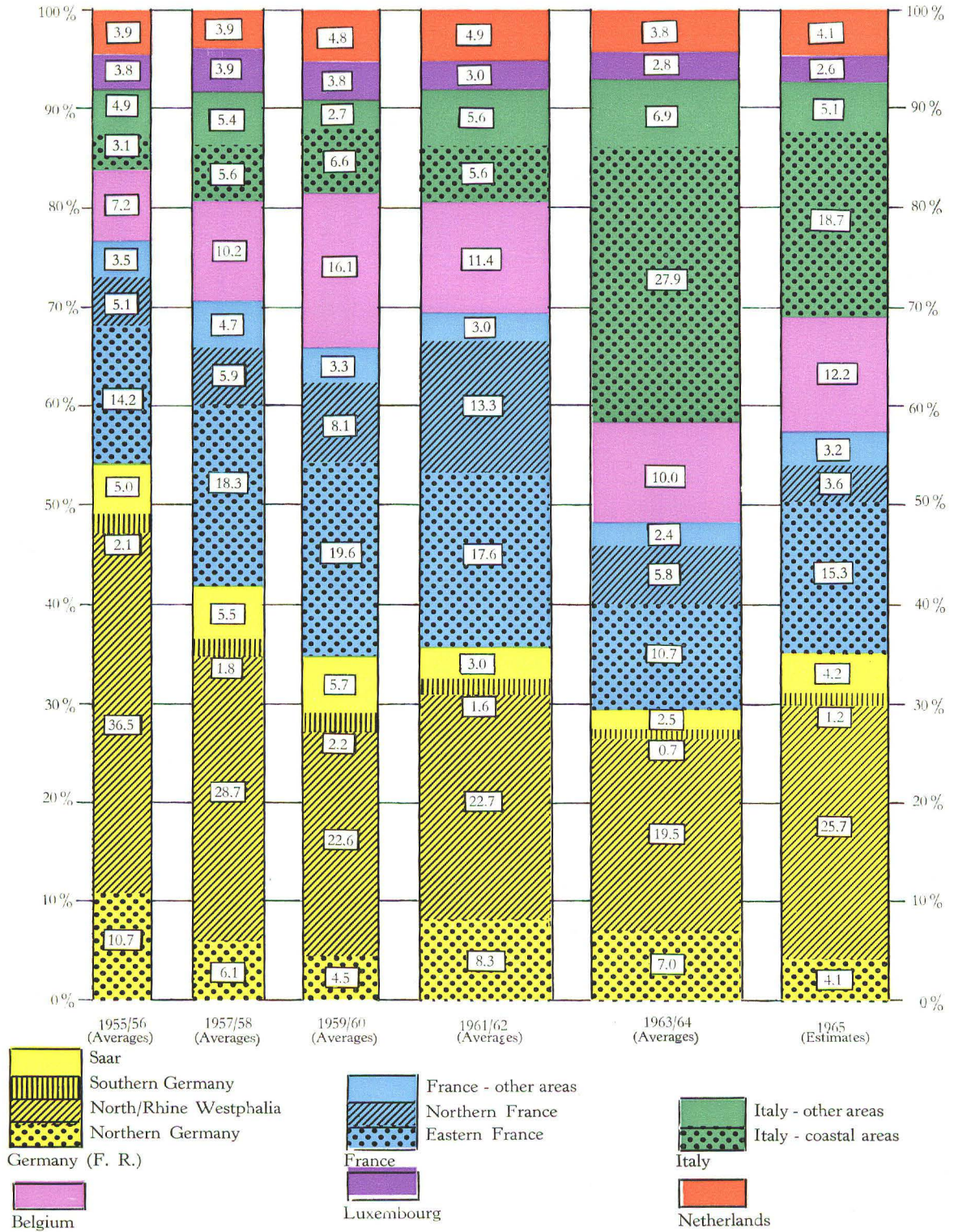


FIGURE 8

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

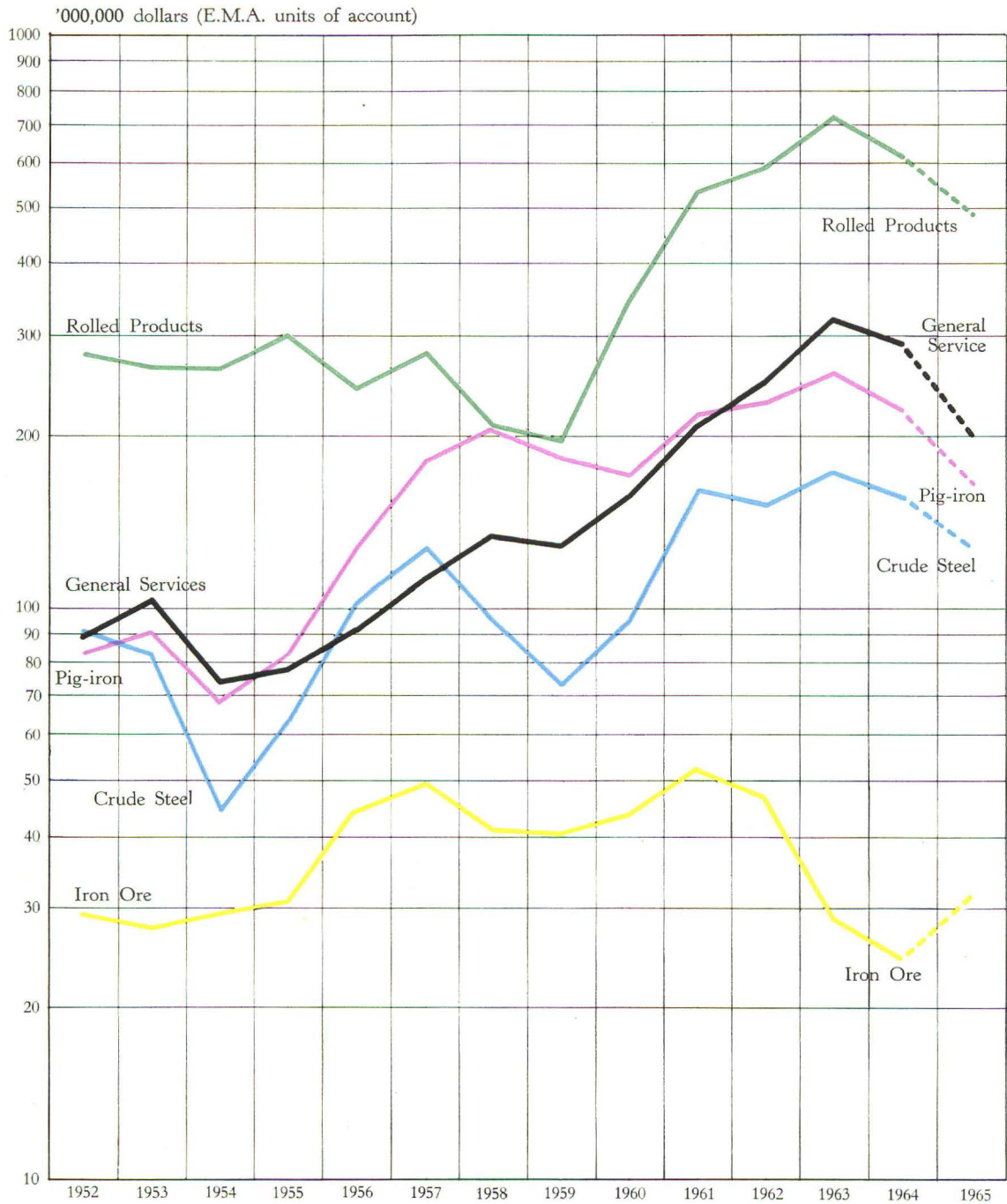


FIGURE 9

Breakdown of Capital Expenditure in the Iron and Steel Industry

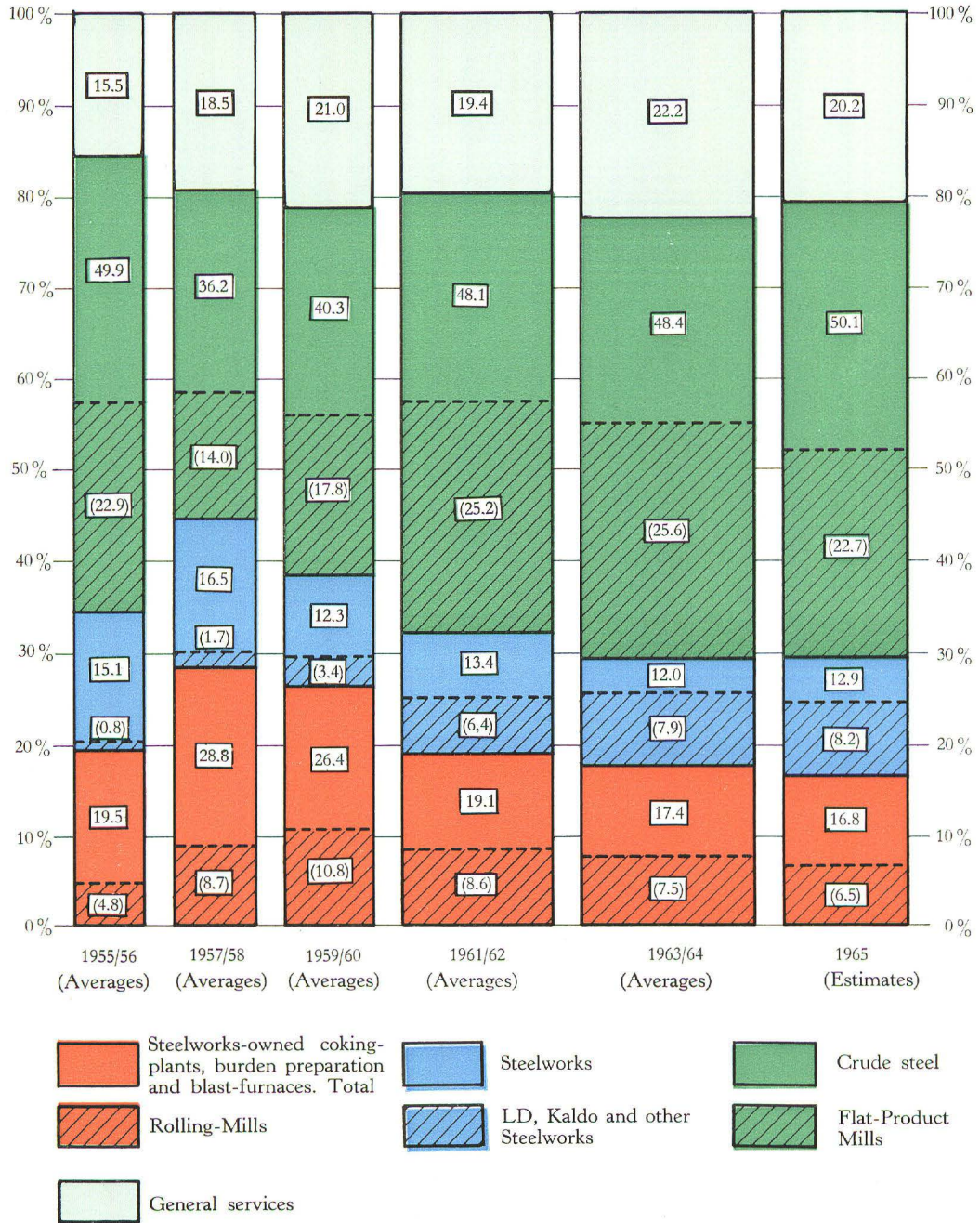


TABLE 17
Development of Production Potential of Pig-Iron
Production Plant

'000,000 metric tons

| Product | Actual production | | Production potential | | | | |
|--|-------------------|------|----------------------|------|------|------|------|
| | 1952 | 1964 | 1964 | 1965 | 1966 | 1967 | 1968 |
| Coke (steelworks-owned plants) ¹⁾ | 15.8 | 20.2 | 23.6 | 23.1 | 23.1 | 23.0 | 23.1 |
| Sinter ²⁾ | 15.6 | 62.8 | 70.7 | 78.3 | 85.0 | 86.6 | 91.1 |
| Pig-iron | 34.7 | 60.7 | 68.8 | 74.7 | 79.0 | 81.1 | 82.7 |

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).

²⁾ Corrected figures: the production of the two sinter strands installed at iron-mines is included, for calculating purposes, under "sinter."

b) Steel Production

In 1963 and 1964 the industry devoted only 12 % of its total capital expenditure to steel-making plant proper, the smallest proportion since 1956. This development is due to the fact that hardly any extension is being undertaken in the *open-hearth* and, particularly, the *basic Bessemer* sectors. The only activity of any note regarding basic Bessemer is the maintenance and modernization work in progress in Lorraine, the Saar, Luxembourg and the Ruhr; as regards open-hearth a fair amount is being spent on productivity improvement in Germany (the north and the Ruhr) and in Italy (mainly in coastal areas). Investment in *electric-furnace* steelworks is running steadily at the fairly high level of 20,000,000 dollars a year, chiefly in the Italian inland works and in France. The rapid expansion of *oxygen steelmaking* capacity continues, accounting in 1964 as in 1963 for nearly 70 % of the industry's total expenditure on crude-steel production plant; of this 70 %, the largest portion was spent by the Italian coastal works, and rather lesser amounts by the Belgian, North German and Ruhr enterprises, while enterprises in central France and Italy, South Germany and even the Saar spent next to nothing.

TABLE 18
Capital Expenditure on Steelmaking Plant,
by Production Processes,
1954—1966

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

| Production process | Actual expenditure | | | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|--------------------|--------------------|------|-------|-------|------|------|------|-------|-------|-------|-------|-------|--|--|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | |
| Basic Bessemer | 13.9 | 17.2 | 22.4 | 45.1 | 49.7 | 33.8 | 21.2 | 24.2 | 23.0 | 18.4 | 8.7 | 10.8 | 6.7 | |
| Open-hearth | 20.1 | 30.7 | 53.9 | 51.6 | 27.4 | 17.6 | 29.1 | 44.8 | 30.2 | 18.5 | 23.4 | 15.6 | 8.4 | |
| Electric-furnace | 10.1 | 15.3 | 17.2 | 16.4 | 10.6 | 8.5 | 11.1 | 21.8 | 21.1 | 18.1 | 18.5 | 17.8 | 9.2 | |
| L/D, Kaldo, etc. | | | 8.1 | 15.3 | 7.1 | 12.8 | 34.0 | 72.0 | 78.1 | 120.0 | 107.1 | 83.7 | 85.8 | |
| Total | 44.1 | 63.2 | 101.6 | 128.4 | 94.8 | 72.7 | 95.4 | 162.8 | 152.4 | 175.0 | 157.7 | 127.9 | 110.1 | |

Community crude-steel production potential in 1964 totalled 91,900,000 metric tons, the rate of utilization working out at 90 %. Projects approved by heads of enterprises as at January 1, 1965, should increase this to 111,800,000 tons in 1968, a 22 % expansion in four years. This is a faster growth rate than was indicated in the 1964 survey; the reason is not so much the intention to install more capacity, though this too is the case in the Ruhr and in Lorraine, as that a number of basic Bessemer and open-hearth steelworks earlier scheduled to be scrapped are to be kept in production for some years longer, a decision taken in particular by many German steelmakers. The net increase in production potential forecast for 1964-68, 20,000,000 tons, is in point of fact precisely the same as the estimated net increase in oxygen steelmaking potential alone.

TABLE 19
Development of Crude-Steel Production Potential,
by Production Processes

'000,000 metric tons

| Production process | Actual production | | Production potential | | | | |
|------------------------|-------------------|------|----------------------|-------|-------|-------|-------|
| | 1952 | 1964 | 1964 | 1965 | 1966 | 1967 | 1968 |
| Basic Bessemer | 23.0 | 34.7 | 37.1 | 36.3 | 36.4 | 35.7 | 34.4 |
| Open-hearth | 15.2 | 27.9 | 31.3 | 33.1 | 33.5 | 33.0 | 33.2 |
| Electric-furnace | 3.3 | 9.6 | 11.3 | 11.8 | 12.0 | 12.2 | 12.1 |
| L/D, Kaldo, etc. | 0.3 | 10.5 | 12.2 | 19.2 | 23.1 | 27.7 | 32.1 |
| Total | 41.8 | 82.7 | 91.9 | 100.4 | 105.0 | 108.6 | 111.8 |

By 1968, electric-furnace potential should account for just over 10 % of the whole, with the remaining 90 % divided about equally between basic Bessemer (showing a slight contraction), open-hearth (pretty well unchanged) and oxygen-blown (expanding vigorously). The breakdown varies considerably, however, from one region to another: according to present estimates, the share of the oxygen steels in production potential in 1968 in the Netherlands will be 60 %, in the Italian coastal works 52 %, in Belgium and northern France 35 %, in the Ruhr 33 %, in north Germany 25 %, and elsewhere ranging lower. Oxygen steelmaking is not of course the answer to prayer in all cases: the other production processes each offer various advantages, according to the character of the ore used and the type of processing which the metal is to undergo.

In a word, then, basic Bessemer, and to a lesser extent open-hearth, steels will lose ground steadily, partly to electric-furnace but very much more to the oxygen-blown qualities.

FIGURE 10

Actual Production and Production Potential of the Iron and Steel Industry

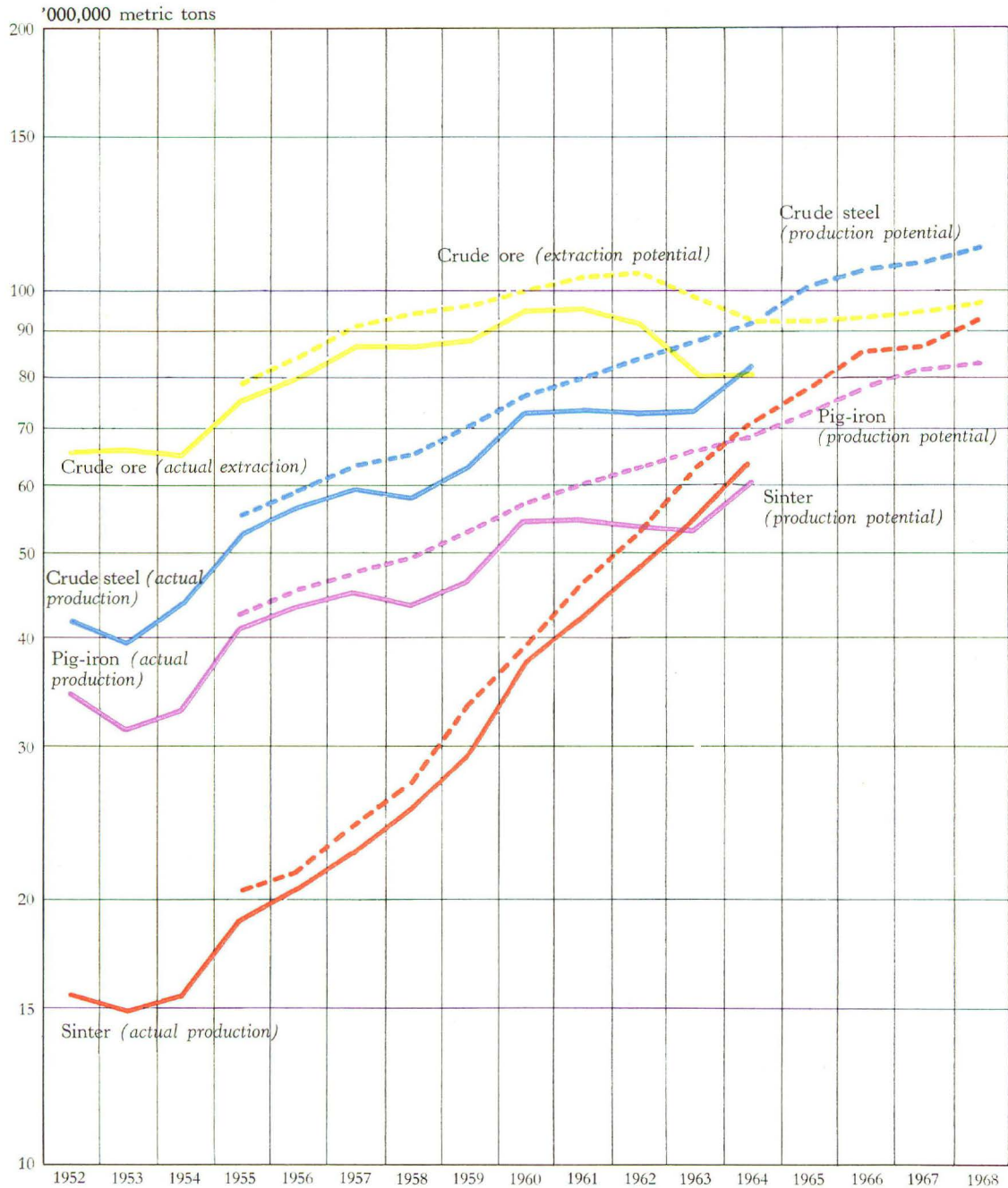


FIGURE 11

Actual Production and Production Potential of Crude Steel by Production Process

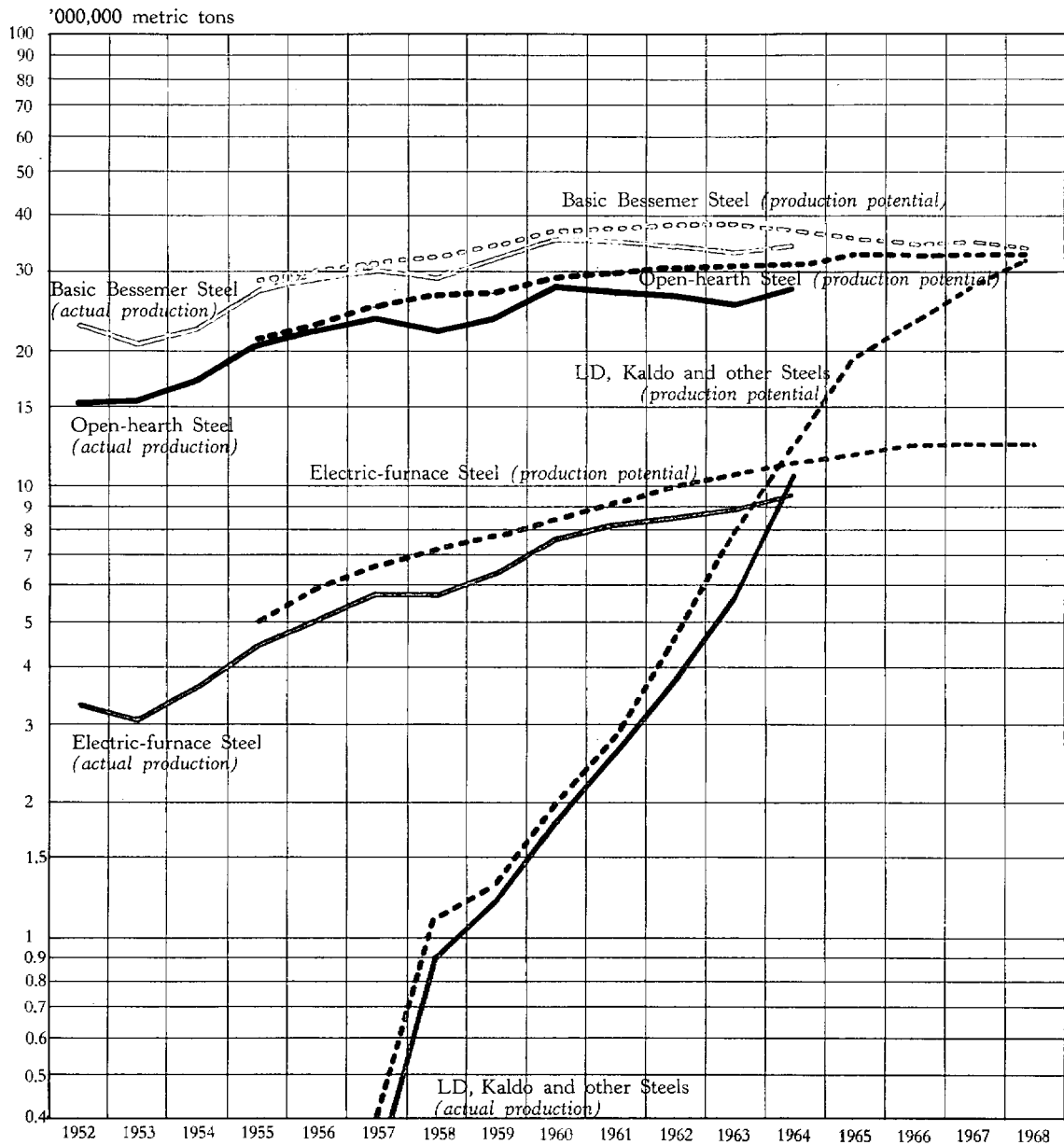


TABLE 20
Shares of the Different Steelmaking Processes
in 1952, 1964 and 1968

| Production process | Actual production | Production potential | |
|------------------------|----------------------|----------------------|-------------------------|
| | 1952 Actual share | 1964 Actual share | 1968 Estimated share |
| Basic Bessemer | 55.0 | 40.4 | 30.8 |
| Open-hearth | 36.4 | 34.0 | 29.7 |
| Electric-furnace | 7.9 | 12.3 | 10.8 |
| L/D, Kaldo, etc. | 0.7 | 13.3 | 28.7 |
| Total | 100.0 | 100.0 | 100.0 |

Aggregate Community crude-steel production potential is now expected to grow from 1964 to 1968 at 5.0 % per annum, a rate not far from the 5.8 % annual increase recorded in actual production from 1952 to 1964.

TABLE 21
Average Annual Rate of Development in the Crude-Steel Sector,
by Production Processes

| Production process | Average annual rate of increase in actual production 1952-64 | Estimated average annual rate of increase in production potential 1964-68 |
|---------------------------|--|---|
| Pig-iron (for comparison) | + 4.8 | + 4.7 |
| Basic Bessemer | + 3.5 | - 1.9 |
| Open-hearth | + 5.2 | + 1.5 |
| Electric-furnace | + 9.3 | + 1.7 |
| L/D, Kaldo, etc. | +34.5 | +27.4 |
| Total, crude steel | + 5.8 | + 5.0 |

c) Production of Semis and Rolled Products

Capital expenditure on continuous-casting installations, rolling-mills and ancillary plant moved from 33 % of the total in 1958-59 to 49 % in 1963 and 48 % in 1964; in 1965 it is expected to reach 50 %, a figure so far exceeded only in 1954-55.

Absolutely, expenditure in 1963 and 1964 works out higher than ever before in the Netherlands, in the Ruhr and most of all in coastal and inland Italy.

The increase in the past three or four years has been especially marked in the case of the hot and cold wide-strip mills, but this particular trend is now showing signs of levelling off. There is at present a great deal of investment activity in practically all parts of the rolling sector, though the section mills are less to the fore than they were from 1954 to 1959.

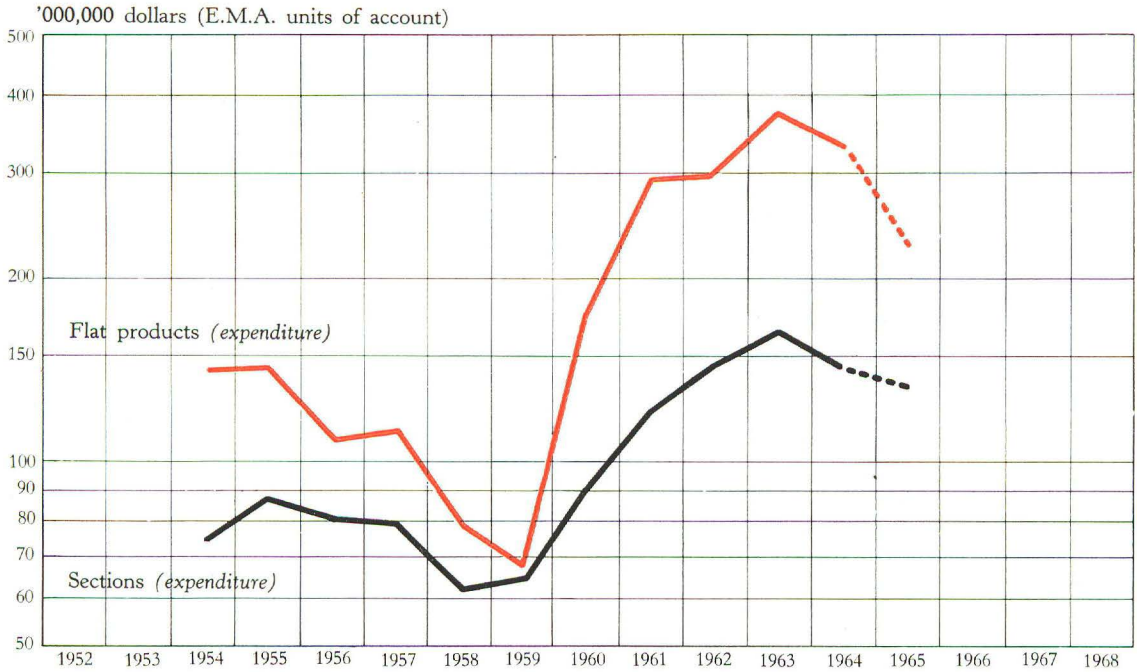
Special mention should be made of the growing interest in continuous casting : the share of these installations in the industry's total expenditure on rolling capacity was over 1 % in 1964 and is expected to be approximately 3 % in 1965. The investment concerned, past and future, is mainly concentrated in Germany, in the Ruhr and Saar.

TABLE 22
Capital Expenditure on Rolling-Mills, 1954—1966

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

| Type of mill | Actual expenditure | | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|----------------------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|--------------|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Heavy and medium section mills | 29.1 | 35.8 | 28.6 | 32.5 | 30.1 | 44.7 | 55.0 | 66.4 | 66.0 | 74.6 | 55.0 | 59.2 | 40.6 |
| Small-bar mills | 29.8 | 38.7 | 37.7 | 32.4 | 25.7 | 15.2 | 19.2 | 26.2 | 27.5 | 48.8 | 66.0 | 59.4 | 43.2 |
| Wire mills | 15.5 | 12.4 | 14.0 | 14.3 | 5.6 | 4.4 | 16.2 | 28.4 | 51.0 | 40.0 | 23.2 | 17.1 | 12.7 |
| <i>Total, section mills</i> | <i>74.4</i> | <i>86.9</i> | <i>80.3</i> | <i>79.2</i> | <i>61.4</i> | <i>64.3</i> | <i>90.4</i> | <i>121.0</i> | <i>144.5</i> | <i>163.4</i> | <i>144.2</i> | <i>135.7</i> | <i>96.5</i> |
| Hoop and strip mills | 13.6 | 12.5 | 5.6 | 12.5 | 5.7 | 2.8 | 4.3 | 5.5 | 8.6 | 8.2 | 4.7 | 10.2 | 10.9 |
| Plate and universal mills | 41.3 | 36.3 | 24.2 | 36.5 | 20.6 | 15.3 | 24.8 | 35.4 | 46.2 | 64.0 | 32.6 | 34.5 | 26.4 |
| Hot sheet mills | 4.3 | 3.6 | 1.8 | 2.0 | 2.3 | 3.2 | 3.7 | 6.0 | 2.1 | 2.3 | 1.8 | 1.4 | 0.3 |
| Cold sheet mills | 3.6 | 2.8 | 0.7 | 0.1 | 0.7 | 0.5 | 0.4 | 0.7 | 0.4 | 0.1 | 0.1 | 0.2 | — |
| Hot wide-strip mills | 31.6 | 35.8 | 30.3 | 31.9 | 16.2 | 16.0 | 27.5 | 67.0 | 65.5 | 158.7 | 136.7 | 78.3 | 77.5 |
| Cold wide-strip mills | 45.2 | 52.6 | 44.4 | 28.5 | 32.4 | 29.8 | 114.8 | 178.6 | 175.9 | 147.1 | 154.3 | 100.8 | 53.6 |
| <i>Total, flat-product mills</i> | <i>139.6</i> | <i>143.6</i> | <i>107.0</i> | <i>111.5</i> | <i>77.9</i> | <i>67.6</i> | <i>175.5</i> | <i>293.2</i> | <i>298.7</i> | <i>380.4</i> | <i>330.2</i> | <i>225.4</i> | <i>168.7</i> |
| Blooming and slabbing mills | 23.1 | 41.3 | 31.2 | 45.1 | 31.6 | 40.4 | 43.6 | 74.8 | 91.3 | 108.7 | 78.2 | 61.5 | 41.7 |
| Continuous-casting installations | | | | | | | | | 2.3 | 4.1 | 7.0 | 15.2 | 29.7 |
| Miscellaneous | 28.0 | 29.3 | 26.4 | 46.6 | 36.1 | 26.3 | 40.8 | 43.4 | 60.8 | 69.8 | 56.2 | 59.2 | 41.6 |
| Total | 265.1 | 301.1 | 244.9 | 282.4 | 207.0 | 198.6 | 350.3 | 532.4 | 597.6 | 726.4 | 615.8 | 497.0 | 378.2 |

FIGURE 12
 Sections and Flat Products
 A — Capital expenditure



B — Actual production and production potential

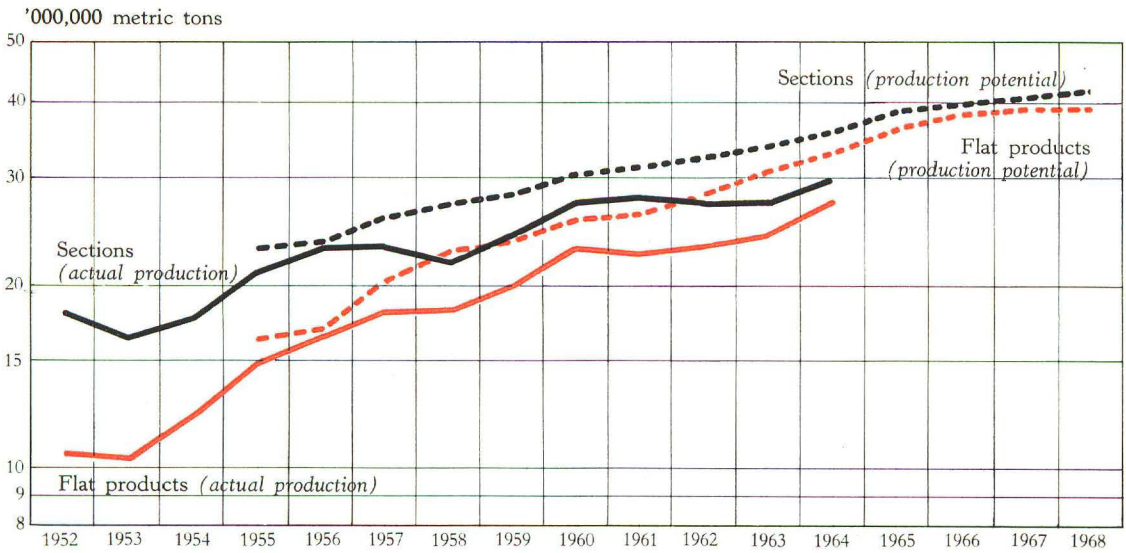
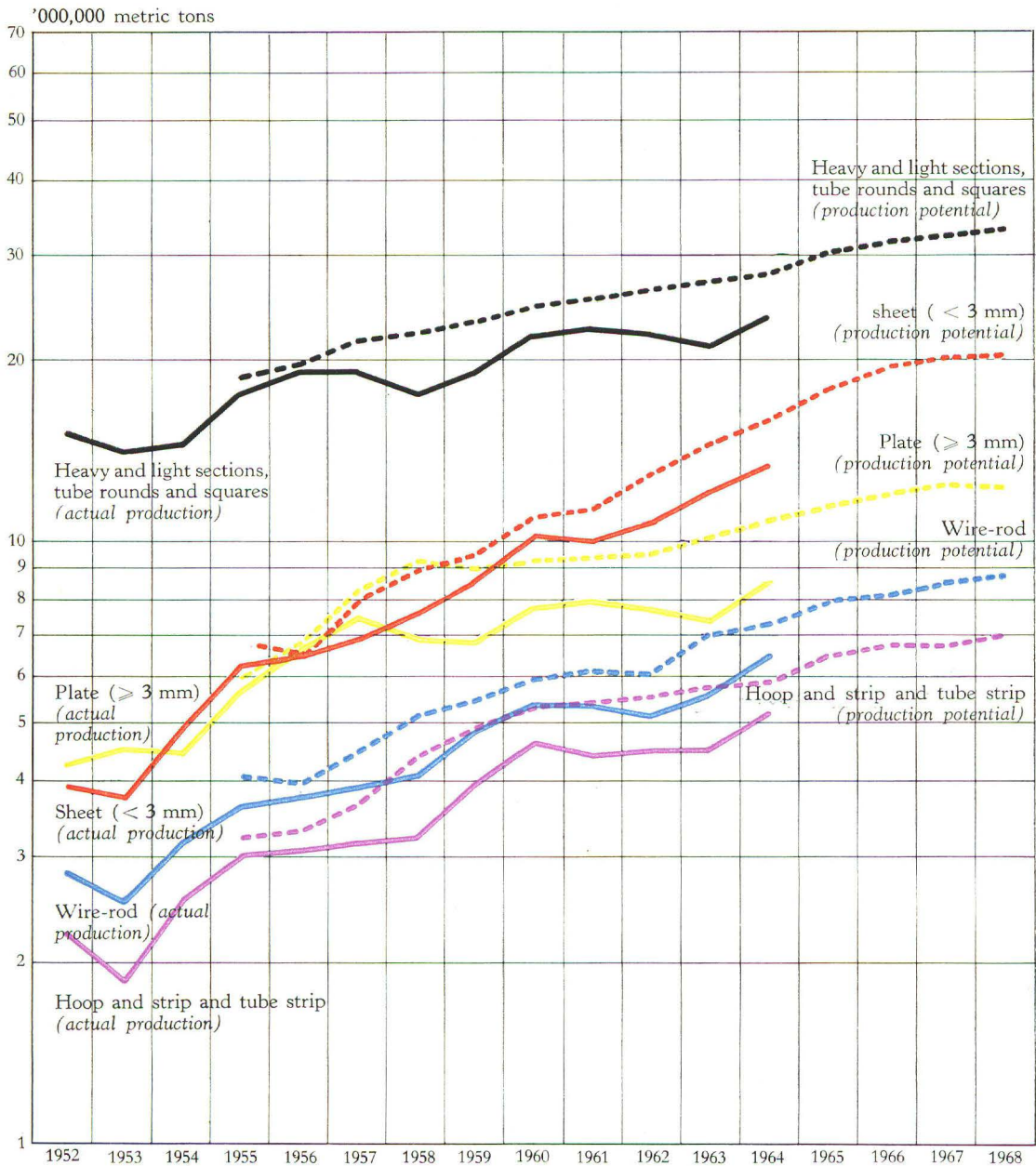


FIGURE 13

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



Between 1952 and 1964, actual production of rolled products increased at an average annual rate of 6.0 % overall, 4.3 % for sections (wire-rod 7.1 %) and 8.3 % for flats (cold-reduced sheet 25.0 %). The rate of increase in production potential for 1964-68 is expected to go up to 4.6 % for sections and down to 4.5 % for flats, the former thus overtaking the latter for the first time since the present series of surveys was instituted.

TABLE 23
Average Annual Rate of Development in the Rolling Sector,
by Types of Finished Product

| Product | Actual production | | | Production potential | | |
|--|--|--|--|--|--|--|
| | 1952 (^{'000,000} m.t.) | Cumulative average annual rate of increase (in %) | 1964 (^{'000,000} m.t.) | 1964 (^{'000,000} m.t.) | Cumulative average annual rate of increase (in %) | 1968 (^{'000,000} m.t.) |
| Heavy and light sections, incl. tube rounds and squares | 15.2 | + 3.7 | 23.5 | 27.9 | + 4.5 | 33.3 |
| Wire-rod | 2.8 | + 7.1 | 6.4 | 7.3 | + 4.8 | 8.8 |
| <i>Total, sections</i> | <i>18.0</i> | <i>+ 4.3</i> | <i>29.9</i> | <i>35.2</i> | <i>+ 4.6</i> | <i>42.1</i> |
| Hoop and strip and tube strip | 2.3 | + 7.0 | 5.2 | 5.9 | + 4.3 | 7.0 |
| Plate of 3 mm and over | 4.3 | + 6.0 | 8.7 | 10.9 | + 2.9 | 12.2 |
| Hot-rolled sheet under 3 mm | 3.1 | — 4.6 | 1.8 | 2.5 | — | 2.5 |
| Cold-reduced sheet under 3 mm | 0.8 | +25.0 | 11.6 | 13.6 | + 6.7 | 17.6 |
| <i>Total, flat products</i> | <i>10.5</i> | <i>+ 8.3</i> | <i>27.3</i> | <i>32.9</i> | <i>+ 4.5</i> | <i>39.3</i> |
| Total, rolled products | 28.5 | + 6.0 | 57.2 | 68.1 | + 4.6 | 81.4 |
| (of which: products rolled in continuous and semi-continuous mills) | (.) | (.) | (33.6) | (39.8) | (+ 5.7) | (49.7) |

Production potential for flat products in 1952 accounted for 37 % of the total potential for finished rolled products; in 1968 the figure is expected to be about 48 %, a proportion already reached in 1964.

Between 1964 and 1968 the proportion of steel to be rolled in continuous and semi-continuous mills should increase from 58 % to 61 %—a notable increase on the earliest figure recorded in this connection, which was 50 %, in 1960.

Table XXVb annexed gives the position with regard to one type of semi-finished product very much in demand, namely coils, produced mostly for cold rerolling in continuous mills: the potential of the hot wide-strip mills is there shown to have increased from 8,000,000 tons in 1955 to 17,000,000 in 1964, with an estimated further expansion to 25,100,000 in 1968, representing an average annual rate of growth of 9 % over thirteen years.

d) General Services

Capital expenditure on power-generating plant in the iron and steel industry, after doubling between 1954 and 1963, slackened a trifle in 1964, doubtless owing to the smaller amounts of blast-furnace gas becoming available as a result of the drastic reduction in the coke rate.

The effects of this expenditure on the production potential for electric current are dealt with in Section II, *d* above in connection with the expected development of pithead power-stations (see Table 12).

Expenditure on other general services, and especially on civil-engineering operations, increased much more substantially still over the same period, more particularly in and after 1960-61, in respect of projects for the construction of a number of integrated plants on the North Sea and Mediterranean coasts.

TABLE 24

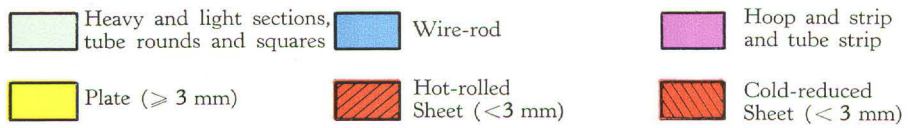
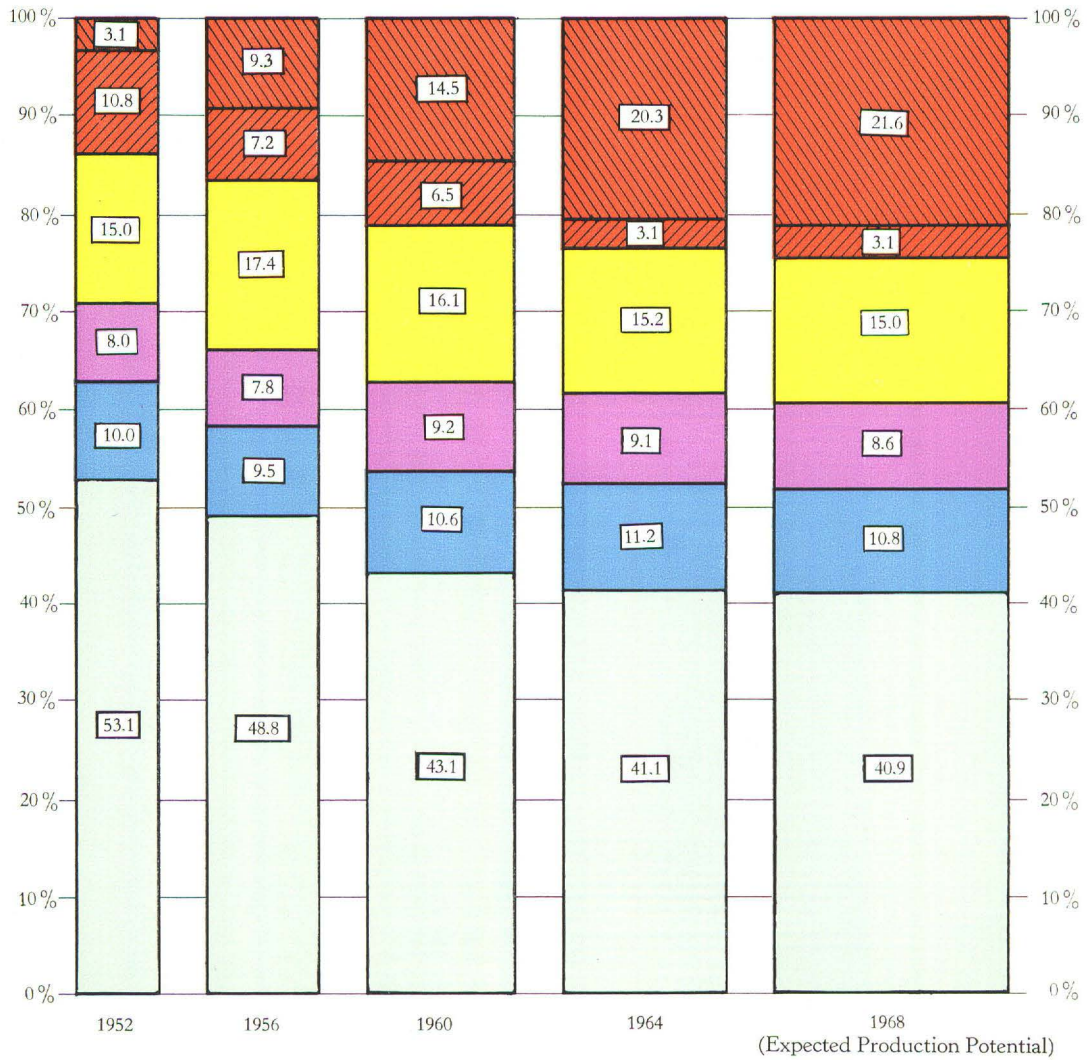
Capital Expenditure on the General Services of the Iron and Steel Industry, 1954-1966

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

| Type of installation | Actual expenditure | | | | | | | | | | | Estimated expenditure (Categories A+B) | |
|--|--------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|--------------|
| | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Power-generating plant and distribution networks | 43.0 | 39.3 | 32.0 | 43.2 | 56.8 | 58.8 | 60.7 | 71.7 | 84.2 | 93.6 | 78.6 | 57.9 | 25.2 |
| Miscellaneous | 31.5 | 37.8 | 60.9 | 70.7 | 78.9 | 69.7 | 96.6 | 137.4 | 162.9 | 226.1 | 216.0 | 142.0 | 77.5 |
| Total | 74.5 | 77.1 | 92.9 | 113.9 | 135.7 | 128.5 | 157.3 | 209.1 | 247.1 | 319.7 | 294.6 | 199.9 | 102.7 |

FIGURE 14

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



V. CONCLUSIONS

The three Executives' Study on the Long-Term Energy Outlook, a second edition of which was issued at the end of 1964, indicates the difficulty likely to be encountered in keeping Community production of hard coal at its present level. The collieries fully recognize this, and each annual investment survey since 1963 has indicated a rather more marked contraction of the aggregate production potential. Notwithstanding the continued expenditure on productivity improvements in 1964, which is expected to increase further in 1965 at the collieries remaining in production, the estimated potential in 1968 is less than 235,000,000 tons, a drop of nearly 8,000,000 from the 1964 level.

Community coal is having to compete not only with petroleum products, but also with imported coal, which is even being used for coke production in some parts of the Community. This is the more noteworthy inasmuch as the demand for coke itself is stagnant, owing particularly to the reduction in specific consumption at the blast-furnaces. For this reason, investment in the carbonization sector, and especially in the mine-owned coking-plants, continues to fall, and the potential in 1968 is put at about 1 1/2 million tons below that in 1964.

Expansion at the pithead and steelworks-owned thermal power/stations, on the other hand, will proceed, though more slowly than was suggested by earlier surveys: their maximum electric capacity is now expected to rise from 13,300 MW in 1964 to 14,900 in 1968, approximately the figure given in the 1964 survey for 1967.

As before, most of the actual and estimated expenditure in this sector is on the large-capacity stations; an increasing proportion is going on the provision of heating and refrigeration to urban agglomerations and industry.

The rate of investment in the Community iron-ore industry in 1964 was only about half of the annual average for the period 1956-1962. Expenditure as low as this cannot offset the effects on production of the closures made necessary by the pressure of competition from overseas ores, so that Community potential shows a decrease of some 5 1/2 million tons from 1963 to 1964. The level is expected to creep up again somewhat in the years immediately ahead: this is, however, due entirely to expansion in one orefield, Lorraine, while everywhere else the gradual contraction will continue.

On the iron and steel side, the leap in production in 1964 demonstrated the existence of further scope for expansion. The recent movement of investment is also encouraging, though there is a certain over-sensitivity to market fluctuations.

In 1963, in continuance of various major projects in many cases adopted amid the favourable business conditions prevailing two or three years earlier, the enterprises approved a record expenditure amounting to something like 20 dollars per ton of crude steel produced; in 1964 expenditure was back to about 15 dollars per ton, much the same as in 1961-62 and still well above the annual average for the years before that. Though a further drop is indicated in real expenditure for 1965, investment declarations received by the High Authority subsequent to the date of the present survey suggest that of late enterprises have been tending to start going ahead with projects once more.

By and large, the orientation of present and future investment is in line with the productivity targets now bulking so large among the concerns of the Community industry : while substantial sums are still being spent on the new coastal plants, the focus is more and more on the modernization of production at its various stages, the blast-furnaces, the steelworks and the rolling-mills.

Investment in the **blast-furnace** sector in 1964, which worked out higher than had been forecast at the beginning of the year, led to further improvements in unitary capacity and operating techniques, and in particular to more intensive burden preparation. One result will be to speed up the rate of increase in pig-iron production potential, which is estimated at 4.7 % per annum for the years 1964-68, as against 5.0 % per annum in the case of crude-steel potential.

Assuming 96 % utilization of the "aggregate individual" potentials declared, present estimates suggest a maximum possible crude-steel production in 1968 of some 108,000,000 tons. This sharp increase is due not so much to plans to install new **steelworks** as to the expected larger availabilities of pig-iron and to the fact that a number of enterprises have decided to keep in production for some years longer capacity which in view of the recent recession they had been intending to scrap.

New investment is concentrated almost entirely on oxygen steelworks, which will by 1968 be producing nearly 30 % of all Community steel, approximately the same proportion as the basic Bessemer plants (gradually contracting) and the open-hearth (pretty well unchanged). This more or less equal distribution is, however, in total Community production only : the share of oxygen steelworks in production potential varies widely from region to region. It is not an accurate reflection of the degree of modernization in the region concerned, since each of the production processes has its advantages according to the characteristics of the ore used and the type of manufacture for which the steel produced is to be employed.

In the **rolling-mill** sector, investment is more evenly divided among the different types of mill than in former years. For semi-finished products (blooms and slabs), the traditional mills are meeting with increased competition, especially in Germany, from continuous casting, expenditure on which, according to enterprises' declarations, is in 1966 to be four times as great as in 1964. As regards finished products, the flat-product mills will, as before, account for the larger portion of the amounts invested, but their potential will no longer increase faster than that of the section mills. Investment activity in both cases is concentrated more particularly on continuous and semi-continuous mills, which are expected by 1968 to roll 61 % of the Community's total output of finished products, as compared with a mere 50 % as lately as 1960.

ANNEXES

I — Basic Definitions

II — Statistical Tables

I — BASIC DEFINITIONS

To ensure that the figures obtained shall be comparable, the High Authority has 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 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, 1965;*

B — *Projects approved but not yet in progress on January 1, 1965;*

C — *Other projects planned to be started between January 1, 1965 and December 31, 1967.*

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 Payment Union (E.P.U.) and subsequently that of the *European Monetary Agreement* (E.M.A.). 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 | Fr. -Fr. | 50 | 50 | 50 | 50 | 50 | 50 |
| France ⁽¹⁾ | Fr. ⁽²⁾ | 350 | 377 ⁽³⁾ | 420 | 4.937 ⁽³⁾ | 4.937 | 4.937 |
| Italy | Lit. | 625 | 625 | 625 | 625 | 625 | 625 |
| Netherlands | Fl. | 3.80 | 3.80 | 3.80 | 3.80 | 3.65 ⁽⁶⁾ | 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).

⁶⁾ 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) the following, basis 1961 = 100, and brought up to date in respect of 1963 :

| 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 |
|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 81.6 | 80.5 | 79.9 | 82.1 | 85.4 | 89.9 | 92.9 | 94.9 | 97.2 | 100.0 | 104.8 | 109.4 |

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 production in 1964 of only about 0.9 million metric tons (of which 0.5 million not shown in any official statistics), out of 228.0 million, i.e. less than 0.4 %.

(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 busbars 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 busbars 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.

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 1964. 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 0.4 % for crude steel and 1.1 % 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 1964. 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.

II — STATISTICAL TABLES

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| |
|---------------------------|
| HARD-COAL INDUSTRY |
|---------------------------|

Total investment

TABLE I
Capital Expenditure by Coalfields

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

| Coalfield | Actual expenditure | | | | | | | Estimated expenditure | | |
|--|----------------------------|---------------|------|----------------------------|----------------------------|---------------|---------------|-----------------------|-----------------|---------------|
| | 1954 | 1955 | 2) | 1961 | 1962 | 1963 | 1964 | on | on Jan. 1, 1965 | |
| | | | | | | | | Jan. 1, | for | |
| 1964 for | 1964 | 1965 | 1966 | | | | | | | |
| Ruhr | 175.71 ⁴⁾ | 175.46 | | 196.30 ⁴⁾ | 190.05 ⁴⁾ | 164.72 | 168.42 | 181.54 | 202.36 | 159.67 |
| Aachen | 11.16 | 9.77 | | 18.09 | 19.51 | 10.22 | 6.85 | 7.12 | 7.90 | 5.56 |
| Lower Saxony | 9.82 | 3.71 | | 5.06 | 4.98 | 5.25 | 4.62 | 8.32 | 8.83 | 12.44 |
| Saar | 19.36 | 18.96 | | 33.82 | 32.92 | 36.46 | 21.55 | 26.91 | 24.36 | 20.75 |
| GERMANY (F.R.) | 216.05 ⁴⁾ | 207.90 | | 253.27 ⁴⁾ | 247.46 ⁴⁾ | 216.65 | 201.44 | 223.89 | 243.45 | 198.42 |
| Campine ²⁾ | 16.89 | 15.76 | | 14.06 | 7.64 | 11.65 | 7.67 | 11.10 | 10.34 | 9.24 |
| Southern Belgium ²⁾ | 30.07 | 25.27 | | 18.48 | 16.45 | 16.96 | 16.33 | 22.89 | 20.17 | 12.55 |
| Dutch Limburg ²⁾ | 15.41 | 19.67 | | 14.20 | 21.97 | 18.75 | 13.65 | 15.88 | 13.16 | 7.93 |
| BELGIUM and NETHERLANDS | 74.09 | 66.00 | | 49.77 | 50.64 | 50.22 | 39.77 | 51.77 | 44.28 | 29.93 |
| Nord/Pas-de-Calais | 55.18 | 57.14 | | 38.24 | 33.11 | 24.06 | 14.66 | 16.02 | 18.45 | 20.83 |
| Lorraine | 52.83 | 45.55 | | 28.29 | 23.03 | 20.17 | 20.21 | 22.51 | 21.45 | 20.76 |
| Centre-Midi | 24.14 | 14.99 | | 9.52 | 7.70 | 9.82 | 9.69 | 9.35 | 9.06 | 9.56 |
| Independent plants ²⁾ | 16.46 | 11.08 | | 0.28 | 0.10 | 0.94 | 1.64 | 1.45 | 0.66 | — |
| FRANCE | 148.61 | 128.76 | | 76.33 | 63.94 | 54.99 | 46.20 | 49.33 | 49.62 | 51.15 |
| ITALY | 6.69 | 5.53 | | 0.89 | 4.41 | 3.55 | 6.37 | 8.97 | 8.74 | 4.55 |
| Total | 445.44⁴⁾ | 408.19 | | 380.26⁴⁾ | 366.45⁴⁾ | 325.41 | 293.78 | 333.96 | 346.09 | 284.05 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

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

³⁾ Up to 1957, coking and briquetting plants; after 1958, briquetting plants only.

⁴⁾ Revised.

| |
|-----------------------------|
| HARD-COAL COLLIERIES |
|-----------------------------|

Investment

TABLE II
Capital Expenditure by Coalfields

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

| Coalfield | Actual expenditure | | | | | | | Estimated expenditure | | |
|--------------------------------|--------------------|---------------|------------------|---------------|---------------|---------------|---------------|-----------------------|------------------------|---------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on Jan. 1, 1964 for | on January 1, 1965 for | |
| | | | | | | | | 1964 | 1965 | 1966 |
| Ruhr | 83.23 | 103.14 | | 124.51 | 117.14 | 109.29 | 115.72 | 121.97 | 141.44 | 89.51 |
| Aachen | 9.07 | 8.61 | | 10.36 | 10.79 | 8.18 | 5.73 | 5.76 | 5.32 | 4.11 |
| Lower Saxony | 4.09 | 2.60 | | 4.42 | 3.61 | 4.55 | 3.87 | 4.78 | 3.45 | 3.55 |
| Saar | 15.16 | 11.97 | | 24.03 | 19.06 | 20.50 | 15.78 | 16.54 | 14.72 | 13.18 |
| GERMANY (F.R.) | 111.55 | 126.32 | | 163.32 | 150.60 | 142.52 | 141.10 | 149.05 | 164.93 | 110.35 |
| Campine | 13.45 | 12.89 | | 6.48 | 7.08 | 10.61 | 6.36 | 7.45 | 7.14 | 8.90 |
| Southern Belgium | 24.58 | 22.87 | | 8.92 | 8.10 | 10.39 | 10.65 | 14.03 | 10.81 | 7.02 |
| BELGIUM | 38.03 | 35.76 | | 15.40 | 15.18 | 21.00 | 17.01 | 21.48 | 17.95 | 15.92 |
| NETHERLANDS (Limburg) ... | 11.60 | 16.87 | | 12.05 | 15.71 | 12.39 | 10.29 | 11.83 | 9.02 | 6.22 |
| Nord/Pas-de-Calais | 38.42 | 36.86 | | 22.15 | 13.73 | 14.33 | 8.58 | 9.16 | 13.76 | 16.69 |
| Lorraine | 28.07 | 27.84 | | 14.34 | 18.23 | 18.40 | 18.63 | 20.26 | 18.69 | 19.56 |
| Centre/Midi | 12.84 | 10.35 | | 7.47 | 5.93 | 7.17 | 7.94 | 7.34 | 6.87 | 5.87 |
| FRANCE | 79.33 | 75.05 | | 43.96 | 37.89 | 39.90 | 35.15 | 36.76 | 39.32 | 42.12 |
| ITALY (Sulcis and La Thuile) . | 1.28 | 2.40 | | 0.61 | 1.12 | 1.68 | 1.84 | 1.84 | 0.84 | 0.65 |
| Total | 241.79 | 256.40 | | 235.34 | 220.50 | 217.49 | 205.39 | 220.96 | 232.06 | 175.26 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

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

Investment

TABLE III
Capital Expenditure by Areas

¹⁾'000,000 dollars (E.M.A. units of account)

| Area | Actual expenditure | | | | | | | Estimated expenditure | | |
|------------------------------------|--------------------|--------------|---------------|--------------|--------------|--------------|--------------|-----------------------|---------------|--------------|
| | 1954 | 1955 | ²⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, | |
| | | | | | | | | Jan. 1, 1964 for | 1965 | 1966 |
| Mine-owned coking-plants | | | | | | | | | | |
| Ruhr | 32.55 | 24.83 | | 18.60 | 17.11 | 10.13 | 12.95 | 15.98 | 15.68 | 20.79 |
| Aachen | 1.43 | 0.34 | | 1.12 | 0.52 | 0.30 | 0.35 | 0.45 | 0.27 | 0.16 |
| Lower Saxony | 0.01 | 0.05 | | — | — | — | — | — | — | — |
| Saar | 2.31 | 2.03 | | 1.18 | 5.39 | 4.19 | 1.00 | 1.40 | 1.19 | 0.77 |
| GERMANY (F.R.) | 36.30 | 27.25 | | 20.90 | 23.02 | 14.62 | 14.30 | 17.83 | 17.14 | 21.72 |
| BELGIUM and the NETHERLANDS | 9.70 | 4.85 | | 1.87 | 2.74 | 1.22 | 0.74 | 0.74 | 0.51 | 0.71 |
| Nord/Pas-de-Calais | 7.29 | 7.61 | | 6.47 | 4.43 | 1.63 | 1.31 | 1.40 | 1.18 | 1.70 |
| Lorraine | 13.55 | 12.01 | | 12.65 | 4.47 | 0.97 | 0.62 | 0.98 | 1.20 | 0.40 |
| Centre/Midi | 1.01 | 0.50 | | 1.21 | 1.18 | 0.59 | 0.24 | 0.50 | 0.30 | 0.30 |
| FRANCE | 21.85 | 20.12 | | 20.33 | 10.08 | 3.19 | 2.17 | 2.88 | 2.68 | 2.40 |
| Total | 67.85 | 52.22 | | 43.10 | 35.84 | 19.03 | 17.21 | 21.45 | 20.33 | 24.83 |
| Independent coking-plants | | | | | | | | | | |
| BELGIUM and the NETHERLANDS | 2.02 | 0.45 | | 1.16 | 1.84 | 1.64 | 1.38 | 1.16 | 0.10 | — |
| FRANCE ³⁾ | 15.47 | 10.31 | | — | — | — | — | — | — | — |
| ITALY | 2.00 | 1.56 | | 0.28 | 3.29 | 1.87 | 4.53 | 7.13 | 7.90 | 3.90 |
| Total | 19.49 | 12.32 | | 1.44 | 5.13 | 3.51 | 5.91 | 8.29 | 8.00 | 3.90 |
| Grand Total | 87.34 | 64.54 | | 44.54 | 40.97 | 22.54 | 23.12 | 29.74 | 28.33 | 28.73 |

¹⁾ Including low and medium-temperature coking-plants.

²⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

³⁾ Exclusive of Gaz de France from 1957.

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|---|
| HARD-COAL BRIQUETTING-PLANTS |
|---|

Investment

TABLE IV
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure | | |
|--------------------------|--------------------------|-------------|------------------|-------------|-------------|-------------|-------------|-----------------------|---------------|-------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, | |
| | | | | | | | | Jan. 1, | 1965 for | 1966 |
| | | | | | | | 1964 for | 1965 | 1966 | |
| Ruhr | 1.58 ²⁾ | 2.42 | | 0.12 | 0.82 | 2.07 | 0.62 | 0.78 | 1.42 | 0.50 |
| Aachen | — | 0.09 | | 0.17 | 0.51 | 0.33 | 0.21 | 0.14 | 1.04 | 0.53 |
| Lower Saxony | 0.05 | 0.08 | | 0.46 | 0.51 | 0.24 | 0.11 | 0.12 | 0.06 | 0.06 |
| GERMANY (F.R.) | 1.63 ²⁾ | 2.59 | | 0.75 | 1.84 | 2.64 | 0.94 | 1.04 | 2.52 | 1.09 |
| Campine | — | — | | — | — | 0.36 | 1.02 | 3.36 | 3.03 | 0.29 |
| Southern Belgium | 0.49 | 0.81 | | 0.56 | 1.27 | 2.80 | 2.35 | 2.83 | 0.62 | 0.51 |
| BELGIUM | 0.49 | 0.81 | | 0.56 | 1.27 | 3.16 | 3.37 | 6.19 | 3.65 | 0.80 |
| NETHERLANDS (Limburg) .. | 0.24 | 0.27 | | 0.38 | 1.18 | 0.37 | 0.14 | 0.40 | 0.34 | 0.71 |
| Nord/Pas-de-Calais | 0.57 | 1.95 | | 1.27 | 0.31 | 0.91 | 2.69 | 2.90 | 2.15 | 1.84 |
| Centre/Midi | 0.66 | 0.93 | | 0.19 | 0.37 | 1.52 | 0.17 | 0.50 | 0.95 | 2.59 |
| Independent plants | 0.99 | 0.77 | | 0.28 | 0.10 | 0.94 | 1.64 | 1.45 | 0.66 | — |
| FRANCE | 2.22 | 3.65 | | 1.74 | 0.78 | 3.37 | 4.50 | 4.85 | 3.76 | 4.43 |
| Total | 4.58²⁾ | 7.32 | | 3.43 | 5.07 | 9.54 | 8.95 | 12.48 | 10.27 | 7.03 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Revised.

| |
|---|
| PITHEAD POWER-STATIONS ¹⁾ |
|---|

Investment

TABLE V
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure | | | |
|---------------------------------|--------------------|--------------|----|----------------------------|----------------------------|--------------|--------------|-----------------------|--------------------|--------------|--|
| | 1954 | 1955 | 2) | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | | |
| | | | | | | | | Jan. 1, 1964 for | for | 1966 | |
| Ruhr | 58.35 | 45.07 | | 53.07 ⁽³⁾ | 54.98 ⁽³⁾ | 43.23 | 39.13 | 42.81 | 43.82 | 48.87 | |
| Aachen | } 8.22 | } 6.67 | | 15.23 | 17.02 | 13.64 | 5.97 | 13.16 | 15.04 | 16.39 | |
| Lower Saxony | | | | | | | | | | | |
| Saar | | | | | | | | | | | |
| GERMANY (F.R.) | 66.57 | 51.74 | | 68.30 ⁽³⁾ | 72.00 ⁽³⁾ | 56.87 | 45.10 | 55.97 | 58.86 | 65.26 | |
| Campine | 3.44 | 2.87 | | 7.58 | 0.56 | 0.68 | 0.29 | 0.29 | 0.17 | 0.05 | |
| Southern Belgium | 5.00 | 1.59 | | 9.00 | 7.08 | 3.77 | 3.33 | 6.03 | 8.74 | 5.02 | |
| BELGIUM | 8.44 | 4.46 | | 16.58 | 7.64 | 4.45 | 3.62 | 6.32 | 8.91 | 5.07 | |
| NETHERLANDS (Limburg) ... | 3.57 | 2.53 | | 1.77 | 5.08 | 5.99 | 3.22 | 3.65 | 3.80 | 0.50 | |
| Nord/Pas-de-Calais | 8.90 | 10.72 | | 8.35 | 14.64 | 7.19 | 2.08 | 2.56 | 1.36 | 0.60 | |
| Lorraine | 11.21 | 5.70 | | 1.30 | 0.33 | 0.80 | 0.96 | 1.27 | 1.56 | 0.80 | |
| Centre/Midi | 9.63 | 3.21 | | 0.65 | 0.22 | 0.54 | 1.34 | 1.01 | 0.94 | 0.80 | |
| FRANCE | 29.74 | 19.63 | | 10.30 | 15.19 | 8.53 | 4.38 | 4.84 | 3.86 | 2.20 | |
| ITALY (Sulcis and La Thuile) .. | 3.41 | 1.57 | | — | — | — | — | — | — | — | |
| Total | 111.73 | 79.93 | | 96.95⁽³⁾ | 99.91⁽³⁾ | 75.84 | 56.32 | 70.78 | 75.43 | 73.03 | |

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

²⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

³⁾ Revised.

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| HARD COAL |
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Extraction

TABLE VI

Extraction and Extraction Potential by Coalfields

'000,000, metric tons net

| Coalfield | Actual extraction potential | | | Actual extraction 1964 | Expected extraction potential | | | |
|------------------------------------|-----------------------------|--------------|--------------|------------------------|-------------------------------|--------------|--------------|--------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Ruhr | 127.7 | 123.7 | 124.9 | 117.2 | 123.3 | 124.7 | 124.1 | 123.6 |
| Aachen | 7.5 | 7.8 | 8.2 | 7.7 | 8.2 | 8.4 | 8.5 | 8.5 |
| Lower Saxony | 2.7 | 2.2 | 2.3 | 2.2 | 2.4 | 2.4 | 2.4 | 2.4 |
| Saar | 17.6 | 16.8 | 16.4 | 14.7 | 16.3 | 15.9 | 15.2 | 14.6 |
| GERMANY (F.R.) | 155.5 | 150.5 | 151.8 | 141.8 | 150.2 | 151.4 | 150.2 | 149.1 |
| Campine | 10.5 | 11.8 | 11.9 | 10.1 | 11.1 | 11.1 | 11.1 | 11.5 |
| Southern Belgium | 21.9 | 12.6 | 12.2 | 11.1 | 11.7 | 11.7 | 11.9 | 11.9 |
| BELGIUM | 32.4 | 24.4 | 24.1 | 21.2 | 22.8 | 22.8 | 23.0 | 23.4 |
| NETHERLANDS (Limburg) | 13.0 | 12.7 | 12.2 | 11.5 | 12.3 | 12.3 | 12.1 | 11.8 |
| Nord/Pas-de-Calais | 29.4 | 28.2 | 27.5 | 26.6 | 26.2 | 25.7 | 25.2 | 24.6 |
| Lorraine | 13.6 | 15.0 | 15.0 | 15.6 | 15.0 | 15.0 | 15.0 | 15.0 |
| Centre/Midi | 13.0 | 11.6 | 11.4 | 10.8 | 10.4 | 10.0 | 9.9 | 9.7 |
| FRANCE | 56.0 | 54.8 | 53.9 | 53.0 | 51.6 | 50.7 | 50.1 | 49.3 |
| ITALY (Sulcis and La Thuile) | 1.4 | 0.8 | 0.5 | 0.5 | 0.7 | 0.9 | 1.1 | 1.1 |
| Total | 258.3 | 243.2 | 242.5 | 228.0 | 237.6 | 238.1 | 236.5 | 234.7 |

N.B. The above table does not take into account the extraction of some mines of small capacity (0.9 million metric tons in 1964 of which 0.5 million metric tons from the "small" German mines, which do not figure in the official production statistics).

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| COKE |
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Production

TABLE VII a
Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 ¹⁾ | Expected production potential | | | |
|---------------------------------------|----------------------|-------------|-------------|--------------------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Mine-owned coking-plants | | | | | | | | |
| Ruhr | 36.9 | 36.7 | 35.2 | 31.8 | 34.9 | 35.4 | 35.4 | 35.6 |
| Aachen ²⁾ | 1.3 | 1.9 | 1.9 | 2.0 | 1.9 | 1.8 | 1.9 | 1.9 |
| Lower Saxony | 0.3 | — | — | — | — | — | — | — |
| Saar | 0.9 | 1.4 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 |
| GERMANY (F.R.) | 39.4 | 40.0 | 38.6 | 35.2 | 38.1 | 38.5 | 38.6 | 38.8 |
| BELGIUM and the NETHERLANDS | | | | | | | | |
| Nord/Pas-de-Calais | 4.3 | 4.4 | 4.3 | 4.0 | 4.4 | 3.0 | 2.6 | 2.6 |
| Lorraine | 3.9 | 5.2 | 5.2 | 5.0 | 5.2 | 5.2 | 5.2 | 5.2 |
| Centre/Midi | 1.0 | 2.6 | 2.7 | 2.7 | 2.8 | 2.8 | 2.8 | 2.8 |
| FRANCE | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Total | 5.5 | 8.7 | 8.8 | 8.6 | 8.9 | 8.9 | 8.9 | 8.9 |
| Total | 49.2 | 53.1 | 51.7 | 47.8 | 51.4 | 50.4 | 50.1 | 50.3 |
| Independent coking-plants | | | | | | | | |
| BELGIUM and the NETHERLANDS | 1.8 | 1.6 | 1.5 | 1.2 | 1.4 | 1.4 | 1.4 | 1.4 |
| FRANCE | — | — | — | — | — | — | — | — |
| ITALY | 1.9 | 2.4 | 2.4 | 2.2 | 2.4 | 2.5 | 2.6 | 2.6 |
| Total | 3.7 | 4.0 | 3.9 | 3.4 | 3.8 | 3.9 | 4.0 | 4.0 |
| Steelworks-owned coking-plants | | | | | | | | |
| GERMANY (F.R.) | 8.2 | 11.1 | 10.2 | 7.9 | 8.5 | 8.4 | 8.6 | 8.6 |
| BELGIUM and the NETHERLANDS | 5.1 | 6.8 | 6.5 | 5.7 | 6.5 | 6.6 | 6.6 | 6.6 |
| FRANCE | 4.1 | 4.7 | 4.6 | 4.2 | 4.4 | 4.4 | 4.4 | 4.4 |
| ITALY | 1.3 | 2.6 | 2.3 | 2.4 | 3.7 | 3.7 | 3.7 | 3.7 |
| Total | 19.0 | 25.2 | 23.6 | 20.2 | 23.1 | 23.1 | 23.3 | 23.3 |
| Grand Total | 71.9 | 82.3 | 79.2 | 71.4 | 78.3 | 77.4 | 77.4 | 77.6 |

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

²⁾ Including electrode coke (108,000 metric tons produced in 1964).

TABLE VIII

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

COKING-PLANTS

Technical Data

| Type of coal | 1955 | | 1962 | | 1963 | | 1964 | |
|---|------------------|---------------------------|------------------|---------------------------|------------------|---------------------------|------------------|---------------------------|
| | '000 metric tons | % | '000 metric tons | % | '000 metric tons | % | '000 metric tons | % |
| Group V ¹⁾ | 70 770 | 77.9 | 70 672 | 75.0 | 69 407 | 75.4 | 73 157 | 76.5 |
| Group VI ¹⁾ | 14 541 | 16.0 | 18 202 | 19.3 | 17 850 | 19.4 | 17 782 | 18.6 |
| Other groups | 5 215 | 5.7 | 4 621 | 4.9 | 3 932 | 4.3 | 3 896 | 4.1 |
| Coke breeze and low-temperature coke breeze | 366 | 0.4 | 781 | 0.8 | 873 | 0.9 | 793 | 0.8 |
| Total | 90 892 | 100.0 | 94 276 | 100.0 | 92 062 | 100.0 | 95 628 | 100.0 |
| | '000 metric tons | output kg/t ²⁾ | '000 metric tons | output kg/t ²⁾ | '000 metric tons | output kg/t ²⁾ | '000 metric tons | output kg/t ²⁾ |
| Coke production | 68 850 | 757.5 | 70 645 | 749.3 | 69 301 | 752.8 | 71 449 | 747.2 |
| | metric tons | % of total input | metric tons | % of total input | metric tons | % of total input | metric tons | % of total input |
| Oil input | 43 900 | 0.047 | 60 272 | 0.064 | 67 778 | 0.074 | 50 375 | 0.053 |

¹⁾ The breakdown between Groups V and VI is only approximate.

²⁾ 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.

| | 1955 | 1962 | 1963 | 1964 | |
|---|--|----------------|----------------|----------------|----------------|
| a) Coke-oven gas delivered | '000,000 stand. cub. metres | 29 960 | 31 882 | 30 888 | 32 638 |
| b) Gas output | stand. cub. metres per ton of wet-charged coal | 330 | 338 | 335 | 341 |
| c) Coke-oven gas delivered to outside enterprises or for consumption other than d) ... | '000,000 stand. cub. m. % of a) | 20 335 (67.9) | 22 203 (69.6) | 21 678 (70.2) | 22 277 (68.3) |
| d) Consumption for heating oven : | | | | | |
| 1) Coke-oven gas | '000,000 stand. cub. m. % of 4) | 9 625 (68.0) | 9 679 (68.1) | 9 210 (67.6) | 10 361 (71.8) |
| 2) Producer gas | '000,000 stand. cub. m. % of 4) | 1 119 (7.9) | 1 351 (9.5) | 1 350 (9.9) | 676 (4.7) |
| 4) Blast-furnace and other gases | '000,000 stand. cub. m. % of 4) | 3 408 (24.1) | 3 177 (22.4) | 3 064 (22.5) | 3 387 (23.5) |
| 4) Total consumption of gas for heating ovens | '000,000 stand. cub. m. | 14 152 (100.0) | 14 207 (100.0) | 13 624 (100.0) | 14 424 (100.0) |
| e) Specific consumption in kcal/kg. of dry-charged coal (assuming an average moisture content of 8 %) | | 728 | 704 | 692 | 705 |

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

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| HARD-COAL BRIQUETTES |
|-----------------------------|

Production

TABLE IX

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|-----------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Ruhr | 7.5 | 5.0 | 5.0 | 4.2 | 5.1 | 5.4 | 5.4 | 5.9 |
| Aachen | 0.5 | 0.8 | 0.9 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 |
| Lower Saxony | 0.5 | 0.6 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 |
| GERMANY (F.R.) | 8.5 | 6.4 | 6.5 | 5.5 | 6.6 | 7.0 | 7.0 | 7.5 |
| Campine | — | — | — | — | 0.1 | 0.2 | 0.4 | 0.4 |
| Southern Belgium | 2.3 | 2.5 | 3.0 | 1.4 | 2.7 | 2.7 | 2.7 | 2.7 |
| BELGIUM | 2.3 | 2.5 | 3.0 | 1.4 | 2.8 | 2.9 | 3.1 | 3.1 |
| NETHERLANDS (Limburg) | 1.3 | 1.6 | 1.7 | 1.4 | 1.8 | 1.8 | 1.8 | 1.8 |
| Nord/Pas-de-Calais | 4.6 | 4.0 | 4.2 | 3.4 | 4.3 | 4.2 | 4.2 | 4.2 |
| Centre/Midi | 2.2 | 1.9 | 2.0 | 1.7 | 2.0 | 2.0 | 2.0 | 1.8 |
| Independent plants | 2.2 | 1.5 | 1.2 | 0.6 | 1.5 | 1.5 | 1.5 | 1.5 |
| FRANCE | 9.0 | 7.4 | 7.4 | 5.7 | 7.8 | 7.7 | 7.7 | 7.5 |
| Total | 21.1 | 17.0 | 18.6 | 14.0 | 19.0 | 19.4 | 19.6 | 19.9 |

ELECTRIC CURRENT

Output

TABLE X

Output of Electric Current and Electric Capacity of Pithead Power-Stations ¹⁾ by areas

| Area | Actual electric capacity MW | | | | Actual output 000,000 kWh 1964 | Expected electric capacity MW | | | |
|-------------------------------|-----------------------------|------------------------|------------------------|------------------------|---|-------------------------------|------------------------|------------------------|------------------------|
| | Begin- ning 1955 | Begin- ning 1963 | Begin- ning 1964 | Begin- ning 1965 | | Begin- ning 1966 | Begin- ning 1967 | Begin- ning 1968 | Begin- ning 1969 |
| Ruhr | 1 727 | 4 323 | 4 275 | 4 271 | 20 128 | 4 253 | 4 557 | 5 125 | 5 437 |
| Aachen | 527 | 728 | 1 111 | 1 097 | 4 088 | 1 097 | 1 235 | 1 265 | 1 265 |
| Lower Saxony | | | | | | | | | |
| Saar | | | | | | | | | |
| GERMANY (F.R.) | 2 254 | 5 051 | 5 386 | 5 368 | 24 216 | 5 350 | 5 792 | 6 390 | 6 702 |
| Campine | 253 | 407 | 407 | 409 | 1 419 | 389 | 389 | 389 | 389 |
| Southern Belgium | 388 | 768 | 886 | 868 | 5 217 | 868 | 868 | 991 | 991 |
| BELGIUM | 641 | 1 175 | 1 293 | 1 277 | 6 636 | 1 257 | 1 257 | 1 380 | 1 380 |
| NETHERLANDS (Limburg) .. | 283 | 351 | 418 | 405 | 1 675 | 465 | 465 | 465 | 465 |
| Nord/Pas-de-Calais | 856 | 1 193 | 1 360 | 1 406 | 7 311 | 1 406 | 1 406 | 1 406 | 1 406 |
| Lorraine | 475 | 698 | 713 | 713 | 3 708 | 723 | 723 | 723 | 723 |
| Centre/Midi | 459 | 564 | 564 | 564 | 2 726 | 557 | 557 | 557 | 557 |
| FRANCE | 1 790 | 2 455 | 2 637 | 2 683 | 13 745 | 2 686 | 2 686 | 2 686 | 2 686 |
| ITALY (Sulcis and La Thuille) | — | — | — | — | — | — | — | — | — |
| Total | 4 968 | 9 032 | 9 734 | 9 733 | 46 272 | 9 758 | 10 200 | 10 921 | 11 233 |

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

**PITHEAD
POWER-STATIONS ¹⁾**

Technical Data

TABLE XI a

Specific Consumption of Coal 1964 ²⁾

C = Output of electric current in '000,000 kWh
P = Maximum electric capacity in '000 MW (average at beginning 1964 - beginning 1965)
H = Load-hours per annum (1964)

} 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 | |
| Ruhr | 12 092 | 2 454 | 4 927 | 4 197 | 887 | 4 732 | 2 443 | 521 | 4 689 | 1 085 | 286 | 3 794 | 311 | 122 | 2 549 | 20 128 | 4 270 | 4 714 | 3 031 |
| Aachen | 2 425 | 612 | 3 962 | 1 634 | 468 | 3 491 | — | — | — | — | — | — | 29 | 14 | 2 071 | 4 088 | 1 094 | 3 737 | 3 062 |
| Lower Saxony | | | | | | | | | | | | | | | | | | | |
| Saar | | | | | | | | | | | | | | | | | | | |
| GERMANY (F.R.) | 14 517 | 3 066 | 4 735 | 5 831 | 1 355 | 4 303 | 2 443 | 521 | 4 689 | 1 085 | 286 | 3 794 | 340 | 136 | 2 500 | 24 216 | 5 364 | 4 515 | 3 036 |
| Campine | 726 | 140 | 5 186 | 361 | 108 | 3 343 | 162 | 55 | 2 945 | 170 | 105 | 1 619 | — | — | — | 1 419 | 408 | 3 478 | 2 918 |
| Southern coalfields | 4 905 | 748 | 6 567 | 194 | 50 | 3 880 | 82 | 25 | 3 280 | 35 | 39 | 897 | 1 | 5 | 200 | 5 217 | 867 | 6 017 | 2 540 |
| BELGIUM | 5 631 | 888 | 6 341 | 555 | 158 | 3 513 | 244 | 80 | 3 050 | 205 | 144 | 1 424 | 1 | 5 | 200 | 6 636 | 1 275 | 5 205 | 2 621 |
| Nord/Pas-de-Calais | 5 670 | 825 | 6 873 | 733 | 160 | 4 581 | 782 | 268 | 2 918 | 126 | 130 | 969 | — | — | — | 7 311 | 1 383 | 5 286 | 2 747 |
| Lorraine | — | — | — | 3 601 | 664 | 5 423 | — | — | — | 88 | 43 | 2 047 | 19 | 6 | 3 167 | 3 708 | 713 | 5 201 | 3 212 |
| Centre/Midi | 532 | 80 | 6 650 | 1 091 | 222 | 4 914 | 594 | 125 | 4 752 | 502 | 130 | 3 862 | 7 | 7 | 1 000 | 2 726 | 564 | 4 833 | 3 519 |
| FRANCE | 6 202 | 905 | 6 853 | 5 425 | 1 046 | 5 186 | 1 376 | 393 | 3 501 | 716 | 303 | 2 363 | 26 | 13 | 2 000 | 13 745 | 2 660 | 5 167 | 3 026 |
| NETHERLANDS | — | — | — | 1 150 | 271 | 4 244 | 394 | 105 | 3 752 | 131 | 29 | 4 517 | — | — | — | 1 675 | 405 | 4 136 | 3 391 |
| Total | 26 350 | 4 859 | 5 423 | 12 961 | 2830 | 4 457 | 4 457 | 1 099 | 4 056 | 2 137 | 762 | 2 804 | 367 | 154 | 2 383 | 46 272 | 9 704 | 4 768 | 2 986 |

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, 1965. 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 1964 and 1965).
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, 1964.

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|---|
| PITHEAD POWER-STATIONS ¹⁾ |
|---|

Technical Data

TABLE XI b

Specific Consumption of Coal, 1955-1964

| | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 |
|---|---------------------|-------|-------|-------|-------|-------|-------|-------|---------------------|---------------------|
| Average specific consumption in kcal/kWh | 3 703 ²⁾ | 3 649 | 3 556 | 3 492 | 3 337 | 3 227 | 3 113 | 3 014 | 3 038 ²⁾ | 2 986 ²⁾ |
| Consumption of secondary products in % of consumption of coal (ton for ton) | 88% | 88% | 88% | 87% | 87% | 92% | 92% | 89% | 92% | 91% |
| Load-hours per annum | 4 761 | 4 934 | 5 036 | 4 530 | 4 185 | 3 965 | 4 020 | 4 518 | 4 405 ²⁾ | 4 768 ²⁾ |

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

²⁾ Approximate figures.

³⁾ See Table XI for breakdown by coalfields.

The ratio of maximum electric capacity to nominal installed capacity varies as follows :

| | |
|--------------------------------|-------|
| Beginning of 1954 | 83.5% |
| do. 1955 | 84.5% |
| do. 1956 | 87.9% |
| do. 1957 | 87.9% |
| do. 1958 | 88.8% |
| do. 1959 | 88.8% |
| do. 1960 | 89.4% |
| do. 1961 | 89.3% |
| do. 1962 | 89.2% |
| do. 1963 | 89.2% |
| do. 1964 | 89.1% |
| do. 1965 | 89.0% |
| Forecast for beginning of 1969 | 90.6% |

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| IRON-ORE INDUSTRY |
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Investment

TABLE XIII

Capital Expenditure by Orefields

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

| Orefield | Actual expenditure | | | | | | | Estimated expenditure | | |
|--|--------------------|--------------|------------------|--------------|---------------------------|--------------|--------------|---------------------------|--------------------|--------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | |
| | | | | | | | | Jan. 1, 1964 for | 1964 | 1965 |
| Salzgitter, Ilsede, Harzvorland ... | 2.21 | 4.73 | | 9.43 | 4.50 ⁴⁾ | 1.95 | 3.82 | 3.85 ⁴⁾ | 5.15 | 0.90 |
| Osnabrück, Weser-Wiehengeb. . | 1.15 | 0.70 | | 0.75 | 0.62 | 0.30 | 0.27 | 0.14 | 0.32 | — |
| Siegerland-Wied | 2.20 | 1.30 | | 1.37 | 1.16 | 0.27 | 0.35 | 0.11 | — | — |
| Central and Southern Germany ²⁾ . | 0.83 | 0.77 | | 0.54 | 0.26 | 0.08 | 0.10 | 0.07 | 0.07 | — |
| Other German fields ³⁾ | 0.73 | 1.25 | | 1.70 | 0.75 | 0.41 | 0.90 | 1.07 | 1.10 | 1.32 |
| GERMANY | 7.12 | 8.75 | | 13.79 | 7.29⁴⁾ | 3.01 | 5.44 | 5.24⁴⁾ | 6.64 | 2.22 |
| BELGIUM | — | — | | 0.11 | 0.01 | — | — | — | — | — |
| Eastern France | 16.43 | 16.62 | | 30.60 | 26.98 | 18.92 | 15.18 | 18.71 | 19.91 | 19.26 |
| Western France | 1.26 | 1.83 | | 4.86 | 8.14 | 2.99 | 1.92 | 2.99 | 2.64 | 2.18 |
| French - Centre-Midi | 0.19 | 0.15 | | 0.15 | 0.10 | 0.18 | 0.05 | 0.09 | 0.11 | 0.10 |
| FRANCE | 17.88 | 18.60 | | 35.61 | 35.22 | 22.09 | 17.15 | 21.79 | 22.66 | 21.54 |
| ITALY | 4.09 | 2.47 | | 1.71 | 2.76 | 1.79 | 0.92 | 0.70 | 0.93 | 1.01 |
| LUXEMBOURG | 0.37 | 0.88 | | 1.22 | 1.17 | 1.36 | 0.79 | 1.01 | 1.21 | 1.16 |
| Total | 29.46 | 30.70 | | 52.44 | 46.45⁴⁾ | 28.25 | 24.30 | 28.74⁴⁾ | 31.44 | 25.93 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Sauerland-Waldeck, Lahn-Dill, Taunus-Hunsrück, Oberhessen.

³⁾ Doggererzgebiet, Kreideerzgebiet.

⁴⁾ Revised.

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| IRON-ORE INDUSTRY |
|--------------------------|

Extraction

TABLE XIV
Extraction and Extraction Potential by Orefields

'000,000 metric tons

| Orefield | Extraction potential | | | Actual extraction 1964 | Expected extraction potential | | | |
|--|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Salzgitter, Ilsede, Harzvorland | 9.5 | 10.1 | 7.6 | 7.0 | 8.0 | 7.9 | 7.9 | 8.2 |
| Osnabrück, Weser-Wiehengebirge ... | 1.8 | 2.1 | 1.5 | 1.2 | 1.5 | 1.5 | 1.5 | 1.5 |
| Siegerland-Wied | 1.4 | 0.8 | 0.6 | 0.6 | 0.1 | — | — | — |
| Central and Southern Germany ¹⁾ ... | 1.7 | 1.3 | 1.0 | 0.9 | 1.0 | 0.9 | 0.9 | 0.8 |
| Other German fields ²⁾ | 2.2 | 2.4 | 2.0 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 |
| GERMANY | 16.6 | 16.7 | 12.7 | 11.6 | 12.6 | 12.3 | 12.3 | 12.5 |
| BELGIUM | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| Eastern France | 48.3 | 64.4 | 64.0 | 57.5 | 65.9 | 67.4 | 69.0 | 70.9 |
| Western France | 4.1 | 6.3 | 5.2 | 3.9 | 5.4 | 5.4 | 5.4 | 5.5 |
| French - Centre, Midi | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| FRANCE | 52.8 | 70.9 | 69.3 | 61.5 | 71.4 | 72.9 | 74.5 | 76.5 |
| ITALY | 2.7 | 1.8 | 1.8 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 |
| LUXEMBOURG | 7.6 | 8.3 | 8.3 | 6.7 | 6.8 | 6.6 | 6.9 | 6.7 |
| Total | 79.8 | 97.9 | 92.3 | 81.5 | 92.5 | 93.5 | 95.4 | 97.4 |

¹⁾ Sauerland-Waldeck, Lahn-Dill, Taunus-Hunsrück, Oberhessen.

²⁾ Doggererzgebiet, Kreideerzgebiet.

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|--------------------------------|
| IRON AND STEEL INDUSTRY |
|--------------------------------|

Total Investment

TABLE XV
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, 1964 for | on January 1, 1965 for | | |
| | 1954 | 1955 | ¹⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | } 210.22 | 60.88 | | 90.86 | 105.66 ⁴⁾ | 114.04 | 78.49 | 54.35 ³⁾ | 40.40 | 9.52 |
| North Rhine/Westphalia | | 216.31 | | 271.48 | 262.67 | 291.19 | 250.21 | 272.01 | 253.89 | 219.37 |
| Southern Germany ³⁾ | | 12.00 | | 17.99 | 19.26 | 9.57 | 10.87 | 10.76 | 12.16 | 20.33 |
| Saar | | 15.61 | 19.41 | 41.71 | 29.94 | 38.31 | 29.97 | 31.02 | 42.49 | 31.66 |
| GERMANY | 225.83 | 308.60 | | 422.04 | 417.53 ⁴⁾ | 453.11 | 369.54 | 368.14 ³⁾ | 348.74 | 280.88 |
| BELGIUM | 32.92 | 33.14 | | 127.56 | 139.45 | 165.41 | 111.58 | 112.14 | 120.76 | 111.57 |
| Eastern France | } 125.86 | 71.40 | | 186.01 | 227.58 | 174.18 | 121.23 | 138.43 | 152.18 | 125.01 |
| Northern France | | 22.54 | | 152.37 | 159.62 | 103.64 | 59.45 | 70.97 | 35.24 | 11.16 |
| France - other areas | | 14.27 | | 34.40 | 36.57 | 36.93 | 28.94 | 36.95 | 32.02 | 20.11 |
| FRANCE | 125.86 | 108.21 | | 372.78 | 423.77 | 314.75 | 209.62 | 246.35 | 219.44 | 156.28 |
| Italy - coastal areas | } 35.85 | 10.35 | | 54.77 | 77.76 | 349.69 | 421.82 | 337.08 | 185.00 | 72.31 |
| Italy - other areas | | 25.56 | | 52.09 | 79.95 | 96.96 | 94.96 | 92.30 | 51.25 | 19.76 |
| ITALY | 35.85 | 35.91 | | 106.86 | 157.71 | 446.65 | 516.78 | 429.38 | 236.25 | 92.07 |
| LUXEMBOURG | 25.08 | 22.13 | | 31.37 | 39.37 | 43.51 | 35.87 | 28.67 | 26.21 | 14.88 |
| NETHERLANDS | 7.94 | 16.34 | | 62.43 | 52.53 | 56.10 | 47.54 | 54.08 | 40.51 | 41.61 |
| Total | 453.48 | 524.33 | | 1123.04 | 1230.36 ⁴⁾ | 1479.53 | 1290.93 | 1238.49 ³⁾ | 991.91 | 697.29 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

⁴⁾ Revised.

**STEELWORKS-OWNED
COKING-PLANTS**

Investment

TABLE XVI a
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------------|------------------|--------------|--------------|--------------|--------------|--|------------------------|-------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on Jan. 1, 1964 for | on Jan. 1, 1965 for | |
| | | | | | | | | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | } 4.18 | 0.10 | | 0.29 | 0.39 | 1.98 | 0.22 | 0.20 | 0.19 | — |
| North Rhine/Westphalia | | 1.53 | | 0.82 | 0.45 | 0.42 | 0.25 | 0.30 | 0.30 | — |
| Southern Germany ³⁾ | | 0.14 | | 0.04 | 0.01 | 0.03 | 0.03 | 0.01 | 0.03 | — |
| Saar | 1.05 | 4.05 | | 1.84 | 1.69 | 1.07 | 0.87 | 0.17 | 0.99 | 0.13 |
| GERMANY | 5.23 | 5.82 | | 2.99 | 2.54 | 3.50 | 1.37 | 0.68 | 1.51 | 0.13 |
| BELGIUM | 1.39 | 2.82 | | 2.55 | 2.07 | 2.78 | 1.11 | 0.95 | 1.96 | 1.06 |
| Eastern France | } 9.29 | 5.10 | | 7.95 | 9.78 | 2.18 | 0.44 | 0.79 | 0.64 | 0.37 |
| Northern France | | — | | 0.47 | 0.12 | 0.15 | 0.23 | 0.59 | 0.52 | 0.06 |
| France - other areas | | 0.81 | | 0.45 | 0.35 | 0.20 | 0.15 | 0.20 | 0.20 | — |
| FRANCE | 9.29 | 5.91 | | 8.87 | 10.25 | 2.53 | 0.82 | 1.58 | 1.36 | 0.43 |
| Italy - coastal areas | — | — | | 3.29 | 8.25 | 24.03 | 25.31 | 11.93 | 10.98 | 3.91 |
| Italy - other areas | — | — | | — | — | — | — | — | — | — |
| ITALY | — | — | | 3.29 | 8.25 | 24.03 | 25.31 | 11.93 | 10.98 | 3.91 |
| LUXEMBOURG | — | — | | — | — | — | — | — | — | — |
| NETHERLANDS | 2.08 | 5.39 | | 0.60 | 1.85 | 0.96 | 1.07 | 1.12 | 1.75 | 0.81 |
| Total | 17.99 | 19.94 | | 18.30 | 24.96 | 33.80 | 29.68 | 16.26 | 17.56 | 6.34 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---------------------------|
| BURDEN PREPARATION |
|---------------------------|

Investment

TABLE XVI b
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------------|------------------|--------------|----------------------------|---------------|--------------|--|--------------------|--------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | |
| | | | | | | | | Jan. 1, 1964 for | 1965 | 1966 |
| Northern Germany ²⁾ | | 2.69 | | 0.40 | 3.21 ⁴⁾ | 8.22 | 1.74 | 2.53 ⁴⁾ | 1.45 | — |
| North Rhine/Westphalia | } 3.08 | 8.43 | | 23.54 | 9.40 | 11.76 | 9.91 | 9.06 | 2.28 | 1.48 |
| Southern Germany ³⁾ | | 0.04 | | 0.02 | 0.03 | — | 0.07 | 0.09 | 0.24 | — |
| Saar | 0.12 | 0.03 | | 3.64 | 1.75 | 2.61 | 3.45 | 3.00 | 5.40 | 11.86 |
| GERMANY | 3.20 | 11.19 | | 27.60 | 14.39 ⁴⁾ | 22.59 | 15.17 | 14.68 ⁴⁾ | 9.37 | 13.34 |
| BELGIUM | 0.10 | 0.27 | | 13.75 | 12.91 | 10.67 | 7.09 | 6.49 | 5.80 | 8.73 |
| Eastern France | | 1.48 | | 32.24 | 49.33 | 27.95 | 13.78 | 14.93 | 17.26 | 13.39 |
| Northern France | } 0.57 | 0.15 | | 6.30 | 13.80 | 3.60 | 2.60 | 1.20 | 5.20 | 4.00 |
| France - other areas | | 0.01 | | 2.32 | 3.47 | 3.80 | 1.70 | 0.86 | 0.37 | 0.03 |
| FRANCE | 0.57 | 1.64 | | 40.86 | 66.60 | 35.35 | 18.08 | 16.99 | 22.83 | 17.42 |
| Italy - coastal areas | } 0.61 | 0.84 | | 0.59 | 2.86 | 43.33 | 42.20 | 24.11 | 23.42 | 6.38 |
| Italy - other areas | | 0.17 | | 0.46 | 0.05 | 0.07 | 0.08 | 0.10 | 0.08 | 0.01 |
| ITALY | 0.61 | 1.01 | | 1.05 | 2.91 | 43.40 | 42.28 | 24.21 | 23.50 | 6.39 |
| LUXEMBOURG | 7.11 | 6.13 | | 8.28 | 11.48 | 6.98 | 0.40 | 0.33 | 1.14 | 0.10 |
| NETHERLANDS | — | 0.90 | | 1.73 | 2.72 | 4.20 | 2.25 | 1.84 | 1.20 | 2.18 |
| Total | 11.59 | 21.14 | | 93.27 | 111.01⁴⁾ | 123.19 | 85.27 | 64.54⁴⁾ | 63.84 | 48.16 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

⁴⁾ Revised.

| |
|-----------------------|
| BLAST-FURNACES |
|-----------------------|

Investment

TABLE XVI c
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------------|------------------|---------------|--------------|---------------|---------------|---|------------------------|--------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on Jan. 1, 1964 for | on January 1, 1965 for | |
| | | | | | | | | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | 16.74 | 0.26 | | 4.56 | 4.56 | 2.87 | 3.49 | 0.80 | 11.68 | 3.18 |
| North Rhine/Westphalia | | 16.16 | | 27.28 | 25.23 | 24.47 | 20.67 | 17.19 | 23.39 | 28.36 |
| Southern Germany ³⁾ | | 2.53 | | 0.77 | 1.37 | 0.43 | 1.21 | 1.31 | 0.97 | — |
| Saar | | 1.92 | 1.56 | | 2.11 | 2.91 | 6.48 | 3.81 | 4.28 | 5.71 |
| GERMANY | 18.66 | 20.51 | | 34.72 | 34.07 | 34.25 | 29.18 | 23.58 | 41.75 | 32.42 |
| BELGIUM | 7.34 | 5.83 | | 14.41 | 14.14 | 10.10 | 11.60 | 9.94 | 8.52 | 9.77 |
| Eastern France | 11.14 | 9.43 | | 23.89 | 23.50 | 23.53 | 17.30 | 19.95 | 11.46 | 3.38 |
| Northern France | | 1.10 | | 16.26 | 11.35 | 6.20 | 6.69 | 4.14 | 1.96 | 0.13 |
| France - other areas | | 0.71 | | 0.73 | 0.95 | 0.70 | 0.55 | 0.55 | 0.53 | 0.14 |
| FRANCE | 11.14 | 11.24 | | 40.88 | 35.80 | 30.43 | 24.54 | 24.64 | 13.95 | 3.65 |
| Italy - coastal areas | 0.59 | 1.68 | | 5.78 | 5.98 | 20.06 | 29.25 | 21.67 | 16.43 | 4.94 |
| Italy - other areas | | 0.08 | | 0.71 | 0.32 | 0.24 | 0.28 | 0.10 | 0.03 | 0.01 |
| ITALY | 0.59 | 1.76 | | 6.49 | 6.30 | 20.30 | 29.53 | 21.77 | 16.46 | 4.95 |
| LUXEMBOURG | 2.01 | 2.33 | | 3.58 | 5.36 | 5.32 | 11.34 | 6.08 | 3.79 | 0.38 |
| NETHERLANDS | 0.44 | 0.18 | | 7.17 | 1.66 | 1.01 | 1.68 | 1.21 | 1.33 | 0.60 |
| Total | 40.18 | 41.85 | | 107.25 | 97.33 | 101.41 | 107.87 | 87.22 | 85.80 | 51.77 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

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

Investment

TABLE XVI d
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, 1964 for | on January 1, 1965 for | |
| | 1954 | 1955 | ¹⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | } 24.00 | 3.05 | | 5.25 | 8.16 ⁴⁾ | 13.07 | 5.45 | 3.53 ⁴⁾ | 13.32 | 3.18 |
| North Rhine/Westphalia | | 26.12 | | 51.64 | 35.08 | 36.65 | 30.83 | 26.55 | 25.97 | 29.84 |
| Southern Germany ³⁾ | | 2.71 | | 0.83 | 1.41 | 0.46 | 1.31 | 1.41 | 1.24 | — |
| Saar | 3.09 | 5.64 | | 7.59 | 6.35 | 10.16 | 8.13 | 7.45 | 12.10 | 12.87 |
| GERMANY | 27.09 | 37.52 | | 65.31 | 51.00 ⁴⁾ | 60.34 | 45.72 | 38.94 ⁴⁾ | 52.63 | 45.89 |
| BELGIUM | 8.83 | 8.92 | | 30.71 | 29.12 | 23.55 | 19.80 | 17.38 | 16.28 | 19.56 |
| Eastern France | } 21.00 | 16.01 | | 64.08 | 82.61 | 53.66 | 31.52 | 35.67 | 29.36 | 17.14 |
| Northern France | | 1.25 | | 23.03 | 25.27 | 9.95 | 9.52 | 5.93 | 7.68 | 4.19 |
| France - other areas | | 1.53 | | 3.50 | 4.77 | 4.70 | 2.40 | 1.61 | 1.10 | 0.17 |
| FRANCE | 21.00 | 18.79 | | 90.61 | 112.65 | 68.31 | 43.44 | 43.21 | 38.14 | 21.50 |
| Italy - coastal areas | } 1.20 | 2.52 | | 9.66 | 17.09 | 87.42 | 96.76 | 57.71 | 50.83 | 15.23 |
| Italy - other areas | | 0.25 | | 1.17 | 0.37 | 0.31 | 0.36 | 0.20 | 0.11 | 0.02 |
| ITALY | 1.20 | 2.77 | | 10.83 | 17.46 | 87.73 | 97.12 | 57.91 | 50.94 | 15.25 |
| LUXEMBOURG | 9.12 | 8.46 | | 11.86 | 16.84 | 12.30 | 11.74 | 6.41 | 4.93 | 0.48 |
| NETHERLANDS | 2.52 | 6.47 | | 9.50 | 6.23 | 6.17 | 5.00 | 4.17 | 4.28 | 3.59 |
| Total | 69.76 | 82.93 | | 218.82 | 233.30 ⁴⁾ | 258.40 | 222.82 | 168.02⁴⁾ | 167.20 | 106.27 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

⁴⁾ Revised.

**BASIC BESSEMER
STEELWORKS**

Investment

TABLE XVII a

Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------------|------------------|--------------|--------------|--------------|-------------|--|--------------------|-------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | |
| | | | | | | | | Jan. 1, 1964 for | 1964 | 1965 |
| Norther Germany ²⁾ | 1.11 | 2.99 | | 1.11 | 0.49 | 0.48 | 0.54 | 0.71 | 0.16 | — |
| North Rhine/Westphalia | 3.24 | 4.05 | | 4.16 | 5.87 | 2.77 | 1.39 | 1.68 | 1.81 | 1.55 |
| Southern Germany ³⁾ | | 0.24 | | 0.08 | 0.12 | 0.02 | 0.22 | 0.12 | 0.40 | 0.05 |
| Saar | 0.40 | 1.36 | | 3.07 | 1.67 | 2.44 | 2.03 | 0.33 | 2.21 | 0.07 |
| GERMANY | 3.64 | 8.64 | | 8.42 | 8.15 | 5.71 | 4.18 | 2.84 | 4.58 | 1.67 |
| BELGIUM | 1.75 | 2.57 | | 6.63 | 7.74 | 7.54 | 2.23 | 1.95 | 1.58 | 1.02 |
| Eastern France | | 3.54 | | 6.65 | 4.57 | 3.24 | 1.30 | 3.56 | 3.44 | 2.91 |
| Northern France | 5.72 | 0.15 | | 1.00 | 1.30 | 0.40 | 0.30 | 0.30 | 0.30 | — |
| France - other areas | | 0.20 | | 0.64 | 0.60 | 0.10 | 0.10 | 0.25 | 0.15 | — |
| FRANCE | 5.72 | 3.89 | | 8.29 | 6.47 | 3.74 | 1.70 | 4.11 | 3.89 | 2.91 |
| Italy - coastal areas | 0.16 | 0.05 | | 0.17 | — | 0.03 | — | — | — | — |
| Italy - other areas | | — | | — | — | — | — | — | — | — |
| ITALY | 0.16 | 0.05 | | 0.17 | — | 0.03 | — | — | — | — |
| LUXEMBOURG | 2.64 | 2.10 | | 0.74 | 0.69 | 1.41 | 0.63 | 1.02 | 0.71 | 1.10 |
| NETHERLANDS | — | — | | — | — | — | — | — | — | — |
| Total | 13.91 | 17.25 | | 24.25 | 23.05 | 18.43 | 8.74 | 9.92 | 10.76 | 6.70 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---------------------------|
| OPEN-HEARTH STEELWORKS |
|---------------------------|

Investment

TABLE XVII b
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------------|------------------|--------------|--------------|--------------|--------------|--|---------------------------|-------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on Jan. 1, 1964 for | on January 1, 1965 for | |
| | | | | | | | | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | } 12.33 | 2.92 | } | 9.78 | 6.07 | 4.33 | 2.53 | 2.56 | 1.23 | 0.25 |
| North Rhine/Westphalia | | 15.62 | | 17.55 | 12.26 | 4.47 | 8.17 | 14.36 | 8.33 | 3.24 |
| Southern Germany ³⁾ | | 0.30 | | 0.16 | 0.45 | 0.23 | 0.20 | 0.22 | 0.05 | 0.30 |
| Saar | | 0.47 | | 0.08 | 0.23 | 0.12 | 1.44 | 1.26 | 0.42 | 1.20 |
| GERMANY | 12.80 | 18.92 | | 27.72 | 18.90 | 10.47 | 12.16 | 17.56 | 10.81 | 3.79 |
| BELGIUM | 0.30 | 0.05 | | 0.04 | 0.36 | 0.20 | 0.19 | 0.19 | 0.17 | — |
| Eastern France | } 5.43 | 3.78 | } | 3.07 | 2.40 | 1.39 | 1.09 | 1.65 | 1.35 | 0.49 |
| Northern France | | 3.52 | | 2.01 | 1.08 | 0.57 | 0.15 | 0.18 | 0.18 | — |
| France - other areas | | 0.21 | | 1.16 | 0.22 | 0.11 | 0.46 | 0.16 | 0.13 | — |
| FRANCE | 5.43 | 7.51 | | 6.24 | 3.70 | 2.07 | 1.70 | 1.99 | 1.66 | 0.49 |
| Italy - coastal areas | } 1.38 | 1.62 | } | 5.49 | 4.43 | 3.20 | 8.07 | 7.30 | 2.24 | 3.36 |
| Italy - other areas | | 0.82 | | 2.92 | 1.37 | 1.19 | 0.90 | 0.50 | 0.40 | 0.63 |
| ITALY | 1.38 | 2.44 | | 8.41 | 5.80 | 4.39 | 8.97 | 7.80 | 2.64 | 3.99 |
| LUXEMBOURG | — | — | | — | — | — | — | — | — | — |
| NETHERLANDS | 0.21 | 1.73 | | 2.35 | 1.42 | 1.38 | 0.37 | 0.67 | 0.36 | 0.12 |
| Total | 20.12 | 30.65 | | 44.76 | 30.18 | 18.51 | 23.39 | 28.21 | 15.64 | 8.39 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|--------------------------------|
| ELECTRIC-FURNACE STEELWORKS |
|--------------------------------|

Investment

TABLE XVII c
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, 1964 for | on January 1, 1965 for | | |
| | 1954 ¹⁾ | 1955 ¹⁾ | ²⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ³⁾ | } 5.42 | 0.05 | | 0.35 | 0.02 | 0.01 | 0.01 | 0.07 | 0.11 | — |
| North Rhine/Westphalia | | 9.76 | | 6.51 | 2.97 | 1.16 | 2.73 | 3.49 | 2.68 | 0.81 |
| Southern Germany ⁴⁾ | | — | | 0.03 | 0.35 | 1.00 | 1.07 | 1.40 | 0.27 | 0.42 |
| Saar | — | 0.02 | | 0.60 | 0.72 | — | 0.04 | — | 2.07 | 2.00 |
| GERMANY | 5.42 | 9.83 | | 7.49 | 4.06 | 2.17 | 3.85 | 4.96 | 5.13 | 3.23 |
| BELGIUM | 1.60 | 1.41 | | 0.70 | 0.88 | 0.35 | 0.37 | 0.16 | 0.28 | 0.01 |
| Eastern France | } 1.14 | — | | 0.73 | 0.59 | 2.09 | 2.62 | 3.21 | 1.03 | 1.34 |
| Northern France | | 1.22 | | 1.03 | 0.30 | 0.09 | 0.33 | 0.11 | 0.52 | 0.65 |
| France - other areas | | 0.94 | | 5.22 | 6.54 | 4.59 | 2.88 | 5.21 | 5.72 | 1.64 |
| FRANCE | 1.14 | 2.16 | | 6.98 | 7.43 | 6.77 | 5.83 | 8.53 | 7.27 | 3.63 |
| Italy - coastal areas | } 1.75 | — | | 0.60 | 0.61 | 2.00 | 2.24 | 1.00 | 1.14 | 0.50 |
| Italy - other areas | | 1.46 | | 5.89 | 7.70 | 5.79 | 5.28 | 7.15 | 3.13 | 1.78 |
| ITALY | 1.75 | 1.46 | | 6.49 | 8.31 | 7.79 | 7.52 | 8.15 | 4.27 | 2.28 |
| LUXEMBOURG | — | 0.04 | | 0.10 | 0.10 | 0.18 | 0.21 | 0.08 | 0.30 | — |
| NETHERLANDS | 0.15 | 0.17 | | 0.08 | 0.32 | 0.79 | 0.67 | 1.14 | 0.56 | 0.04 |
| Total | 10.06 | 15.07 | | 21.84 | 21.10 | 18.05 | 18.45 | 23.02 | 17.81 | 9.19 |

¹⁾ For the years 1954-1955 including other steelworks except Basic Bessemer, Open-Hearth, LD, Rotor and similar processes.

²⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

³⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

⁴⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

**LD, KALDO AND
OTHER STEELWORKS**

Investment
TABLE XVII d
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|----------------------------------|--------------|--------------|---------------|---------------|---------------------|--|--------------|--|
| | 1954 | 1955 ¹⁾ ²⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | | |
| | | | | | | | Jan. 1, 1964 for | for | for | |
| Northern Germany ³⁾ | . | — | 7.98 | 10.80 | 13.81 | 6.83 | 3.42 | 0.45 | — | |
| North Rhine/Westphalia | . | 0.15 | 34.90 | 36.42 | 20.88 | 13.13 | 10.41 | 20.94 | 28.17 | |
| Southern Germany ⁴⁾ | . | — | 0.04 | — | — | — | — | — | — | |
| Saar | . | — | 1.91 | 0.32 | 0.29 | 0.09 | 2.73 | 2.11 | 6.33 | |
| GERMANY | . | 0.15 | 44.83 | 47.54 | 34.98 | 20.05 | 16.56 | 23.50 | 34.50 | |
| BELGIUM | . | — | 5.39 | 10.18 | 21.55 | 21.44 | 20.71 | 20.46 | 17.99 | |
| Eastern France | . | 0.06 | 2.12 | 3.17 | 3.90 | 3.67 | 3.29 | 7.35 | 15.58 | |
| Northern France | . | — | 9.60 | 9.80 | 8.00 | 4.50 | 3.00 | 2.65 | 0.40 | |
| France - other areas | . | — | — | — | — | — | — | — | 1.00 | |
| FRANCE | . | 0.06 | 11.72 | 12.97 | 11.90 | 8.17 | 6.29 | 10.00 | 16.98 | |
| Italy - coastal areas | . | — | 0.01 | 1.35 | 45.15 | 49.57 | 47.22 | 18.54 | 7.17 | |
| Italy - other areas | . | — | — | — | — | — | — | 0.88 | 0.16 | |
| ITALY | . | — | 0.01 | 1.35 | 45.15 | 49.57 | 47.22 | 19.42 | 7.33 | |
| LUXEMBOURG | . | — | 3.15 | 4.03 | 3.67 | 6.15 | 7.81 | 8.72 | 7.82 | |
| NETHERLANDS | . | — | 6.86 | 1.99 | 2.79 | 1.74 | 1.65 | 1.55 | 1.14 | |
| Total | . | 0.21 | 71.96 | 78.06 | 120.04 | 107.12 | 100.24 | 83.65 | 85.76 | |

¹⁾ For 1955, LD, Rotor and similar works only.

²⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

³⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

⁴⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---------------------------|
| STEELWORKS - TOTAL |
|---------------------------|

Investment

TABLE XVII e
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, 1964 for | on January 1, 1965 for | |
| | 1954 | 1955 | ¹⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | } 20.99 | 5.96 | | 19.22 | 17.38 | 18.63 | 9.91 | 6.76 | 1.95 | 0.25 |
| North Rhine/Westphalia | | 29.58 | | 63.12 | 57.52 | 29.28 | 25.42 | 29.94 | 33.76 | 33.77 |
| Southern Germany ³⁾ | | 0.54 | | 0.31 | 0.92 | 1.25 | 1.49 | 1.74 | 0.72 | 0.77 |
| Saar | | 0.87 | 1.46 | 5.81 | 2.83 | 4.17 | 3.42 | 3.48 | 7.59 | 8.40 |
| GERMANY | 21.86 | 37.54 | | 88.46 | 78.65 | 53.33 | 40.24 | 41.92 | 44.02 | 43.19 |
| BELGIUM | 3.65 | 4.03 | | 12.76 | 19.16 | 29.64 | 24.23 | 23.01 | 22.49 | 19.02 |
| Eastern France | } 12.29 | 7.38 | | 12.57 | 10.73 | 10.62 | 8.68 | 11.71 | 13.17 | 20.32 |
| Northern France | | 4.89 | | 13.64 | 12.48 | 9.06 | 5.28 | 3.59 | 3.65 | 1.05 |
| France - other areas | | 1.35 | | 7.02 | 7.36 | 4.80 | 3.44 | 5.62 | 6.00 | 2.64 |
| FRANCE | 12.29 | 13.62 | | 33.23 | 30.57 | 24.48 | 17.40 | 20.92 | 22.82 | 24.01 |
| Italy - coastal areas | } 3.29 | 1.67 | | 6.27 | 6.39 | 50.38 | 59.88 | 55.52 | 21.92 | 11.03 |
| Italy - other areas | | 2.28 | | 8.81 | 9.07 | 6.98 | 6.18 | 7.65 | 4.41 | 2.57 |
| ITALY | 3.29 | 3.95 | | 15.08 | 15.46 | 57.36 | 66.06 | 63.17 | 26.33 | 13.60 |
| LUXEMBOURG | 2.64 | 2.14 | | 3.99 | 4.82 | 5.26 | 6.99 | 8.91 | 9.73 | 8.92 |
| NETHERLANDS | 0.36 | 1.90 | | 9.29 | 3.73 | 4.96 | 2.78 | 3.46 | 2.47 | 1.30 |
| Total | 44.09 | 63.18 | | 162.81 | 152.39 | 175.03 | 157.70 | 161.39 | 127.86 | 110.04 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|--|
| BLOOMING AND SLABBING MILLS |
|--|

Investment

TABLE XVIII a
Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------------|------------------|--------------|--------------|---------------|--------------|---|--------------------|--------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | |
| | | | | | | | | Jan. 1, 1964 for | for | |
| | | | | | | | 1964 | 1965 | 1966 | |
| Northern Germany ²⁾ | | 9.42 | | 2.76 | 10.31 | 9.62 | 13.66 | 9.50 | 1.37 | 0.10 |
| North Rhine/Westphalia | | 20.84 | | 20.26 | 18.84 | 29.34 | 8.55 | 9.37 | 7.91 | 9.50 |
| Southern Germany ³⁾ | | 0.53 | | — | 0.04 | 0.08 | 0.31 | 0.34 | 1.03 | 0.78 |
| Saar | | 0.04 | | 2.86 | 2.46 | 2.36 | 3.54 | 5.08 | 3.05 | 1.05 |
| GERMANY | | 30.83 | | 25.88 | 31.65 | 41.40 | 26.06 | 24.29 | 13.36 | 11.43 |
| BELGIUM | | 1.11 | | 6.97 | 14.43 | 21.29 | 7.00 | 7.65 | 9.29 | 8.46 |
| Eastern France | | 3.21 | | 14.25 | 11.10 | 3.61 | 2.50 | 5.52 | 15.30 | 14.44 |
| Northern France | | — | | 16.26 | 10.40 | 4.00 | 4.10 | 2.40 | 3.40 | — |
| France - other areas | | 0.17 | | 0.89 | 0.32 | 0.84 | 0.06 | 0.60 | 0.49 | 0.42 |
| FRANCE | | 3.38 | | 31.40 | 21.82 | 8.45 | 6.66 | 8.52 | 19.19 | 14.86 |
| Italy - coastal areas | | 0.18 | | 2.86 | 4.03 | 13.50 | 23.23 | 22.85 | 11.50 | 4.52 |
| Italy - other areas | | 1.99 | | 2.73 | 6.02 | 8.61 | 9.44 | 6.86 | 2.95 | 0.98 |
| ITALY | | 2.17 | | 5.59 | 10.05 | 22.11 | 32.67 | 29.71 | 14.45 | 5.50 |
| LUXEMBOURG | | 2.76 | | 1.53 | 3.40 | 5.09 | 2.25 | 2.14 | 1.27 | — |
| NETHERLANDS | | 1.09 | | 3.39 | 9.91 | 10.40 | 3.60 | 5.71 | 3.95 | 1.51 |
| Total | 23.10 | 41.34 | | 74.76 | 91.26 | 108.74 | 78.24 | 78.02 | 61.51 | 41.76 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|------------------------------|
| CONTINUOUS CASTING PLANTS |
|------------------------------|

Investment

TABLE XVIII b

Capital Expenditure by Area]

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

| Area | Actual expenditure | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|-------------|-------------|--|---------------------------|--------------|
| | 1962 | 1963 | 1964 | on Jan. 1, 1964 for | on January 1, 1965 for | |
| | | | | 1964 | 1965 | 1966 |
| Northern Germany ¹⁾ | — | — | — | — | — | — |
| North Rhine/Westphalia | 2.31 | 3.33 | 3.88 | 5.07 | 12.21 | 25.40 |
| Southern Germany ²⁾ | — | — | — | — | — | — |
| Saar | — | 0.49 | 1.46 | 3.21 | 2.76 | 4.00 |
| GERMANY | 2.31 | 3.82 | 5.34 | 8.28 | 14.97 | 29.40 |
| BELGIUM | — | 0.27 | 1.39 | 1.22 | — | — |
| Eastern France | — | — | — | 0.04 | — | — |
| Northern France | — | — | — | — | — | — |
| France — other areas | — | — | — | — | — | — |
| FRANCE | — | — | — | 0.04 | — | — |
| Italy — coastal areas | — | — | — | — | — | — |
| Italy — other areas | — | — | 0.25 | 0.25 | 0.26 | 0.25 |
| ITALY | — | — | 0.25 | 0.25 | 0.26 | 0.25 |
| LUXEMBOURG | — | — | — | — | — | — |
| NETHERLANDS | — | — | — | — | — | — |
| Total | 2.31 | 4.09 | 6.98 | 9.79 | 15.23 | 29.65 |

¹⁾ Schleswig-Holstein, Lower-Saxony, Hamburg, Bremen.²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

SECTION MILLS

Investment

TABLE XVIII c

Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------------|------------------|---------------|---------------|---------------|---------------|---|--------------------|--------------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | |
| | | | | | | | | Jan. 1, 1964 for | 1964 | 1965 |
| Northern Germany ²⁾ | . | 12.02 | | 5.31 | 5.58 | 10.01 | 6.15 | 4.67 | 3.76 | 1.55 |
| North Rhine/Westphalia | . | 38.20 | | 25.26 | 35.83 | 40.89 | 29.21 | 34.12 | 23.79 | 14.60 |
| Southern Germany ³⁾ | . | 2.85 | | 0.64 | 0.89 | 0.94 | 0.29 | 0.85 | 1.51 | 0.22 |
| Saar | . | 8.12 | | 15.15 | 8.69 | 6.45 | 1.01 | 2.39 | 3.38 | 4.55 |
| GERMANY | . | 61.19 | | 46.36 | 50.99 | 58.29 | 36.66 | 42.03 | 32.44 | 20.92 |
| BELGIUM | . | 2.63 | | 16.75 | 16.25 | 5.73 | 5.34 | 6.36 | 5.15 | 4.57 |
| Eastern France | . | 8.76 | | 15.50 | 28.41 | 31.67 | 30.31 | 31.98 | 38.54 | 44.58 |
| Northern France | . | 1.61 | | 15.86 | 16.79 | 9.49 | 2.35 | 2.13 | 1.26 | 0.18 |
| France - other areas | . | 3.85 | | 4.61 | 4.61 | 4.20 | 9.40 | 9.75 | 8.80 | 4.44 |
| FRANCE | . | 14.22 | | 35.97 | 49.81 | 45.36 | 42.06 | 43.86 | 48.60 | 49.20 |
| Italy - coastal areas | . | 0.32 | | 5.52 | 3.66 | 7.19 | 18.25 | 23.47 | 28.59 | 9.21 |
| Italy - other areas | . | 8.29 | | 4.03 | 4.57 | 8.24 | 6.09 | 6.77 | 8.78 | 3.71 |
| ITALY | . | 8.61 | | 9.55 | 8.23 | 15.43 | 24.34 | 30.24 | 37.37 | 12.92 |
| LUXEMBOURG | . | 0.23 | | 9.52 | 8.92 | 17.02 | 12.27 | 8.74 | 5.07 | 1.40 |
| NETHERLANDS | . | — | | 2.85 | 10.28 | 21.60 | 23.54 | 25.84 | 6.99 | 7.62 |
| Total | | 74.40 | | 121.00 | 144.48 | 163.43 | 144.21 | 157.07 | 135.62 | 96.63 |

1) Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

2) Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

3) Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---------------------------|
| FLAT-PRODUCT MILLS |
|---------------------------|

Investment

TABLE XVIII d

Capital Expenditure by Areas

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

| Area | Actual expenditure | | | | | | | Estimated expenditure (projects in progress, or approved) | | |
|--------------------------------------|--------------------|--------|------------------|--------|--------|--------|--------|--|---------------------------|--------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on Jan. 1, 1964 for | on January 1, 1965 for | |
| | | | | | | | | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | . | 23.26 | | 47.57 | 40.15 | 38.81 | 26.60 | 17.52 | 9.38 | 2.90 |
| North Rhine/Westphalia | . | 67.33 | | 57.13 | 60.02 | 88.85 | 102.03 | 114.57 | 91.97 | 85.65 |
| Southern Germany ³⁾ | . | 1.98 | | 14.33 | 8.06 | 2.51 | 3.27 | 2.91 | 2.53 | 4.67 |
| Saar | . | 0.44 | | 0.19 | 1.85 | 1.86 | 0.59 | 0.31 | 0.56 | — |
| GERMANY | . | 93.01 | | 119.22 | 110.08 | 132.03 | 132.49 | 135.31 | 104.44 | 93.22 |
| BELGIUM | . | 7.59 | | 33.43 | 29.57 | 50.72 | 27.98 | 31.66 | 42.25 | 35.97 |
| Eastern France | . | 11.49 | | 34.83 | 37.56 | 13.10 | 14.67 | 10.82 | 12.99 | 10.48 |
| Northern France | . | 11.33 | | 48.77 | 59.43 | 44.36 | 26.65 | 24.04 | 10.32 | 3.35 |
| France - other areas | . | 3.86 | | 7.26 | 5.45 | 8.40 | 5.75 | 8.75 | 7.88 | 6.09 |
| FRANCE | . | 26.68 | | 90.86 | 102.44 | 65.86 | 47.07 | 43.61 | 31.19 | 19.92 |
| Italy - coastal areas | . | 1.77 | | 3.73 | 4.25 | 68.87 | 56.31 | 40.81 | 12.08 | 2.25 |
| Italy - other areas | . | 7.09 | | 27.60 | 48.91 | 61.35 | 62.57 | 60.64 | 26.01 | 7.47 |
| ITALY | . | 8.86 | | 31.33 | 53.16 | 130.22 | 118.88 | 101.45 | 38.09 | 9.72 |
| LUXEMBOURG | . | 4.42 | | 1.09 | 0.91 | 0.57 | 0.31 | 0.44 | 1.72 | 1.68 |
| NETHERLANDS | . | 3.03 | | 17.29 | 2.57 | 0.93 | 3.36 | 1.32 | 7.74 | 8.17 |
| Total | 139.60 | 143.59 | | 293.22 | 298.73 | 380.33 | 330.09 | 313.79 | 225.43 | 168.68 |

1) Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

2) Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

3) Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|--|
| ROLLING-MILLS - TOTAL ¹⁾ |
|--|

Investment

TABLE XVIII e

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, 1964 | on January 1, 1965 for | | |
| | 1954 | 1955 | ²⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ³⁾ | | 45.52 | | 55.94 | 56.30 | 58.69 | 46.51 | 31.82 | 14.74 | 5.52 |
| North Rhine/Westphalia | 138.03 | 136.30 | | 108.73 | 122.98 | 172.98 | 161.43 | 180.24 | 160.24 | 142.38 |
| Southern Germany ⁴⁾ | | 6.75 | | 15.55 | 14.80 | 5.39 | 4.39 | 4.51 | 6.29 | 17.56 |
| Saar | 8.00 | 9.80 | | 18.69 | 13.48 | 13.44 | 9.35 | 13.49 | 15.32 | 10.17 |
| GERMANY | 146.03 | 198.37 | | 198.91 | 207.56 | 250.50 | 221.68 | 230.06 | 196.59 | 175.63 |
| BELGIUM | 15.57 | 13.80 | | 68.21 | 72.26 | 89.09 | 48.18 | 48.49 | 63.08 | 50.68 |
| Eastern France | | 29.63 | | 70.19 | 90.58 | 66.05 | 52.02 | 57.01 | 71.95 | 72.11 |
| Northern France | 64.00 | 13.52 | | 84.68 | 94.13 | 65.26 | 35.59 | 31.66 | 16.56 | 4.47 |
| France - other areas | | 9.23 | | 16.48 | 16.56 | 21.22 | 19.04 | 24.12 | 21.54 | 15.40 |
| FRANCE | 64.00 | 52.38 | | 171.35 | 201.27 | 152.53 | 106.65 | 112.79 | 110.05 | 91.98 |
| Italy - coastal areas | | 4.52 | | 15.58 | 16.02 | 98.43 | 113.68 | 105.99 | 59.85 | 17.99 |
| Italy - other areas | 25.39 | 18.69 | | 35.60 | 61.87 | 79.61 | 79.81 | 75.60 | 38.94 | 12.69 |
| ITALY | 25.39 | 23.21 | | 51.18 | 77.89 | 178.04 | 193.49 | 181.59 | 98.79 | 30.68 |
| LUXEMBOURG | 11.21 | 8.40 | | 12.83 | 13.97 | 22.98 | 14.96 | 11.43 | 9.70 | 4.00 |
| NETHERLANDS | 2.95 | 4.92 | | 29.88 | 24.62 | 33.25 | 30.81 | 34.14 | 18.75 | 25.32 |
| Total | 265.15 | 301.08 | | 532.36 | 597.57 | 726.39 | 615.77 | 618.50 | 496.96 | 378.29 |

¹⁾ Including ancillary and auxiliary plants.²⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.³⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.⁴⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

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

Investment

TABLE XIX 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, 1964 for | on January 1, 1965 for | |
| | 1954 | 1955 | ¹⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | | 4.07 | | 3.96 | 12.53 | 15.10 | 6.83 | 5.42 | 3.86 | 0.03 |
| North Rhine/Westphalia | 14.83 | 12.19 | | 17.44 | 18.34 | 16.07 | 7.44 | 7.47 | 11.73 | 3.09 |
| Southern Germany ³⁾ | | 1.24 | | 0.26 | 1.12 | 1.10 | 2.12 | 1.77 | 1.84 | 0.82 |
| Saar | 0.88 | 0.57 | | 2.99 | 2.61 | 6.27 | 3.81 | 2.90 | 1.62 | 0.19 |
| GERMANY | 15.71 | 18.07 | | 24.65 | 34.60 | 38.54 | 20.20 | 17.56 | 19.05 | 4.13 |
| BELGIUM | 2.35 | 2.86 | | 5.87 | 5.93 | 6.82 | 5.06 | 7.87 | 9.80 | 11.04 |
| Eastern France | | 12.45 | | 18.80 | 18.69 | 19.34 | 7.24 | 11.60 | 5.58 | 1.40 |
| Northern France | 21.15 | 0.67 | | 5.19 | 2.79 | 1.13 | 2.08 | 2.38 | 1.05 | 0.22 |
| France - other areas | | 0.79 | | 1.59 | 2.69 | 1.69 | 1.07 | 0.93 | 0.67 | 0.27 |
| FRANCE | 21.15 | 13.91 | | 25.58 | 24.17 | 22.16 | 10.39 | 14.91 | 7.30 | 1.89 |
| Italy - coastal areas | 1.20 | 0.38 | | 7.83 | 10.52 | 18.47 | 38.45 | 34.28 | 17.44 | 5.21 |
| Italy - other areas | | 1.10 | | 0.71 | 0.63 | 2.00 | 1.55 | 1.52 | 1.23 | 0.61 |
| ITALY | 1.20 | 1.48 | | 8.54 | 11.15 | 20.47 | 40.00 | 35.80 | 18.67 | 5.82 |
| LUXEMBOURG | 1.32 | 2.30 | | 1.22 | 1.40 | 1.66 | 0.82 | 0.72 | 0.09 | — |
| NETHERLANDS | 1.25 | 0.69 | | 5.83 | 6.98 | 4.00 | 2.17 | 3.25 | 3.00 | 2.33 |
| Total | 42.98 | 39.31 | | 71.69 | 84.23 | 93.65 | 78.64 | 80.11 | 57.91 | 25.21 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---|
| MISCELLANEOUS (IRON AND STEEL WORKS) |
|---|

Investment

TABLE XIX b

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, 1964 for | on January 1, 1965 for | |
| | 1954 | 1955 | ¹⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | } 12.37 | 2.28 | | 6.49 | 11.29 | 8.55 | 9.79 | 6.82 | 6.53 | 0.54 |
| North Rhine/Westphalia | | 12.12 | | 30.55 | 28.75 | 36.21 | 25.09 | 27.81 | 22.19 | 10.29 |
| Southern Germany ³⁾ | | 0.76 | | 1.04 | 1.01 | 1.37 | 1.56 | 1.33 | 2.07 | 1.18 |
| Saar | | 2.77 | 1.94 | | 6.63 | 4.67 | 4.27 | 5.26 | 3.70 | 5.66 |
| GERMANY | 15.14 | 17.10 | | 44.71 | 45.72 | 50.40 | 41.70 | 39.66 | 36.45 | 12.04 |
| BELGIUM | 2.52 | 3.53 | | 10.01 | 12.98 | 16.31 | 14.31 | 15.39 | 9.11 | 11.27 |
| Eastern France | } 7.42 | 5.93 | | 20.37 | 24.97 | 24.51 | 21.77 | 22.44 | 32.12 | 14.04 |
| Northern France | | 2.21 | | 25.83 | 24.95 | 18.24 | 6.98 | 27.41 | 6.30 | 1.23 |
| France - other areas | | 1.37 | | 5.81 | 5.19 | 4.52 | 2.99 | 4.67 | 2.71 | 1.63 |
| FRANCE | 7.42 | 9.51 | | 52.01 | 55.11 | 47.27 | 31.74 | 54.52 | 41.13 | 16.90 |
| Italy - coastal areas | } 4.77 | 1.26 | | 15.43 | 27.74 | 94.99 | 113.05 | 83.58 | 34.96 | 22.85 |
| Italy - other areas | | 3.24 | | 5.80 | 8.01 | 8.06 | 7.06 | 7.33 | 6.56 | 3.87 |
| ITALY | 4.77 | 4.50 | | 21.23 | 35.75 | 103.05 | 120.11 | 90.91 | 41.52 | 26.72 |
| LUXEMBOURG | 0.79 | 0.83 | | 1.47 | 2.34 | 1.31 | 1.36 | 1.20 | 1.76 | 1.48 |
| NETHERLANDS | 0.86 | 2.36 | | 7.93 | 10.97 | 7.72 | 6.78 | 9.06 | 12.01 | 9.07 |
| Total | 31.50 | 37.83 | | 137.36 | 162.87 | 226.06 | 216.00 | 210.74 | 141.98 | 77.48 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

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

Investment

TABLE XIX c

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, 1964 for | on January 1, 1965 for | |
| | 1954 | 1955 | ¹⁾ | 1961 | 1962 | 1963 | 1964 | 1964 | 1965 | 1966 |
| Northern Germany ²⁾ | } 27.20 | 6.35 | | 10.45 | 23.82 | 23.65 | 16.62 | 12.24 | 10.39 | 0.57 |
| North Rhine/Westphalia | | 24.31 | | 47.99 | 47.09 | 52.28 | 32.53 | 35.28 | 33.92 | 13.38 |
| Southern Germany ³⁾ | | 2.00 | | 1.30 | 2.13 | 2.47 | 3.68 | 3.10 | 3.91 | 2.00 |
| Saar | | 3.65 | 2.51 | | 9.62 | 7.28 | 10.54 | 9.07 | 6.60 | 7.28 |
| GERMANY | 30.85 | 35.17 | | 69.36 | 80.32 | 88.94 | 61.90 | 57.22 | 55.50 | 16.17 |
| BELGIUM | 4.87 | 6.39 | | 15.88 | 18.91 | 23.13 | 19.37 | 23.26 | 18.91 | 22.31 |
| Eastern France | } 28.57 | 18.38 | | 38.17 | 43.66 | 43.85 | 29.01 | 34.04 | 37.70 | 15.44 |
| Northern France | | 2.88 | | 31.02 | 27.74 | 19.37 | 9.06 | 29.79 | 7.35 | 1.45 |
| France - other areas | | 2.16 | | 7.40 | 7.88 | 6.21 | 4.06 | 5.60 | 3.38 | 1.90 |
| FRANCE | 28.57 | 23.42 | | 77.59 | 79.28 | 69.43 | 42.13 | 69.43 | 48.43 | 18.79 |
| Italy - coastal areas | } 5.97 | 1.64 | | 23.26 | 38.26 | 113.46 | 151.50 | 117.86 | 52.40 | 28.06 |
| Italy - other areas | | 4.34 | | 6.51 | 8.64 | 10.06 | 8.61 | 8.85 | 7.79 | 4.48 |
| ITALY | 5.97 | 5.98 | | 29.77 | 46.90 | 123.52 | 160.11 | 126.71 | 60.19 | 32.54 |
| LUXEMBOURG | 2.11 | 3.13 | | 2.69 | 3.74 | 2.97 | 2.18 | 1.92 | 1.85 | 1.48 |
| NETHERLANDS | 2.11 | 3.05 | | 13.76 | 17.95 | 11.72 | 8.95 | 12.31 | 15.01 | 11.40 |
| Total | 74.48 | 77.14 | | 209.05 | 247.10 | 319.71 | 294.64 | 290.85 | 199.89 | 102.69 |

¹⁾ Capital expenditure concerning 1956 — 1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

SINTER

Production

TABLE XX

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|---------------------------|---------------------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 2.7 ²⁾ | 5.7 ²⁾ | 7.0 | 5.2 | 7.9 | 7.9 | 7.9 | 7.9 |
| North Rhine/Westphalia | 8.7 | 17.9 | 19.2 | 18.4 | 20.7 | 20.7 | 20.7 | 21.6 |
| Southern Germany ²⁾ | 0.1 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Saar | 3.2 | 5.3 | 5.4 | 4.8 | 5.8 | 5.8 | 5.8 | 6.4 |
| GERMANY | 14.7 ²⁾ | 29.2 ²⁾ | 31.9 | 28.7 | 34.7 | 34.7 | 34.7 | 36.2 |
| BELGIUM | 0.7 | 6.3 | 8.0 | 6.6 | 8.8 | 9.3 | 9.9 | 10.2 |
| Eastern France | 1.8 | 12.9 | 14.8 | 13.9 | 15.6 | 17.8 | 17.8 | 20.4 |
| Northern France | 0.1 | 2.4 | 2.7 | 2.6 | 2.9 | 3.7 | 4.2 | 4.2 |
| France - other areas | 0.0 | 0.8 | 0.9 | 0.9 | 1.3 | 1.3 | 1.3 | 1.4 |
| FRANCE | 1.9 | 16.1 | 18.4 | 17.4 | 19.8 | 22.8 | 23.3 | 26.0 |
| Italy - coastal areas | 1.4 | 2.2 | 3.2 | 2.2 | 5.8 | 8.9 | 9.3 | 9.3 |
| Italy - other areas | 0.5 | 0.6 | 0.6 | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 |
| ITALY | 1.9 | 2.8 | 3.8 | 2.6 | 6.4 | 9.5 | 9.9 | 9.9 |
| LUXEMBOURG | 1.2 | 5.0 | 5.4 | 4.8 | 5.5 | 5.5 | 5.5 | 5.5 |
| NETHERLANDS | — | 2.5 | 3.2 | 2.7 | 3.2 | 3.2 | 3.3 | 3.3 |
| Total | 20.4 ²⁾ | 61.9 ²⁾ | 70.7 | 62.8 | 78.3 | 85.0 | 86.6 | 91.1 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.³⁾ Revised.

| |
|-----------------|
| PIG-IRON |
|-----------------|

Production

TABLE XXI

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual pro - duction 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|---------------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 2.1 | 3.8 | 3.9 | 3.6 | 4.2 | 4.8 | 4.8 | 4.8 |
| North Rhine/Westphalia | 13.8 | 21.9 | 21.6 | 18.8 | 23.1 | 23.8 | 24.4 | 24.5 |
| Southern Germany ²⁾ | 1.1 | 1.4 | 1.4 | 1.2 | 1.7 | 1.7 | 1.7 | 1.7 |
| Saar | 3.0 | 3.7 | 3.8 | 3.6 | 4.3 | 4.8 | 4.7 | 4.9 |
| GERMANY | 20.2 | 30.8 | 30.7 | 27.2 | 33.3 | 35.1 | 35.6 | 35.9 |
| BELGIUM | 5.5 | 7.9 | 8.9 | 8.1 | 9.4 | 9.7 | 10.5 | 10.8 |
| Eastern France | 8.5 | 12.7 | 13.1 | 11.3 | 13.5 | 14.0 | 14.0 | 14.6 |
| Northern France | 2.0 | 3.3 | 3.7 | 3.4 | 4.0 | 4.2 | 4.3 | 4.4 |
| France - other areas | 0.9 | 1.3 | 1.3 | 1.1 | 1.2 | 1.2 | 1.2 | 1.3 |
| FRANCE | 11.4 | 17.3 | 18.1 | 15.8 | 18.7 | 19.4 | 19.5 | 20.3 |
| Italy - coastal areas | 1.4 | 3.4 | 3.8 | 3.1 | 5.8 | 7.0 | 7.7 | 7.9 |
| Italy - other areas | 0.4 | 0.6 | 0.6 | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 |
| ITALY | 1.8 | 4.0 | 4.4 | 3.5 | 6.4 | 7.6 | 8.3 | 8.5 |
| LUXEMBOURG | 3.1 | 4.1 | 4.5 | 4.2 | 4.6 | 4.8 | 4.8 | 4.8 |
| NETHERLANDS | 0.7 | 1.8 | 2.2 | 1.9 | 2.3 | 2.4 | 2.4 | 2.4 |
| Total | 42.5 | 65.9 | 68.8 | 60.7 | 74.7 | 79.0 | 81.1 | 82.7 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|-----------------------------|
| BASIC BESSEMER STEEL |
|-----------------------------|

Production

TABLE XXII a

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 1.0 | 1.8 | 1.6 | 1.4 | 1.2 | 1.3 | 1.3 | 1.3 |
| North Rhine/Westphalia | 8.0 | 9.2 | 7.9 | 7.3 | 7.4 | 7.4 | 7.0 | 5.8 |
| Southern Germany ²⁾ | 0.4 | 0.6 | 0.6 | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 |
| Saar | 2.5 | 2.9 | 3.0 | 2.9 | 3.5 | 3.5 | 3.5 | 3.2 |
| GERMANY | <i>11.9</i> | <i>14.5</i> | <i>13.1</i> | <i>12.2</i> | <i>13.0</i> | <i>13.1</i> | <i>12.7</i> | <i>11.2</i> |
| BELGIUM | 5.2 | 7.2 | 7.6 | 7.2 | 7.3 | 6.9 | 6.9 | 6.8 |
| Eastern France | 6.7 | 9.7 | 9.5 | 8.8 | 9.8 | 10.1 | 10.3 | 10.5 |
| Northern France | 1.1 | 1.5 | 1.4 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 |
| France - other areas | 0.3 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 |
| FRANCE | <i>8.1</i> | <i>11.7</i> | <i>11.4</i> | <i>10.6</i> | <i>11.7</i> | <i>12.1</i> | <i>12.3</i> | <i>12.4</i> |
| Italy - coastal areas | 0.4 | 0.7 | 0.6 | 0.5 | — | — | — | — |
| Italy - other areas | — | — | — | — | — | — | — | — |
| ITALY | <i>0.4</i> | <i>0.7</i> | <i>0.6</i> | <i>0.5</i> | — | — | — | — |
| LUXEMBOURG | 3.2 | 4.2 | 4.4 | 4.2 | 4.3 | 4.3 | 3.8 | 4.0 |
| NETHERLANDS | — | — | — | — | — | — | — | — |
| Total | 28.8 | 38.3 | 37.1 | 34.7 | 36.3 | 36.4 | 35.7 | 34.4 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|--------------------------|
| OPEN-HEARTH STEEL |
|--------------------------|

Production

TABLE XXII b

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 1.3 | 2.8 | 2.8 | 2.6 | 3.2 | 3.5 | 3.6 | 3.6 |
| North Rhine/Westphalia | 9.3 | 13.4 | 13.8 | 12.7 | 14.6 | 14.6 | 13.9 | 13.9 |
| Southern Germany ²⁾ | 0.9 | 0.7 | 0.8 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 |
| Saar | 0.7 | 0.9 | 1.0 | 0.9 | 1.0 | 1.1 | 1.0 | 1.0 |
| GERMANY | <i>12.2</i> | <i>17.8</i> | <i>18.4</i> | <i>16.8</i> | <i>19.6</i> | <i>20.0</i> | <i>19.3</i> | <i>19.3</i> |
| BELGIUM | 0.7 | 0.7 | 0.7 | 0.4 | 0.7 | 0.6 | 0.6 | 0.6 |
| Eastern France | 1.8 | 2.6 | 2.7 | 2.4 | 2.7 | 2.7 | 2.7 | 2.8 |
| Northern France | 1.5 | 2.5 | 2.4 | 2.2 | 2.4 | 2.4 | 2.4 | 2.3 |
| France - other areas | 0.9 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| FRANCE | <i>4.2</i> | <i>5.6</i> | <i>5.7</i> | <i>5.2</i> | <i>5.7</i> | <i>5.7</i> | <i>5.7</i> | <i>5.7</i> |
| Italy - coastal areas | 1.4 | 3.4 | 3.3 | 3.1 | 3.8 | 3.9 | 4.0 | 4.2 |
| Italy - other areas | 1.8 | 2.1 | 2.1 | 1.8 | 2.2 | 2.2 | 2.3 | 2.3 |
| ITALY | <i>3.2</i> | <i>5.5</i> | <i>5.4</i> | <i>4.9</i> | <i>6.0</i> | <i>6.1</i> | <i>6.3</i> | <i>6.5</i> |
| LUXEMBOURG | — | — | — | — | — | — | — | — |
| NETHERLANDS | 0.9 | 1.2 | 1.1 | 0.6 | 1.1 | 1.1 | 1.1 | 1.1 |
| Total | 21.2 | 30.8 | 31.3 | 27.9 | 33.1 | 33.5 | 33.0 | 33.2 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|-----------------------------------|
| ELECTRIC-FURNACE STEEL |
|-----------------------------------|

Production

TABLE XXII c

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 ¹⁾ | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ²⁾ | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| North Rhine/Westphalia | 0.9 | 2.5 | 2.6 | 2.5 | 2.9 | 2.9 | 2.9 | 2.9 |
| Southern Germany ³⁾ | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| Saar | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| GERMANY | 1.2 | 3.0 | 3.2 | 3.0 | 3.5 | 3.5 | 3.6 | 3.6 |
| BELGIUM | 0.4 | 0.6 | 0.6 | 0.4 | 0.6 | 0.5 | 0.5 | 0.5 |
| Eastern France | 0.3 | 0.4 | 0.5 | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 |
| Northern France | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| France - other areas | 0.6 | 1.3 | 1.3 | 1.0 | 1.4 | 1.5 | 1.5 | 1.4 |
| FRANCE | 1.1 | 2.0 | 2.1 | 1.7 | 2.3 | 2.4 | 2.4 | 2.3 |
| Italy - coastal areas | 0.2 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 |
| Italy - other areas | 1.9 | 4.2 | 4.6 | 3.7 | 4.6 | 4.7 | 4.7 | 4.7 |
| ITALY | 2.1 | 4.7 | 5.1 | 4.2 | 5.1 | 5.2 | 5.3 | 5.3 |
| LUXEMBOURG | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| NETHERLANDS | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| Total | 5.0 | 10.6 | 11.3 | 9.6 | 11.8 | 12.0 | 12.2 | 12.1 |

¹⁾ For 1955, including "other steels".

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---------------------------------------|
| LD. KALDO AND OTHER STEELS |
|---------------------------------------|

Production

TABLE XXII d

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | . | 0.5 | 0.7 | 0.6 | 1.7 | 1.7 | 1.7 | 1.7 |
| North Rhine/Westphalia | . | 3.5 | 5.4 | 4.4 | 6.6 | 8.1 | 9.8 | 11.6 |
| Southern Germany ²⁾ | . | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Saar | . | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.0 |
| GERMANY | . | 4.2 | 6.4 | 5.3 | 8.6 | 10.1 | 11.8 | 14.3 |
| BELGIUM | . | 0.3 | 0.9 | 0.6 | 1.8 | 2.7 | 3.5 | 4.2 |
| Eastern France | . | 0.7 | 0.8 | 0.8 | 0.9 | 1.0 | 1.8 | 2.6 |
| Northern France | . | 0.9 | 1.5 | 1.5 | 1.9 | 2.0 | 2.2 | 2.2 |
| France - other areas | . | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| FRANCE | . | 1.7 | 2.3 | 2.3 | 2.8 | 3.0 | 4.0 | 4.9 |
| Italy - coastal areas | . | — | 0.5 | 0.2 | 3.3 | 4.4 | 4.9 | 5.2 |
| Italy - other areas | . | — | — | — | — | — | 0.1 | 0.1 |
| ITALY | . | — | 0.5 | 0.2 | 3.3 | 4.4 | 5.0 | 5.3 |
| LUXEMBOURG | . | 0.2 | 0.3 | 0.3 | 0.5 | 0.7 | 1.2 | 1.2 |
| NETHERLANDS | . | 1.5 | 1.8 | 1.8 | 2.2 | 2.2 | 2.2 | 2.2 |
| Total | . | 7.9 | 12.2 | 10.5 | 19.2 | 23.1 | 27.7 | 32.1 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|----------------------|
| STEEL - TOTAL |
|----------------------|

Production

TABLE XXII e

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|---------------------------|-------------------------------|--------------|--------------|--------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 2.4 | 5.3 | 5.3 | 4.8 | 6.3 | 6.7 | 6.8 | 6.8 |
| North Rhine/Westphalia | 18.2 | 28.6 | 29.7 | 26.9 | 31.5 | 33.0 | 33.6 | 34.2 |
| Southern Germany ²⁾ | 1.4 | 1.4 | 1.6 | 1.3 | 1.9 | 1.9 | 1.9 | 1.9 |
| Saar | 3.3 | 4.2 | 4.5 | 4.3 | 5.0 | 5.1 | 5.1 | 5.5 |
| GERMANY | 25.3 | 39.5 | 41.1 | 37.3 | 44.7 | 46.7 | 47.4 | 48.4 |
| BELGIUM | 6.3 | 8.8 | 9.8 | 8.6 | 10.4 | 10.7 | 11.5 | 12.1 |
| Eastern France | 8.8 | 13.4 | 13.5 | 12.4 | 14.0 | 14.4 | 15.4 | 16.5 |
| Northern France | 2.8 | 5.2 | 5.6 | 5.3 | 5.9 | 6.1 | 6.3 | 6.2 |
| France - other areas | 1.8 | 2.4 | 2.4 | 2.1 | 2.6 | 2.7 | 2.7 | 2.6 |
| FRANCE | 13.4 | 21.0 | 21.5 | 19.8 | 22.5 | 23.2 | 24.4 | 25.3 |
| Italy - coastal areas | 2.0 | 4.6 | 4.9 | 4.3 | 7.6 | 8.8 | 9.5 | 10.0 |
| Italy - other areas | 3.7 | 6.3 | 6.7 | 5.5 | 6.8 | 6.9 | 7.1 | 7.1 |
| ITALY | 5.7 | 10.9 | 11.6 | 9.8 | 14.4 | 15.7 | 16.6 | 17.1 |
| LUXEMBOURG | 3.3 | 4.5 | 4.8 | 4.6 | 4.9 | 5.1 | 5.1 | 5.3 |
| NETHERLANDS | 1.0 | 2.9 | 3.1 | 2.6 | 3.5 | 3.6 | 3.6 | 3.6 |
| Total | 55.0 | 87.6 | 91.9 | 82.7 | 100.4 | 105.0 | 108.6 | 111.8 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|----------|
| SECTIONS |
|----------|

Production

TABLE XXIII a

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual pro - duction 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|------|------|---------------------------------|-------------------------------|------|------|------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 1.0 | 1.4 | 1.7 | 1.5 | 2.3 | 2.3 | 2.3 | 2.3 |
| North Rhine, Westphalia | 6.4 | 9.6 | 10.2 | 8.4 | 10.8 | 11.2 | 11.4 | 11.9 |
| Southern Germany ²⁾ | 0.6 | 0.7 | 0.7 | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 |
| Saar | 1.6 | 2.4 | 2.3 | 2.2 | 2.7 | 2.7 | 2.7 | 2.9 |
| GERMANY | 9.6 | 14.1 | 14.9 | 12.7 | 16.7 | 17.1 | 17.3 | 18.0 |
| BELGIUM | 2.9 | 4.0 | 4.1 | 3.4 | 4.5 | 4.7 | 4.8 | 4.8 |
| Eastern France | 4.3 | 5.6 | 5.5 | 4.8 | 5.7 | 5.8 | 6.1 | 6.5 |
| Northern France | 0.9 | 1.6 | 1.7 | 1.3 | 1.7 | 1.7 | 1.8 | 1.8 |
| France - other areas | 0.8 | 1.3 | 1.2 | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 |
| FRANCE | 6.0 | 8.5 | 8.4 | 7.2 | 8.6 | 8.7 | 9.1 | 9.5 |
| Italy - coastal areas | 0.8 | 1.3 | 1.3 | 1.2 | 1.6 | 1.9 | 2.1 | 2.2 |
| Italy - other areas | 1.6 | 3.8 | 3.9 | 3.1 | 4.0 | 4.2 | 4.3 | 4.3 |
| ITALY | 2.4 | 5.1 | 5.2 | 4.3 | 5.6 | 6.1 | 6.4 | 6.5 |
| LUXEMBOURG | 1.8 | 2.2 | 2.2 | 2.1 | 2.2 | 2.4 | 2.4 | 2.5 |
| NETHERLANDS | 0.2 | 0.3 | 0.4 | 0.2 | 0.4 | 0.7 | 0.8 | 0.8 |
| Total | 22.9 | 34.2 | 35.2 | 29.9 | 38.0 | 39.7 | 40.8 | 42.1 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|----------------------|
| FLAT PRODUCTS |
|----------------------|

Production

TABLE XXIII b

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 0.4 | 1.6 | 2.1 | 1.5 | 2.6 | 2.7 | 2.8 | 2.8 |
| North Rhine/Westphalia | 5.5 | 9.6 | 10.1 | 8.0 | 11.1 | 11.8 | 11.8 | 11.7 |
| Southern Germany ²⁾ | 0.6 | 1.3 | 1.4 | 1.1 | 1.5 | 1.6 | 1.6 | 1.6 |
| Saar | 0.8 | 1.0 | 1.1 | 0.8 | 1.1 | 1.1 | 1.1 | 1.1 |
| GERMANY | 7.3 | 13.5 | 14.7 | 11.4 | 16.3 | 17.2 | 17.3 | 17.2 |
| BELGIUM | 1.9 | 3.0 | 3.4 | 2.9 | 3.6 | 4.1 | 4.3 | 4.4 |
| Eastern France | 2.3 | 4.9 | 4.9 | 4.4 | 5.0 | 5.1 | 5.2 | 5.2 |
| Northern France | 1.3 | 2.3 | 2.5 | 2.2 | 2.9 | 2.9 | 2.9 | 2.9 |
| France - other areas | 0.4 | 0.4 | 0.5 | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 |
| FRANCE | 4.0 | 7.6 | 7.9 | 7.0 | 8.5 | 8.6 | 8.7 | 8.7 |
| Italy - coastal areas | 0.7 | 1.6 | 1.8 | 1.4 | 2.2 | 2.7 | 2.9 | 2.9 |
| Italy - other areas | 0.8 | 2.0 | 2.3 | 1.9 | 2.4 | 2.5 | 2.7 | 2.8 |
| ITALY | 1.5 | 3.6 | 4.1 | 3.3 | 4.6 | 5.2 | 5.6 | 5.7 |
| LUXEMBOURG | 0.7 | 1.2 | 1.3 | 1.2 | 1.3 | 1.4 | 1.4 | 1.5 |
| NETHERLANDS | 0.8 | 1.6 | 1.5 | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 |
| Total | 16.2 | 30.5 | 32.9 | 27.3 | 35.8 | 38.3 | 39.1 | 39.3 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---|
| FINISHED ROLLED PRODUCTS - TOTAL |
|---|

Production

TABLE XXIII c

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 1.4 | 3.0 | 3.8 | 3.0 | 4.9 | 5.0 | 5.1 | 5.1 |
| North Rhine/Westphalia | 11.9 | 19.2 | 20.3 | 16.4 | 21.9 | 23.0 | 23.2 | 23.6 |
| Southern Germany ²⁾ | 1.2 | 2.0 | 2.1 | 1.7 | 2.4 | 2.5 | 2.5 | 2.5 |
| Saar | 2.4 | 3.4 | 3.4 | 3.0 | 3.8 | 3.8 | 3.8 | 4.0 |
| GERMANY | 16.9 | 27.6 | 29.6 | 24.1 | 33.0 | 34.3 | 34.6 | 35.2 |
| BELGIUM | 4.8 | 7.0 | 7.5 | 6.3 | 8.1 | 8.8 | 9.1 | 9.2 |
| Eastern France | 6.6 | 10.5 | 10.4 | 9.2 | 10.7 | 10.9 | 11.3 | 11.7 |
| Northern France | 2.2 | 3.9 | 4.2 | 3.5 | 4.6 | 4.6 | 4.7 | 4.7 |
| France - other areas | 1.2 | 1.7 | 1.7 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 |
| FRANCE | 10.0 | 16.1 | 16.3 | 14.2 | 17.1 | 17.3 | 17.8 | 18.2 |
| Italy - coastal areas | 1.5 | 2.9 | 3.1 | 2.6 | 3.8 | 4.6 | 5.0 | 5.1 |
| Italy - other areas | 2.4 | 5.8 | 6.2 | 5.0 | 6.4 | 6.7 | 7.0 | 7.1 |
| ITALY | 3.9 | 8.7 | 9.3 | 7.6 | 10.2 | 11.3 | 12.0 | 12.2 |
| LUXEMBOURG | 2.5 | 3.4 | 3.5 | 3.3 | 3.5 | 3.8 | 3.8 | 4.0 |
| NETHERLANDS | 1.0 | 1.9 | 1.9 | 1.7 | 1.9 | 2.5 | 2.6 | 2.6 |
| Total | 39.1 | 64.7 | 68.1 | 57.2 | 73.8 | 78.0 | 79.9 | 81.4 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|---|
| HEAVY AND LIGHT SECTIONS (INCLUDING TUBE ROUNDS AND SQUARES) |
|---|

Production

TABLE XXIV a

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 1.0 | 1.4 | 1.5 | 1.3 | 2.1 | 2.1 | 2.1 | 2.1 |
| North Rhine/Westphalia | 5.1 | 7.4 | 7.8 | 6.2 | 8.2 | 8.6 | 8.7 | 9.0 |
| Southern Germany ²⁾ | 0.6 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 |
| Saar | 1.3 | 1.9 | 1.9 | 1.8 | 2.3 | 2.3 | 2.3 | 2.4 |
| GERMANY | 8.0 | 11.4 | 11.9 | 9.9 | 13.4 | 13.8 | 13.9 | 14.3 |
| BELGIUM | 2.4 | 3.1 | 3.1 | 2.5 | 3.3 | 3.5 | 3.6 | 3.6 |
| Eastern France | 3.4 | 4.1 | 4.0 | 3.4 | 4.1 | 4.1 | 4.3 | 4.6 |
| Northern France | 0.9 | 1.3 | 1.4 | 1.2 | 1.4 | 1.4 | 1.5 | 1.5 |
| France - other areas | 0.6 | 1.0 | 0.9 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 |
| FRANCE | 4.9 | 6.4 | 6.3 | 5.4 | 6.4 | 6.4 | 6.7 | 7.0 |
| Italy - coastal areas | 0.7 | 1.2 | 1.2 | 1.1 | 1.5 | 1.8 | 2.0 | 2.1 |
| Italy - other areas | 1.2 | 3.1 | 3.3 | 2.7 | 3.3 | 3.5 | 3.6 | 3.6 |
| ITALY | 1.9 | 4.3 | 4.5 | 3.8 | 4.8 | 5.3 | 5.6 | 5.7 |
| LUXEMBOURG | 1.5 | 1.9 | 1.9 | 1.9 | 1.9 | 2.1 | 2.1 | 2.2 |
| NETHERLANDS | 0.1 | 0.1 | 0.2 | 0.0 | 0.3 | 0.5 | 0.5 | 0.5 |
| Total | 18.8 | 27.2 | 27.9 | 23.5 | 30.1 | 31.6 | 32.4 | 33.3 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|-----------------|
| WIRE-ROD |
|-----------------|

| |
|-------------------|
| Production |
|-------------------|

TABLE XXIV b

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|------------|------------|------------------------|-------------------------------|------------|------------|------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | — | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| North Rhine/Westphalia | 1.3 | 2.2 | 2.4 | 2.2 | 2.6 | 2.6 | 2.7 | 2.9 |
| Southern Germany ²⁾ | — | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Saar | 0.3 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 |
| GERMANY | 1.6 | 2.7 | 3.0 | 2.8 | 3.3 | 3.3 | 3.4 | 3.7 |
| BELGIUM | 0.5 | 0.9 | 1.0 | 0.9 | 1.2 | 1.2 | 1.2 | 1.2 |
| Eastern France | 0.9 | 1.5 | 1.5 | 1.4 | 1.6 | 1.7 | 1.8 | 1.9 |
| Northern France | 0.0 | 0.3 | 0.3 | 0.1 | 0.3 | 0.3 | 0.3 | 0.3 |
| France - other areas | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| FRANCE | 1.1 | 2.1 | 2.1 | 1.8 | 2.2 | 2.3 | 2.4 | 2.5 |
| Italy - coastal areas | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Italy - other areas | 0.4 | 0.7 | 0.6 | 0.4 | 0.7 | 0.7 | 0.7 | 0.7 |
| ITALY | 0.5 | 0.8 | 0.7 | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 |
| LUXEMBOURG | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| NETHERLANDS | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.3 |
| Total | 4.1 | 7.0 | 7.3 | 6.4 | 7.9 | 8.1 | 8.4 | 8.8 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
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| HOOP AND STRIP AND TUBE STRIP |
|--|

Production

TABLE XXIV c

Production and Production Potential by Areas

*000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|------------|------------|------------------------|-------------------------------|------------|------------|------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | — | — | 0.0 | 0.0 | — | — | — | — |
| North Rhine, Westphalia | 1.5 | 2.5 | 2.6 | 2.1 | 2.9 | 3.1 | 3.0 | 3.0 |
| Southern Germany ²⁾ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Saar | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| GERMANY | 1.7 | 2.8 | 2.9 | 2.4 | 3.2 | 3.4 | 3.3 | 3.3 |
| BELGIUM | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 |
| Eastern France | 0.6 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 |
| Northern France | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| France - other areas | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FRANCE | 0.6 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 |
| Italy - coastal areas | 0.1 | 0.2 | 0.3 | 0.2 | 0.5 | 0.6 | 0.6 | 0.6 |
| Italy - other areas | 0.1 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |
| ITALY | 0.2 | 0.5 | 0.6 | 0.5 | 0.8 | 0.9 | 0.9 | 1.0 |
| LUXEMBOURG | 0.4 | 0.7 | 0.8 | 0.7 | 0.8 | 0.8 | 0.8 | 0.9 |
| NETHERLANDS | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total | 3.3 | 5.7 | 5.9 | 5.2 | 6.4 | 6.8 | 6.8 | 7.0 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

**PLATE > 3 mm
(INCLUDING
WIDE FLAT STEEL)**

Production

TABLE XXIV d

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | 0.4 | 0.9 | 1.1 | 0.8 | 1.2 | 1.2 | 1.2 | 1.2 |
| North Rhine, Westphalia | 2.4 | 4.0 | 4.4 | 3.4 | 4.5 | 4.7 | 4.7 | 4.6 |
| Southern Germany ²⁾ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Saar | 0.4 | 0.6 | 0.7 | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 |
| GERMANY | 3.2 | 5.5 | 6.2 | 4.7 | 6.5 | 6.7 | 6.7 | 6.6 |
| BELGIUM | 0.7 | 0.8 | 1.0 | 0.8 | 1.1 | 1.2 | 1.2 | 1.2 |
| Eastern France | 0.6 | 1.3 | 1.1 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 |
| Northern France | 0.4 | 0.7 | 0.7 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 |
| France - other areas | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| FRANCE | 1.1 | 2.1 | 1.9 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 |
| Italy - coastal areas | 0.3 | 0.6 | 0.7 | 0.6 | 0.8 | 1.0 | 1.2 | 1.2 |
| Italy - other areas | 0.3 | 0.6 | 0.5 | 0.3 | 0.5 | 0.5 | 0.5 | 0.5 |
| ITALY | 0.6 | 1.2 | 1.2 | 0.9 | 1.3 | 1.5 | 1.7 | 1.7 |
| LUXEMBOURG | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| NETHERLANDS | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Total | 6.0 | 10.2 | 10.9 | 8.7 | 11.5 | 12.1 | 12.3 | 12.2 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

| |
|--|
| HOT-ROLLED SHEET < 3 mm. |
|--|

Production

TABLE XXIV e

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|------------|------------|------------------------|-------------------------------|------------|------------|------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | — | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| North Rhine/Westphalia | 1.1 | 1.1 | 1.0 | 0.7 | 0.9 | 0.9 | 0.8 | 0.8 |
| Southern Germany ²⁾ | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Saar | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| GERMANY | 1.6 | 1.4 | 1.3 | 0.9 | 1.2 | 1.2 | 1.1 | 1.1 |
| BELGIUM | 0.5 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| Eastern France | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 |
| Northern France | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| France - other areas | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| FRANCE | 1.1 | 0.8 | 0.7 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 |
| Italy - coastal areas | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.3 | 0.3 | 0.3 |
| Italy - other areas | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| ITALY | 0.3 | 0.2 | 0.2 | 0.1 | 0.2 | 0.4 | 0.4 | 0.4 |
| LUXEMBOURG | — | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NETHERLANDS | 0.0 | 0.0 | 0.0 | 0.0 | — | — | — | — |
| Total | 3.5 | 2.6 | 2.5 | 1.8 | 2.4 | 2.6 | 2.5 | 2.5 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

COLD-REDUCED SHEET
< 3 mm.

Production

TABLE XXIV f

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ¹⁾ | — | 0.7 | 1.0 | 0.7 | 1.3 | 1.4 | 1.5 | 1.5 |
| North Rhine/Westphalia | 0.5 | 2.0 | 2.1 | 1.8 | 2.8 | 3.1 | 3.3 | 3.3 |
| Southern Germany ²⁾ | 0.2 | 1.1 | 1.2 | 0.9 | 1.3 | 1.4 | 1.4 | 1.4 |
| Saar | 0.1 | — | — | — | — | — | — | — |
| GERMANY | 0.8 | 3.8 | 4.3 | 3.4 | 5.4 | 5.9 | 6.2 | 6.2 |
| BELGIUM | 0.4 | 1.6 | 1.7 | 1.5 | 1.8 | 2.1 | 2.3 | 2.4 |
| Eastern France | 0.6 | 2.1 | 2.3 | 2.0 | 2.4 | 2.5 | 2.5 | 2.5 |
| Northern France | 0.5 | 1.2 | 1.6 | 1.4 | 2.0 | 2.0 | 2.0 | 2.0 |
| France - other areas | 0.1 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| FRANCE | 1.2 | 3.5 | 4.2 | 3.6 | 4.7 | 4.8 | 4.8 | 4.8 |
| Italy - coastal areas | 0.2 | 0.7 | 0.7 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 |
| Italy - other areas | 0.2 | 1.0 | 1.4 | 1.2 | 1.5 | 1.6 | 1.8 | 1.8 |
| ITALY | 0.4 | 1.7 | 2.1 | 1.8 | 2.3 | 2.4 | 2.6 | 2.6 |
| LUXEMBOURG | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| NETHERLANDS | 0.4 | 1.1 | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 |
| Total | 3.4 | 12.0 | 13.6 | 11.6 | 15.5 | 16.8 | 17.5 | 17.6 |

¹⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

²⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

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| 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) | | |
|--------------------------------------|--------------------|------|------------------|------|------|-------|-------|--|--------------------|------|
| | 1954 | 1955 | 1) ¹⁾ | 1961 | 1962 | 1963 | 1964 | on | on January 1, 1965 | |
| | | | | | | | | Jan. 1, 1964 for | for | 1966 |
| Northern Germany ²⁾ | . | 14.5 | | 21.3 | 8.5 | 23.8 | 12.3 | 5.7 | 2.1 | 0.2 |
| North Rhine/Westphalia | . | 12.7 | | 13.1 | 13.9 | 33.7 | 45.3 | 53.0 | 34.2 | 50.0 |
| Southern Germany ³⁾ | — | — | | — | — | — | — | — | — | — |
| Saar | — | — | | — | — | — | — | — | — | — |
| GERMANY | . | 27.2 | | 34.4 | 22.4 | 57.5 | 57.6 | 58.7 | 36.3 | 50.2 |
| BELGIUM | . | 0.9 | | 7.4 | 8.9 | 23.3 | 8.8 | 9.8 | 17.0 | 22.6 |
| Eastern France | . | 1.8 | | 2.0 | 1.5 | 0.9 | 0.7 | 0.4 | 3.2 | 1.0 |
| Northern France | . | 1.1 | | 20.0 | 27.7 | 22.7 | 11.6 | 9.1 | 4.2 | 0.8 |
| France - other areas | . | 0.8 | | — | 0.5 | 1.2 | 0.1 | 0.7 | 0.2 | 0.0 |
| FRANCE | .. | 3.7 | | 22.0 | 29.7 | 24.8 | 12.4 | 10.2 | 7.6 | 1.8 |
| Italy - coastal areas | . | 0.4 | | 1.0 | 0.3 | 37.2 | 34.9 | 26.8 | 4.8 | 0.9 |
| Italy - other areas | . | 2.4 | | 1.4 | 3.5 | 15.7 | 22.6 | 24.1 | 12.7 | 0.4 |
| ITALY | . | 2.8 | | 2.4 | 3.8 | 52.9 | 57.5 | 50.9 | 17.5 | 1.3 |
| LUXEMBOURG | . | 0.2 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| NETHERLANDS | . | 1.0 | | 0.8 | 0.7 | 0.3 | 0.4 | 0.1 | 0.1 | 1.6 |
| Total | | 31.6 | | 67.0 | 65.5 | 158.8 | 136.7 | 129.8 | 78.5 | 77.5 |

¹⁾ Capital expenditure concerning 1956-1960 appears in the tables of the 1963 Survey's Report.

²⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

³⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.

COILS ¹⁾

Production

TABLE XXV b

Production and Production Potential by Areas

'000,000 metric tons

| Area | Production potential | | | Actual production 1964 | Expected production potential | | | |
|--------------------------------------|----------------------|-------------|-------------|------------------------|-------------------------------|-------------|-------------|-------------|
| | 1955 ²⁾ | 1963 | 1964 | | 1965 | 1966 | 1967 | 1968 |
| Northern Germany ³⁾ | 0.3 | 0.9 | 1.6 | 1.3 | 2.1 | 2.3 | 2.5 | 2.5 |
| North Rhine/Westphalia | 1.7 | 3.5 | 4.1 | 3.8 | 5.4 | 5.5 | 5.9 | 7.1 |
| Southern Germany ⁴⁾ | — | — | — | — | — | — | — | — |
| Saar | — | — | — | — | — | — | — | — |
| GERMANY | 2.0 | 4.4 | 5.7 | 5.1 | 7.5 | 7.8 | 8.4 | 9.6 |
| BELGIUM | 1.0 | 1.7 | 2.3 | 2.1 | 2.5 | 2.7 | 3.4 | 3.7 |
| Eastern France | 1.5 | 2.4 | 2.5 | 2.4 | 2.5 | 2.6 | 2.6 | 2.6 |
| Northern France | 1.1 | 1.7 | 2.4 | 2.2 | 2.5 | 2.8 | 2.8 | 2.8 |
| France - other areas | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| FRANCE | 2.7 | 4.1 | 5.0 | 4.7 | 5.1 | 5.5 | 5.5 | 5.5 |
| Italy - coastal areas | 0.9 | 1.5 | 1.8 | 1.5 | 3.0 | 3.3 | 3.5 | 3.6 |
| Italy - other areas | 0.2 | 0.3 | 0.3 | 0.1 | 0.5 | 0.8 | 0.8 | 0.8 |
| ITALY | 1.1 | 1.8 | 2.1 | 1.6 | 3.5 | 4.1 | 4.3 | 4.4 |
| LUXEMBOURG | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| NETHERLANDS | 0.8 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Total | 8.0 | 13.8 | 17.0 | 15.4 | 20.5 | 22.0 | 23.5 | 25.1 |

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

²⁾ Figures for 1955 are approximations only.

³⁾ Schleswig-Holstein, Lower Saxony, Hamburg, Bremen.

⁴⁾ Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria.