European Coal and Steel Community

COMMISSION

# Investment in the Community Coalmining and Iron and Steel Industries

REPORT ON THE 1980 SURVEY
Position as at 1 January 1980

JULY 1980

This publication also appears in the following languages:

DA ISBN 92-825-2007-2
DE ISBN 92-825-2008-0
FR ISBN 92-825-2010-2
IT ISBN 92-825-2011-0
NL ISBN 92-825-2012-9

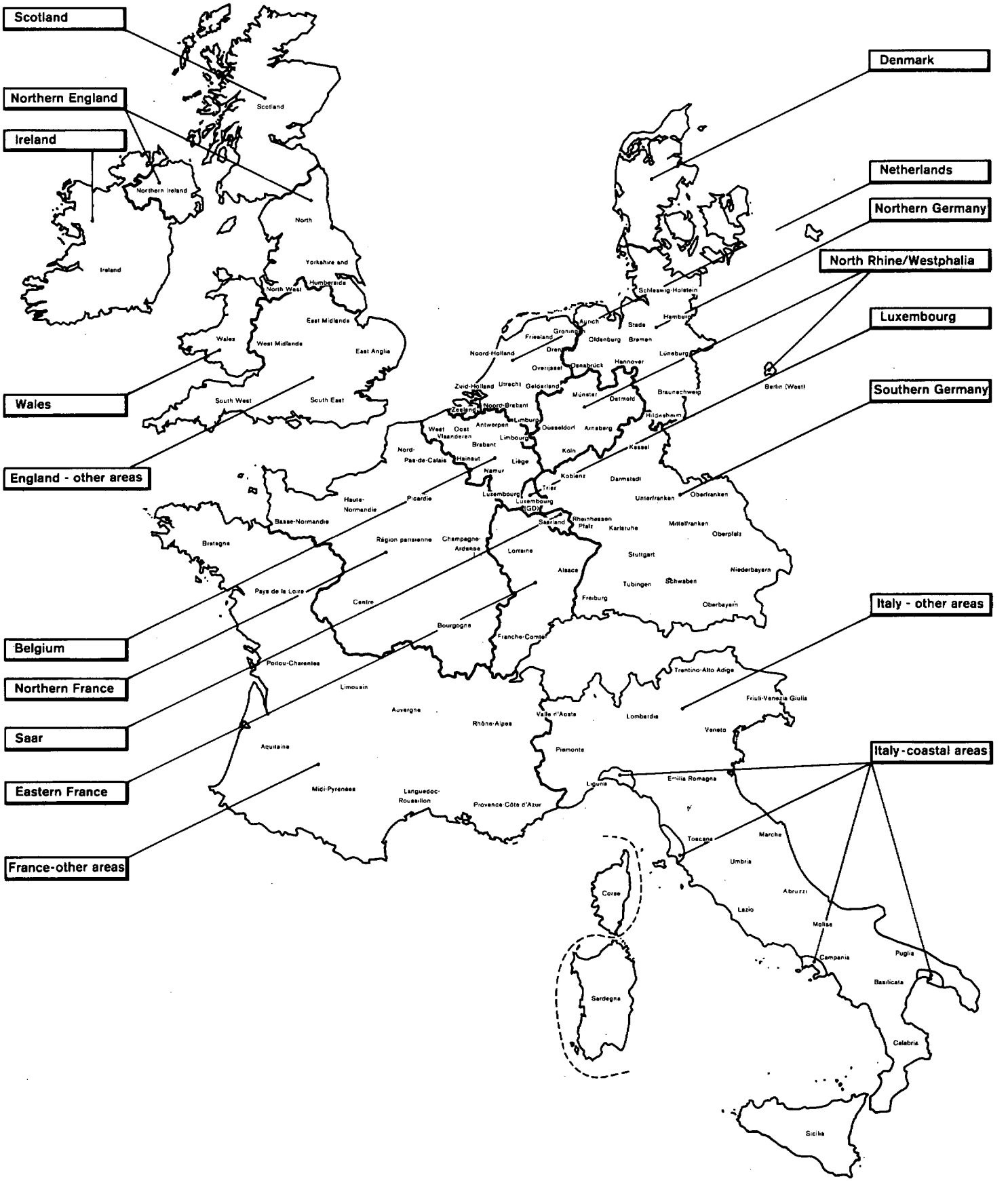
Cataloguing data can be found at the end of this publication.


*Printed in Belgium*



ISBN 92-825-2009-9 Catalogue number: CB-30-80-835-EN-C

# Iron and steel regions in the Community



# CONTENTS

## INTRODUCTORY NOTE

This report presents the results of the European Commission's 1980 survey of past and future investment by coal and steel enterprises in the European Coal and Steel Community (ECSC) and of the impact of such investment on production potential.

A full breakdown of the results of the survey by product and plant categories and by region is given in the statistical annex.

The standard ECSC definitions of capital expenditure and production potential which have been used in the survey are given in an annex to this report.

## EUROPEAN UNIT OF ACCOUNT

The unit of account used in this report is the European unit of account. [1]

The average values of the European unit of account (EUA) used for conversion of figures for the years 1977 to 1980 are given in the table below. Figures for 1980 and after are converted at the value of the European unit of account in national currency as at 2 January 1980, also shown in the table below.

| Country | Currency | 1977 | 1978 | 1979 | 1980 and after |
|---|---|---|---|---|---|
| FR of Germany | DM | 2,64832 | 2,55608 | 2,51095 | 2,48211 |
| Belgium/Luxembourg | BFR/LFR | 40,8826 | 40,0611 | 40,1633 | 40,3135 |
| France | FF | 5,60608 | 5,73983 | 5,82948 | 5,81136 |
| Italy | LIT | 1 006,790 | 1 080,220 | 1 138,440 | 1 159,310 |
| Netherlands | HFL | 2,80011 | 2,75409 | 2,74861 | 2,73676 |
| United Kingdom | UKL | 0,653701 | 0,663911 | 0,646428 | 0,649113 |
| Denmark | DKR | 6,85568 | 7,01946 | 7,20701 | 7,72413 |
| Ireland | IRL | 0,653701 | 0,663888 | 0,669478 | 0,671402 |

[1] Cf. Article 2 (2) of Council Decision 75/250/EEC of 21 April 1975 and Article 2 (2) of Commission Decision No. 3289/75/ECSC of 18 December 1975.

*Note:* For technical reasons the Continental practice of using a comma instead of a decimal point has been adopted in this publication.

## FOREWORD

The statistics on production potential are based, as before, on a survey conducted at the start of the year. A certain number of undertakings remained undecided as to closure decisions, while in other cases capacities which are used infrequently have been recorded. Additionally, the continuing deterioration of the steel market has resulted in changes being made to the investment programmes planned by undertakings early in the year. The figures given in this report are therefore in some cases unrealistically high. It would thus be premature to draw any firm conclusions from them concerning the undertakings' restructuring efforts.

In the course of the year the Commission, in cooperation with the undertakings concerned, will endeavour to compile more realistic statistics on effective production, and may accordingly publish revised figures at a later date.

# I — SUMMARY AND CONCLUSIONS

The present enquiry shows that capital expenditure in the Community **coal industry** has risen from 932 million EUA in 1978 to 1 167 million EUA in 1979, exceeding the forecasts made at the beginning of the year. According to the companies, expenditure will again increase to more than 1 360 million EUA in 1980, on the basis of approved projects, 1 500 million EUA if the additional planned but not approved projects are included.

Extraction potential recorded a further fall in 1979 so that the level of 245 million tonnes shows a fall of 10% from that observed in 1974. If the forecasts show a further diminution of 2% for 1980, they allow none the less the prospect of stabilization at this level or even an eventual improvement. If all the planned projects (including those not yet approved) are realized, the extraction potential will be about 245 million tonnes in 1983. The extent to which all these projects will be achieved will depend on market development (iron production, construction of coal-fired power stations) and the availability of finance which will continue to depend in part on Government and Community assistance.

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Capital expenditure for **coke-ovens** in the Community fell by 30% from the 1978 level to 113 million EUA in 1979. For 1980 it will scarcely exceed this amount.

Taking account of approved projects and those in progress, the production potential for coke-making will drop from 78,7 million tonnes in 1979 to 76,6 million tonnes in 1983. The previous enquiry had forecast production potential of 77,6 million tonnes for 1982. It appears that the continuing steel crisis has prompted the closure of obsolete coke-ovens at a faster rate than previously anticipated.

The revised General Objectives for Steel forecast iron production of between 96 and 101 million tonnes for 1985. Community coke requirements, allowing for consumption in other sectors, will therefore be approximately 68 to 70 million tonnes. Bearing in mind the obsolescence of a large number of batteries, the very low level of capital expenditure and the trend in recent years for coke production potential to fall more rapidly than forecast, it appears that the Community's coking facilities will be insufficient to meet demand unless vigorous efforts are made to renovate the facilities.

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In the area of **iron-ore mines**, both the capital expenditure—14,5 million EUA—and the extraction potential—46,7 million tonnes—showed further falls during 1979.

For 1980 it is estimated that capital expenditure will be 12,6 million EUA, while extraction potential will fall to 42,0 million tonnes. A level of only 38,8 million tonnes is foreseen for 1983.

A further worsening of the financial situation of the mining companies cannot be excluded.

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In 1979, for the first time since 1975, the downward trend of **capital expenditure** in the **iron and steel industry** has been halted and levelled off at 2 000 million EUA; 1978 — 2 022 million EUA. This corresponds fairly closely to the forecasts made at the beginning of the year of 2 018 million EUA. In 1970 constant price terms [1] the expenditure in millions of EUA was 1 380 in 1977, 1 169 in 1978 and 1 143 in 1979. The stabilization of capital expenditure seems to be due to improvements in the steelmakers' revenue and the development of major programmes developed in conjunction with the national authorities. However, the recent increase in the prices of primary and secondary raw materials and rising costs on the one hand, and slackening of demand and lower selling prices on the other, offer little hope of a recovery in capital expenditure levels for 1980.

In 1970 constant price terms, investment per tonne of crude-steel capacity, which had fallen from 11,9 EUA in 1974 to 5,8 EUA in 1978, was 5,6 EUA in 1979, maintaining its unsatisfactory level.

As already pointed out in the report on the previous survey, this persistently low level of capital expenditure could well make it impossible to modernize the—albeit smaller—capacity needed to cater for the demand forecast in the revised General Objectives.

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The new survey confirms that the decline in **crude-steel potential** which first became apparent in the 1979 survey is likely to continue, though very gradually, falling from 203,5 million tonnes in 1979 to 200,8 million tonnes in 1983, the last year for which forecasts are made in the survey. Of the countries registering declines in production potential, the United Kingdom is most affected, following implementation of the British Steel Corporation's '15 million tonnes per annum plan'.

On the other hand, as shown in Table I, several enterprises expect their production potential to expand between now and 1983. A substantial proportion of this expansion will arise in existing plant as a result of changes in steelmaking processes. [2]

As mentioned in the report on the 1979 survey, further substantial reductions of capacities are certainly being considered—and may even have been decided—in several regions. Table II, showing the rate of utilization of steel production potential, indicates that a capacity of nearly 13 million tonnes was used at less than 50%, which should be a reliable pointer to closures over and above those announced in the survey. However, these cuts have not yet been announced by the enterprises concerned, either for fear of labour unrest or, more probably, of losses in their market shares. As a result the essential restructuring is proceeding extremely slowly and further substantial losses could be sustained by the enterprises concerned.

[1] Revision of price indices by the national statistical institutes has made it necessary to adjust the 1970 constant price values published in 1979.

[2] In the case of Italy, this survey includes ten or so plants not previously considered, which between them represent a steel production potential of approximately 500 000 tonnes. The increase in this country's potential can therefore be put down partly to improved survey coverage.

*TABLE I*

**Development of crude-steel production and production potential**

*(million tonnes)*

| Country | Production | Production potential | | |
|---|---|---|---|---|
| | 1979 | Actual | Expected | |
| | | 1979 | 1980 | 1983 |
| FR of Germany | 46,0 | 68,8 | 68,5 | 67,8 |
| Belgium | 13,5 | 19,7 | 19,7 | 19,9 |
| France | 23,4 | 32,0 | 30,7 | 30,8 |
| Italy | 24,8 | 37,0 | 37,3 | 38,1 |
| Luxembourg | 4,9 | 7,3 | 7,3 | 7,5 |
| Netherlands | 5,8 | 8,4 | 8,6 | 8,7 |
| United Kingdom | 21,5 | 28,9 | 28,4 | 26,7 |
| Denmark | 0,8 | 1,2 | 1,1 | 0,9 |
| Ireland | 0,1 | 0,1 | 0,2 | 0,3 |
| **Total EUR 9** | **140,8** | **203,5** | **201,8** | **200,8** |

The present survey reveals that the withdrawal of obsolete capacity (open-hearth, Basic Bessemer and OBM/LWS converted from Basic Bessemer) is going ahead more quickly than anticipated. However, although in some cases closures involve no replacement, in others—particularly open-hearth furnaces—the obsolete capacity is replaced by electric furnaces. This and the price of scrap which has remained attractively low for some time, explains why the electric-arc process—which accounted for 16% of total production in 1974—now accounts for 23%. About 24% of the 1983 production potential for steel is expected to be from arc furnaces.

The rapid expansion of continuous casting which was already apparent at the time of the previous survey is expected to continue and it is anticipated that, between 1979 and 1983, the proportion of total crude-steel capacity which could be continuously cast will rise from 29% to 45%. The higher yields obtained by this method of producing semi-finished products also increase the quantity of steel available for conversion into finished rolled products, as compared with conventional casting.

*TABLE II*

**Rate of utilization of crude-steel production potential in 1979**

| | Production potential | Rate of utilization | | | |
|---|---|---|---|---|---|
| | | <20% | 21-50% | 51-80% | >81% |
| Total crude steel in million tonnes | 203,5 | 4,0 | 8,9 | 141,5 | 49,0 |
| in % | 100,0 | 2,0 | 4,4 | 69,5 | 24,1 |

In fact the new survey shows that finished product potential is likely to rise between now and 1983 from 167,6 to 170,7 million tonnes.

A decrease in production potential is forecast for only two products: **heavy sections** and **hot-rolled medium, narrow and tube strip**. The falling production potential for heavy sections—from 18,4 million tonnes to 17,6 million tonnes—is nevertheless offset by new capacity for continuously cast 'tube rounds and squares'. The decrease in the production potential of medium, narrow and tube strip covers in fact a steady decline in production potential on specialized mills, only partly compensated by an increase in medium and narrow strip produced by slitting of wide strip.

Hot-rolled plate and sheet rolled on specialized mills is affected by a similar development.

However, while the rates of utilization of specialized mills have been particularly low over the past few years (as low as 50% in certain cases) the current production potential of some 19 million tonnes is not expected to fall between now and 1983.

Despite substantial closures, the production potential for long products other than heavy sections should remain largely unchanged during the years covered by the survey:

— the production potential for **light sections**, at just under 31 million tonnes, should more or less maintain its current level;

— the production potential for **wire rod**, in the region of 19 million tonnes, is expected to fall slightly and then revert to its present level between 1979 and 1983.

For these different categories of products, the results of the survey therefore offer little hope of a significant improvement in the balance between supply and demand required by the revised General Objectives.

*TABLE III*

**Development of production and production potential of finished rolled products**

*(million tonnes)*

| | Production | | Production potential | | | |
|---|---|---|---|---|---|---|
| | | | Actual | | Expected | |
| | 1978 | 1979 | 1978 | 1979 | 1980 | 1983 |
| Coils hot wide strip | 46,7 | 49,7 | 67,7 | 69,8 | 71,5 | 76,5 |
| Heavy sections (including tube rounds and squares) | 11,3 | 10,9 | 18,9 | 18,4 | 18,2 | 17,6 |
| Light sections | 19,2 | 20,7 | 31,8 | 30,8 | 30,4 | 30,6 |
| Wire rod | 11,2 | 12,6 | 18,5 | 18,9 | 18,5 | 18,9 |
| Hoop and strip for tubemaking | 6,6 | 7,2 | 12,4 | 12,2 | 12,0 | 11,6 |
| Hot-rolled sheet and plates | 12,8 | 14,4 | 27,4 | 27,9 | 27,8 | 27,9 |
| Cold-rolled sheet | 27,8 | 29,0 | 43,0 | 43,8 | 44,4 | 45,5 |
| Coils finished products | 12,1 | 11,6 | 15,1 | 15,6 | 15,9 | 18,7 |
| **Total finished rolled production** [1] | **101,0** | **106,4** | **167,1** | **167,6** | **167,2** | **170,7** |

[1] Including coils finished products and tube rounds and squares.

In the case of two products, capacity is actually expected to increase:

— the production potential for **cold-rolled wide strip** is expected to rise from 43,8 million tonnes in 1979 to 45,5 million tonnes in 1983, i.e. an average annual increase of 0,9%;

— the largest rise between 1979 and 1983 is expected in the production potential of **hot-rolled wide strip**, with an increase from 69,8 million tonnes to 76,5 million tonnes, i.e. an average annual increase of 2,3%.

The increase in capacity for this latter product is admittedly offset to a certain extent by the rise in production of medium and narrow strip and plate and sheet on wide-strip mills, to the detriment of specialized mill production. Similarly, a greater proportion of hot wide strip could be re-rolled in cold rolling mills thanks to their increased production potential. However, the latest revised General Objectives concluded that the hot and cold wide-strip capacity available in 1978 would already adequately cater for foreseeable demand in 1983.

# II — COALMINING INDUSTRY

## 1. Capital expenditure

### 1.1. Total capital expenditure in 1979

The 1979 figure of 1 167,0 million EUA for investments notified was 25% up on the previous year. Although a part of the increase is attributable to price rises (the increase in investment from 1978 to 1979 amounted to some 22,4% in real terms), the figures none the less reflect the industry's willingness to invest at a high level despite the rapidly increasing expenditure since 1974 and a deterioration in the situation in most mines (with the exception of the Federal Republic of Germany).

Capital expenditure was higher in all the Member States with the exception of France. It increased in almost all regions of the United Kingdom, particularly Yorkshire, as a result of work on the Selby project. Similar upward trends were observed in the Federal Republic of Germany and Belgium.

*TABLE IV*

**Actual and estimated capital expenditure in the coalmining industry 1977-1981**

*(million EUA)*

| | Actual expenditure | | | Estimated expenditure | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1980 | | 1981 | |
| | 1977 | 1978 | 1979 | Projects approved and in progress (cat. A+B) | All planned projects (cat. A+B+C) | Projects approved and in progress (cat. A+B) | All planned projects (cat. A+B+C) |
| Capital expenditure: | | | | | | | |
| — At current prices | 743,6 | 931,8 | 1 167,0 | 1 361,7 | 1 505,5 | 1 157,0 | 1 543,5 |
| — At constant prices of 1970 | 431,3 | 501,8 | 614,2 [1] | 716,7 [1] | 792,4 [1] | 608,9 [1] | 812,4 [1] |

[1] Estimated.

Taken overall, expenditure exceeded the estimates drawn up at the beginning of 1979; this however was entirely due to investments in the United Kingdom, as actual expenditure was below the estimates in the other Member States, particularly Belgium.

### 1.2. Forecast capital expenditure for 1980 and 1981

Spending forecasts for 1980 and 1981 remain at a particularly high levels, both for projects formally approved and those still at the planning stage.

With the exception of France, almost all the coalfields in the Community have indicated substantial increases, particularly in the Saar and Aix-en-Chapelle coalfields in the Federal Republic of Germany. In the case of the Ruhr, the programmes could include some of the measures originally planned for 1978 and 1979.

In the Community as a whole, capital expenditure per tonne of coal produced amounted to 4,92 EUA in 1979, compared with 3,94 EUA in the previous year. Of course, this increase is a result of the interplay of various (sometimes contradictory) factors, for example, lower effective production, the rate of inflation, the rate at which new deposits are opened up, etc. As a result, comparison over a period of time and between coalfields tends to be distorted. Nevertheless, the overall trend has been significantly upwards since the start of the energy crisis.

*TABLE V*

**Capital expenditure per tonne of coal extracted**

*(in EUA per tonne)*

| | 1977 | 1978 | 1979 |
|---|---|---|---|
| FR of Germany | 2,60 | 2,35 | 2,99 |
| Belgium | 1,83 | 3,03 | 4,02 |
| France | 2,31 | 2,43 | 2,12 |
| United Kingdom | 3,73 | 5,42 | 6,90 |
| **EUR 9** | **3,11** | **3,94** | **4,92** |

### 1.3. Breakdown of actual and forecast investment by category of installation

As in the past, investment in underground machinery accounted for the major part of total investment in 1979.

The level of expenditure in shafts and underground workings remained steady in 1979, and this trend is expected to continue in 1980.

## 2. Extraction and extraction potential

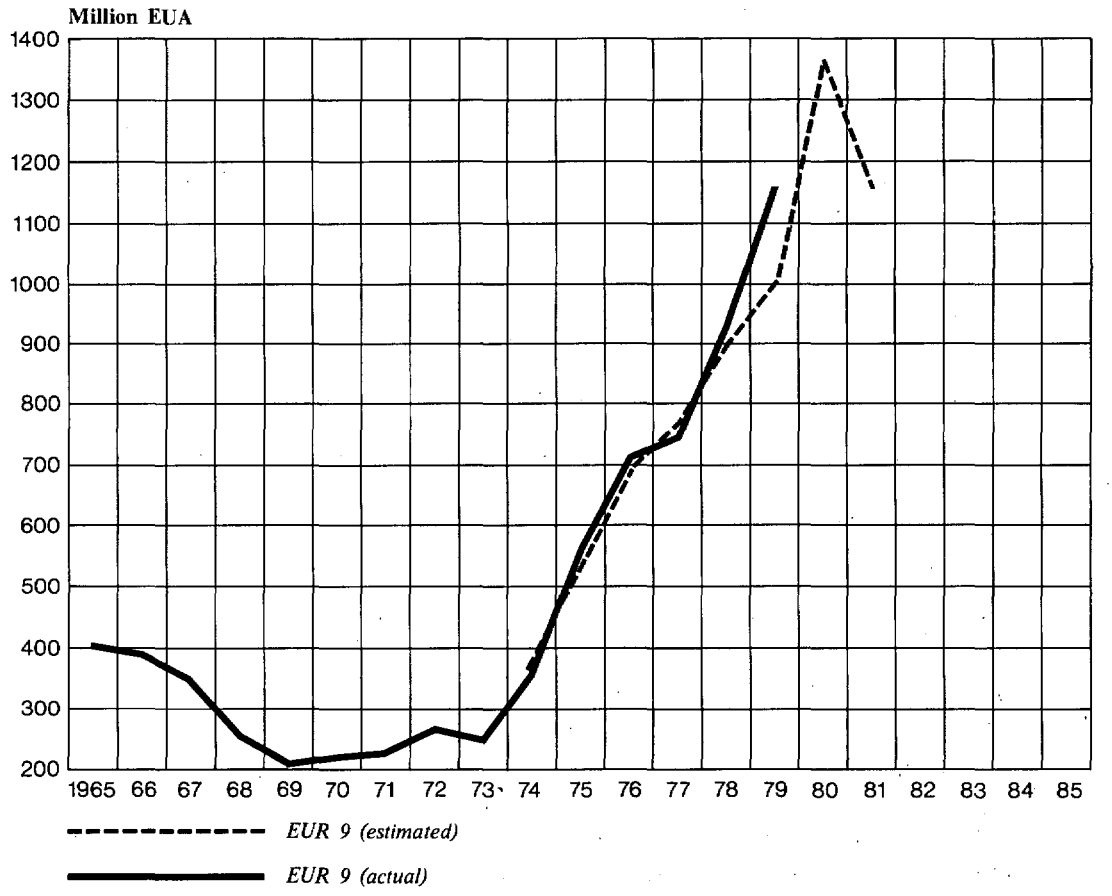
### 2.1. Extraction and extraction potential in 1979

Production in 1979, at 237,2 million tonnes, was some 0,3% up on the 1978 figure of 236,4 million tonnes (see Table VII). This increase in production was entirely due to German coal-mines. This small

*FIGURE 1*

**Actual capital expenditure and estimated capital expenditure as at the beginning of each year**

Collieries




**Capital expenditure per tonne of coal produced in 1978 and 1979**

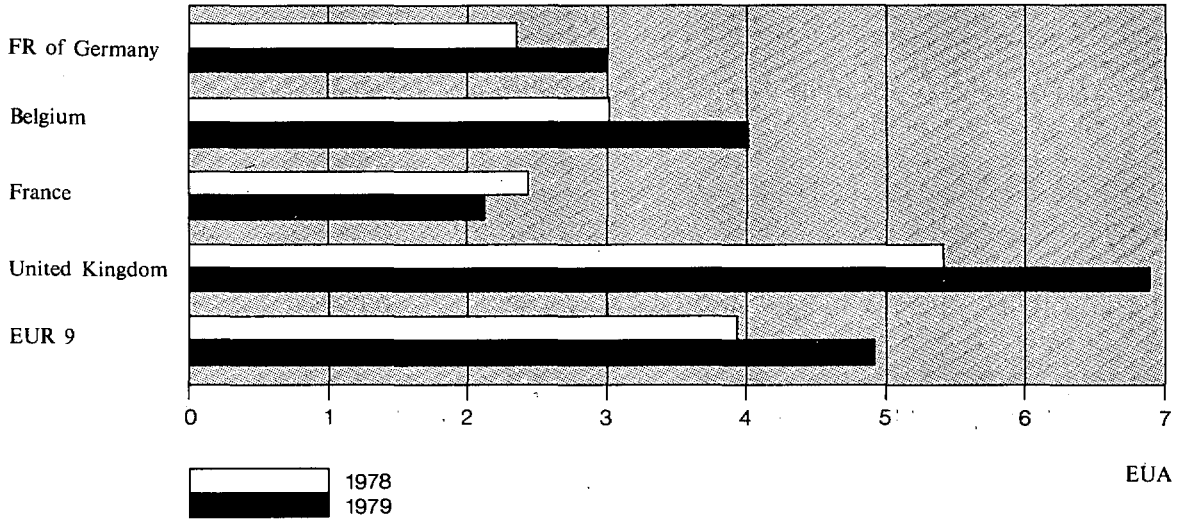


*TABLE VI*

**Breakdown of actual and planned capital expenditure on coal-mines in Community by type of installation 1977-1981** [1]

*(million EUA)*

| Type of installation | Actual expenditure | | | Estimated expenditure (Cat. A + B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Shafts and underground | 125,4 | 179,8 | 273,8 | 315,3 | 279,6 |
| Underground machinery | 248,1 | 360,3 | 427,5 | 456,9 | 362,3 |
| Haulage and winding equipment | 52,7 | 60,9 | 70,0 | 88,0 | 73,2 |
| Screening and washing | 136,1 | 144,9 | 157,1 | 173,9 | 147,9 |
| Other surface installations, Buildings and miscellaneous | 145,3 | 185,7 | 238,6 | 327,5 | 294,1 |
| **Total** | **743,6** | **931,8** | **1 167,0** | **1 361,7** | **1 157,0** |

growth in output appears to be confirmed in the first months of 1980, where the increase includes a substantial contribution from the United Kingdom.

Consumption of coal by power-stations increased by 8%, the trend being the same in all the Member States. Deliveries to coking plants, at 87,8 million tonnes, were 6% up on the 1978 figure. Although Community coal consumption increased significantly in 1979, virtually the entire increase was matched by a rise in imports and a substantial reduction in stocks.

Despite the capital expenditure approved for most coalfields, extraction potential throughout the Community fell to 245,3 million tonnes from the previous year's figure of 251,7 million tonnes. The decline in extraction potential since 1974 is now of the order of 28 million tonnes, or 10%.

## 2.2. Estimated extraction potential between 1980 and 1983

With the exception of those coalfields where closure of the least viable coalmines has caused a rapid decline, overall extraction potential seems likely to stabilize over the coming years. Indeed, a considerable increase in extraction potential is anticipated in the Yorkshire coalfield. The completion of a number of projects and the closure of less productive mines has resulted in an increase in production for the Community as a whole of 4,5% per day worked and for the mine.

Despite what are generally felt to be good long-term prospects for coal, the trend in extraction potential outlined above is, at the time of the survey, characterized by a good deal of uncertainty as to developments in the steel industry, future demand for coal from power-stations and medium-term energy demand. Given this uncertainty, the availability of public finance is a determining factor in the implementation of major projects to boost long-term production capacity.

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*FIGURE 2*

**Actual coal extraction potential in 1979 and forecast extraction potential for 1983**

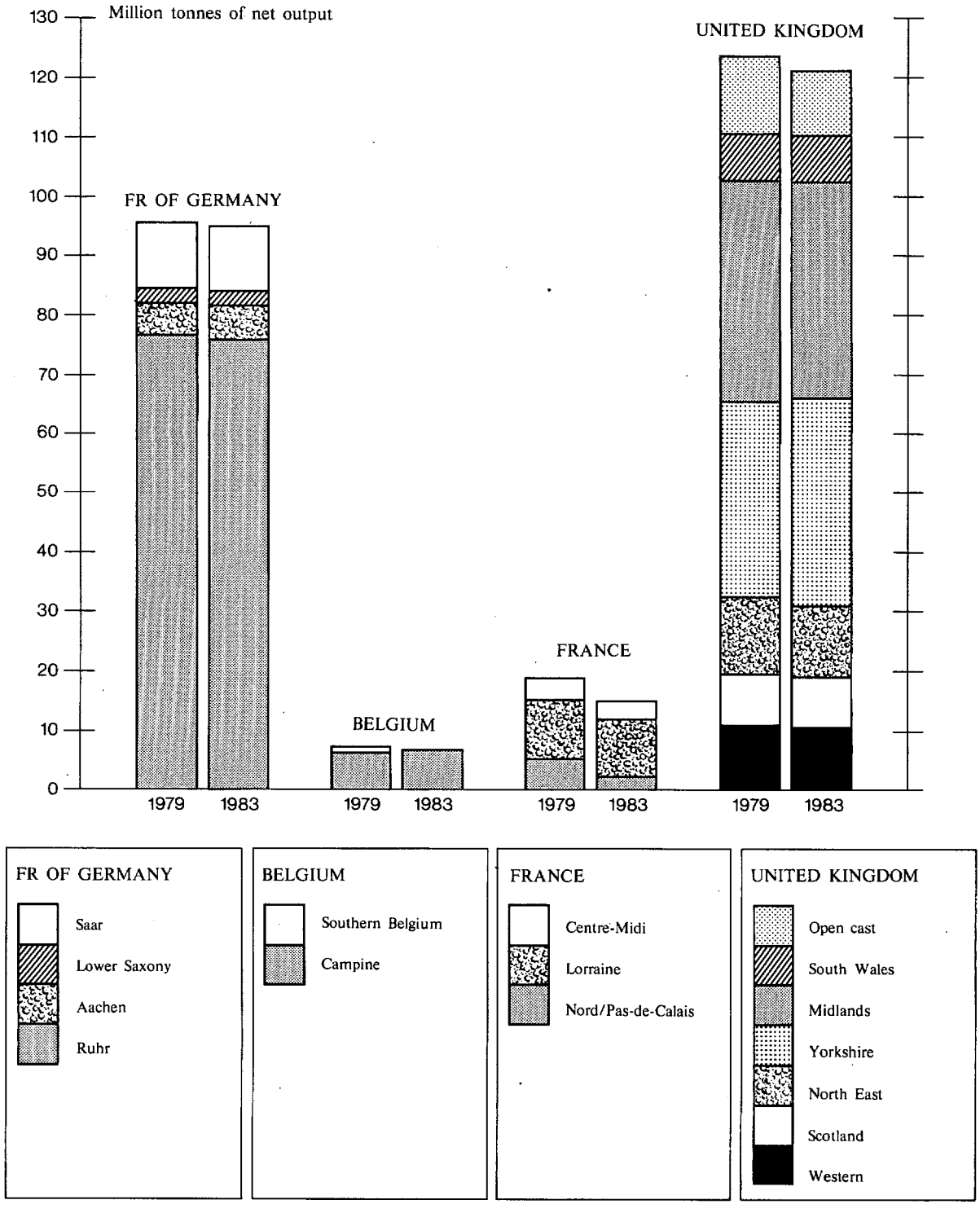


*TABLE VII*

**Movement of coal extraction potential** [1]

*(million tonnes)*

| Community | Extraction | | Extraction potential | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Actual | | Expected | | | |
| | 1978 | 1979 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| Tonnes (t = t) ..... | 236,4 | 237,2 | 251,7 | 245,3 | 240,0 | 238,8 | 239,1 | 238,1 |
| | | | | | Estimates based on all planned projects | | | |
| Tonnes (t = t) ..... | | | | | 241,2 | 241,6 | 243,9 | 245,0 |

[1] Without small German mines and licensed mines.

Total capital expenditure has for several years been in excess of the 500 million EUA (at 1973 prices) set as an objective in the 'Medium Term Guidelines for Coal' for the period 1975-1985.[1]

Extraction potential, which has continued to fall until now, though more slowly than in the past, seems to be stabilizing.

The forecasts given by the companies indicate that at least 238 million tonnes of potential will be available between now and 1983. Furthermore, should there be a favourable development in the market, certain areas, particularly the Ruhr, could realize reserve capacities, given full use of facilities and the elimination of technical bottlenecks.

The divergences between the development of capital expenditure and that of extraction potential can be explained as follows; decisions to close mines are taken for reasons, particularly technical considerations, which cannot always be precisely forecast and which are independent of capital expenditure; a significant proportion of investments are made to reduce costs and often have no marked effect on extraction potential; projects to create new capacity are usually on a very large scale, with the effects on extraction potential realized only after several years, and are, in any case, subject to delays caused by the contractors.

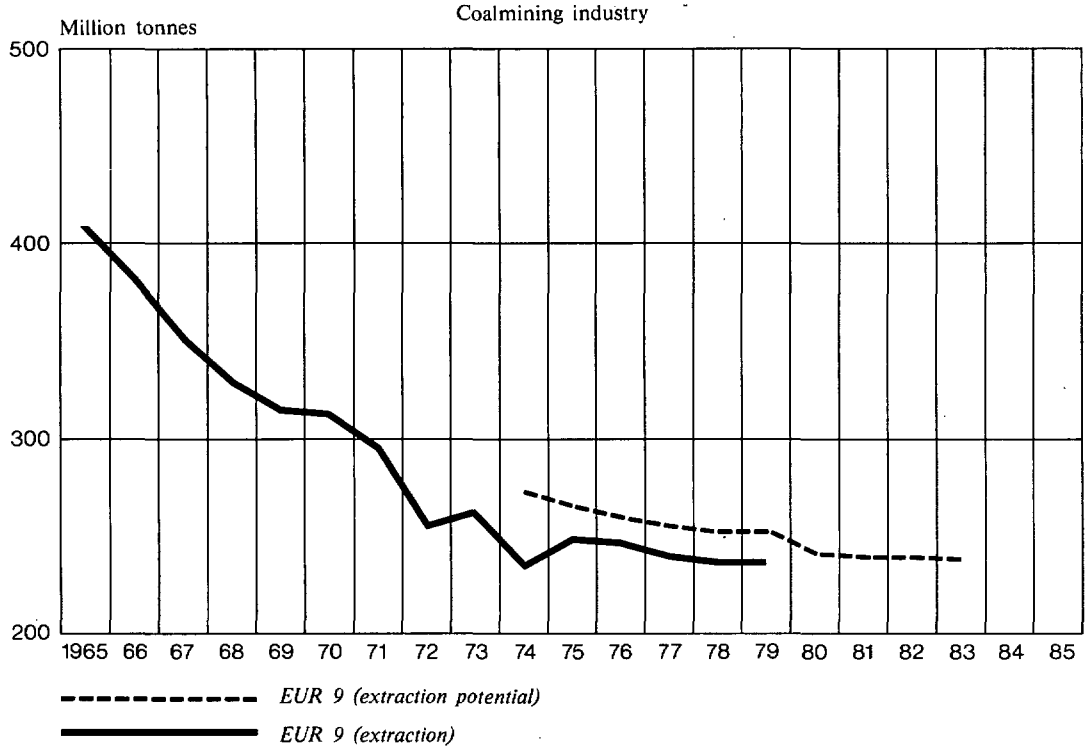
For these reasons, the possibility cannot be excluded that the present apparent stabilization of potential will not be followed by a small increase. The coal industry will not achieve in the next years the objective of a production of 250 million tonnes coal equivalent laid down in the 'Medium-term Guidelines', the importance of which has been confirmed by recent developments in the energy market. In fact, taking into account all the projects declared, including those in the planning stage, the extraction potential could regain a level of 245 million tonnes by 1983.

[1] 'Medium-term Guidelines for Coal 1975-1985'; OJ C 22 of 30.1.1975.

*FIGURE 3*

**Extraction and extraction potential**

Coalmining industry



# III — COKING PLANTS

## 1. Capital expenditure

### 1.1. Capital expenditure in 1979

Capital expenditure for coking plants in the Community in 1979 was 113,2 million EUA, a further fall—this time of some 30% from the figure of 162,2 million EUA recorded in 1978—and by far the lowest figure recorded since the enlargement of the Community. Less than 80% of total investment forecast by operators at the beginning of 1979 was in fact carried out, although these plans were already appreciably lower than actual investment in 1978. This shortfall between estimated and actual expenditure affected all installations, mine-owned, steelworks and independent coking plants equally.

For the mine-owned coking plants of the Ruhr, which account for almost a quarter of total Community production, capital expenditure only just exceeded 12 million EUA, or 0,75 EUA per tonne produced.

*TABLE VIII*

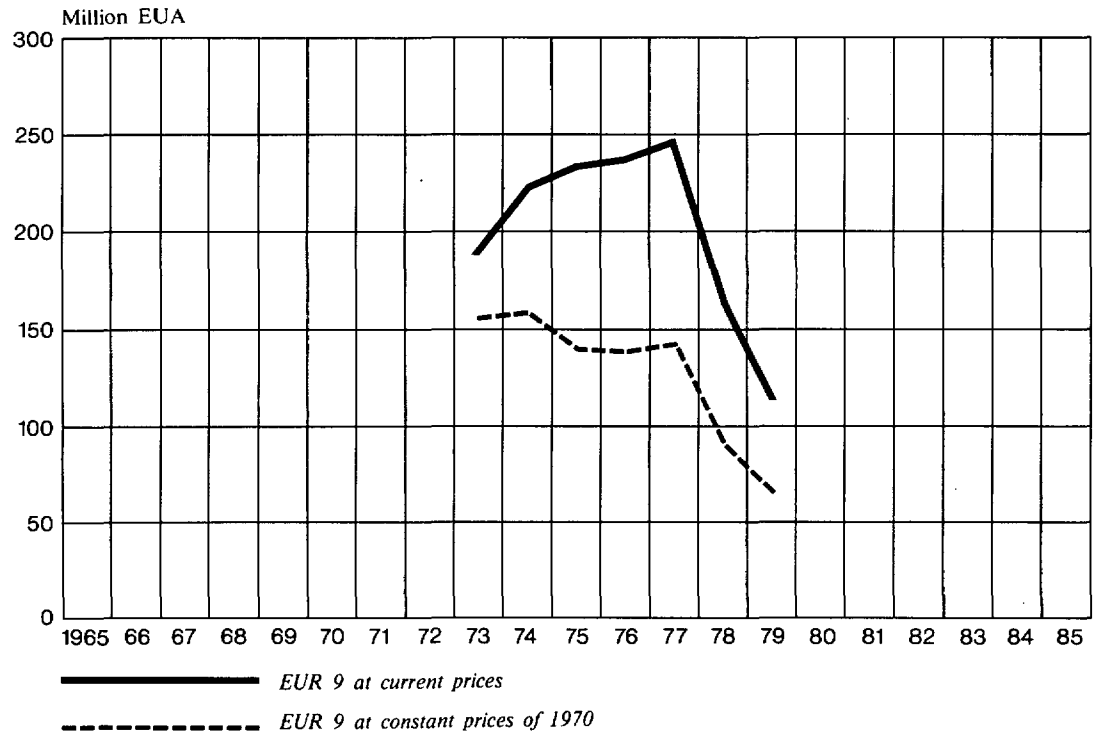
**Breakdown of actual capital spending at mine-owned independent and steelworks coking plants 1977-1981**

*(million EUA)*

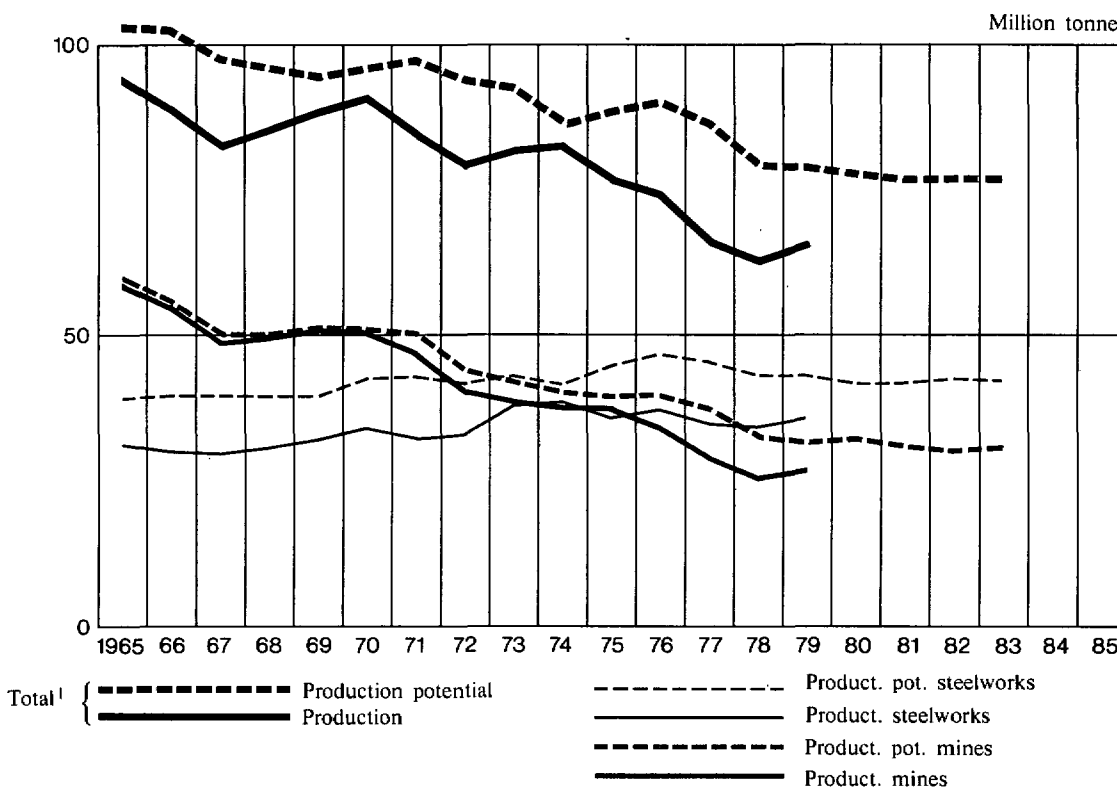
| Sector | Actual expenditure | | | Estimated expenditure (cat. A+B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Mine-owned | 76,9 | 46,7 | 36,8 | 57,0 | 55,3 |
| Independent | 12,1 | 4,0 | 5,0 | 1,9 | 0,1 |
| Steelworks-owned | 157,7 | 111,5 | 71,4 | 84,0 | 63,1 |
| **Total – at current prices** | **246,7** | **162,2** | **113,2** | **142,9** | **118,5** |
| **– at constant prices of 1970** | **143,1** | **87,3** | **59,6** | **75,2** | **62,4** |

*FIGURE 4*

**Capital expenditure for all coking plants**




**Production and production potential of coking plants**




[1] Mine-owned, independent and steelworks-owned coking plants.

### 1.2. Forecast capital expenditure for 1980 and 1981

Although a number of modernization projects approved in the Netherlands since 1 January 1980 are likely to increase slightly the figures given for 1980 and 1981, the forecasts do not hold out any real prospect of a higher level of investment in coking plants.

For 1980, coking-plant operators have forecast total expenditure amounting to no more than 142,9 million EUA.

## 2. Production potential

Production of coke in the Community recovered somewhat in 1979 to reach 65,8 million tonnes, compared with 62,6 million tonnes in the previous year. This increase of 5% was recorded in all categories: mine-owned, steelworks and independent coking plants. Deliveries to the steel industry, at 58,3 million tonnes, were 11% up on 1978, as were net exports—at 7,4 million tonnes—whereas stocks were cut by half from 18,8 to 9,8 million tonnes.

The production potential of coking plants fell by 0,5 million tonnes to 78,7 million tonnes in 1979.

*TABLE IX*

**Development of production potential of coking plant**

*(million tonnes)*

| Coking plant | Production | | | Production potential | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Actual | | Forecast | | | |
| | 1960 | 1978 | 1979 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| Mine-owned | 56,9 | 25,9 | 27,3 | 32,5 | 31,9 | 32,2 | 31,0 | 30,3 | 30,5 |
| Independent | 6,0 | 2,5 | 2,8 | 3,7 | 3,7 | 3,7 | 3,7 | 3,7 | 3,7 |
| Steelworks owned | 32,3 | 34,2 | 35,7 | 43,0 | 43,1 | 41,6 | 41,8 | 42,6 | 42,4 |
| **Total** | **95,2** | **62,6** | **65,8** | **79,2** | **78,7** | **77,5** | **76,5** | **76,6** | **76,6** |

There has therefore been a net reduction in total coking capacity in the Community of 7,6 million tonnes since 1974. The decline has amounted to about 8,1 million tonnes for mine-owned coking plants and 0,8 million tonnes for independent coking plants. On the other hand, production potential for steelworks coking plant has increased by 1,3 million tonnes; closures in the United Kingdom have in the main been offset by an expansion of capacity in the Federal Republic of Germany, France and Italy.

Capacity utilization improved from 78,8% in 1978 to 83,6% in 1979.

As in previous surveys, producers anticipate a further cutback in coking capacity in the coming years. The current estimate of 76,6 million tonnes for 1983 would be 9,7 million tonnes down on the 1974 figure. The fall in potential of mine-owned coking plants is expected to be reversed in France and the Federal Republic of Germany, but to continue in the United Kingdom.

*

* *

The forecasts set out in the revised 'General Objectives for Steel' suggest crude-steel production in 1985 of about 154,1 million tonnes in favourable conditions and 144,8 million tonnes in average conditions. The corresponding pig-iron production should, taking into account the increased proportion of electric steel in total production and the decline in open-hearth production, be between 96 and 101 million tonnes (including foundry iron) for which between 48 to 50 million tonnes of coke would be needed in blast-furnaces. Total coke requirements in the Community should reach a level of 68 to 70 million tonnes in 1985, bearing in mind the likely requirements of sinter plants, other industrial consumers and exports. Demand should therefore be roughly the same as current capacity.

However it should be remembered that production potential has fallen over the past five years by 10%. Given the low level of capital expenditure and the obsolescence of a large number of coking plants, this downward trend can only be expected to continue more or less rapidly. The consensus of opinion, taking an average life of 25 years for the facilities, is that more than 70% of current installed capacity will be unserviceable in ten years' time. In that case, and on the basis of reasonable modernization costs, simply to maintain current capacity would require approximately 60 EUA per tonne of installed capacity or an average annual investment of about 350 million EUA. Structural modifications and the application of recent technology designed to reduce significantly manufacturing costs would require an even higher level of investment.

# IV — BRIQUETTING PLANTS

## 1. Coal briquetting plants

In 1979, investment in coal briquetting plants amounted to 1,51 million EUA; capital expenditure for 1980 is estimated at 1,8 million EUA. This investment is not intended to expand capacity but to replace older equipment and to make some improvements in quality.

Information provided in the survey indicates that production potential will fall by 1,5 million tonnes a year between now and 1983. With the exception of the United Kingdom, where potential will remain frozen at the present level, all other countries foresee a reduction in their capacities.

## 2. Brown coal briquetting plants

For brown coal briquetting plants, capital expenditure was 6,2 million EUA in 1979 and investments totalling 11,7 million EUA are planned for 1980. Although the consumption of brown coal briquettes showed a significant increase in 1979, caused undoubtedly by price increases of various domestic heating fuels, it appears that the long-term trend remains downward. However, the consumption of breeze, a by-product, should improve as a result of increased demand from some industries.

## V — IRON-ORE MINES

The results of the 1980 survey show that capital expenditure for iron-ore mines in the Community fell from 16,4 million EUA in 1978 to 14,5 million EUA in 1979; expenditure per tonne of crude ore extracted remained very low — 0,38 EUA compared to 0,40 EUA.

*TABLE X*

**Actual and estimated capital expenditure in iron-ore mines 1977-1981**

*(million EUA)*

| Community | Actual expenditure | | | Estimated expenditure (cat. A+B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Total expenditure | | | | | |
| — at ruling prices | 20,7 | 16,4 | 14,5 | 12,6 | 5,0 |
| — at constant 1970 prices | 12,0 | 8,8 | 7,6 | 6,6 | 2,6 |

Mines in France which produce four-fifths of the ore extracted in the Community, continued to account for the largest part of total spending in 1979—8,2 million EUA. However, their expenditure per tonne of ore extracted was 0,26 EUA, which reflects only the replacement of worn-out equipment. Any improvements in output are largely attributable to the closure of less productive mines.

In the United Kingdom the opening of an open-cast mine has caused a temporary fall in capital expenditure, while in the Federal Republic of Germany expenditure was negligible.

The total expenditure forecast for 1980—12,6 million EUA—represents a new low, due in particular to the completion of an open-cast project in the United Kingdom.

Iron-ore production in the Community is falling rapidly, 37,9 million tonnes in 1979 against 40,6 million tonnes in 1978. The rate of capacity utilization remains low, and despite some improvement in the price of ore, the financial situation of most producers remains worrying.

In this situation the extraction potential forecast by the survey—38,8 million tonnes in 1983 as against 46,7 million tonnes in 1979—must be regarded as hypothetical. In most cases the figures relate to the

*TABLE XI*

**Development of iron-ore extraction and extraction potential**

*(million tonnes)*

| Actual extraction | | | Extraction potential | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Actual | | Estimated | | | |
| 1977 | 1978 | 1979 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| 45,6 | 40,6 | 37,9 | 53,3 | 46,7 | 42,0 | 40,7 | 40,3 | 38,8 |

technical capacities which, as a result of the rationalization measures taken in recent years, are heavily encumbered by fixed expenses.

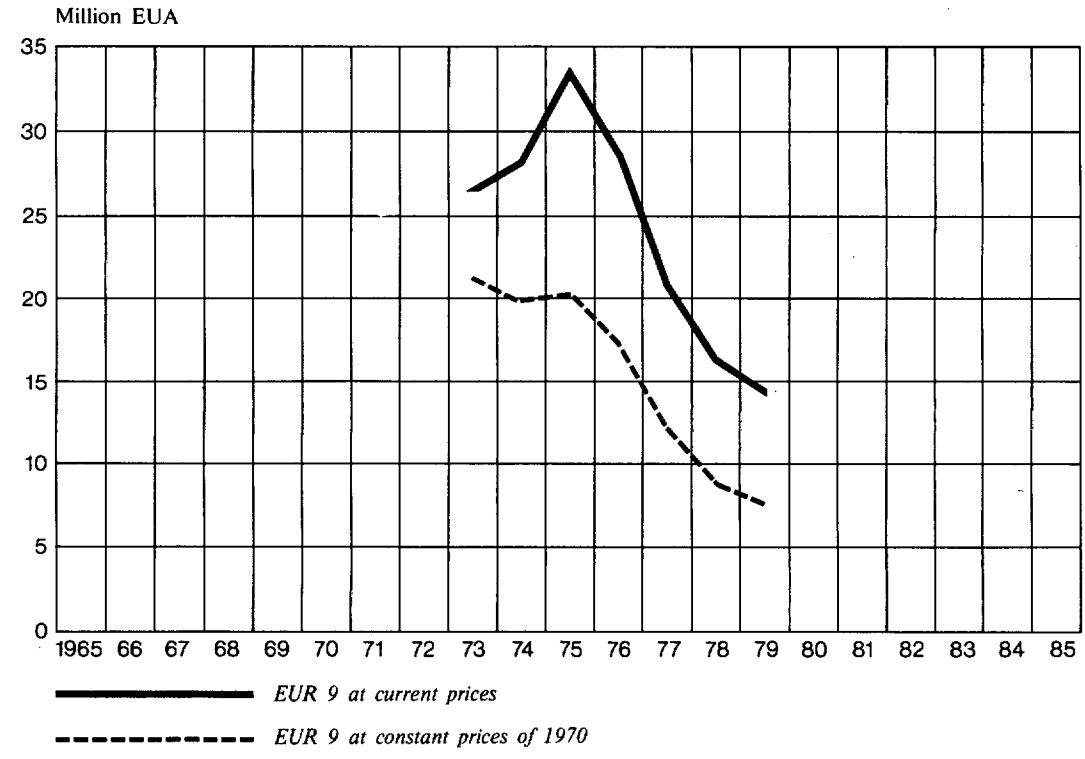
The replies to the survey do not take into account the financial situation of the companies. In the current economic climate, the burden of fixed charges, accumulated deficits and debt servicing, together with delays in investment threaten to bring about a much more rapid fall in extraction potential than that considered in this survey. The 1979 survey forecasts the anticipated total extraction potential for 1980 as 45,7 million tonnes, whereas for the same year, the 1980 survey gives a figure of 42,0 million tonnes. This indicates the gap between forecasts drawn up on the basis of technical data and those based on real trends.

Although they have risen by between 20 and 25%, the prices of imported ore have not allowed enterprises to realize the investments which will be necessary to face developments in the steel industry. As far as the Community's iron-ore mines are concerned, it appears that, unless appropriate measures are taken by the authorities; the majority will have to close at some stage, and their re-opening at a later date will pose considerable technical and economic problems.

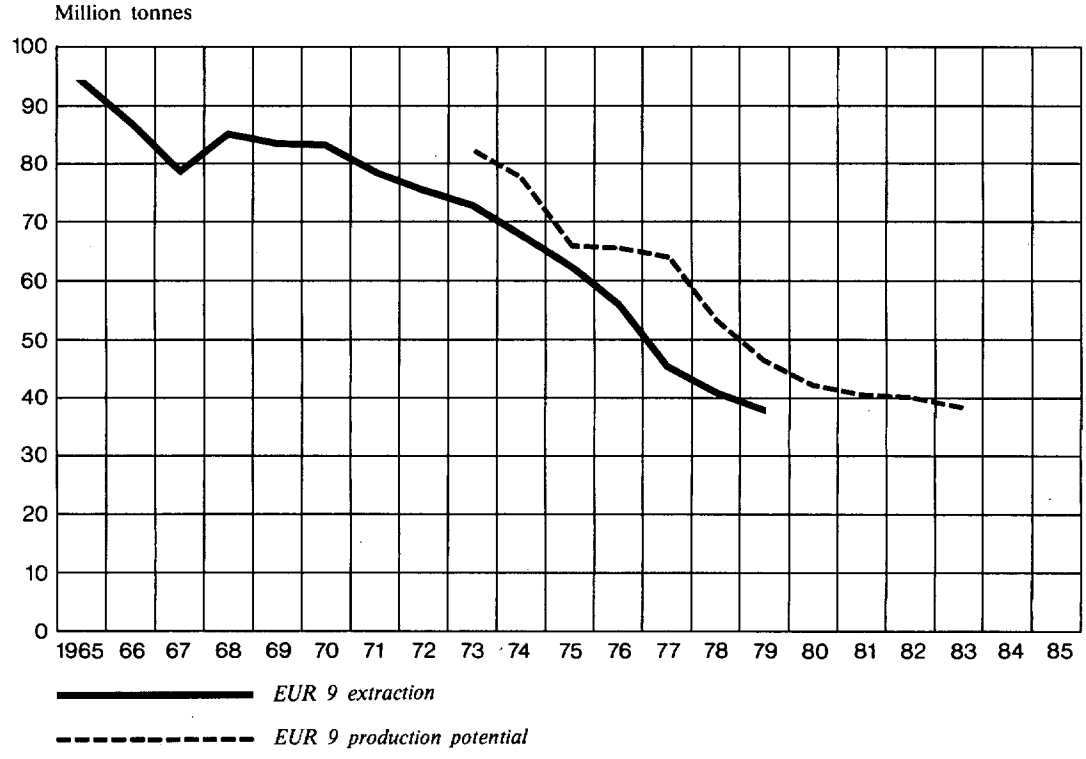
Such prospects will in the case of some steelworks seriously increase their raw material costs and, in the regions affected, cause further social problems, while, for the Community, it will mean complete dependence on imported ore. The feeling among the majority of experts is that, from the mid-eighties onwards, the cost of imports will inevitably rise as a result of the need to open new mines, if for no other reason.

*FIGURE 5*

**Capital expenditure on iron-ore mines**




**Extraction and extraction potential of iron-ore**



# VI — IRON AND STEEL INDUSTRY

## 1. Capital expenditure

### 1.1. Capital expenditure in 1979

From 1975 to 1978 capital expenditure at current prices in the Community steel industry has successively fallen each year from 3 317 million EUA to 2 022 million EUA. In 1979 the expenditure stabilized at a level of 2 000 million EUA, almost the figure forecast at the beginning of the year. At current prices per tonne of crude steel, capital expenditure in 1979 was 14,6 EUA, compared with 15,5 EUA in 1978 and 18,9 EUA in 1977.

*TABLE XII*

**Capital expenditure in the Iron and steel industry**

*(EUA)*

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|
| Total expenditure – at ruling prices (million) | 3 028,4 | 2 989,5 | 3 316,8 | 3 293,3 | 2 359,5 | 2 022,3 | 2 000,1 |
| Total expenditure – at constant 1970 prices (million) | 2 502,8 | 2 126,2 | 2 044,9 | 1 800,6 | 1 379,8 | 1 168,9 | 1 142,9 |
| Expenditure per tonne of crude steel produced – at constant 1970 prices | 16,7 | 13,7 | 16,3 | 13,4 | 9,4 | 8,8 | 8,1 |
| Expenditure per tonne of crude steel production potential – at constant 1970 prices | 14,3 | 11,9 | 10,8 | 9,1 | 5,9 | 5,8 | 5,6 |

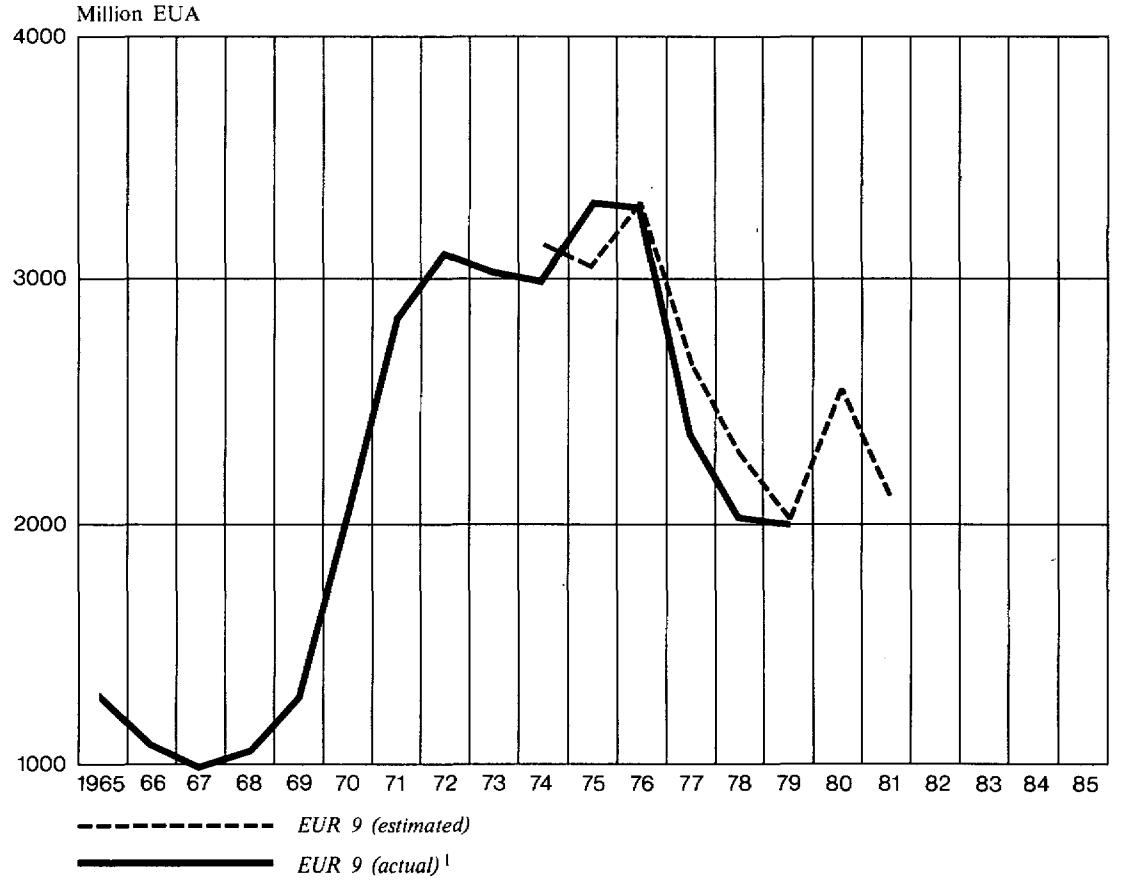
At constant 1970 prices [1] capital expenditure in 1979 amounted to 1 143 million EUA, almost the same as the 1978 figure of 1 169 million EUA.

[1] Revision of cost indices by the national authorities has meant that the 1970 constant prices given for previous years have had to be corrected.

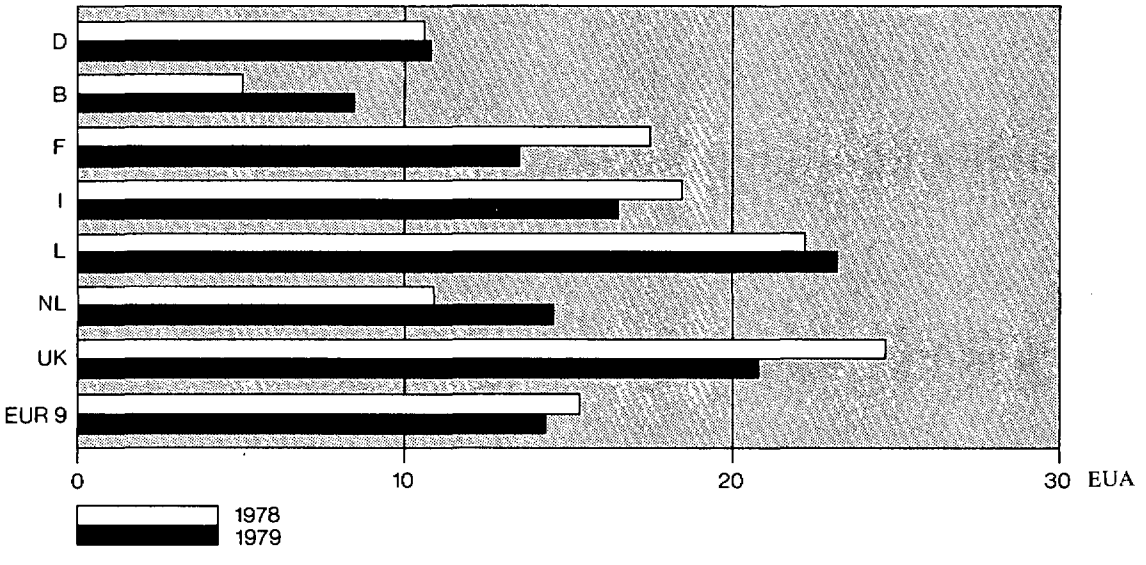
*FIGURE 6*

**Actual capital expenditure and estimated capital expenditure as at the beginning of each year**

Iron and steel industry




**Capital expenditure per tonne of crude steel produced in 1978 and 1979**




[1] Capital expenditure included for the United Kingdom before 1973 is not strictly comparable to that declared for the other member countries since it includes expenditure on activities outside the ECSC, in particular on steel foundries, steel tubeworks and miscellaneous cold-working plants.

In national terms, the highest level of capital expenditure was incurred in the Federal Republic of Germany (almost 500 million EUA), followed by the United Kingdom (almost 450 million EUA) and Italy (almost 400 million EUA). Between 1978 and 1979, investment declined in France, the United Kingdom and Italy, but increased in all other countries.

Compared with estimates made at the beginning of 1979, capital expenditure was lower in the Federal Republic of Germany, mainly in North Rhine-Westphalia (−12%), Luxembourg (−15%), the Netherlands (−15%), Denmark (−25%) and Ireland (−44%) These differences are due to delays in the completion of investment programmes. On the other hand, the only area in which actual spending was considerably higher than the estimated figure was the north of England (+16%), due no doubt to the completion, ahead of the previous forecasts, of a new production unit.

The major part of capital expenditure was devoted to steelmaking and cold-strip mills:

— blast-furnaces 10%
— oxygen melting shops 13%
— electric melting shops 7%
— continuous casting 14%
— cold wide strip mills 7%

### 1.2. Estimated capital expenditure in 1980

Capital expenditure in current prices of 1980 is expected to amount to 2 561 million EUA, an increase of 28% over 1979, apparently heralding a reversal of the previous trend. However, the extent of the increase differs from country to country:

— in the United Kingdom, the Netherlands[1] and Luxembourg, expenditure is expected to be lower than the previous year (−34%, −20% and −13% respectively);
— in France and Denmark, expenditure is expected to increase slightly;
— in the Federal Republic of Germany, Belgium and Italy, a substantial increase is expected (+47%, +181% and +70% respectively).

These forecasts clearly reflect the different policies for the future adopted by steelmakers in the various countries. When considering the Belgian situation, account should be taken of the moratorium observed by the steelmaking firms in anticipation of the concerted development plan adopted recently by the Planning and Supervisory Committee.

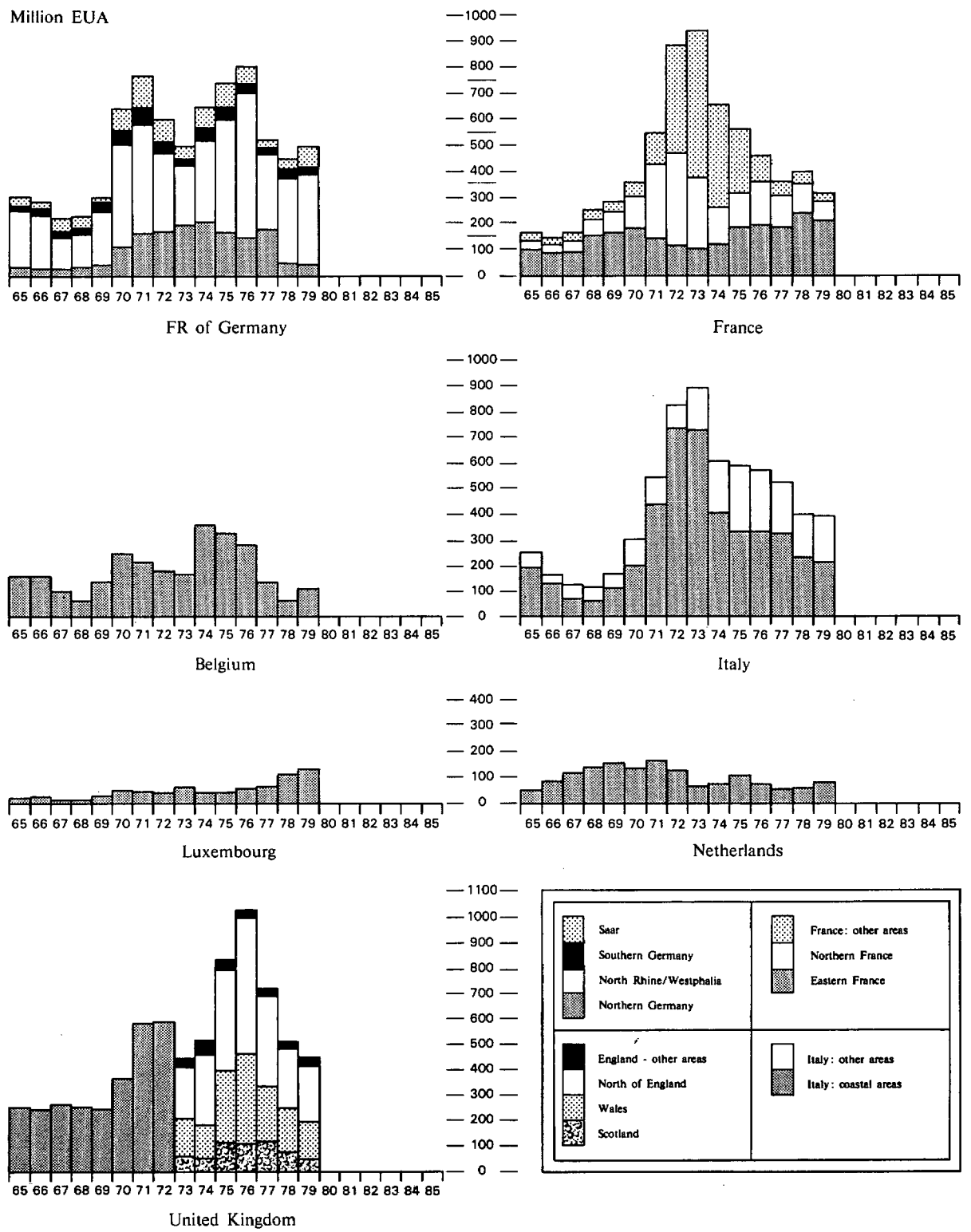
The capital expenditure estimates for 1980 highlight the following trends concerning the expenditure by stage of production:

— **blast-furnaces**: 13% of estimated total expenditure, mainly in North Rhine/Westphalia and the Saar in the Federal Republic of Germany, and the coastal regions of Italy;
— **oxygen melting shops**: 11% of estimated expenditure, centred on the Saar, North Rhine/Westphalia and coastal regions of Italy;
— **continuous casting**: 17% of estimated expenditure, particularly in the following countries and regions: North Rhine/Westphalia, Belgium, eastern France, coastal regions of Italy, Luxembourg, the Netherlands and Wales;
— **wire rod**: 4% of estimated expenditure, mainly in Belgium and the non-coastal regions of Italy;
— **light section mills**: 3% of estimated expenditure, essentially in the non-coastal regions of Italy;

[1] Since the date of the survey, a project has been decided which would raise expenditure in the Netherlands to the level of previous years.

*FIGURE 7*

**Capital expenditure in the iron and seel industry**



— **hot wide strip mills**: 6% of estimated expenditure, largely in North Rhine/Westphalia, Belgium and coastal regions of Italy;
— **cold wide strip mills**: 8% of estimated expenditure, mainly in North Rhine/Westphalia, Belgium and coastal regions of Italy.

## 2. Production and production potential

### 2.1. Sponge-iron, sinter and pellets

Production of sponge-iron in the Community was 0,52 million tonnes in 1979, which was substantially higher than the 1978 level of 0,35 million tonnes, while average utilization of production capacity was 72,1% compared with 52,1% in the previous year. Production potential is likely to increase from 0,7 million tonnes in 1979 to 2,9 million tonnes in 1983, which is the figure predicted for 1982 in the previous survey.

The direct reduction plant built recently in Scotland but not yet commissioned, is not likely to be starting production in the near future. In the Federal Republic of Germany a plant now nearing completion will begin production in 1981, while an older plant has been closed. The two plants planned on the Italian coast are not expected to start up production before 1982. These projects could be delayed even further, as scrap prices have recently fallen while the price of imported ore and energy have risen.

The production potential for sinter and pellets remain almost constant between 1979 (176,4 million tonnes) and 1983 (176,6 million tonnes).

Reductions in sinter capacity are evident, mainly due to the planned closures of downstream pig-iron production plants, principally in the Saar, in eastern and northern France and in the United Kingdom (Wales, northern England and other areas of England).

On the other hand capacity increases, planned mainly in North Rhine/Westphalia, the Saar and in Scotland, tend to offset the capacity reduction recorded elsewhere.

### 2.2. Pig-iron

Pig-iron production increased to 98,5 million tonnes in 1979, compared with 90,2 million tonnes the previous year. Production potential fell slightly (1978: 141,1; 1979: 140,5 million tonnes), with the result that utilization increased from 63,9% in 1978 to 70,1% in 1979.

The lowest rate of utilization was recorded in the Saar (58,5%), the highest in Wales (84,8%). Some rates of utilization of pig-iron production capacity are particularly low, mainly in works where restructuring has taken place, leading to a reduction in steel-making capacity and a consequent surplus of pig-iron capacity.

Pig-iron production potential is expected to decrease, between 1979 and 1983, from 140,5 to 133,6 [1] million tonnes/year (a reduction of 6,9 million tonnes or 4,9%).

Reductions in capacity are expected mainly in the Federal Republic of Germany, with the exception however of northern Germany, although since the survey had been completed it has been decided to

[1] The 1983 figure should be increased by approximately 1,6 million tonnes to take into account the new joint venture ironworks planned in the Saar.

close a pig-iron works in that region. Following the planned closures already announced, there is likely to be a reduction in pig-iron capacity in eastern and northern France. Similarly, there will be a reduction in the United Kingdom where decisions to close two pig-iron works were taken at the end of 1979, although this will be offset to a certain extent by the completion of plant improvements in Scotland and Wales.

## 2.3. Crude steel

### 2.3.1. *General analysis of the development of production potential*

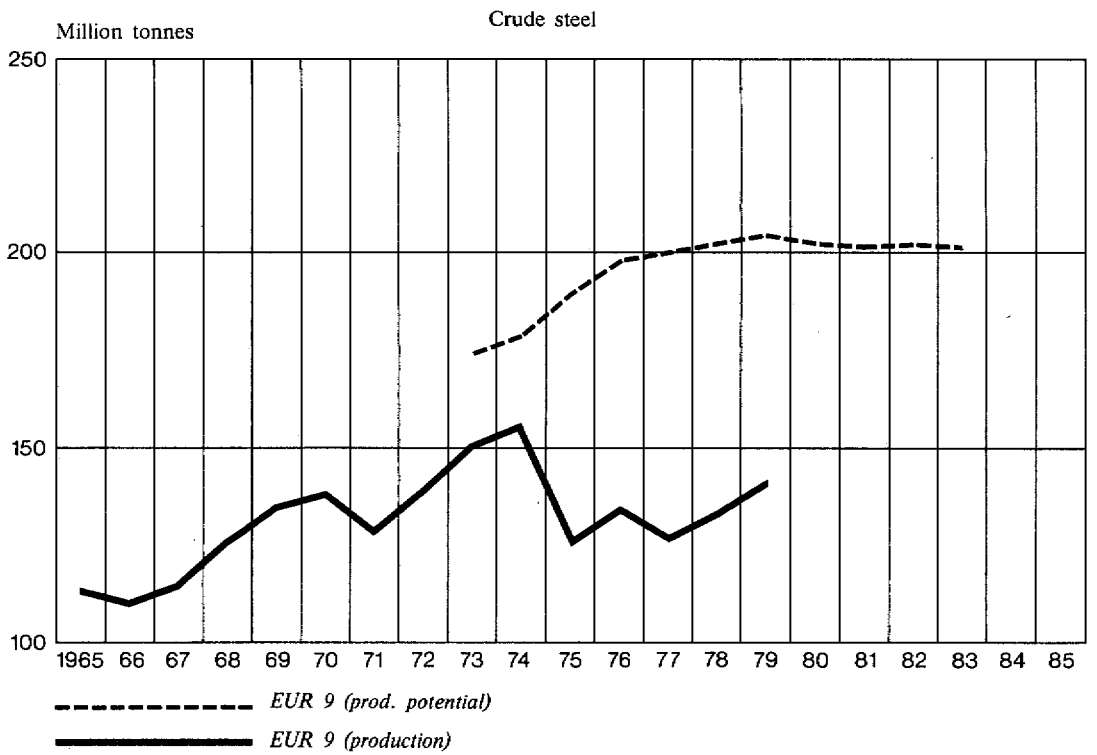
In 1979 steel production amounted to 140,8 million tonnes, compared with 132,6 million tonnes in 1978. Production potential increased from 202,1 million tonnes in 1978 to 203,5 million tonnes in 1979. The average rate of utilization of production capacity improved from 65,6% in 1978 to 69,2% in 1979, a figure which is still unsatisfactory. By way of comparison, the utilization rate in 1974 was 86,9%.

The lowest utilization rates were recorded in the Saar (55,4%), and on the Italian coast (59,8%), but utilization exceeded 75% in Ireland (80%), in regions of England other than northern England (79,3%) and in Wales (76%).

In 1979 crude-steel production potential was 14% higher than in 1974, and in 1983 this difference will probably be about 12%.

*FIGURE 8*

**Actual production and production potential of the iron and steel industry**



The reduction in capacity expected over the forecast period was one of the most striking features of the previous survey, and is confirmed to a certain extent by the 1980 survey. At present, a capacity of 200,8 million tonnes is forecast for 1983 instead of the 201,7 million tonnes forecast for 1982 in the 1979 survey. However, the only new factor as regards a reduction in production potential is the British Steel Corporation's restructuring programme which was announced towards the end of 1979. The effect of the decisions taken would be to cut back United Kingdom production potential between 1979 and 1983 from 28,9 to 26,7 million tonnes. At the time of the 1979 survey a figure of 32,0 million tonnes was forecast for 1982.

This drop in forecast production potential (5,3 million tonnes for 1983) planned by the United Kingdom has been offset to a large extent by upward revisions in other countries, which are due mainly to the re-evaluation of the performance of existing plants, improved productivity, the elimination of down-stream bottlenecks—often by installing continuous casting—or proposed changes in working methods, for example in the case of one oxygen steelworks scrap consumption is to be increased.

*TABLE XIII*

**Share of each steelmaking process in total crude-steel production potential**

| Process | 1974 | | 1979 | | 1983 | |
|---|---|---|---|---|---|---|
| | million tonnes | % | million tonnes | % | million tonnes | % |
| Basic Bessemer and others | 12,3 | 7 | 1,2 | 1 | 0,0 | – |
| Open-hearth | 26,5 | 15 | 12,0 | 6 | 2,8 | 1 |
| Electric | 29,4 | 16 | 44,5 | 22 | 48,2 | 24 |
| Oxygen-blown | 110,7 | 62 | 145,8 | 71 | 149,8 | 75 |
| *of which:* OBM converted from Basic Bessemer | (4,0) | (2) | (6,1) | (3) | (0,7) | (0) |
| **Total crude steel** | **178,9** | **100** | **203,5** | **100** | **200,8** | **100** |

2.3.2. *Analysis of the development of production potential by type of process*

According to the new survey, the elimination of the older steelmaking processes, e.g. open-hearth, Basic Bessemer and OBM converted from Basic Bessemer, is taking place more rapidly than anticipated a year earlier. While the Basic Bessemer process will have been almost entirely phased out by the end of this year, the last open-hearth plants seem likely to be continuing in operation until 1983. However, the majority of open-hearth steel producers already appear to regard the process as definitively obsolete for economic reasons.

Sometimes obsolete melting shops are not replaced after closure, in which case the rolling-mills receive their semi-finished products from other sources. However, for strategic reasons, companies often replace the old equipment with a new melting shop—sometimes of reduced capacity. Electric-arc furnaces are usually chosen as they have similar requirements so that the existing buildings and infrastructure can

be utilized. Oxygen steelmaking is a consideration only in works which have facilities for supplying liquid pig-iron and where the level of production is sufficient to warrant it.

The reasons given above, the continuing very low price of scrap, and the upward trend in ore prices, explain why steelmaking has developed more rapidly than forecast in the previous year's survey. In 1979 this process accounted for 22% of production potential and 23% of actual production. By 1983, it will represent 24% of production capacity.

*TABLE XIV*

**Changes in crude-steel production potential between successive surveys**

*(million tonnes)*

| Region | Production potential | | | | | |
|---|---|---|---|---|---|---|
| | 1979 survey | | | 1980 survey | | Difference between the final years of the respective surveys |
| | 1978 | 1979 | 1982 | 1979 | 1983 | |
| Northern Germany | 13,5 | 13,6 | 13,5 | 13,5 | 14,8 | +1,4 |
| North Rhine-Westphalia | 42,5 | 42,5 | 42,4 | 42,3 | 41,9 | −0,6 |
| Southern Germany | 3,8 | 3,9 | 3,6 | 3,9 | 3,6 | −0,1 |
| Saar | 9,1 | 9,1 | 7,6 | 9,1 | 7,6 | +0,0 |
| *FR of Germany* | *68,9* | *69,0* | *67,1* | *68,8* | *67,8* | *+0,7* |
| *Belgium* | *20,0* | *19,7* | *19,1* | *19,7* | *19,9* | *+0,9* |
| *Eastern France* | 12,9 | 12,8 | 11,4 | 12,8 | 12,2 | +0,8 |
| Northern France | 14,2 | 14,3 | 12,4 | 13,7 | 12,6 | +0,2 |
| France - other areas | 5,2 | 5,2 | 5,3 | 5,6 | 6,0 | +0,7 |
| *France* | *32,4* | *32,4* | *29,1* | *32,0* | *30,8* | *+1,7* |
| Italy - coastal areas | 18,9 | 19,2 | 19,4 | 19,1 | 19,4 | +0,0 |
| Italy - other areas | 16,8 | 17,0 | 17,7 | 18,0 | 18,7 | +1,0 |
| *Italy* | *35,7* | *36,2* | *37,1* | *37,0* | *38,1* | *+1,0* |
| *Luxembourg* | *7,6* | *7,2* | *7,5* | *7,3* | *7,5* | *0,0* |
| *Netherlands* | *8,3* | *8,3* | *8,6* | *8,4* | *8,7* | *+0,0* |
| Scotland | 2,1 | 2,4 | 3,4 | 2,3 | 3,2 | −0,2 |
| Wales | 8,6 | 8,6 | 9,9 | 9,2 | 9,1 | −0,9 |
| Northern England | 13,8 | 14,8 | 15,8 | 14,6 | 13,2 | −2,6 |
| England - other regions | 3,4 | 3,0 | 2,8 | 2,8 | 1,2 | −1,6 |
| *United Kingdom* | *27,9* | *28,8* | *32,0* | *28,9* | *26,7* | *−5,3* |
| *Denmark* | *1,2* | *1,2* | *0,9* | *1,2* | *0,9* | *−0,0* |
| *Ireland* | *0,1* | *0,1* | *0,3* | *0,1* | *0,3* | *−0,0* |
| **Total EUR 9** | **202,1** | **202,9** | **201,7** | **203,5** | **200,8** | **−0,9** |

2.3.3. *Analysis of development in production potential by country and by region*

The reduction in crude-steel production potential from 203,5 million tonnes in 1979 to 200,8 million tonnes in 1983 is the net result of divergent trends in different countries and regions. The revision from one survey to the next affects both the figures for the reference year and those for the last year for which forecasts are made.

Table XIV analyses these revisions by region, comparing the changes in production potential forecast by two successive surveys:

— for the 1979 survey, the actual figures for 1978 and forecasts for 1979 and 1982, the final year for which forecasts were made;

— for the 1980 survey, the actual figures for 1979 and forecast for 1983, the new year for which forecasts are made.

(a) *Revision of reference year figures from one survey to the next*

Regarding production potential for the beginning of the period, the few significant downward revisions in North Rhine/Westphalia, in northern France and in regions of England other than the north, can be explained by the earlier or more rapid implementation of closure decisions. On the other hand, significant upward revisions of figures for the beginning of the reference period in regions of France other than northern or eastern France, and in Wales, are due to a re-evaluation of existing capacity following gradual improvements in productivity.

In inland areas of Italy, about half the increase of more than one million tonnes is due to the new survey covering about ten small companies not included previously in the survey, while the remainder is due to the re-evaluation of existing capacity.

(b) *Revision of the final year forecasts from one survey to the next*

The most important downward revision of the final year forecasts was made in the United Kingdom (−5,3 million tonnes or −16,5%). It affects all regions and is the result of the '15 million tonnes a year plan' announced recently by the British Steel Corporation. The BSC's new strategy involves complete closure of two works and numerous reductions in capacity in others, involving the closure of certain production stages. A downward revision of the 1983 figures is also evident in North Rhine/Westphalia (−0,6 million tonnes or −1,3%) as a result of a decision to replace several open-hearth shops by an oxygen steelworks of lower capacity.

However, it is regrettable that the survey should reveal numerous upward revisions of production potential for 1983 compared with the last survey's figures for 1982, viz:

— northern Germany (+1,4 million tonnes or +10,1%). Although one works revised its future production potential downwards, another works, after adopting a new process, made a substantial upward revision;

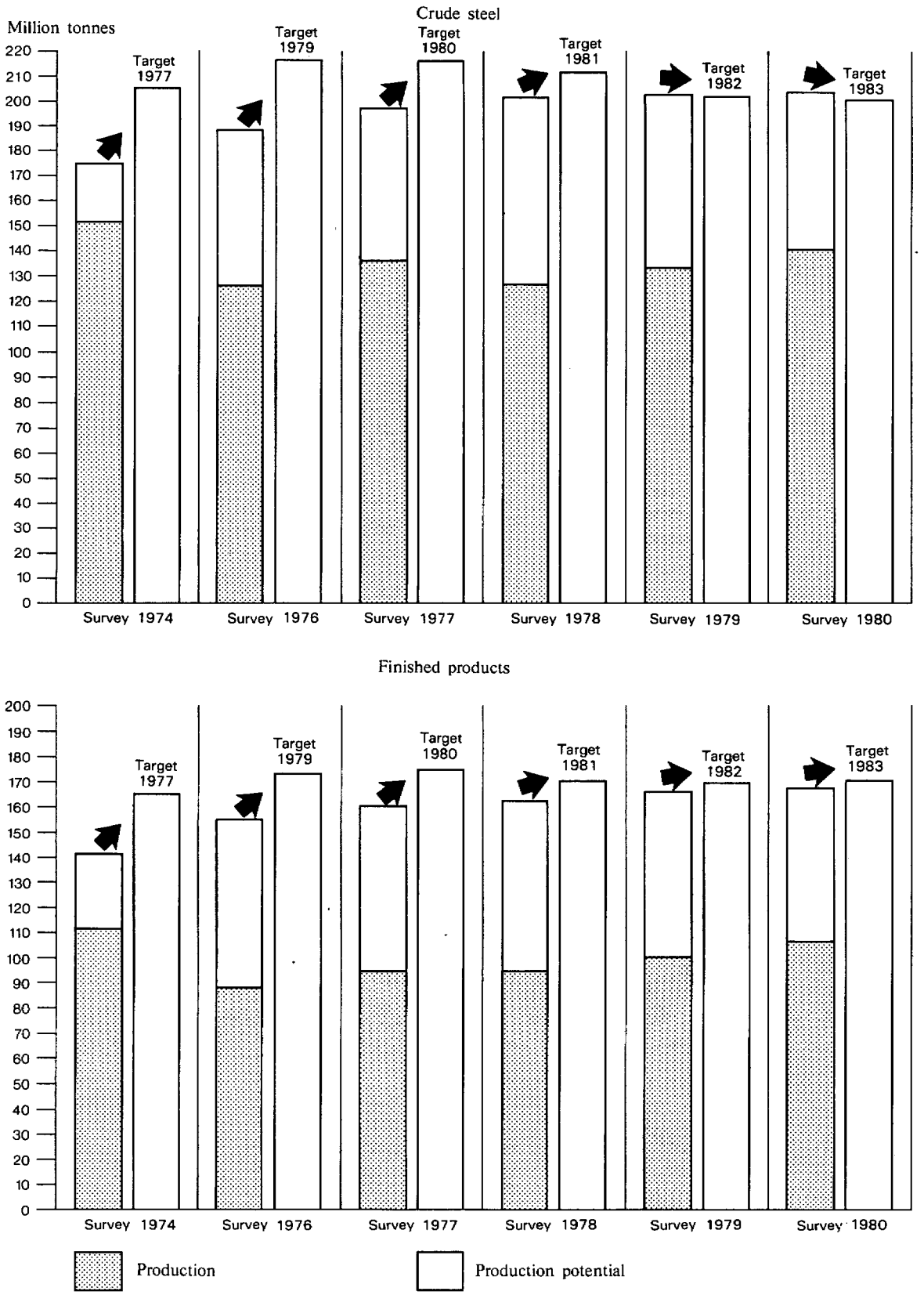
— Belgium (+0,9 million tonnes or +4,5%). One works revised its future production potential upwards while the planned closure of another works has been deferred;

— eastern France (+0,8 million tonnes or +7,3%). One company revised its production potential upwards in both an existing steelworks and in a steelworks under construction;

— regions of France other than eastern and northern France (+0,7 million tonnes or +13,4%). One company revised the future capacity of one of its works upwards;

*FIGURE 9*

**Expected production potential according to the survey**



— the non-coastal regions of Italy (+0,5 million tonnes or +2,7%, excluding the works not covered by the 1979 survey). There were several upward revisions of the figures for existing capacity.

*TABLE XV*

**Direction of change of crude-steel production potential at ECSC works, by region 1979-1983**

| Region | Number and change in production potential of works | | | | | | |
|---|---|---|---|---|---|---|---|
| | Decreasing capacity | | Constant capacity | Increasing capacity | | Total | |
| | Number | Production potential million tonnes | Number | Number | Production potential million tonnes | Number | Production potential million tonnes |
| Northern Germany | 2 | 1,0 | 4 | 3 | 2,3 | 9 | +1,3 |
| North Rhine/Westphalia | 8 | 2,9 | 29 | 8 | 2,5 | 45 | −0,4 |
| Southern Germany | 1 | 0,5 | 7 | 1 | 0,2 | 9 | −0,3 |
| Saar | 4 | 4,7 | 1 | 3 | 3,1 | 8 | −1,6 |
| *FR of Germany* | *15* | *9,1* | *41* | *15* | *8,1* | *71* | *−1,0* |
| Belgium | *3* | *0,3* | *11* | *2* | *0,5* | *16* | *+0,2* |
| Eastern France | 7 | 2,6 | 7 | 4 | 2,0 | 18 | −0,6 |
| Northern France | 2 | 1,5 | 15 | 8 | 0,4 | 25 | −1,1 |
| France - other areas | 1 | 0,1 | 11 | 5 | 0,5 | 17 | +0,4 |
| *France* | *10* | *4,1* | *33* | *17* | *2,9* | *60* | *−1,2* |
| Italy - coastal areas | 1 | 2,3 | 6 | 3 | 2,6 | 10 | +0,3 |
| Italy - other areas | 4 | 0,5 | 75 | 22 | 1,2 | 101 | +0,7 |
| *Italy* | *5* | *2,8* | *81* | *25* | *3,8* | *111* | *+1,1* |
| *Luxembourg* | *1* | *0,5* | *2* | *2* | *0,7* | *5* | *+0,3* |
| *Netherlands* | *1* | *0,1* | *1* | *2* | *0,3* | *4* | *+0,3* |
| Scotland | 0 | — | 2 | 1 | 0,9 | 3 | +0,9 |
| Wales | 1 | 1,1 | 2 | 5 | 1,0 | 8 | −0,1 |
| Northern England | 9 | 2,7 | 22 | 2 | 1,3 | 33 | −1,4 |
| England - other regions | 5 | 1,7 | 4 | 1 | 0,1 | 10 | −1,6 |
| *United Kingdom* | *16* | *5,5* | *29* | *9* | *3,3* | *54* | *−2,2* |
| *Denmark* | *1* | *0,5* | *1* | *1* | *0,2* | *3* | *−0,3* |
| *Ireland* | *0* | — | *0* | *1* | *0,3* | *1* | *+0,3* |
| **Total EUR 9** | **52** | **22,8** | **199** | **74** | **20,1** | **325** | **−2,7** |

Undoubtedly, in some cases such upward revisions of production potential from one survey to the next stem from progressive increases in productivity, in other cases, however, they reflect market considerations. Each year such revisions are likely to absorb a substantial proportion of the effort to reduce capacity made by other companies in the face of acute social and regional problems.

Table XV analyses the development plans of steelworks, by region, between 1979 and 1983. This table calls for some comments in addition to those made on Table XIV.

Those regions which show a net reduction in capacity are mainly those where restructuring plans have been finalized and in part implemented. As regards those regions which see a growth in capacity, in at least two cases, northern Germany and France excluding the north and east, a change in the method of steel plant operation has brought about a re-evaluation of existing capacities. In at least one case, closures to compensate for increase in capacity of existing steelworks have not yet been incorporated in the figures. Finally, in another case, increases in capacity in one region have been compensated by closures in others.

*TABLE XVI*

**Share of integrated coastal works [1] in total Community production potential**

(%)

| | 1979 | 1983 |
|---|---|---|
| Crude steel | 30 | 33 |
| Continuous casting | 27 | 27 |
| Coils | 52 | 54 |

[1] Bremen, IJmuiden, Sidmar, Dunkirk, Mondeville, Fos, Corniliagno, Piombino, Bagnoli, Taranto, Port Talbot, Llanwern, Scunthorpe, Redcar, Teesside, Ravenscraig.
*N.B.*: This list includes works which, although not located on the coast, nevertheless may share some of the transport costs and other location advantages of strictly coastal works.

## 2.4. Continuous casting

Production of continuously cast steel rose to 43,7 million tonnes in 1979, a significant increase over 1978, when production was only 38,6 million tonnes. At the same time continuous casting production potential increased from 54,9 million tonnes in 1978 to 58,7 million tonnes in 1979. The share of continuously cast steel was 31% in 1979. This rapid increase in capacity is likely to continue. It is now expected that capacity will reach 90,0 million tonnes in 1983, or 44,8% of crude-steel production potential, compared with 37,1% forecast in the 1979 survey.

## 2.5. Hot-rolled wide coils

In 1979 the production of hot wide strip in coils was 49,7 million tonnes compared with 46,7 million tonnes in 1978. Production potential, which rose to 67,7 million tonnes in 1978 and was expected to reach 68,7 million tonnes in 1979, in fact increased to 69,8 million tonnes.

The rate of utilization of production capacity also increased from 69,2% in 1978 to 71,2% in 1979. However, in certain works, utilization rates of close to 50% were recorded, particularly in northern

*TABLE XVII*

**Ratio of continuous casting production potential to crude steel production potential**

(%)

| Country | 1979 | 1983 |
|---|---|---|
| FR of Germany | 34,0 | 49,4 |
| Belgium | 21,3 | 40,2 |
| France | 26,3 | 47,7 |
| Italy | 44,3 | 54,5 |
| Luxembourg | — | 17,3 |
| Netherlands | — | 17,2 |
| United Kingdom | 20,1 | 32,2 |
| Denmark | 58,3 | 100,0 |
| Ireland | — | 100,0 |
| **Total EUR 9** | **28,8** | **44,6** |

*TABLE XVIII*

**Direction of change of production potential for pig-iron, crude steel and finished products at ECSC works 1979-1983**

| | Number and change in production potential of works | | | | | | |
|---|---|---|---|---|---|---|---|
| | Decreasing capacity | | Constant capacity | Increasing capacity | | Total | |
| | Number | Production potential million tonnes | Number | Number | Production potential million tonnes | Number | Production potential million tonnes |
| Pig-iron | 23 | 15,4 | 37 | 19 | 8,4 | 79 | − 6,9 |
| Crude steel | 52 | 22,8 | 199 | 74 | 20,1 | 325 | − 2,7 |
| Continuous casting | 0 | — | 81 | 70 | 31,3 | 151 | +31,3 |
| Hot wide strip | 1 | 0,9 | 18 | 15 | 7,6 | 34 | + 6,7 |
| Heavy sections (incl. rounds and squares for rolled tubes) | 23 | 2,2 | 64 | 14 | 1,5 | 101 | − 0,8 |
| Light sections | 22 | 1,5 | 186 | 53 | 1,2 | 261 | − 0,2 |
| Wire rod | 14 | 1,6 | 50 | 24 | 1,5 | 88 | − 0,0 |
| Narrow strip | 8 | 0,9 | 47 | 6 | 0,2 | 61 | − 0,7 |
| Plates and hot-rolled sheets | 10 | 0,9 | 98 | 13 | 0,9 | 121 | + 0,1 |
| Cold-rolled sheetd | 2 | 0,4 | 46 | 22 | 2,0 | 70 | + 1,7 |

Germany, in North Rhine/Westphalia, in northern France, in both coastal and other regions of Italy, and in Wales.

*TABLE XIX*

**Changes in production potential of rolled products between successive surveys**

*(million tonnes)*

| | 1979 survey | | | 1980 survey | | Difference between the final years of the respective surveys |
|---|---|---|---|---|---|---|
| | 1978 | 1979 | 1982 | 1979 | 1983 | |
| Coils hot wide strip | 67,7 | 68,7 | 72,2 | 69,8 | 76,5 | +4,3 |
| Heavy sections (excluding rolled tube rounds and squares) | 15,6 | 15,8 | 16,7 | 15,3 | 15,8 | −0,9 |
| Light sections | 31,8 | 30,1 | 30,3 | 30,8 | 30,6 | +0,3 |
| Wire rod | 18,5 | 18,7 | 18,8 | 18,9 | 18,9 | +0,1 |
| Hoop and strip for tubemaking from specialized mills | 8,7 | 8,9 | 8,3 | 8,8 | 7,5 | −0,8 |
| Hot-rolled sheet and plates from specialized mills | 19,9 | 19,8 | 19,7 | 19,3 | 19,0 | −0,7 |
| Cold-rolled sheet and colils | 43,0 | 43,3 | 44,5 | 43,8 | 45,5 | +1,0 |

The survey predicts a very rapid development of production potential for hot wide strip in coil between now and 1983, when potential is expected to reach 76,5 million tonnes whereas last year's survey predicted 72,2 million tonnes for 1982. An increasing proportion of medium and narrow strip and hot-rolled plate is manufactured from wide strip and thus absorbs a greater proportion of hot-rolled wide strip than expected. However, even allowing for this substitution effect, the latest revised General Objectives for Steel concluded that the capacity available in 1978—67,7 million tonnes—would be sufficient to cover estimated demand in 1983.

Apart from a new mill to be built in Italy, the increases in production potential recorded in this survey are attributable to improvements to existing mills, new reheating furnaces, extra stands, increased motor capacities, etc. Although these marginal investments are intended to improve productivity for individual companies, the resultant increases in production will, unless offset by closures, aggravate the problems of surplus capacity.

In this context, it is interesting to calculate the annual rates of increase or decrease in production capacities for the various product groups anticipated between 1979 and 1983. These are shown in Table XX.

### 2.6. Heavy sections (including rolled tube rounds and squares)

Production of heavy sections, including rolled tube rounds and squares, was 10,9 million tonnes in 1979, slightly down on the 1978 production of 11,3 million tonnes. Production potential was 18,9 million tonnes in 1978 but fell to 18,4 million tonnes in 1979. The rate of utilization remains low (59,4%, almost the same as 1978).

*TABLE XX*

**Annual rate of increase for the period covered by the survey**

| | Production 1979 | Production potential | | Average annual rate of increase |
|---|---|---|---|---|
| | | 1979 | 1983 | |
| | million tonnes | million tonnes | million tonnes | % |
| Coils hot wide strip | 49,7 | 69,8 | 76,5 | +2,3 |
| Heavy sections (excluding rolled tube rounds and squares) | 9,0 | 15,3 | 15,8 | +0,8 |
| Light sections | 20,6 | 30,8 | 30,6 | −0,2 |
| Wire rod | 12,6 | 18,9 | 18,9 | −0,1 |
| Hoop and strip for tubemaking from specialized mills | 5,4 | 8,8 | 7,5 | −4,0 |
| Hot-rolled sheet and plates from specialized mills | 10,2 | 19,3 | 19,0 | −0,4 |
| Cold-rolled sheet and coils) | 29,0 | 43,8 | 45,5 | +0,9 |

While the previous survey forecast a slight increase in capacity up to the final year covered by the survey, the present survey indicates a fall from 18,4 to 17,6 million tonnes between 1979 and 1983. This fall in capacity will mainly affect tube rounds and squares, while capacity for other heavy sections will remain stable. Indeed, reductions in Belgium, in northern England and other areas of England will be offset by increases in capacity, principally in inland Italy and in Luxembourg. The reduction in capacity for tube rounds and squares which is evident in North Rhine/Westphalia is offset by an equivalent capacity for the same product made by continuous casting, but which is not counted under rolled products.

## 2.7. Light sections

Production of light sections was 20,7 million tonnes in 1979 compared with 19,2 million tonnes in 1978. Production potential, which was 31,8 million tonnes in 1978, fell to 30,8 million tonnes in 1979.

The rate of utilization of mills producing light sections was higher in 1979 (67,1%) than in 1978 (60,4%).

At the same time the rate of utilization of mills producing concrete reinforcing bars, which was 59,2% in 1978, increased to 70,3% in 1979.

According to the 1980 survey light section capacity will fall slightly between 1979 (30,8 million tonnes) and 1983 (30,6 million tonnes). However, the last figure has been revised upwards since the 1979 survey (see Table XIX).

## 2.8. Wire rod in coils

Production increased to 12,6 million tonnes in 1979 compared with 11,2 million tonnes in 1978. Production potential was revised upwards slightly (Table XIX). The rate of utilization was thus improved, rising from 60,3% in 1978 to 66,3% in 1979.

Between 1979 and 1983 production potential is expected to remain constant at 18,9 million tonnes, although this apparent stability conceals divergent trends in the various countries and regions.

Two rolling-mills are to be closed in North Rhine/Westphalia, one mill in Belgium, one mill in northern France, five mills in Italy, three of which had only very low capacity, and one mill in northern England, while a third mill in North Rhine/Westphalia is to reduce its capacity.

On the other hand the survey reports increased capacity of mills recently constructed or modernized in Italy. Furthermore, in Belgium the construction of a new wire rod mill, which had been interrupted, has been resumed, although the closures to offset this increase have not yet been announced.

In addition, efforts to modernize existing obsolete mills (increased coil weight, new finishing blocks and continuous heat treatment in hot rolling), where not offset by compensating closures, are an additional factor in increasing over-capacity.

## 2.9. Hot-rolled medium and narrow tube strip

In 1979 production of hot-rolled medium and narrow strip and tube strip was 7,2 million tonnes compared with 6,6 million tonnes in 1978. Production potential fell slightly from 12,4 million tonnes in 1978 to 12,2 million tonnes in 1979. This improved the rate of utilization, which increased from 53,4% in 1978 to 58,7% in 1979.

*TABLE XXI*

**Production of medium and narrow strip from coils and on specialized rolling mills**

*(million tonnes)*

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|
| Ex-coils | 1,6 | 1,5 | 0,9 | 1,7 | 1,4 | 1,4 | 1,8 |
| Specialized rolling mills | 7,0 | 6,9 | 4,6 | 5,4 | 5,0 | 5,2 | 5,4 |

Production potential for medium narrow strip and tube strip is expected to fall from 12,2 million tonnes in 1979 to 11,6 million tonnes in 1983. Specialized mills will be most affected, with their production potential falling from 8,8 million tonnes to 7,5 million tonnes over this period. However, even this fall in capacity may not be sufficient to restore the balance between supply and demand and a further reduction in medium and narrow strip production on specialized mills is not unlikely.

The survey reflects the trend towards the substitution of medium and narrow strip manufactured on specialized mills by slit wide strip. A certain number of decisions to close plant have already been taken, including mills in the Saar, in Belgium, in eastern France and in regions of England other than northern England. In addition, a decision has been taken to reduce output at a works in coastal regions of Italy. The decision to close a second works in the Saar has been taken since 1 January 1980.

*TABLE XXII*

**Production of hot-rolled sheet from coils and on specialized rolling mills**

*(million tonnes)*

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|
| Ex-coils | 3,5 | 4,3 | 2,8 | 2,7 | 2,9 | 2,9 | 4,1 |
| Specialized rolling mills | 12,4 | 13,7 | 11,9 | 10,0 | 9,7 | 10,0 | 10,2 |

## 2.10. Hot-rolled plate, sheet and universals

Because the number of specialized mills for hot-rolled sheet is so small, these mills have been added to the category of plate greater than or equal to 3 mm.

Production rose from 12,4 million tonnes in 1978 to 14,4 million tonnes in 1979. However, production from specialized mills showed only a slight improvement, from 10,0 million tonnes in 1978 to 10,2 million tonnes in 1979.

Production potential increased from 27,4 million tonnes in 1978 to 27,9 million tonnes in 1979. For specialized mills the figures are 19,9 million tonnes for 1978 and 19,3 million tonnes for 1979.

The rate of capacity utilization, which was 46,9% in 1978, rose to 51,6% in 1979, while that of specialized mills was 50,0% in 1978 and 52,9% in 1979. Production potential is expected to remain stationary at 27,9 million tonnes between 1979 and 1983 for this entire range. The capacity of specialized mills should fall in the same period from 19,4 to 19,0 million tonnes.

Table XIX shows a substantial downward revision of the expected capacity of specialized mills between the 1979 and 1980 surveys.

Three closures have been announced, one in non-coastal Italy, the two others in England (north and other areas). As against this, a decision has been taken to expand two installations in Scotland.

As in the case of medium and narrow strip, plates and sheets hot-rolled on specialized mills are gradually being replaced by plate and sheet cut from hot-rolled wide strip, at least in the case of widths (less than 2 m) and thickness (less than 20 mm), where this is possible. Consequently there are no definite plans for new hot-rolled plate or sheet mills.

Considering the substitution mentioned above, closure would be desirable in this category of mills, particularly in view of the anticipated development of hot-rolled wide strip mills.

## 2.11. Cold-rolled sheet

At 29,0 million tonnes, production in 1979 exceeded the 1978 production level of 27,8 million tonnes. Production potential increased from 43,0 million tonnes in 1978 to 43,8 million tonnes in 1979, while the average rate of utilization improved from 64,7% in 1978 to 66,3% in 1979.

Further increases in production potential are expected, taking capacity from 43,8 million tonnes in 1979 to 45,5 million tonnes in 1983. Table XIX shows furthermore, that the production potential figures forecast in the 1979 survey have, in the 1980 survey, been subject to considerable upward revision.

According to the survey the development of production potential during the period 1979 to 1983 corresponds to an average annual rate of increase of 0,9% (Table XX).

Some works show particularly low rates of capacity utilization, in the region of 50% or less, for example in northern Germany, North Rhine/Westphalia, southern Germany, Belgium, eastern and northern France, all areas of Italy and also in Wales and in northern England. One closure has been confirmed in the case of a works situated in northern France, while there is a plan to reduce output from a works in Wales. At present, three projects to expand cold-rolled sheet capacity are under way, in Belgium, in Italy (coastal areas) and in Wales.

# Scope and definitions

# Statistical tables

**IMPORTANT NOTE**

Because of rounding, some columns of figures in the tables do not agree with the totals in the decimal place.

# CONTENTS

# SCOPE AND DEFINITIONS

## I — Scope of survey

The survey is based on figures supplied by ECSC enterprises which in 1979 accounted for 99% of total coal production, 99% of crude-steel production and 99% of finished products designated by the Treaty establishing the ECSC.

## II — Definitions

### 1. Classification of investment projects

In their replies to the survey, the enterprises are asked to distinguish the effects on capital expenditure and production potential of the following three categories of investment project:

— Projects completed or in progress before 1 January 1980 (Category A);

— Projects approved but not yet in progress on 1 January 1980 (Category B);

— Other projects planned to be started between 1 January 1980 and 31 December 1983 (Category C).

### 2. 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 at the prices ruling in that year, but excluding the financing of workers' housing schemes, outside shareholdings and all interests not directly connected with ECSC Treaty products.

### 3. Coal - Extraction potential

The figures shown represent the net maximum output technically achievable, allowing for the potential of the different installations at the collieries (underground, surface, washeries), and assuming that it is not impeded by difficulties in distribution, by strikes or by manpower shortages. The extraction is expressed for all countries in tonne = tonne.

A number of mines with a low output, including the German 'small mines' and the 'licensed mines' in the United Kingdom, have not been included in the survey. They accounted for an extraction in 1979 of 1,4 million tonnes.

### 4. 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 potential of the ancillary and auxiliary installations. It is assumed that a ready market and unlimited raw material supplies are assured.

### 5. Iron-ore - Extraction potential

The figures shown represent the maximum continuous output which can be achieved by each mine, allowing for the potential of the different installations, for example, underground or surface ore-preparation plant where the ore is sold only after treatment.

### 6. Sinter, pig-iron, crude steel and finished steel products

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 normal 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 of the charge in each plant concerned, on the assumption that the raw materials will be available.'

Estimates of the maximum production potential of blast-furnaces and steelworks accounts for deliveries of pig-iron to all steelworks, not only those, for example, on the same site as the blast-furnaces.

Estimates of the production potential of rolling-mills take into account all normal supplies of semi-products to the mills, not only those from adjacent steelworks. The production potential of rolling-mills is also governed by the shape, quality and width of the material fed ito the mill and the products to be obtained. Where enterprises have not been able to forecast future demand conditions, they have been asked to assume that the mix of inputs and outputs, on any one mill and across the different types of mill, will be broadly the same as that in 1979.

## III — Capital goods prices indices

The enterprises declare their capital expenditure at the ruling prices for the year concerned, the figures being converted into units of account at the rates shown at the beginning of this report. In order to gain some idea of how investments have changed from year to year on a constant price basis, two capital goods price indices have been prepared—one for the iron and steel industry and the other for the mining industry. For the period before 1970 this has been done by taking the national indices for prices of all capital goods and by weighting these indices in accordance with the share of each country in total Community investment in each of the industries concerned. For the years since 1970, the price indices used relate only to metal products and machinery.

The table below shows the indices calculated according to these methods. These indices have been applied to the main series of expenditure figures in the report.

| Community index 1970 = 100 | 1965 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron and steel industry ... | 81,8 | 87,4 | 91,8 | 100 | 107,2 | 110,1 | 121,0 | 140,7 | 162,2 | 167,1 | 171,0 | 173,0 | 175,0 [1] |
| Mining industry ..... | 82,6 | 87,8 | 92,0 | 100 | 107,9 | 113,4 | 123,9 | 142,1 | 166,5 | 165,2 | 172,4 | 185,7 | 190,0 [1] |

[1] Estimated.

## IV — Interpretation of capital expenditure figures for 1978 and 1979

It should be borne in mind that even at current prices the figures given in this report for capital expenditure in 1978 and 1979 may differ from those in the 1978 report. There are three main reasons for this:

— first, for 1978, enterprises may revise their figures in the light of the completion of their final annual accounts;

— secondly, for 1979, actual spending by the enterprises may often depart from the expenditure estimates submitted at 1 January of that year;

— thirdly, again for 1979, the actual rates of exchange between the national currencies and the unit of account may differ from those used in the estimates of capital expenditure for the year ahead.

## V — Breakdown of production potential and capital expenditure by region

In the tables, the producer regions in the original six countries other than those mentioned by name are:

| | |
|---|---|
| Northern Germany: | *Länder* Schleswig-Holstein, Lower Saxony, Hamburg, Bremen; |
| Southern Germany: | *Länder* Hesse, Rhineland-Palatinate, Baden-Württemberg, Bavaria; |
| Eastern France: | Meurthe-et-Moselle, Meuse, Moselle, Bas-Rhin, Doubs, Gura; |
| Northern France: | Seine-et-Marne, Yvelines, Hauts-de-Seine, Seine-Saint-Denis, Ardennes, Aube, Marne, Haute-Marne, Oise, Eure, Calvados, Côte-d'Or, Nièvre, Saône-et-Loire, Nord, Pas-de-Calais; |
| Northern England: | (steel-producing regions only): North-West, Yorkshire and Humberside; |
| England — other regions: | (steel-producing regions only): West Midlands, East Midlands, East Anglia, South-West, South-East. |

The National Coal Board Areas included in the coal-producing regions of the United Kingdom are as follows:

| | |
|---|---|
| Scotland: | Scottish; |
| Yorkshire: | North Yorkshire, South Yorkshire, Barnsley, Doncaster; |

| | |
|---|---|
| Midlands & Kent: | North Nottinghamshire, South Nottinghamshire, North Derbyshire, South Midlands; |
| Western: | Western; |
| South Wales: | South Wales. |

Opencast mining has been considered as a separate category irrespective of regional locations.

For statistical purposes only, the production potential and capital expenditure of steel-producing enterprises in Berlin have been included in the totals for the regions of North-Rhine/Westphalia.

## HARD COAL COLLIERIES

### Investments

*TABLE 1*

**Capital expenditure by coalfields**

*(million EUA)*

| Coalfield | Actual expenditure | | | Estimated expenditure | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | | | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | | 1981 | |
| | | | | A+B | A+B | A+B+C | A+B | A+B+C |
| Ruhr [1] | 159,7 | 140,1 | 176,8 | 204,6 | 228,1 | 228,1 | 202,7 | 309,2 |
| Aachen [2] | 24,1 | 16,9 | 35,6 | 16,7 | 65,7 | 90,9 | 49,7 | 78,7 |
| Lower Saxony | 20,7 | 15,2 | 17,2 | 13,2 | 17,4 | 17,4 | 5,3 | 16,8 |
| Saar | 31,7 | 38,7 | 47,8 | 75,5 | 97,3 | 97,3 | 77,4 | 106,3 |
| *FR of Germany* | *236,2* | *210,9* | *277,3* | *310,0* | *408,5* | *433,7* | *335,1* | *511,0* |
| Campine | 12,7 | 19,6 | 24,4 | 30,7 | 37,4 | 37,4 | — | 34,7 |
| Southern Belgium | 0,3 | 0,4 | 0,2 | 0,1 | 0,4 | 0,4 | — | — |
| *Belgium* | *13,0* | *20,0* | *24,6* | *30,8* | *37,8* | *37,8* | — | *34,7* |
| Nord/Pas-de-Calais | 7,4 | 5,9 | 5,0 | 5,4 | 4,9 | 4,9 | 4,0 | 4,0 |
| Lorraine | 36,1 | 37,3 | 30,0 | 31,7 | 33,9 | 33,9 | 30,9 | 33,2 |
| Centre-Midi | 5,7 | 4,7 | 4,5 | 4,4 | 5,2 | 5,2 | 4,6 | 4,6 |
| *France* | *49,2* | *47,9* | *39,5* | *41,5* | *44,0* | *44,0* | *39,5* | *41,8* |
| Scotland | 15,6 | 24,7 | 31,5 | 28,2 | 40,1 | | 35,9 | |
| North East | 37,9 | 38,9 | 59,7 | 52,1 | 50,1 | | 47,7 | |
| Yorkshire | 170,7 | 292,7 | 372,5 | 275,2 | 425,1 | | 428,6 | |
| Midlands and Kent | 110,9 | 170,5 | 222,0 | 162,2 | 227,5 | | 170,5 | |
| Western | 42,0 | 53,9 | 55,9 | 51,2 | 60,9 | | 47,4 | |
| South Wales | 54,5 | 52,7 | 48,4 | 38,0 | 48,4 | | 38,3 | |
| Opencast mining | 13,8 | 19,6 | 35,6 | 16,3 | 19,3 | 26,2 | 13,9 | 26,2 |
| *United Kingdom* | *445,3* | *653,0* | *825,6* | *623,1* | *871,4* | *990,0* | *782,4* | *956,0* |
| **Total EUR 9** | **743,6** | **931,8** | **1 167,0** | **1 005,4** | **1 361,7** | **1 505,5** | **1 157,0** | **1 543,5** |

[1] Without the expenses of the Ruhr part of EBV.
[2] Includes the expenses of the Ruhr part of EBV.

*TABLE 2*

**Capital expenditure per tonne of coal produced 1976-1979**

*(EUA/tonne at current prices and current exchange rates)*

| Region | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|
| Ruhr | 2,28 | 2,24 | 2,02 | 2,45 |
| Aachen | 3,29 | 2,89 | 1,98 | 4,21 |
| Lower Saxony | 9,13 | 9,82 | 6,25 | 7,37 |
| Saar | 3,53 | 3,42 | 4,17 | 4,83 |
| *FR of Germany* | *2,64* | *2,60* | *2,35* | *2,99* |
| Campine | 1,37 | 2,03 | 3,29 | 4,35 |
| Southern Belgium | 0,89 | 0,28 | 0,56 | 0,37 |
| *Belgium* | *1,30* | *1,83* | *3,03* | *4,02* |
| Nord/Pas-de-Calais | 1,10 | 1,11 | 0,99 | 0,93 |
| Lorraine | 3,07 | 3,60 | 3,82 | 3,13 |
| Centre-Midi | 0,76 | 1,23 | 1,18 | 1,24 |
| *France* | *1,93* | *2,31* | *2,43* | *2,12* |
| Scotland | 1,83 | 1,83 | 3,02 | 3,88 |
| North East | 2,98 | 2,98 | 2,98 | 4,41 |
| Yorkshire | 4,21 | 5,49 | 9,56 | 12,01 |
| Midlands and Kent | 3,20 | 3,10 | 4,70 | 6,20 |
| Western | 4,41 | 3,90 | 4,88 | 5,09 |
| South Wales | 4,99 | 7,36 | 7,01 | 6,35 |
| Opencast mining | 1,14 | 1,05 | 1,42 | 2,84 |
| *United Kingdom* | *3,36* | *3,73* | *5,42* | *6,90* |
| **Total EUR 9** | **2,89** | **3,11** | **3,94** | **4,92** |

*TABLE 3*

**Extraction and extraction potential by coalfields**

*(million tonnes (t = t))*

| Actual extraction 1979 | Coalfield | Extraction potential 1977 | 1978 | 1979 | Expected extraction potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 75,2 | Ruhr | 80,0 | 80,1 | 76,5 | 75,1 | 74,6 | 75,2 | 75,9 |
| 5,3 | Aachen | 5,8 | 5,6 | 5,6 | 5,6 | 5,6 | 5,6 | 5,6 |
| 2,3 | Lower Saxony | 2,2 | 2,5 | 2,4 | 2,4 | 2,4 | 2,4 | 2,4 |
| 9,9 | Saar | 10,5 | 10,8 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 |
| *92,9* | *FR of Germany* | *98,5* | *98,9* | *95,4* | *94,1* | *93,6* | *94,2* | *95,0* |
| 5,6 | Campine | 6,4 | 6,0 | 6,5 | 6,1 | 6,3 | 6,6 | 6,7 |
| 0,5 | Southern Belgium | 1,2 | 1,0 | 0,8 | 0,4 | 0,2 | — | — |
| *6,1* | *Belgium* | *7,5* | *7,0* | *7,3* | *6,5* | *6,5* | *6,6* | *6,7* |
| 5,4 | Nord/Pas-de-Calais | 6,7 | 6,0 | 5,4 | 4,5 | 3,7 | 3,0 | 2,3 |
| 9,6 | Lorraine | 10,2 | 9,8 | 9,8 | 9,9 | 9,9 | 9,7 | 9,7 |
| 3,6 | Centre-Midi | 4,7 | 4,0 | 3,7 | 3,6 | 3,6 | 3,3 | 3,1 |
| *18,6* | *France* | *21,7* | *19,8* | *18,9* | *18,0* | *17,2* | *16,1* | *15,2* |
| 8,1 | Scotland | 9,1 | 9,0 | 8,6 | 8,3 | 8,5 | 8,6 | 8,5 |
| 13,6 | Northern | 13,8 | 13,2 | 13,0 | 12,9 | 12,6 | 12,3 | 11,8 |
| 31,0 | Yorkshire | 33,4 | 32,6 | 32,7 | 32,2 | 32,9 | 33,6 | 35,2 |
| 35,8 | Midlands and Kent | 38,8 | 37,7 | 37,4 | 36,5 | 36,7 | 36,5 | 36,4 |
| 11,0 | Western | 11,6 | 11,6 | 11,1 | 11,0 | 11,1 | 11,1 | 10,7 |
| 7,6 | South Wales | 7,9 | 7,8 | 7,9 | 8,0 | 7,8 | 7,8 | 7,7 |
| 12,5 | Opencast | 13,6 | 14,0 | 13,0 | 12,6 | 12,0 | 12,3 | 11,0 |
| *119,7* | *United Kingdom* | *128,2* | *126,0* | *123,7* | *121,4* | *121,5* | *122,2* | *121,2* |
| **237,2** | **Total EUR 9** | **255,9** | **251,7** | **245,3** | **240,0** | **238,8** | **239,1** | **238,1** |

*TABLE 4*

**Capital expenditure by coalfields**

*(million EUA)*

| Area | Actual expenditure | | | Estimated expenditure | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| **Mine-owned coking plants** | | | | | | |
| Ruhr [1] | 41,9 | 20,9 | 11,5 | 19,8 | 29,2 | 34,7 |
| Aachen [2] | 2,1 | 0,4 | 0,4 | 0,6 | 0,6 | 0,6 |
| Saar | 4,2 | 4,0 | 2,1 | 3,3 | 2,5 | 1,7 |
| *FR of Germany* | *48,2* | *25,3* | *13,9* | *23,6* | *32,3* | *36,9* |
| Nord/Pas-de-Calais | 2,3 | 3,0 | 3,0 | 3,0 | 2,6 | 3,2 |
| Lorraine | 23,6 | 12,6 | 4,2 | 4,6 | 10,7 | 14,2 |
| Centre-Midi | 0,2 | — | — | 0,1 | — | — |
| *France* | *26,0* | *15,5* | *7,2* | *7,7* | *13,4* | *17,4* |
| *United Kingdom* | *2,7* | *5,9* | *15,7* | *17,1* | *11,3* | *1,0* |
| **Total EUR 9** | **76,9** | **46,7** | **36,8** | **48,4** | **57,0** | **55,3** |
| **Independent coking plants** | | | | | | |
| *Belgium and Netherlands* | *0,1* | *0,1* | *0,1* | *0,7* | *0,1* | *0,1* |
| *Italy* | *11,3* | *3,1* | *2,8* | *4,5* | *1,3* | — |
| *United Kingdom* | *0,7* | *0,8* | *2,1* | *0,8* | *0,5* | — |
| **Total EUR 9** | **12,1** | **4,0** | **5,0** | **6,0** | **1,9** | **0,1** |
| **Steelworks-owned coking plants** | | | | | | |
| *FR of Germany* | *6,4* | *5,8* | *3,2* | *3,0* | *9,8* | *15,1* |
| *Belgium and Netherlands* | *10,9* | *4,9* | *7,8* | *11,0* | *12,1* | *8,9* |
| *France* | *20,0* | *18,0* | *9,5* | *13,0* | *16,8* | *6,3* |
| *Italy* | *19,9* | *19,0* | *11,6* | *10,9* | *21,6* | *17,2* |
| Scotland | 7,0 | 3,3 | 0,3 | 1,1 | 0,3 | — |
| South Wales | 59,5 | 43,4 | 14,3 | 27,1 | 10,5 | 3,6 |
| Northern England | 32,8 | 14,1 | 23,7 | 22,5 | 12,8 | 12,0 |
| England - other areas | 1,2 | 3,1 | 0,9 | 1,1 | — | — |
| *United Kingdom* | *100,5* | *63,8* | *39,3* | *51,8* | *23,6* | *15,6* |
| **Total EUR 9** | **157,7** | **111,5** | **71,4** | **89,7** | **84,0** | **63,1** |
| **Grand total EUR 9** | **246,7** | **162,2** | **113,2** | **144,1** | **142,9** | **118,5** |

[1] Without the expenses of the Ruhr part of EBV.
[2] Includes the expenses of the Ruhr part of EBV.

**COKE**

**Production**

*TABLE 5*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Extraction potential 1977 | Extraction potential 1978 | Extraction potential 1979 | Expected extraction potential 1980 | Expected extraction potential 1981 | Expected extraction potential 1982 | Expected extraction potential 1983 |
|---|---|---|---|---|---|---|---|---|
| | **Mine-owned coking plants** | | | | | | | |
| 15,6 | Ruhr | 21,1 | 19,0 | 18,7 | 18,7 | 18,4 | 18,5 | 18,9 |
| 1,8 | Aachen | 2,0 | 1,9 | 1,9 | 1,9 | 1,9 | 1,9 | 1,9 |
| 1,4 | Saar | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 |
| *18,9* | *FR of Germany* | *24,5* | *22,4* | *22,1* | *22,2* | *21,8* | *21,9* | *22,3* |
| 2,7 | Nord/Pas-de-Calais | 4,8 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 |
| 2,3 | Lorraine | 2,7 | 2,6 | 2,4 | 2,4 | 2,5 | 2,5 | 2,5 |
| 0,3 | Centre-Midi | 0,5 | 0,5 | 0,5 | 0,5 | 0,5 | 0,3 | 0,3 |
| *5,3* | *France* | *8,0* | *6,0* | *5,8* | *5,8* | *5,8* | *5,7* | *5,7* |
| *3,2* | *United Kingdom* | *4,6* | *4,1* | *4,1* | *4,3* | *3,3* | *2,7* | *2,5* |
| **27,3** | **Total EUR 9** | **37,1** | **32,5** | **31,9** | **32,2** | **31,0** | **30,3** | **30,5** |
| | **Independent coking plants** | | | | | | | |
| *0,6* | *Belgium and Netherlands* | *0,8* | *0,6* | *0,7* | *0,7* | *0,7* | *0,7* | *0,7* |
| *1,7* | *Italy* | *2,6* | *2,6* | *2,5* | *2,5* | *2,5* | *2,5* | *2,5* |
| *0,5* | *United Kingdom*[1] | *0,6* | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* |
| **2,8** | **Total EUR 9** | **4,0** | **3,7** | **3,7** | **3,7** | **3,7** | **3,7** | **3,7** |
| | **Steelworks-owned coking plants** | | | | | | | |
| *7,8* | *FR of Germany* | *9,1* | *9,1* | *9,1* | *9,1* | *9,1* | *9,3* | *9,3* |
| *8,4* | *Belgium and Netherlands* | *10,7* | *9,7* | *9,4* | *8,9* | *8,9* | *9,1* | *9,2* |
| *6,2* | *France* | *6,7* | *6,7* | *6,6* | *6,2* | *6,3* | *6,3* | *6,3* |
| *5,8* | *Italy* | *9,0* | *9,0* | *9,0* | *9,0* | *9,0* | *9,0* | *9,0* |
| 0,8 | Scotland | 1,1 | 0,9 | 1,2 | 1,2 | 1,3 | 1,3 | 1,3 |
| 2,6 | Wales | 3,7 | 2,9 | 3,1 | 2,7 | 2,5 | 2,7 | 2,4 |
| 3,7 | Northern England | 4,0 | 3,9 | 4,2 | 4,4 | 4,7 | 4,8 | 4,8 |
| 0,4 | England - other regions | 0,9 | 0,7 | 0,5 | 0,1 | — | — | — |
| *7,5* | *United Kingdom* | *9,6* | *8,5* | *9,0* | *8,4* | *8,5* | *8,9* | *8,6* |
| **35,7** | **Total EUR 9** | **45,1** | **43,0** | **43,1** | **41,6** | **41,8** | **42,6** | **42,4** |
| **65,8** | **Grand total EUR 9** | **86,2** | **79,2** | **78,7** | **77,5** | **76,5** | **76,6** | **76,6** |

[1] Without LTC.

## HARD COAL BRIQUETTES

**Production**

*TABLE 6*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Extraction potential 1977 | 1978 | 1979 | Expected extraction potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 1,0 | Ruhr | 0,7 | 0,7 | 1,0 | 0,9 | 0,9 | 0,9 | 0,9 |
| 0,5 | Aachen | 1,0 | 1,0 | 1,0 | 1,0 | 1,0 | 1,0 | 1,0 |
| 0,2 | Lower Saxony | 0,7 | 0,7 | 0,7 | 0,3 | — | — | — |
| *1,7* | *FR of Germany* | *2,3* | *2,4* | *2,6* | *2,2* | *1,9* | *1,9* | *1,9* |
| *0,1* | *Belgium* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,2* | *0,2* |
| 1,3 | Nord/Pas-de-Calais | 2,0 | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 |
| 0,4 | Centre-Midi | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,3 |
| 0,5 | Independent plants [1] | 0,8 | 0,7 | 0,7 | 0,6 | 0,6 | 0,5 | 0,5 |
| *2,1* | *France* | *3,6* | *2,9* | *2,9* | *2,8* | *2,8* | *2,7* | *2,2* |
| *1,0* | *United Kingdom* | *1,1* | *1,1* | *1,1* | *1,1* | *1,0* | *1,0* | *1,1* |
| **5,0** | **Total EUR 9** | **7,3** | **6,7** | **6,9** | **6,4** | **6,0** | **5,8** | **5,4** |

[1] Estimate.

## BROWN COAL BRIQUETTES

**Production**

*TABLE 7*

**Production and production potential for brown coal briquettes[1]**

*(million tonnes)*

| Actual production 1979 | | Extraction potential 1977 | 1978 | 1979 | Expected extraction potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| **6,2** | **Total EUR 9** | **6,2** | **6,2** | **6,2** | **6,2** | **6,2** | **6,2** | **6,2** |

[1] Including breeze and brown coal coke.

## IRON-ORE MINING

**Investment**

*TABLE 8*

**Capital expenditure by countries**

*(million EUA)*

| Country | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| *FR of Germany* | *5,1* | *3,6* | *1,3* | *2,2* | *1,9* | *0,4* |
| *Belgium* | — | — | — | — | — | — |
| *France* | *13,3* | *11,1* | *8,2* | *8,7* | *9,6* | *4,6* |
| *Italy* | *0,3* | *0,1* | *0,4* | *0,3* | *0,3* | — |
| *Luxembourg* | *0,8* | *0,1* | *0,1* | *0,0* | *0,1* | — |
| *United Kingdom* | *1,2* | *1,5* | *4,5* | *5,9* | *0,7* | — |
| **Total EUR 9** | **20,7** | **16,4** | **14,5** | **17,1** | **12,6** | **5,0** |

## IRON-ORE MINING

**Extraction**

*TABLE 9*

**Capital expenditure by category**

*(million tonnes)*

| Sectors | Actual expenditure | | | Estimated expenditure (projects in progress and approved) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Extraction of ore | 17,5 | 13,3 | 12,5 | 11,2 | 4,7 |
| Mine-based preparation of ore | 0,2 | 0,3 | 0,6 | 0,3 | 0,1 |
| Miscellaneous surface | 3,0 | 2,8 | 1,4 | 1,1 | 0,2 |
| **Total EUR 9** | **20,7** | **16,4** | **14,5** | **12,6** | **5,0** |

*TABLE 10*

**Extraction and extraction potential by countries**

*(million tonnes)*

| Country | Extraction | | Extraction potential | | | | |
|---|---|---|---|---|---|---|---|
| | 1978 | 1979 | 1979 | 1980 | 1981 | 1982 | 1983 |
| *FR of Germany* | *1,7* | *1,7* | *2,1* | *2,2* | *2,3* | *2,3* | *2,3* |
| *Belgium* | *0,0* | — | — | — | — | — | — |
| *France* | *33,4* | *31,2* | *38,7* | *36,4* | *35,3* | *34,8* | *33,3* |
| *Italy* | *0,4* | *0,2* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* |
| *Luxembourg* | *0,9* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| *United Kingdom* | *4,2* | *4,2* | *5,0* | *2,5* | *2,2* | *2,3* | *2,3* |
| **Total EUR 9** | **40,6** | **37,9** | **46,7** | **42,0** | **40,7** | **40,3** | **38,8** |

*TABLE 11*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 118,2 | 49,5 | 42,8 | 39,6 | 65,2 | 103,5 |
| North Rhine/Westphalia | 329,2 | 321,4 | 345,9 | 391,5 | 499,8 | 377,1 |
| Southern Germany | 30,3 | 33,4 | 24,9 | 21,0 | 25,4 | 4,1 |
| Saar | 27,8 | 32,7 | 82,2 | 83,8 | 138,6 | 89,6 |
| *FR of Germany* | *505,5* | *437,0* | *495,8* | *536,0* | *729,0* | *574,2* |
| *Belgium* | *139,2* | *63,4* | *113,7* | *106,6* | *319,4* | *272,8* |
| Eastern France | 174,0 | 244,2 | 211,7 | 201,7 | 203,0 | 140,9 |
| Northern France | 153,6 | 107,8 | 72,2 | 57,4 | 81,6 | 68,6 |
| France - other areas | 49,8 | 47,5 | 31,2 | 35,9 | 42,0 | 42,7 |
| *France* | *377,4* | *399,6* | *315,1* | *294,9* | *326,6* | *252,2* |
| Italy - coastal areas | 307,3 | 283,4 | 236,7 | 220,6 | 445,0 | 522,0 |
| Italy - other areas | 194,2 | 166,3 | 162,8 | 176,3 | 232,9 | 281,6 |
| *Italy* | *501,6* | *449,8* | *399,5* | *396,9* | *677,8* | *803,6* |
| *Luxembourg* | *68,3* | *107,0* | *114,6* | *135,4* | *99,4* | *44,7* |
| *Netherlands* | *45,4* | *60,8* | *84,9* | *99,3* | *67,8* | *22,5* |
| Scotland | 114,7 | 70,0 | 50,3 | 43,4 | 34,7 | 14,5 |
| Wales | 211,1 | 171,9 | 146,1 | 135,4 | 111,1 | 71,9 |
| Northern England | 366,0 | 242,5 | 219,9 | 189,0 | 124,8 | 47,3 |
| England - other areas | 24,2 | 17,9 | 30,5 | 32,9 | 22,5 | 11,1 |
| *United Kingdom* | *716,0* | *502,3* | *446,9* | *400,6* | *293,1* | *144,8* |
| *Denmark* | *5,6* | *1,7* | *11,2* | *15,0* | *11,3* | *3,9* |
| *Ireland* | *0,7* | *0,8* | *18,4* | *32,9* | *36,7* | *5,0* |
| **Total EUR 9** | **2 359,5** | **2 022,3** | **2 000,1** | **2 017,6** | **2 561,1** | **2 123,9** |
| **Total EUR 9 at constant 1970 prices** | **1 379,8** | **1 168,9** | **1 142,9** | **1 166,2** | **1 463,5** | **1 213,6** |

**IRON AND STEEL INDUSTRY**

**Total investment**

*TABLE 12*

**Capital expenditure by type of installation**

*(million EUA)*

| Type of installation | Actual expenditure | | | Estimated expenditure (cat. A + B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Plant for production of: | | | | | |
| Pig-iron | 593,2 | 463,0 | 350,1 | 526,1 | 383,6 |
| Steel | 463,9 | 360,2 | 401,5 | 401,7 | 304,2 |
| Rolled products | 917,7 | 843,2 | 892,0 | 1 261,9 | 1 164,1 |
| General services | 384,7 | 364,9 | 356,5 | 371,5 | 271,9 |
| **Total EUR 9** | **2 359,5** | **2 022,3** | **2 000,1** | **2 561,1** | **2 123,9** |
| **Total at constant 1970 prices** | **1 379,8** | **1 168,9** | **1 142,9** | **1 463,5** | **1 213,6** |

**IRON AND STEEL INDUSTRY**
**ESTIMATED / ACTUAL**
**CAPITAL EXPENDITURE**

**Investment**

*TABLE 13*

**Capital expenditure in 1979 by stages in production**

*(million EUA)*

| Stage in production | Estimates (1) | Actual amounts spent (2) | Agreement with estimates % (3) = (2) : (1) |
|---|---|---|---|
| Pig-iron | 372,1 | 350,1 | 94,1 |
| Crude steel | 357,0 | 401,5 | 112,5 |
| Rolling-mills | 901,9 | 892,0 | 98,9 |
| General services | 386,6 | 356,5 | 92,2 |
| **Total iron and steel industry** | **2 017,6** | **2 000,1** | **99,1** |

**IRON AND STEEL INDUSTRY**
**ESTIMATED / ACTUAL CAPITAL EXPENDITURE**

**Investment**

*TABLE 14*

**Capital expenditure in 1979 by countries**

| Country | Estimated national currency (1) | Achieved national currency (2) | Rate of achievement % at current prices (3) = (2) : (1) |
|---|---|---|---|
| *FR of Germany* | *DM (million)* *1 345,9* | *DM (million)* *1 244,9* | *92,5* |
| *Belgium* | *BFR (million)* *4 281,4* | *BFR (million)* *4 566,6* | *106,7* |
| *France* | *FF (million)* *1 719,1* | *FF (million)* *1 836,9* | *106,8* |
| *Italy* | *LIT (thousand million)* *451,8* | *LIT (thousand million)* *454,8* | *100,7* |
| *Luxembourg* | *LFR (million)* *5 438,1* | *LFR (million)* *4 602,7* | *84,6* |
| *Netherlands* | *HFL (million)* *272,9* | *HFL (million)* *233,4* | *85,5* |
| *United Kingdom* | *UKL (million)* *259,0* | *UKL (million)* *288,9* | *111,5* |
| *Denmark* | *DKR (million)* *108,0* | *DKR (million)* *80,7* | *74,7* |
| *Ireland* | *IRL (million)* *22,0* | *IRL (million)* *12,3* | *55,9* |
| **Total EUR 9** | *million EUA* *2 017,6* | *million EUA* *2 001,1* | *99,1* |

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

**Total investment**

*TABLE 15*

**Capital expenditure by type of installation**

*(million EUA)*

| Sectors | Actual expenditure | | | Estimated expenditure (cat. A + B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Steelworks coking plants | 157,8 | 111,5 | 71,4 | 84,0 | 63,1 |
| Burden preparation and direct reduction | 119,2 | 92,7 | 71,4 | 116,4 | 92,5 |
| Blast-furnaces | 316,2 | 258,7 | 207,3 | 325,8 | 228,1 |
| **Total EUR 9** | **593,2** | **463,0** | **350,1** | **526,1** | **383,6** |

BLAST-FURNACES

**Investment**

*TABLE 16*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 45,7 | 6,0 | 3,4 | 4,3 | 2,0 | 0,3 |
| North Rhine/Westphalia | 41,6 | 43,7 | 52,1 | 34,4 | 92,3 | 41,3 |
| Southern Germany | 0,2 | 0,1 | 0,2 | 0,5 | 0,4 | 0,5 |
| Saar | 2,2 | 0,8 | 1,1 | 6,2 | 25,3 | 8,2 |
| *FR of Germany* | *89,7* | *50,5* | *56,9* | *45,4* | *120,0* | *50,3* |
| *Belgium* | *13,7* | *1,7* | *9,9* | *2,2* | *23,1* | *13,1* |
| Eastern France | 26,2 | 28,8 | 19,3 | 14,3 | 22,1 | 20,3 |
| Northern France | 8,9 | 8,9 | 2,9 | 4,5 | 10,5 | 17,9 |
| France - other areas | 4,0 | 1,8 | 2,6 | 2,6 | 3,6 | 2,1 |
| *France* | *39,2* | *39,5* | *24,7* | *21,4* | *36,2* | *40,3* |
| Italy - coastal areas | 76,3 | 47,4 | 16,0 | 15,0 | 95,6 | 109,9 |
| Italy - other areas | 1,6 | 2,3 | 2,0 | 1,8 | 1,8 | 4,0 |
| *Italy* | *77,9* | *49,7* | *18,0* | *16,8* | *97,4* | *113,9* |
| *Luxembourg* | *17,4* | *52,6* | *59,0* | *46,4* | *14,8* | *2,0* |
| *Netherlands* | *2,9* | *1,6* | *4,6* | *10,5* | *7,0* | *1,9* |
| Scotland | 12,2 | 7,7 | 6,6 | 6,0 | 2,8 | 1,1 |
| Wales | 19,0 | 3,8 | 3,0 | 5,2 | 6,3 | 0,9 |
| Northern England | 43,5 | 51,3 | 24,5 | 21,8 | 17,8 | 4,6 |
| England - other areas | 0,7 | 0,3 | 0,1 | 0,5 | 0,4 | — |
| *United Kingdom* | *75,4* | *63,1* | *34,2* | *33,5* | *27,3* | *6,7* |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **316,2** | **258,7** | **207,3** | **176,3** | **325,8** | **228,1** |

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

**Investment**

*TABLE 17*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 57,5 | 10,8 | 5,3 | 9,4 | 5,7 | 0,6 |
| North Rhine/Westphalia | 61,4 | 81,7 | 91,6 | 83,9 | 128,5 | 76,7 |
| Southern Germany | 0,2 | 0,1 | 0,2 | 0,5 | 0,4 | 0,5 |
| Saar | 2,3 | 0,8 | 1,4 | 6,2 | 38,6 | 22,8 |
| *FR of Germany* | *121,5* | *93,3* | *98,5* | *100,0* | *173,2* | *100,6* |
| *Belgium* | *36,8* | *4,5* | *16,5* | *12,9* | *29,9* | *16,1* |
| Eastern France | 48,4 | 54,9 | 33,6 | 31,2 | 42,3 | 27,6 |
| Northern France | 9,7 | 9,3 | 3,0 | 4,6 | 11,4 | 20,3 |
| France - other areas | 8,5 | 4,1 | 2,6 | 3,0 | 3,7 | 2,3 |
| *France* | *66,6* | *68,3* | *39,2* | *38,8* | *57,4* | *50,2* |
| Italy - coastal areas | 105,2 | 68,7 | 31,8 | 34,0 | 144,5 | 141,0 |
| Italy - other areas | 2,3 | 3,7 | 2,4 | 21,8 | 31,0 | 39,4 |
| *Italy* | *107,6* | *72,3* | *34,2* | *55,7* | *175,6* | *180,4* |
| *Luxembourg* | *18,6* | *52,7* | *59,3* | *47,0* | *17,0* | *2,7* |
| *Netherlands* | *7,9* | *5,7* | *8,9* | *13,1* | *16,2* | *11,0* |
| Scotland | 62,1 | 28,5 | 15,5 | 16,9 | 6,7 | 1,1 |
| Wales | 82,2 | 50,7 | 17,7 | 32,9 | 16,9 | 4,6 |
| Northern England | 85,1 | 83,5 | 59,2 | 53,1 | 32,8 | 17,0 |
| England - other areas | 4,8 | 3,4 | 1,1 | 1,6 | 0,4 | — |
| *United Kingdom* | *234,3* | *166,1* | *93,6* | *104,6* | *56,8* | *22,7* |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **593,2** | **463,0** | **350,1** | **372,1** | **526,1** | **383,6** |

*TABLE 18*

**Capital expenditure according to production process**

*(million EUA)*

| Process | Actual expenditure | | | Estimated expenditure (cat. A + B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| OBM, LWS and similar | 96,5 | 123,7 | 102,0 | 55,3 | 21,2 |
| Open-hearth | 23,5 | 6,8 | 2,4 | 2,5 | 2,9 |
| Electric furnace | 180,4 | 117,7 | 140,5 | 107,3 | 99,6 |
| LD, Kaldo (Basic Bessemer and other) | 163,5 | 112,0 | 156,5 | 236,6 | 180,4 |
| **Total EUR 9** | **463,9** | **360,2** | **401,5** | **401,7** | **304,2** |

**OPEN-HEARTH STEELWORKS**

**Investment**

*TABLE 19*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | — | 0,1 | 0,1 | 0,7 | 0,3 | 1,7 |
| North Rhine/Westphalia | 21,9 | 5,6 | 1,8 | 4,1 | 1,7 | 0,4 |
| Southern Germany | 0,1 | 0,3 | 0,1 | 0,0 | — | — |
| Saar | 0,0 | — | — | — | — | — |
| *FR of Germany* | *22,1* | *5,9* | *2,0* | *4,8* | *2,0* | *2,1* |
| *Belgium* | — | — | — | — | — | — |
| Eastern France | — | — | — | — | — | — |
| Northern France | 0,8 | — | — | — | — | — |
| France - other areas | — | — | — | — | — | — |
| *France* | *0,8* | — | — | — | — | — |
| Italy - coastal areas | — | — | — | — | — | — |
| Italy - other areas | 0,0 | 0,1 | 0,1 | 0,4 | 0,5 | 0,9 |
| *Italy* | *0,0* | *0,1* | *0,1* | *0,4* | *0,5* | *0,9* |
| *Luxembourg* | — | — | — | — | — | — |
| *Netherlands* | — | — | — | — | — | — |
| Scotland | — | — | — | — | — | — |
| Wales | 0,2 | 0,4 | 0,2 | 0,6 | — | — |
| Northern England | 0,0 | — | — | — | — | — |
| England - other areas | 0,1 | 0,3 | 0,1 | — | — | — |
| *United Kingdom* | *0,3* | *0,8* | *0,3* | *0,6* | — | — |
| *Denmark* | *0,2* | *0,1* | *0,0* | *0,1* | — | — |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **23,5** | **6,8** | **2,4** | **5,9** | **2,5** | **2,9** |

*TABLE 20*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 4,2 | 0,8 | 1,9 | 2,4 | 1,9 | 0,5 |
| North Rhine/Westphalia | 26,0 | 19,3 | 26,9 | 23,3 | 27,4 | 35,6 |
| Southern Germany | 2,5 | 1,9 | 2,3 | 0,0 | 2,4 | 0,3 |
| Saar | 1,5 | 0,0 | 1,2 | — | 1.6 | 0,9 |
| *FR of Germany* | *34,2* | *22,0* | *32,2* | *25,7* | *33,3* | *37,3* |
| *Belgium* | *16,3* | *6,5* | *1,5* | *1,3* | *2,6* | *2,2* |
| Eastern France | 0,3 | 0,2 | 0,1 | 0,1 | 0,9 | 0,2 |
| Northern France | 16,6 | 11,7 | 13,2 | 9,1 | 8,2 | 0,8 |
| France - other areas | 8,0 | 7,4 | 6,8 | 8,4 | 5,9 | 4,6 |
| *France* | *24,9* | *19,3* | *20,2* | *17,5* | *15,0* | *5,6* |
| Italy - coastal areas | 8,2 | 14,4 | 11,4 | 9,2 | 2,5 | 1,8 |
| Italy - other areas | 48,4 | 23,9 | 23,9 | 22,0 | 26,7 | 45,2 |
| *Italy* | *56,6* | *38,3* | *35,4* | *31,3* | *29,1* | *47,0* |
| *Luxembourg* | — | — | — | — | — | — |
| *Netherlands* | *0,2* | *0,8* | *0,3* | *2,2* | *0,4* | — |
| Scotland | 0,3 | 0,2 | 0,1 | 0,3 | — | — |
| Wales | 15,7 | 12,6 | 5,3 | 3,4 | 2,5 | 0,0 |
| Northern England | 26,3 | 16,2 | 23,8 | 23,2 | 7,2 | 1,8 |
| England - other areas | 2,3 | 1,2 | 11,9 | 9,9 | 8,2 | 3,9 |
| *United Kingdom* | *44,5* | *30,1* | *41,0* | *36,8* | *18,0* | *5,7* |
| *Denmark* | *3,7* | *0,7* | *5,1* | *2,0* | *1,3* | *0,8* |
| *Ireland* | *0,0* | *0,0* | *4,8* | *6,8* | *7,6* | *1,0* |
| **Total EUR 9** | **180,4** | **117,7** | **140,5** | **123,6** | **107,3** | **99,6** |

**LD, KALDO AND OTHER STEELWORKS (BASIC BESSEMER, ETC.)**

*TABLE 21*

**Capital expenditure by regions**

**Investment**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 12,5 | 3,9 | 10,8 | 2,0 | 23,8 | 22,2 |
| North Rhine/Westphalia | 15,2 | 19,3 | 18,5 | 35,8 | 40,1 | 51,0 |
| Southern Germany | — | — | — | — | — | — |
| Saar | 0,8 | 11,8 | 63,6 | 43,9 | 72,7 | 35,2 |
| *FR of Germany* | *28,5* | *35,1* | *92,9* | *81,7* | *136,6* | *108,4* |
| *Belgium* | *12,4* | *1,5* | *8,1* | *5,2* | *15,2* | *9,0* |
| Eastern France | 1,3 | 1,6 | 0,8 | 3,3 | 2,5 | 0,8 |
| Northern France | 15,8 | 5,1 | 1,4 | 2,3 | 3,6 | 1,1 |
| France - other areas | 2,6 | 1,4 | 2,7 | 2,9 | 3,7 | 8,2 |
| *France* | *19,7* | *8,2* | *4,9* | *8,5* | *9,9* | *10,1* |
| Italy - coastal areas | 34,0 | 15,5 | 9,7 | 11,0 | 22,9 | 25,9 |
| Italy - other areas | — | 0,1 | 0,2 | — | 0,8 | 1,3 |
| *Italy* | *34,0* | *15,6* | *9,9* | *11,0* | *23,7* | *27,2* |
| *Luxembourg* | *20,2* | *14,2* | *6,5* | *12,4* | *16,0* | *7,7* |
| *Netherlands* | *8,0* | *6,0* | *3,5* | *6,5* | *9,4* | *3,0* |
| Scotland | 11,1 | 12,2 | 17,6 | 13,2 | 18,4 | 12,5 |
| Wales | 1,9 | 3,0 | 3,9 | 2,1 | 0,9 | 0,5 |
| Northern England | 27,6 | 15,9 | 9,2 | 5,8 | 6,6 | 2,0 |
| England - other areas | 0,1 | 0,2 | 0,0 | 0,1 | — | — |
| *United Kingdom* | *40,8* | *31,3* | *30,7* | *21,1* | *25,9* | *14,9* |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **163,5** | **112,0** | **156,5** | **146,4** | **236,6** | **180,4** |

**BOTTOM BLOWN STEELS (OBM, LWS, ETC.)**

*TABLE 22*

**Capital expenditure**

**Investment**

*(million EUA)*

| | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| **Total EUR 9** | **96,5** | **123,7** | **102,0** | **81,2** | **55,3** | **21,2** |

**STEELWORKS TOTAL**

**Investment**

*TABLE 23*

**Capital expenditure by regions.**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 18,0 | 4,8 | 13,8 | 5,1 | 26,3 | 24,3 |
| North Rhine/Westphalia | 63,0 | 44,2 | 47,1 | 63,1 | 69,2 | 87,0 |
| Southern Germany | 7,7 | 3,4 | 3,1 | 0,9 | 4,6 | 0,3 |
| Saar | 11,2 | 16,5 | 65,7 | 44,8 | 74,4 | 36,1 |
| *FR of Germany* | *100,0* | *68,9* | *129,7* | *114,0* | *174,5* | *147,9* |
| *Belgium* | *29,5* | *9,1* | *11,0* | *6,5* | *18,7* | *11,2* |
| Eastern France | 69,6 | 94,4 | 57,6 | 58,7 | 29,3 | 9,1 |
| Northern France | 33,3 | 16,8 | 14,7 | 11,4 | 11,8 | 1,9 |
| France - other areas | 10,6 | 8,9 | 9,6 | 11,3 | 9,6 | 12,7 |
| *France* | *113,5* | *120,0* | *81,8* | *81,4* | *50,8* | *23,8* |
| Italy - coastal areas | 54,5 | 54,1 | 62,3 | 44,3 | 51,3 | 40,9 |
| Italy - other areas | 48,6 | 24,2 | 24,3 | 22,4 | 28,0 | 47,4 |
| *Italy* | *103,1* | *78,2* | *86,6* | *66,7* | *79,3* | *88,3* |
| *Luxembourg* | *20,2* | *14,2* | *6,5* | *12,4* | *16,0* | *7,7* |
| *Netherlands* | *8,2* | *6,7* | *3,9* | *8,7* | *9,7* | *3,0* |
| Scotland | 11,3 | 12,4 | 17,7 | 13,5 | 18,4 | 12,5 |
| Wales | 17,8 | 16,0 | 9,4 | 6,1 | 3,5 | 0,5 |
| Northern England | 53,9 | 32,1 | 33,0 | 29,0 | 13,8 | 3,7 |
| England - other areas | 2,5 | 1,7 | 12,0 | 10,0 | 8,2 | 3,9 |
| *United Kingdom* | *85,6* | *62,2* | *72,1* | *58,5* | *43,8* | *20,6* |
| *Denmark* | *3,9* | *0,8* | *5,1* | *2,1* | *1,3* | *0,8* |
| *Ireland* | *0,0* | *0,0* | *4,8* | *6,8* | *7,6* | *1,0* |
| **Total EUR 9** | **463,9** | **360,2** | **401,5** | **357,0** | **401,7** | **304,2** |

*TABLE 24*

**Capital expenditure by type of mill**

*(million EUA)*

| Type of mill | Actual expenditure | | | Estimated expenditure (cat. A + B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Blooming and slabbing mills | 138,6 | 102,1 | 81,5 | 84,8 | 40,9 |
| Continuous casting plants | 187,4 | 187,1 | 288,5 | 424,1 | 461,7 |
| Total section mills | 206,2 | 201,5 | 175,1 | 281,6 | 178,0 |
| Total flat product mills | 290,1 | 279,5 | 284,4 | 402,1 | 438,3 |
| Miscellaneous (including coating lines) | 95,5 | 64,1 | 62,6 | 69,1 | 45,2 |
| **Total EUR 9** | **917,7** | **834,2** | **892,0** | **1 261,9** | **1 164,1** |

**CONTINUOUS CASTING PLANTS**

**Investment**

*TABLE 25*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 0,6 | 0,8 | 1,2 | 1,7 | 9,3 | 46,5 |
| North Rhine/Westphalia | 39,7 | 36,4 | 58,4 | 47,5 | 107,4 | 72,8 |
| Southern Germany | 0,1 | 0,1 | 0,3 | 0,2 | 1,6 | 0,2 |
| Saar | 0,1 | 1,7 | 0,2 | 13,3 | 0,7 | 16,6 |
| *FR of Germany* | *40,4* | *39,0* | *60,1* | *62,8* | *118,9* | *136,2* |
| *Belgium* | *24,0* | *17,2* | *6,4* | *7,2* | *49,6* | *57,7* |
| Eastern France | 3,5 | 47,4 | 78,2 | 72,0 | 74,1 | 75,4 |
| Northern France | 15,9 | 4,3 | 0,9 | 0,7 | 1,8 | — |
| France - other areas | 2,6 | 0,4 | 0,4 | 1,4 | 0,4 | 0,3 |
| *France* | *22,0* | *52,1* | *79,5* | *74,2* | *76,3* | *75,7* |
| Italy - coastal areas | 18,5 | 24,8 | 23,2 | 17,6 | 59,4 | 112,7 |
| Italy - other areas | 20,9 | 10,4 | 8,5 | 7,8 | 5,7 | 7,3 |
| *Italy* | *39,3* | *35,3* | *31,7* | *25,4* | *65,1* | *119,9* |
| *Luxembourg* | — | *0,3* | *8,2* | *20,7* | *33,1* | *16,8* |
| *Netherlands* | *2,8* | *22,4* | *41,2* | *50,0* | *21,0* | *3,6* |
| Scotland | 25,7 | 9,4 | 3,1 | 3,3 | 1,0 | — |
| Wales | 0,9 | 0,4 | 22,0 | 0,4 | 26,8 | 35,7 |
| Northern England | 31,8 | 10,9 | 30,9 | 24,7 | 19,9 | 12,2 |
| England - other areas | 0,4 | 0,3 | 0,3 | 0,5 | 1,9 | 2,3 |
| *United Kingdom* | *58,8* | *21,0* | *56,3* | *28,9* | *49,6* | *50,1* |
| *Denmark* | — | — | *3,0* | *9,8* | *6,1* | *1,6* |
| *Ireland* | — | — | *2,0* | *1,7* | *4,3* | *0,1* |
| **Total EUR 9** | **187,4** | **187,1** | **288,5** | **280,6** | **424,1** | **461,7** |

**BLOOMING, SLABBING, SEMI-FINISHED PRODUCT MILLS**

**Investment**

*TABLE 26*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 1,7 | 4,3 | 1,3 | 1,4 | 1,8 | 0,4 |
| North Rhine/Westphalia | 13,5 | 17,4 | 11,0 | 14,5 | 21,2 | 6,6 |
| Southern Germany | 0,1 | 0,0 | 1,5 | 2,0 | 0,6 | — |
| Saar | 2,1 | 0,4 | 5,3 | 4,4 | 8,1 | 1,9 |
| *FR of Germany* | *17,5* | *22,1* | *19,1* | *22,3* | *31,7* | *9,0* |
| *Belgium* | *0,4* | *0,5* | *3,9* | *9,9* | *1,9* | *1,4* |
| Eastern France | 1,7 | 3,3 | 1,9 | 1,8 | 7,9 | 3,3 |
| Northern France | 3,5 | 0,7 | 0,1 | 0,3 | 0,3 | 0,2 |
| France - other areas | 5,3 | 1,3 | 0,0 | 0,2 | 0,1 | 0,2 |
| *France* | *10,4* | *5,3* | *2,1* | *2,3* | *8,3* | *3,6* |
| Italy - coastal areas | 5,0 | 1,2 | 2,2 | 6,4 | 15,2 | 15,5 |
| Italy - other areas | 2,9 | 2,3 | 3,7 | 3,8 | 2,2 | 1,2 |
| *Italy* | *8,0* | *3,5* | *5,9* | *10,2* | *17,3* | *16,6* |
| *Luxembourg* | *9,2* | *2,3* | *4,4* | *3,9* | *8,4* | *5,1* |
| *Netherlands* | *0,5* | *0,6* | *0,9* | *0,5* | *0,1* | — |
| Scotland | 0,0 | 0,5 | — | 0,8 | — | — |
| Wales | 32,3 | 36,9 | 32,2 | 29,5 | 9,1 | 3,3 |
| Northern England | 59,0 | 29,3 | 12,0 | 7,8 | 7,9 | 1,8 |
| England - other areas | 1,2 | 1,1 | 0,9 | 0,8 | 0,1 | — |
| *United Kingdom* | *92,6* | *67,8* | *45,1* | *38,9* | *17,0* | *5,2* |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **138,6** | **102,1** | **81,5** | **87,9** | **84,8** | **40,9** |

*TABLE 27*

**Capital expenditure by sectors**

*(million EUA)*

| Type of mill | Actual expenditure | | | Estimated expenditure (cat. A + B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Heavy and medium section mills | 100,5 | 72,7 | 62,8 | 101,6 | 67,6 |
| Small bar mills | 48,1 | 54,8 | 59,8 | 73,9 | 62,9 |
| Wire rod mills | 57,5 | 73,9 | 52,5 | 106,1 | 47,5 |
| **Total EUR 9** | **206,2** | **201,5** | **175,1** | **281,6** | **178,0** |

*TABLE 28*

**Capital expenditure by countries**

*(million EUA)*

| Country | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| *FR of Germany* | *31,6* | *17,3* | *18,2* | *17,2* | *7,0* | *7,8* |
| *Belgium* | *3,2* | *2,5* | *0,6* | *0,0* | *0,5* | — |
| *France* | *18,5* | *22,9* | *10,0* | *10,1* | *10,1* | *12,9* |
| *Italy* | *38,0* | *21,9* | *15,1* | *14,8* | *50,6* | *35,9* |
| *Luxembourg* | *3,0* | *4,3* | *2,0* | *13,3* | *7,2* | *4,6* |
| *Netherlands* | *0,1* | *0,2* | *0,6* | *0,6* | — | — |
| *United Kingdom* | *6,3* | *3,4* | *8,6* | *8,4* | *9,9* | *4,1* |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | *7,8* | *16,5* | *16,2* | *2,4* |
| **Total EUR 9** | **100,5** | **72,7** | **62,8** | **80,9** | **101,6** | **67,6** |

*TABLE 29*

**Capital expenditure by countries**

*(million EUA)*

| Country | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| *FR of Germany* | *7,6* | *13,8* | *16,1* | *10,9* | *14,5* | *0,8* |
| *Belgium* | *2,7* | *1,5* | *2,3* | *6,3* | *3,2* | *17,4* |
| *France* | *18,6* | *19,9* | *17,8* | *8,4* | *6,0* | *3,6* |
| *Italy* | *8,7* | *15,7* | *20,1* | *25,6* | *42,5* | *38,2* |
| *Luxembourg* | *1,5* | *0,1* | *0,1* | *5,5* | *0,8* | *0,3* |
| *Netherlands* | *0,9* | *0,3* | *0,3* | *0,2* | *0,3* | *0,1* |
| *United Kingdom* | *7,1* | *3,4* | *2,9* | *4,4* | *5,2* | *1,7* |
| *Denmark* | *1,1* | *0,2* | *0,2* | *0,5* | *1,5* | *0,9* |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **48,1** | **54,8** | **59,8** | **61,8** | **73,9** | **62,9** |

CONTINUOUS ROD AND BAR MILLS

**Investment**

*TABLE 30*

**Capital expenditure by countries**

*(million EUA)*

| Country | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| *FR of Germany* | *4,2* | *6,8* | *2,7* | *1,7* | *8,2* | *5,7* |
| *Belgium* | *5,1* | *1,1* | *3,7* | *13,2* | *51,6* | *13,7* |
| *France* | *7,0* | *12,7* | *4,7* | *3,3* | *4,5* | *1,4* |
| *Italy* | *30,5* | *42,6* | *25,2* | *21,2* | *34,2* | *24,9* |
| *Luxembourg* | *0,1* | *2,5* | *0,7* | *0,2* | *0,2* | *0,1* |
| *Netherlands* | *0,2* | *0,7* | *0,8* | *1,0* | *0,1* | — |
| *United Kingdom* | *10,5* | *7,7* | *14,7* | *11,4* | *7,4* | *1,7* |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **57,5** | **73,9** | **52,5** | **52,0** | **106,1** | **47,5** |

*TABLE 31*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 3,4 | 8,2 | 5,6 | 5,0 | 5,6 | 4,9 |
| North Rhine/Westphalia | 37,5 | 22,5 | 25,7 | 23,9 | 11,9 | 8,1 |
| Southern Germany | 0,0 | 6,7 | 5,0 | 0,1 | 11,5 | 1,3 |
| Saar | 2,5 | 0,6 | 0,7 | 0,7 | 0,6 | — |
| *FR of Germany* | *43,4* | *37,9* | *37,0* | *29,7* | *29,6* | *14,3* |
| *Belgium* | *10,9* | *5,1* | *6,6* | *19,5* | *55,2* | *31,1* |
| Eastern France | 10,3 | 14,4 | 6,2 | 6,5 | 12,8 | 13,2 |
| Northern France | 29,6 | 34,6 | 21,2 | 8,8 | 5,4 | 1,4 |
| France - other areas | 4,0 | 6,5 | 5,0 | 6,5 | 2,6 | 3,4 |
| *France* | *44,0* | *55,5* | *32,4* | *21,8* | *20,8* | *18,0* |
| Italy - coastal areas | 41,2 | 34,2 | 12,0 | 12,7 | 41,8 | 25,1 |
| Italy - other areas | 35,9 | 46,0 | 48,4 | 48,9 | 85,5 | 73,8 |
| *Italy* | *77,1* | *80,2* | *60,4* | *61,6* | *127,3* | *98,9* |
| *Luxembourg* | *4,5* | *7,0* | *2,8* | *19,0* | *8,2* | *5,0* |
| *Netherlands* | *1,2* | *1,1* | *1,7* | *1,8* | *0,3* | *0,1* |
| Scotland | 2,2 | 0,6 | 2,1 | 1,1 | 2,3 | — |
| Wales | 3,8 | 1,8 | 0,4 | 0,1 | 0,3 | — |
| Northern England | 14,4 | 10,0 | 10,9 | 10,3 | 11,8 | 2,9 |
| England - other areas | 3,4 | 2,1 | 12,7 | 12,7 | 8,2 | 4,5 |
| *United Kingdom* | *23,8* | *14,5* | *26,2* | *24,2* | *22,5* | *7,4* |
| *Denmark* | *1,1* | *0,2* | *0,2* | *0,5* | *1,5* | *0,9* |
| *Ireland* | — | — | *7,8* | *16,5* | *16,2* | *2,4* |
| **Total EUR 9** | **206,2** | **201,5** | **175,1** | **194,6** | **281,6** | **178,0** |

*TABLE 32*

**Capital expenditure by sectors**

*(million EUA)*

| Sectors | Actual expenditure | | | Estimated expenditure (cat. A + B) | |
|---|---|---|---|---|---|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Hot wide strip mills | 49,6 | 52,7 | 78,3 | 141,9 | 172,4 |
| Hoop and strip mills | 11,3 | 23,7 | 23,2 | 10,3 | 3,2 |
| Plate and universal mills | 70,7 | 39,3 | 32,5 | 50,7 | 48,2 |
| Hot sheet mills | 0,3 | 0,2 | 1,2 | 0,2 | 0,6 |
| Cold strip mills | 158,1 | 163,7 | 149,1 | 199,0 | 213,9 |
| **Total EUR 9** | **290,1** | **279,5** | **284,4** | **402,1** | **438,3** |

**FLAT PRODUCT MILLS**

**Investment**

*TABLE 33*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 22,9 | 7,9 | 2,5 | 5,4 | 4,4 | 12,0 |
| North Rhine/Westphalia | 48,0 | 55,0 | 65,3 | 70,0 | 68,9 | 41,2 |
| Southern Germany | 13,2 | 16,4 | 6,2 | 7,4 | 2,2 | 0,6 |
| Saar | 0,6 | 1,7 | 0,7 | 0,1 | 1,3 | 0,1 |
| *FR of Germany* | *84,7* | *81,0* | *74,8* | *82,9* | *76,7* | *53,8* |
| *Belgium* | *14,6* | *9,8* | *37,4* | *13,1* | *128,0* | *134,6* |
| Eastern France | 15,4 | 3,5 | 3,8 | 12,4 | 2,3 | — |
| Northern France | 32,3 | 22,1 | 16,6 | 15,9 | 29,3 | 24,2 |
| France - other areas | 4,6 | 2,9 | 2,0 | 1,6 | 7,2 | 11,2 |
| *France* | *52,2* | *28,4* | *22,4* | *30,0* | *38,8* | *35,4* |
| Italy - coastal areas | 38,2 | 34,3 | 49,4 | 52,8 | 78,7 | 136,9 |
| Italy - other areas | 21,2 | 35,5 | 24,4 | 19,0 | 35,5 | 62,6 |
| *Italy* | *59,4* | *69,8* | *73,8* | *71,8* | *114,2* | *199,5* |
| *Luxembourg* | *1,7* | *17,5* | *15,6* | *13,0* | *3,4* | *1,5* |
| *Netherlands* | *11,0* | *9,6* | *14,0* | *14,4* | *12,5* | *2,1* |
| Scotland | 8,0 | 7,0 | 5,7 | 3,2 | 2,9 | — |
| Wales | 27,8 | 38,9 | 32,4 | 37,3 | 21,0 | 10,9 |
| Northern England | 28,4 | 16,2 | 6,6 | 8,1 | 2,2 | 0,0 |
| England - other areas | 1,9 | 1,0 | 0,9 | 0,5 | 1,3 | 0,1 |
| *United Kingdom* | *66,1* | *63,2* | *45,7* | *49,2* | *27,4* | *11,0* |
| *Denmark* | *0,4* | *0,3* | *0,7* | *0,6* | *1,1* | *0,6* |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **290,1** | **279,5** | **284,4** | **274,9** | **402,1** | **438,3** |

HOT WIDE STRIP MILLS

**Investment**

*(already included in capital expenditure for flat product mills: Table 33)*

*TABLE 34*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 6,9 | 3,0 | 1,3 | 1,1 | 3,0 | 2,6 |
| North Rhine/Westphalia | 10,6 | 20,3 | 43,6 | 38,4 | 25,7 | 21,9 |
| Southern Germany | — | — | — | — | — | — |
| Saar | — | — | — | — | — | — |
| *FR of Germany* | *17,5* | *23,3* | *44,9* | *39,5* | *28,6* | *24,6* |
| *Belgium* | *6,9* | *3,1* | *12,9* | *3,1* | *34,5* | *28,8* |
| Eastern France | — | 0,0 | — | — | — | — |
| Northern France | 0,0 | 0,0 | 0,9 | 1,7 | 9,8 | 3,1 |
| France - other areas | 2,2 | 2,0 | 1,2 | 0,1 | 5,5 | 10,9 |
| *France* | *2,2* | *2,0* | *2,1* | *1,9* | *15,3* | *14,0* |
| Italy - coastal areas | 5,6 | 0,8 | 1,6 | 18,8 | 43,1 | 102,3 |
| Italy - other areas | 7,3 | 19,1 | 9,3 | 9,7 | 9,3 | 2,1 |
| *Italy* | *13,0* | *20,0* | *10,9* | *28,5* | *52,4* | *104,5* |
| *Luxembourg* | *0,0* | *0,1* | *0,1* | *0,3* | *0,2* | — |
| *Netherlands* | *0,8* | *1,7* | *4,0* | *6,2* | *7,7* | *0,5* |
| Scotland | 0,5 | 0,4 | 0,4 | 0,7 | 0,0 | — |
| Wales | 7,3 | 1,8 | 2,8 | 1,4 | 2,9 | — |
| Northern England | 1,3 | 0,3 | 0,2 | 0,1 | 0,2 | — |
| England - other areas | — | — | — | — | — | — |
| *United Kingdom* | *9,2* | *2,6* | *3,4* | *2,1* | *3,2* | — |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | — | — | — | — |
| **Total EUR 9** | **49,6** | **52,7** | **78,3** | **81,7** | **141,9** | **172,4** |

**ROLLING MILLS [1]**
**TOTAL**

**Investment**

*TABLE 35*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 28,6 | 21,2 | 10,8 | 13,7 | 21,2 | 63,7 |
| North Rhine/Westphalia | 155,8 | 138,6 | 166,5 | 166,0 | 219,4 | 139,3 |
| Southern Germany | 16,0 | 26,9 | 14,9 | 11,5 | 16,9 | 2,2 |
| Saar | 6,6 | 8,8 | 8,5 | 21,5 | 13,8 | 19,3 |
| *FR of Germany* | *206,9* | *195,6* | *200,7* | *212,7* | *271,3* | *224,5* |
| *Belgium* | *51,7* | *35,1* | *63,3* | *63,0* | *242,1* | *226,0* |
| Eastern France | 32,9 | 71,8 | 97,2 | 94,5 | 109,4 | 93,3 |
| Northern France | 88,6 | 65,9 | 42,5 | 29,9 | 43,2 | 26,9 |
| France - other areas | 25,8 | 15,7 | 12,4 | 12,5 | 17,4 | 21,5 |
| *France* | *147,4* | *153,5* | *152,1* | *136,9* | *170,0* | *141,7* |
| Italy - coastal areas | 107,4 | 94,8 | 86,9 | 93,1 | 196,2 | 292,1 |
| Italy - other areas | 86,9 | 105,0 | 91,3 | 87,8 | 136,1 | 162,1 |
| *Italy* | *194,3* | *199,8* | *178,2* | *180,9* | *332,3* | *454,3* |
| *Luxembourg* | *22,6* | *27,4* | *31,6* | *59,1* | *55,9* | *30,2* |
| *Netherlands* | *16,4* | *34,3* | *58,4* | *67,6* | *34,8* | *6,0* |
| Scotland | 36,0 | 17,5 | 11,0 | 8,5 | 6,1 | — |
| Wales | 93,4 | 95,3 | 100,1 | 76,5 | 63,7 | 50,9 |
| Northern England | 140,4 | 70,5 | 68,0 | 53,3 | 44,7 | 18,2 |
| England - other areas | 7,0 | 4,8 | 15,0 | 14,5 | 11,6 | 6,8 |
| *United Kingdom* | *276,8* | *188,1* | *194,0* | *152,7* | *126,2* | *76,0* |
| *Denmark* | *1,5* | *0,4* | *3,9* | *10,8* | *8,8* | *3,0* |
| *Ireland* | *0,0* | *0,0* | *9,8* | *18,2* | *20,5* | *2,5* |
| **Total EUR 9** | **917,7** | **834,2** | **892,0** | **901,9** | **1 261,9** | **1 164,1** |

[1] Including ancillary plants.

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

**Investment**

*TABLE 36*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 3,3 | 2,5 | 2,6 | 3,0 | 3,4 | 10,2 |
| North Rhine/Westphalia | 8,4 | 6,0 | 7,0 | 18,5 | 19,4 | 10,7 |
| Southern Germany | 0,7 | 0,4 | 0,8 | 0,4 | 0,8 | 0,1 |
| Saar | 0,3 | 0,7 | 0,6 | 0,7 | 0,2 | — |
| *FR of Germany* | *12,8* | *9,6* | *11,1* | *22,7* | *23,8* | *21,1* |
| *Belgium* | *4,2* | *5,4* | *7,4* | *7,4* | *4,3* | *1,2* |
| Eastern France | 5,7 | 4,0 | 3,0 | 4,6 | 4,4 | 2,5 |
| Northern France | 5,4 | 1,6 | 1,7 | 0,9 | 2,2 | 13,6 |
| France - other areas | 1,3 | 0,8 | 0,4 | 1,0 | 0,6 | 0,4 |
| *France* | *12,4* | *6,4* | *5,1* | *6,5* | *7,2* | *16,6* |
| Italy - coastal areas | 11,6 | 1,4 | 1,1 | 3,3 | 6,6 | 7,8 |
| Italy - other areas | 7,9 | 6,3 | 7,1 | 7,5 | 8,9 | 8,7 |
| *Italy* | *19,5* | *7,7* | *8,2* | *10,8* | *15,5* | *16,5* |
| *Luxembourg* | *1,8* | *8,8* | *7,4* | *6,3* | *1,3* | *0,8* |
| *Netherlands* | *1,6* | *1,1* | *2,0* | *1,6* | *2,5* | *0,6* |
| Scotland | 0,7 | 6,1 | 0,3 | 1,8 | 1,4 | — |
| Wales | 0,3 | 1,0 | 6,1 | 5,2 | 17,5 | 14,9 |
| Northern England | 23,9 | 7,9 | 16,9 | 10,9 | 7,0 | 4,3 |
| England - other areas | 1,8 | 3,1 | 0,7 | 0,3 | 0,1 | 0,1 |
| *United Kingdom* | *26,6* | *18,1* | *24,0* | *18,2* | *26,0* | *19,3* |
| *Denmark* | — | — | — | — | — | — |
| *Ireland* | — | — | *0,5* | *1,9* | *0,6* | *0,0* |
| **Total EUR 9** | **79,0** | **57,0** | **65,7** | **75,5** | **81,2** | **76,1** |

MISCELLANEOUS
(IRON AND STEELWORKS)

**Investment**

*TABLE 37*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 10,9 | 10,2 | 10,3 | 8,4 | 8,7 | 4,6 |
| North Rhine/Westphalia | 40,5 | 50,9 | 33,6 | 59,9 | 63,3 | 63,3 |
| Southern Germany | 5,6 | 2,6 | 5,9 | 7,7 | 2,8 | 0,9 |
| Saar | 7,4 | 5,9 | 6,0 | 10,6 | 11,5 | 11,5 |
| *FR of Germany* | *64,4* | *69,6* | *55,8* | *86,5* | *86,2* | *80,2* |
| *Belgium* | *17,0* | *9,3* | *15,5* | *16,7* | *24,5* | *18,4* |
| Eastern France | 17,3 | 19,0 | 20,3 | 12,7 | 17,6 | 8,4 |
| Northern France | 16,5 | 14,2 | 10,4 | 10,5 | 12,9 | 5,8 |
| France - other areas | 3,6 | 18,1 | 6,2 | 8,1 | 10,6 | 5,9 |
| *France* | *37,4* | *51,3* | *37,0* | *31,3* | *41,1* | *20,0* |
| Italy - coastal areas | 28,6 | 64,5 | 54,5 | 45,9 | 46,3 | 40,1 |
| Italy - other areas | 48,4 | 27,2 | 37,7 | 37,0 | 28,8 | 24,1 |
| *Italy* | *77,0* | *91,7* | *92,2* | *82,9* | *75,1* | *64,2* |
| *Luxembourg* | *5,2* | *3,8* | *9.8* | *10,7* | *9,3* | *3,3* |
| *Netherlands* | *11,3* | *13,0* | *11,8* | *8,3* | *4,5* | *1,9* |
| Scotland | 4,4 | 5,4 | 5,8 | 2,7 | 2,0 | 0,9 |
| Wales | 17,3 | 8,9 | 12,7 | 14,7 | 9,5 | 1,1 |
| Northern England | 62,8 | 48,5 | 42,9 | 42,7 | 26,5 | 4,1 |
| England - other areas | 8,1 | 5,0 | 1,8 | 6,5 | 2,3 | 0,3 |
| *United Kingdom* | *92,7* | *67,9* | *63,2* | *66,6* | *40,3* | *6,3* |
| *Denmark* | *0,2* | *0,5* | *2,1* | *2,0* | *1,2* | *0,0* |
| *Ireland* | *0,7* | *0,8* | *3,4* | *6,0* | *8,0* | *1,5* |
| **Total EUR 9** | *305,7* | *307,9* | *290,8* | *311,1* | *290,3* | *195,8* |

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

**Investment**

*TABLE 38*

**Capital expenditure by regions**

*(million EUA)*

| Region | Actual expenditure | | | Estimated expenditure (projects in progress, and approved) | | |
|---|---|---|---|---|---|---|
| | | | | on 1 Jan. 1979 for | on 1 Jan. 1980 for | |
| | 1977 | 1978 | 1979 | 1979 | 1980 | 1981 |
| Northern Germany | 14,2 | 12,6 | 13,0 | 11,4 | 12,1 | 14,7 |
| North Rhine/Westphalia | 49,0 | 56,9 | 40,6 | 78,4 | 82,6 | 74,0 |
| Southern Germany | 6,3 | 3,0 | 6,7 | 8,1 | 3,6 | 1,0 |
| Saar | 7,7 | 6,7 | 6,6 | 11,3 | 11,8 | 11,5 |
| *FR of Germany* | *77,2* | *79,1* | *66,9* | *109,3* | *110,0* | *101,3* |
| *Belgium* | *21,1* | *14,6* | *22,9* | *24,1* | *28,8* | *19,6* |
| Eastern France | 23,0 | 23,1 | 23,3 | 17,3 | 22,0 | 10,9 |
| Northern France | 21,9 | 15,8 | 12,1 | 11,4 | 15,1 | 19,4 |
| France - other areas | 4,9 | 18,8 | 6,6 | 9,1 | 11,2 | 6,2 |
| *France* | *49,8* | *57,7* | *42,0* | *37,9* | *48,4* | *36,6* |
| Italy - coastal areas | 40,2 | 65,9 | 55,6 | 49,2 | 52.9 | 47,9 |
| Italy - other areas | 56,4 | 33,5 | 44,8 | 44,4 | 37,7 | 32,8 |
| *Italy* | *96,6* | *99,5* | *100,5* | *93,7* | *90,6* | *80,7* |
| *Luxembourg* | *7,0* | *12,6* | *17,2* | *17,0* | *10,5* | *4,1* |
| *Netherlands* | *12,9* | *14,1* | *13,8* | *9,9* | *7,0* | *2,6* |
| Scotland | 5,2 | 11,5 | 6,1 | 4,5 | 3,5 | 0,9 |
| Wales | 17,6 | 9,9 | 18,8 | 19,9 | 27,0 | 15,9 |
| Northern England | 86,7 | 56,4 | 59,8 | 53,6 | 33,5 | 8,4 |
| England - other areas | 9,9 | 8,1 | 2,5 | 6,9 | 2,4 | 0,4 |
| *United Kingdom* | *119,3* | *85,9* | *87,2* | *84,8* | *66,3* | *25,6* |
| *Denmark* | *0,2* | *0,5* | *2,1* | *2,0* | *1,2* | *0,0* |
| *Ireland* | *0,7* | *0,8* | *3,9* | *7,9* | *8,6* | *1,5* |
| **Total EUR 9** | **384,7** | **364,9** | **356,5** | **386,6** | **371,5** | **271,9** |

## SINTER AND SPONGE IRON

### Production

*TABLE 39*

**Production and production potential**

*(million tonnes)*

| Actual production 1979 | | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| **132,4** | **Total EUR 9** | **174,9** | **176,9** | **177,1** | **178,7** | **178,5** | **181,1** | **179,6** |

## PIG-IRON

### Production

*TABLE 40*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 7,0 | Northern Germany | 9,9 | 10,2 | 11,1 | 11,1 | 11,1 | 11,1 | 11,1 |
| 22,7 | North Rhine/Westphalia | 32,2 | 32,7 | 32,2 | 30,6 | 31,2 | 30,7 | 30,8 |
| 1,0 | Southern Germany | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 | 1,1 | 1,1 |
| 4,5 | Saar | 7,5 | 7,7 | 7,7 | 7,7 | 6,8 | 6,1 | 4,7 |
| *35,2* | *FR of Germany* | *50,9* | *51,9* | *52,4* | *50,7* | *50,5* | *49,0* | *47,7* |
| *10,9* | *Belgium* | *15,8* | *16,0* | *15,8* | *15,8* | *16,0* | *16,0* | *16,0* |
| 9,3 | Eastern France | 13,7 | 13,1 | 12,5 | 11,3 | 10,9 | 10,9 | 10,9 |
| 7,6 | Northern France | 10,3 | 10,7 | 10,0 | 9,7 | 9,3 | 9,5 | 9,6 |
| 2,6 | France - other areas | 3,3 | 3,4 | 3,6 | 3,6 | 3,9 | 3,9 | 3,9 |
| *19,4* | *France* | *27,3* | *27,2* | *26,1* | *24,6* | *24,1* | *24,3* | *24,4* |
| 10,6 | Italy - coastal areas | 16,9 | 16,0 | 16,2 | 16,4 | 16,4 | 16,4 | 16,4 |
| 0,7 | Italy - other areas | 0,3 | 1,0 | 1,0 | 1,0 | 1,0 | 0,7 | 0,8 |
| *11,4* | *Italy* | *17,2* | *17,0* | *17,1* | *17,4* | *17,4* | *17,1* | *17,2* |
| *3,8* | *Luxembourg* | *6,4* | *5,4* | *5,4* | *5,3* | *5,4* | *5,4* | *5,4* |
| *4,8* | *Netherlands* | *7,0* | *7,0* | *7,0* | *7,0* | *7,0* | *7,0* | *7,0* |
| 1,2 | Scotland | 1,9 | 1,1 | 1,7 | 2,7 | 2,7 | 2,7 | 2,7 |
| 4,7 | Wales | 6,2 | 5,5 | 5,5 | 5,6 | 5,3 | 5,3 | 5,3 |
| 6,3 | Northern England | 7,5 | 8,3 | 8,3 | 8,4 | 7,8 | 7,8 | 7,8 |
| 0,8 | England - other regions | 2,0 | 1,6 | 1,2 | 0,3 | 0,1 | 0,1 | 0,1 |
| *13,0* | *United Kingdom* | *17,6* | *16,5* | *16,7* | *17,0* | *16,0* | *16,0* | *16,0* |
| — | *Denmark* | — | — | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **98,5** | **Total EUR 9** | **142,2** | **141,1** | **140,5** | **137,9** | **136,3** | **134,8** | **133,6** |

*TABLE 41*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 9,1 | Northern Germany ..... | 12,6 | 13,5 | 13,5 | 13,4 | 14,7 | 14,7 | 14,8 |
| 29,0 | North Rhine/Westphalia .. | 43,1 | 42,5 | 42,3 | 41,9 | 41,9 | 42,1 | 41,9 |
| 2,8 | Southern Germany ..... | 3,1 | 3,8 | 3,9 | 4,0 | 3,7 | 3,6 | 3,6 |
| 5,1 | Saar ..... | 8,9 | 9,1 | 9,1 | 9,2 | 8,7 | 8,2 | 7,6 |
| *46,0* | *FR of Germany* ..... | *67,7* | *68,9* | *68,8* | *68,5* | *68,9* | *68,5* | *67,8* |
| *13,5* | *Belgium* ..... | *19,2* | *20,0* | *19,7* | *19,7* | *19,9* | *20,0* | *19,9* |
| 10,0 | Eastern France ..... | 14,6 | 12,9 | 12,8 | 12,1 | 12,0 | 12,2 | 12,2 |
| 9,6 | Northern France ..... | 13,5 | 14,2 | 13,7 | 13,1 | 12,6 | 12,6 | 12,6 |
| 3,7 | France - other areas ..... | 5,2 | 5,2 | 5,6 | 5,6 | 5,9 | 6,0 | 6,0 |
| *23,4* | *France* ..... | *33,3* | *32,4* | *32,0* | *30,7* | *30,5* | *30,9* | *30,8* |
| 11,4 | Italy - coastal areas ..... | 19,2 | 18,9 | 19,1 | 19,4 | 19,4 | 19,4 | 19,4 |
| 13,4 | Italy - other areas ..... | 14,8 | 16,8 | 18,0 | 18,0 | 18,4 | 18,6 | 18,7 |
| *24,8* | *Italy* ..... | *34,0* | *35,7* | *37,0* | *37,3* | *37,8* | *38,0* | *38,1* |
| *4,9* | *Luxembourg* ..... | *8,2* | *7,6* | *7,3* | *7,3* | *7,5* | *7,5* | *7,5* |
| *5,8* | *Netherlands* ..... | *8,2* | *8,3* | *8,4* | *8,6* | *8,7* | *8,7* | *8,7* |
| 1,7 | Scotland ..... | 3,1 | 2,1 | 2,5 | 3,3 | 3,3 | 3,2 | 3,2 |
| 7,0 | Wales ..... | 8,7 | 8,6 | 9,2 | 9,3 | 9,1 | 9,1 | 9,1 |
| 10,7 | Northern England ..... | 13,3 | 13,8 | 14,5 | 14,2 | 13,2 | 13,2 | 13,2 |
| 2,2 | England - other regions ... | 3,7 | 3,4 | 2,8 | 1,6 | 1,2 | 1,2 | 1,2 |
| *21,5* | *United Kingdom* ..... | *28,9* | *27,9* | *28,9* | *28,4* | *26,7* | *26,7* | *26,7* |
| *0,8* | *Denmark* ..... | *1,2* | *1,2* | *1,2* | *1,1* | *0,9* | *0,9* | *0,9* |
| *0,1* | *Ireland* ..... | *0,1* | *0,1* | *0,1* | *0,2* | *0,3* | *0,3* | *0,3* |
| **140,8** | **Total EUR 9** | **200,7** | **202,1** | **203,5** | **201,8** | **201,3** | **201,5** | **200,8** |

*TABLE 42*

**Comparison of the forecasts of crude steel production potential given in recent surveys**
**EUR 9**

*(million tonnes)*

| Year of inquiry | Production potential estimated | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| 1975 | 200,6 | 207,5 | 212,8 | | | | | |
| 1976 | 198,0 | 207,8 | 212,4 | 215,8 | | | | |
| 1977 | 197,7 | 201,7 | 208,5 | 212,7 | 214,0 | | | |
| 1978 | | 200,7 | 201,2 | 208,1 | 210,3 | 210,5 | | |
| 1979 | | | 202,1 | 202,9 | 204,3 | 202,1 | 201,7 | |
| 1980 | | | | 203,5 | 201,8 | 201,3 | 201,5 | 200,8 |

CRUDE STEEL

Production

*TABLE 43*

**Crude steel production potential according to steelmaking process**

*(million tonnes)*

| Process | Production | | Production potential | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1960 | 1979 | 1975 | 1979 | 1980 | 1981 | 1982 | 1983 |
| Basic Bessemer and other | 37,6 | 0,8 | 10,5 | 1,2 | 0,3 | 0,0 | 0,0 | 0,0 |
| OBM and similar processes | — | 10,2 | 10,1 | 14,0 | 15,7 | 15,2 | 14,9 | 13,6 |
| Open-hearth | 48,7 | 7,6 | 23,7 | 12,0 | 7,2 | 5,3 | 3,8 | 2,8 |
| Electric furnace | 9,3 | 32,3 | 32,7 | 44,5 | 44,8 | 46,2 | 47,7 | 48,2 |
| LD, Kaldo, etc. | 2,2 | 89,8 | 112,7 | 131,8 | 133,7 | 134,6 | 135,0 | 136,2 |
| **Total EUR 9** | **97,8** | **140,8** | **189,7** | **203,5** | **201,8** | **201,3** | **201,5** | **200,8** |

CRUDE STEEL

**Production**

*TABLE 44*

**Shares of the different steelmaking processes in 1960, 1979, 1983**

(%)

| Process | Production | | Production potential | |
|---|---|---|---|---|
| | 1960 | 1979 | 1979 | 1983 estimated share |
| Basic Bessemer and other | 38,5 | 0,6 | 0,6 | 0,0 |
| OBM and similar processes | — | 7,3 | 6,9 | 6,8 |
| Open-hearth | 49,8 | 5,4 | 5,9 | 1,4 |
| Electric furnace | 9,5 | 23,0 | 21,9 | 24,0 |
| LD, Kaldo, etc | 2,2 | 63,7 | 64,7 | 67,8 |
| **Total EUR 9** | **100,0** | **100,0** | **100,0** | **100,0** |

CRUDE STEEL

**Production**

*TABLE 45*

**Rate of utilization of production potential by steelmaking process, in 1979**

| Process | | Production potential | Rate of utilization | | | |
|---|---|---|---|---|---|---|
| | | | <30% | 31-60% | 61-80% | ⩾81% |
| Open-hearth steel, Basic Bessemer and other | in million tonnes | 13,2 | 1,1 | 2,7 | 6,3 | 3,1 |
| | in % | 100,0 | 8,6 | 20,1 | 47,9 | 23,4 |
| Electric furnace steel | in million tonnes | 44,5 | 2,8 | 4,5 | 20,2 | 17,0 |
| | in % | 100,0 | 6,2 | 10,2 | 45,3 | 38,3 |
| Oxygen-blown steel | in million tonnes | 145,8 | 2,1 | 20,4 | 94,3 | 28,9 |
| | in % | 100,0 | 1,4 | 14,0 | 64,8 | 19,8 |
| **Total crude steel EUR 9** | in million tonnes | 203,5 | 6,0 | 27,6 | 120,8 | 49,0 |
| | in % | 100,0 | 2,9 | 13,6 | 59,4 | 24,1 |

**BASIC BESSEMER STEEL AND OTHER**

**Production**

*TABLE 46*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| — | Northern Germany | — | — | — | — | — | — | — |
| — | North Rhine/Westphalia | — | — | — | — | — | — | — |
| — | Southern Germany | — | — | — | — | — | — | — |
| — | Saar | — | — | — | — | — | — | — |
| — | *FR of Germany* | — | — | — | — | — | — | — |
| — | *Belgium* | *0,0* | *0,0* | — | — | — | — | — |
| 0,8 | Eastern France | 3,7 | 1,8 | 1,2 | 0,3 | 0,0 | 0,0 | 0,0 |
| 0,0 | Northern France | — | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| — | France - other areas | 0,5 | 0,0 | — | — | — | — | — |
| *0,8* | *France* | *4,2* | *1,8* | *1,2* | *0,3* | *0,0* | *0,0* | *0,0* |
| — | Italy - coastal areas | — | — | — | — | — | — | — |
| 0,0 | Italy - other areas | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | *0,0* |
| *0,0* | *Italy* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* |
| — | *Luxembourg* | *1,3* | — | — | — | — | — | — |
| — | *Netherlands* | — | — | — | — | — | — | — |
| — | Scotland | — | — | — | — | — | — | — |
| — | Wales | — | — | — | — | — | — | — |
| 0,0 | Northern England | — | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| 0,0 | England - other regions | 0,0 | — | 0,0 | 0,0 | 0,0 | 0,0 | *0,0* |
| *0,0* | *United Kingdom* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* |
| — | *Denmark* | — | — | — | — | — | — | *0,0* |
| — | *Ireland* | — | — | — | — | — | — | *0,0* |
| **0,8** | **Total EUR 9** | **5,5** | **1,9** | **1,2** | **0,3** | **0,0** | **0,0** | **0,0** |

*TABLE 47*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 0,9 | Northern Germany | 1,0 | 1,0 | 1,0 | 0,8 | 0,8 | 0,3 | 0,0 |
| 3,2 | North Rhine/Westphalia | 6,1 | 5,3 | 5,0 | 3,9 | 3,3 | 2,9 | 2,1 |
| 0,3 | Southern Germany | 0,5 | 0,5 | 0,5 | 0,4 | 0,1 | 0,0 | 0,0 |
| 0,2 | Saar | 0,5 | 0,2 | 0,2 | 0,2 | 0,2 | 0,0 | 0,0 |
| *4,6* | *FR of Germany* | *8,1* | *7,0* | *6,7* | *5,4* | *4,4* | *3,2* | *2,1* |
| — | *Belgium* | *0,2* | — | — | — | — | — | — |
| 0,1 | Eastern France | 0,3 | 0,1 | 0,1 | 0,1 | 0,1 | 0,0 | 0,0 |
| 0,3 | Northern France | 0,6 | 0,5 | 0,4 | 0,3 | 0,3 | 0,3 | 0,3 |
| — | France - other areas | 0,1 | 0,0 | — | — | — | — | — |
| *0,4* | *France* | *1,0* | *0,6* | *0,5* | *0,4* | *0,4* | *0,3* | *0,3* |
| 0,9 | Italy - coastal areas | 2,4 | 2,3 | 2,3 | 0,4 | 0,0 | 0,0 | 0,0 |
| 0,3 | Italy - other areas | 0,5 | 0,5 | 0,5 | 0,4 | 0,4 | 0,4 | 0,4 |
| *1,1* | *Italy* | *2,9* | *2,8* | *2,8* | *0,8* | *0,4* | *0,4* | *0,4* |
| — | *Luxembourg* | — | — | — | — | — | — | — |
| *0,0* | *Netherlands* | — | *0,0* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* |
| — | Scotland | 1,3 | 0,4 | — | — | — | — | — |
| 1,1 | Wales | 2,7 | 1,8 | 1,1 | 0,3 | 0,0 | 0,0 | 0,0 |
| — | Northern England | 0,5 | — | — | — | — | — | — |
| 0,1 | England - other regions | 0,6 | 0,5 | 0,3 | 0,0 | 0,0 | 0,0 | 0,0 |
| *1,2* | *United Kingdom* | *5,2* | *2,7* | *1,4* | *0,3* | *0,0* | *0,0* | *0,0* |
| *0,3* | *Denmark* | *0,5* | *0,5* | *0,5* | *0,3* | *0,0* | *0,0* | *0,0* |
| — | *Ireland* | — | — | — | — | — | — | — |
| **7,6** | **Total EUR 9** | **17,9** | **13,7** | **12,0** | **7,2** | **5,3** | **3,8** | **2,8** |

ELECTRIC-FURNACE STEEL

**Production**

*TABLE 48*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential | | | Expected production potential | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| 1,3 | Northern Germany | 1,4 | 1,5 | 1,5 | 1,5 | 1,5 | 2,1 | 2,5 |
| 3,0 | North Rhine/Westphalia | 4,0 | 4,1 | 4,4 | 5,0 | 5,6 | 6,1 | 6,1 |
| 1,5 | Southern Germany | 1,5 | 1,9 | 1,9 | 2,1 | 2,1 | 2,1 | 2,1 |
| 0,5 | Saar | 0,5 | 0,5 | 0,5 | 0,6 | 0,6 | 0,6 | 0,6 |
| *6,4* | *FR of Germany* | *7,4* | *8,0* | *8,4* | *9,2* | *9,8* | *10,9* | *11,3* |
| *0,6* | *Belgium* | *0,8* | *1,3* | *1,3* | *1,3* | *1,3* | *1,4* | *1,3* |
| 0,5 | Eastern France | 0,9 | 0,7 | 0,7 | 0,7 | 0,7 | 0,6 | 0,6 |
| 1,9 | Northern France | 2,1 | 2,3 | 2,5 | 2,6 | 2,7 | 2,8 | 2,8 |
| 1,1 | France - other areas | 1,5 | 1,5 | 1,6 | 1,6 | 1,7 | 1,7 | 1,7 |
| *3,6* | *France* | *4,6* | *4,6* | *4,8* | *4,9* | *5,1* | *5,1* | *5,1* |
| 0,5 | Italy - coastal areas | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,9 | 0,9 |
| 13,0 | Italy - other areas | 14,2 | 16,0 | 17,2 | 17,3 | 17,9 | 18,2 | 18,3 |
| *13,4* | *Italy* | *15,0* | *16,9* | *18,0* | *18,1* | *18,7* | *19,1* | *19,2* |
| — | *Luxembourg* | *0,0* | *0,0* | — | — | — | — | — |
| *0,3* | *Netherlands* | *0,3* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* |
| 0,4 | Scotland | 0,5 | 0,4 | 0,5 | 0,4 | 0,4 | 0,4 | 0,4 |
| 1,4 | Wales | 1,4 | 2,3 | 2,7 | 2,7 | 2,8 | 2,8 | 2,8 |
| 4,2 | Northern England | 5,4 | 5,7 | 5,9 | 5,3 | 5,3 | 5,3 | 5,3 |
| 1,4 | England - other regions | 1,7 | 1,7 | 1,6 | 1,4 | 1,2 | 1,2 | 1,2 |
| *7,4* | *United Kingdom* | *9,1* | *10,2* | *10,8* | *9,8* | *9,6* | *9,6* | *9,6* |
| *0,5* | *Denmark* | *0,7* | *0,7* | *0,7* | *0,9* | *0,9* | *0,9* | *0,9* |
| *0,1* | *Ireland* | *0,1* | *0,1* | *0,1* | *0,2* | *0,3* | *0,3* | *0,3* |
| **32,3** | **Total EUR 9** | **38,0** | **42,0** | **44,5** | **44,8** | **46,2** | **47,7** | **48,2** |

**LD, KALDO AND SIMILAR STEELS**

**Production**

*TABLE 49*

**Production and production potential by regions**

*(million tonnes*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 7,0 | Northern Germany | 10,2 | 11,1 | 11,1 | 11,1 | 12,3 | 12,3 | 12,3 |
| 22,8 | North Rhine/Westphalia | 33,0 | 33,1 | 32,8 | 32,9 | 32,9 | 33,1 | 33,6 |
| — | Southern Germany | — | — | — | — | — | — | — |
| 1,6 | Saar | 5,0 | 5,0 | 5,0 | 5,0 | 5,8 | 6,3 | 7,0 |
| *31,4* | *FR of Germany* | *48,1* | *49,1* | *48,9* | *49,0* | *51,0* | *51,8* | *52,9* |
| *11,6* | *Belgium* | *14,8* | *15,6* | *15,9* | *15,9* | *16,1* | *16,1* | *16,1* |
| 3,7 | Eastern France | 5,3 | 5,2 | 4,5 | 4,6 | 4,5 | 4,3 | 4,3 |
| 7,4 | Northern France | 10,0 | 11,4 | 10,9 | 10,2 | 9,6 | 9,6 | 9,6 |
| 2,6 | France - other areas | 3,5 | 3,7 | 3,9 | 4,0 | 4,2 | 4,2 | 4,2 |
| *13,7* | *France* | *18,8* | *20,3* | *19,4* | *18,7* | *18,3* | *18,2* | *18,2* |
| 10,0 | Italy - coastal areas | 16,0 | 15,8 | 16,0 | 16,1 | 16,1 | 16,1 | 16,1 |
| 0,2 | Italy - other areas | 0,0 | 0,2 | 0,2 | 0,2 | 0,2 | 0,1 | 0,0 |
| *10,2* | *Italy* | *16,0* | *16,0* | *16,2* | *16,4* | *16,3* | *16,2* | *16,1* |
| *4,6* | *Luxembourg* | *6,2* | *6,9* | *6,8* | *7,3* | *7,5* | *7,5* | *7,5* |
| *5,5* | *Netherlands* | *7,9* | *7,9* | *7,9* | *8,1* | *8,2* | *8,2* | *8,2* |
| 1,3 | Scotland | 1,3 | 1,3 | 2,0 | 2,9 | 2,9 | 2,9 | 2,9 |
| 4,4 | Wales | 4,5 | 4,5 | 5,4 | 6,3 | 6,3 | 6,3 | 6,3 |
| 6,4 | Northern England | 7,4 | 8,1 | 8,5 | 8,9 | 7,9 | 7,9 | 7,9 |
| 0,7 | England - other regions | 1,3 | 1,1 | 0,9 | 0,2 | 0,0 | 0,0 | 0,0 |
| *12,9* | *United Kingdom* | *14,6* | *15,0* | *16,8* | *18,3* | *17,1* | *17,1* | *17,1* |
| — | *Denmark* | — | — | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **89,8** | **Total EUR 9** | **126,4** | **130,9** | **131,8** | **133,7** | **134,6** | **135,0** | **136,2** |

**BOTTOM BLOWN STEELS (OBM, LWS, ETC.)**

**Production**

*TABLE 50*

**Production and production potential**

*(million tonnes)*

| Actual production 1979 | | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| **10,2** | **Total EUR 9** | **12,8** | **13,6** | **14,0** | **15,7** | **15,2** | **14,9** | **13,6** |

## CONTINUOUS CASTING PLANTS

### Production

*TABLE 51*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 3,8 | Northern Germany | 3,7 | 4,1 | 4,4 | 4,8 | 4,8 | 5,5 | 6,3 |
| 10,5 | North Rhine/Westphalia | 11,8 | 12,1 | 13,6 | 16,8 | 18,6 | 19,9 | 20,1 |
| 1,6 | Southern Germany | 1,8 | 2,1 | 2,1 | 2,3 | 2,3 | 2,3 | 2,3 |
| 2,0 | Saar | 3,2 | 3,3 | 3,3 | 3,3 | 3,8 | 4,8 | 4,8 |
| *17,9* | *FR of Germany* | *20,6* | *21,6* | *23,4* | *27,2* | *29,4* | *32,5* | *33,5* |
| *3,2* | *Belgium* | *3,2* | *4,2* | *4,2* | *4,2* | *5,0* | *6,7* | *8,0* |
| 0,3 | Eastern France | 0,4 | 0,2 | 0,4 | 2,4 | 3,8 | 5,1 | 5,3 |
| 5,3 | Northern France | 5,2 | 6,0 | 6,2 | 7,2 | 7,4 | 7,4 | 7,4 |
| 1,3 | France - other areas | 1,1 | 1,4 | 1,8 | 1,8 | 1,9 | 1,9 | 1,9 |
| *6,9* | *France* | *6,7* | *7,6* | *8,4* | *11,4* | *13,0* | *14,5* | *14,7* |
| 3,1 | Italy - coastal areas | 4,8 | 4,8 | 5,2 | 5,8 | 6,6 | 7,6 | 8,3 |
| 8,4 | Italy - other areas | 8,2 | 10,5 | 11,1 | 11,2 | 11,7 | 12,3 | 12,5 |
| *11,5* | *Italy* | *13,1* | *15,3* | *16,4* | *17,0* | *18,4* | *19,9* | *20,8* |
| *0,0* | *Luxembourg* | — | — | *0,0* | *0,0* | *1,3* | *1,3* | *1,3* |
| *0,0* | *Netherlands* | — | — | *0,0* | *0,7* | *1,5* | *1,5* | *1,5* |
| 0,8 | Scotland | 0,7 | 0,9 | 1,0 | 1,5 | 1,5 | 1,5 | 1,5 |
| 0,5 | Wales | 0,9 | 1,6 | 1,7 | 1,7 | 1,8 | 1,8 | 2,3 |
| 1,6 | Northern England | 1,9 | 2,2 | 2,4 | 3,1 | 3,8 | 3,8 | 3,8 |
| 0,7 | England - other regions | 1,1 | 1,0 | 0,7 | 0,8 | 0,9 | 1,0 | 1,0 |
| *3,7* | *United Kingdom* | *4,7* | *5,6* | *5,8* | *7,0* | *7,9* | *8,1* | *8,6* |
| *0,5* | *Denmark* | *0,6* | *0,7* | *0,7* | *1,0* | *0,9* | *0,9* | *0,9* |
| *0,0* | *Ireland* | — | — | *0,0* | *0,2* | *0,3* | *0,3* | *0,3* |
| **43,7** | **Total EUR 9** | **48,8** | **54,9** | **58,7** | **68,7** | **77,9** | **85,6** | **89,6** |

**COILS**
**HOT ROLLED WIDE STRIP**

**Production**

*TABLE 52*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 4,1 | Northern Germany | 6,6 | 6,7 | 7,4 | 7,4 | 9,4 | 9,4 | 9,4 |
| 11,5 | North Rhine/Westphalia | 13,6 | 13,7 | 13,7 | 14,7 | 15,3 | 15,3 | 15,4 |
| — | Southern Germany | — | — | — | — | — | — | — |
| — | Saar | — | — | — | — | — | — | — |
| *15,8* | *FR of Germany* | *20,3* | *20,3* | *21,1* | *22,1* | *24,7* | *24,7* | *24,8* |
| *7,2* | *Belgium* | *8,9* | *9,3* | *9,7* | *9,7* | *9,7* | *10,2* | *10,6* |
| 3,1 | Eastern France | 3,5 | 3,5 | 3,5 | 3,5 | 3,5 | 3,5 | 3,5 |
| 4,6 | Northern France | 6,2 | 6,4 | 6,7 | 6,7 | 6,8 | 6,8 | 6,8 |
| 2,5 | France - other areas | 3,0 | 3,2 | 3,5 | 3,5 | 3,7 | 3,7 | 3,7 |
| *10,2* | *France* | *12,7* | *13,1* | *13,7* | *13,7* | *14,0* | *14,0* | *14,0* |
| 5,9 | Italy - coastal areas | 10,5 | 10,0 | 10,0 | 9,9 | 9,9 | 10,4 | 10,9 |
| 0,7 | Italy - other areas | 0,9 | 1,0 | 1,0 | 1,0 | 1,0 | 1,1 | 1,1 |
| *6,6* | *Italy* | *11,3* | *10,9* | *11,0* | *10,9* | *11,0* | *11,5* | *12,1* |
| *0,4* | *Luxembourg* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| *3,6* | *Netherlands* | *5,2* | *5,2* | *5,3* | *5,4* | *5,4* | *5,4* | *5,4* |
| 0,7 | Scotland | 0,7 | 0,7 | 1,1 | 1,7 | 1,7 | 1,7 | 1,7 |
| 4,4 [1] | Wales | 6,2 | 6,2 | 6,4 | 6,3 | 6,0 | 6,0 | 6,0 |
| 0,6 | Northern England | 1,1 | 1,4 | 0,9 | 1,0 | 1,2 | 1,2 | 1,2 |
| — | England - other regions | — | — | — | — | — | — | — |
| *5,7* | *United Kingdom* | *8,1* | *8,3* | *8,4* | *9,0* | *8,9* | *8,9* | *8,9* |
| — | *Denmark* | — | — | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **49,5** | Total EUR 9 | **67,1** | **67,7** | **69,8** | **71,5** | **74,3** | **75,4** | **76,5** |

[1] Not including output of private sector production.

**HEAVY SECTIONS (INCLUDING ROLLED TUBE ROUNDS AND SQUARES**

**Production**

*TABLE 53*

**Production and production potential by countries**

*(millions tonnes)*

| Actual production 1979 | Country | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| *3,5* | *FR of Germany* | *6,7* | *6,9* | *6,4* | *6,5* | *6,5* | *5,6* | *5,6* |
| *1,1* | *Belgium* | *1,6* | *1,6* | *1,8* | *1,8* | *1,8* | *1,8* | *1,5* |
| *1,8* | *France* | *3,0* | *3,1* | *3,0* | *3,0* | *3,0* | *2,9* | *2,9* |
| *1,1* | *Italy* | *2,3* | *2,1* | *2,2* | *2,4* | *2,7* | *2,6* | *2,6* |
| *1,1* | *Luxembourg* | *1,9* | *1,7* | *1,7* | *1,7* | *1,9* | *1,9* | *1,9* |
| *0,0* | *Netherlands* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* |
| *2,2* | *United Kingdom* | *3,1* | *3,5* | *3,2* | *2,8* | *2,8* | *2,7* | *2,7* |
| *0,0* | *Denmark* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* |
| *0,0* | *Ireland* | *0,0* | *0,0* | *0,0* | *0,0* | *0,2* | *0,2* | *0,2* |
| **10,9** | **Total EUR 9** | **18,6** | **18,9** | **18,4** | **18,2** | **13,8** | **17,8** | **17,6** |

*TABLE 54*

**Production and production potential by countries**

*(million tonnes)*

| Actual production 1979 | Country | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| *4,8* | *FR of Germany* ..... | *9,0* | *8,8* | *8,1* | *7,9* | *7,8* | *7,9* | *7,9* |
| *1,1* | *Belgium* ..... | *2,8* | *2,1* | *1,9* | *1,5* | *1,5* | *1,5* | *1,5* |
| *3,0* | *France* ..... | *4,4* | *4,0* | *4,0* | *4,1* | *4,1* | *4,1* | *4,2* |
| *7,4* | *Italy* ..... | *8,6* | *10,0* | *10,4* | *10,4* | *10,3* | *10,3* | *10,2* |
| *0,9* | *Luxembourg* ..... | *1,6* | *1,7* | *1,6* | *1,6* | *1,7* | *1,7* | *1,7* |
| *0,3* | *Netherlands* ..... | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* |
| *2,8* | *United Kingdom* ..... | *4,3* | *4,3* | *3,9* | *3,9* | *4,0* | *4,0* | *4,0* |
| *0,2* | *Denmark* ..... | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* |
| *0,0* | *Ireland* ..... | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* |
| **20,7** | **Total EUR 9** | **31,6** | **31,8** | **30,8** | **30,4** | **30,4** | **30,5** | **30,6** |

**FERRO-CONCRETE BARS [1]**

**Production**

*TABLE 55*

**Production and production potential by countries**

*(million tonnes)*

| Actual production 1979 | Country | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| *1,9* | *FR of Germany* ..... | *3,2* | *3,1* | *3,0* | *2,9* | *2,8* | *2,9* | *2,9* |
| *0,5* | *Belgium* ..... | *1,4* | *1,1* | *0,8* | *0,6* | *0,6* | *0,6* | *0,6* |
| *1,0* | *France* ..... | *1,6* | *1,6* | *1,3* | *1,3* | *1,3* | *1,3* | *1,3* |
| *4,7* | *Italy* ..... | *6,0* | *6,0* | *6,4* | *6,3* | *6,2* | *6,1* | *6,1* |
| *0,5* | *Luxembourg* ..... | *0,7* | *0,7* | *0,6* | *0,7* | *0,7* | *0,7* | *0,7* |
| *0,3* | *Netherlands* ..... | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* |
| *0,6* | *United Kingdom* ..... | *0,5* | *0,7* | *0,9* | *1,0* | *1,0* | *1,0* | *1,0* |
| — | *Denmark* ..... | *0,1* | *0,0* | — | — | — | — | — |
| *0,0* | *Ireland* ..... | *0,0* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* |
| **9,5** | **Total EUR 9** | **14,0** | **13,8** | **13,6** | **13,4** | **13,2** | **13,2** | **13,2** |

[1] Already included - for rods in Table 54 'Light sections' and coils in Table 57 'Wire rod'.

*TABLE 56*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 1,3 | Northern Germany | 2,4 | 2,9 | 2,7 | 2,6 | 2,6 | 2,7 | 2,7 |
| 4,5 | North Rhine/Westphalia | 8,7 | 8,6 | 7,9 | 7,8 | 7,7 | 6,8 | 6,8 |
| 1,1 | Southern Germany | 1,7 | 1,8 | 1,9 | 1,9 | 1,9 | 1,9 | 1,9 |
| 1,4 | Saar | 2,9 | 2,4 | 2,0 | 2,0 | 2,0 | 2,0 | 2,0 |
| *8,4* | *FR of Germany* | *15,6* | *15,7* | *14,5* | *14,4* | *14,3* | *13,4* | *13,5* |
| *2,3* | *Belgium* | *4,4* | *3,7* | *3,7* | *3,2* | *3,3* | *3,3* | *3,0* |
| 2,5 | Eastern France | 4,6 | 4,1 | 3,7 | 3,7 | 3,7 | 3,7 | 3,7 |
| 1,7 | Northern France | 2,1 | 2,3 | 2,4 | 2,4 | 2,5 | 2,5 | 2,5 |
| 0,6 | France - other areas | 0,7 | 0,8 | 0,8 | 0,8 | 0,9 | 0,9 | 0,9 |
| *4,8* | *France* | *7,4* | *7,1* | *7,0* | *7,0* | *7,1* | *7,1* | *7,1* |
| 1,1 | Italy - coastal areas | 2,5 | 1,5 | 1,6 | 1,7 | 1,7 | 1,7 | 1,7 |
| 7,4 | Italy - other areas | 8,4 | 10,5 | 10,9 | 11,1 | 11,3 | 11,2 | 11,3 |
| *8,5* | *Italy* | *10,9* | *12,1* | *12,5* | *12,8* | *13,1* | *12,9* | *12,9* |
| *2,0* | *Luxembourg* | *3,5* | *3,3* | *3,3* | *3,3* | *3,6* | *3,6* | *3,6* |
| *0,3* | *Netherlands* | *0,5* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| 0,1 | Scotland | 0,4 | 0,4 | 0,2 | 0,1 | 0,2 | 0,3 | 0,3 |
| 0,3 | Wales | 0,5 | 0,4 | 0,3 | 0,4 | 0,4 | 0,4 | 0,4 |
| 3,1 | Northern England | 4,8 | 4,7 | 4,5 | 4,2 | 4,1 | 4,0 | 4,0 |
| 1,5 | England - other regions | 1,7 | 2,3 | 2,1 | 2,0 | 2,0 | 2,0 | 2,0 |
| *5,0* | *United Kingdom* | *7,4* | *7,8* | *7,1* | *6,7* | *6,8* | *6,7* | *6,7* |
| *0,2* | *Denmark* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* |
| *0,0* | *Ireland* | *0,1* | *0,1* | *0,1* | *0,1* | *0,3* | *0,3* | *0,3* |
| **31,6** | **Total EUR 9** | **50,1** | **50,7** | **49,1** | **48,6** | **49,3** | **48,3** | **48,1** |

**WIRE ROD**

**Production**

*TABLE 57*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 0,5 | Northern Germany | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 |
| 1,8 | North Rhine/Westphalia | 3,8 | 3,7 | 3,0 | 2,6 | 2,6 | 2,6 | 2,6 |
| 0,5 | Southern Germany | 0,3 | 0,4 | 0,5 | 0,7 | 0,7 | 0,7 | 0,7 |
| 1,1 | Saar | 1,6 | 1,6 | 1,6 | 1,6 | 1,6 | 1,6 | 1,6 |
| *4,0* | *FR of Germany* | *6,4* | *6,5* | *5,8* | *5,6* | *5,6* | *5,6* | *5,6* |
| *0,8* | *Belgium* | *1,2* | *1,2* | *1,4* | *1,5* | *1,6* | *1,8* | *1,9* |
| 1,9 | Eastern France | 2,6 | 2,4 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 |
| 0,7 | Northern France | 1,0 | 1,2 | 1,1 | 0,8 | 0,8 | 0,8 | 0,8 |
| 0,1 | France - other areas | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| *2,6* | *France* | *3,6* | *3,7* | *3,7* | *3,4* | *3,4* | *3,4* | *3,4* |
| 0,3 | Italy - coastal areas | 0,4 | 0,3 | 0,6 | 0,8 | 0,8 | 0,5 | 0,5 |
| 1,9 | Italy - other areas | 1,7 | 2,3 | 3,1 | 3,0 | 3,2 | 3,3 | 3,3 |
| *2,2* | *Italy* | *2,1* | *2,6* | *3,7* | *3,8* | *4,0* | *3,8* | *3,8* |
| *0,3* | *Luxembourg* | *0,5* | *0,5* | *0,5* | *0,4* | *0,4* | *0,4* | *0,4* |
| *0,3* | *Netherlands* | *0,6* | *0,8* | *0,8* | *0,8* | *0,8* | *0,8* | *0,8* |
| — | Scotland | — | — | — | — | — | — | — |
| 0,3 | Wales | 0,3 | 0,4 | 0,4 | 0,5 | 0,5 | 0,5 | 0,5 |
| 1,7 | Northern England | 2,7 | 2,6 | 2,3 | 2,2 | 2,2 | 2,2 | 2,2 |
| 0,3 | England - other regions | 0,1 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 |
| *2,3* | *United Kingdom* | *3,1* | *3,2* | *3,0* | *3,0* | *2,9* | *2,9* | *2,9* |
| *0,0* | *Denmark* | *0,0* | — | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* |
| — | *Ireland* | — | — | — | — | — | — | — |
| **12,6** | **Total EUR 9** | **17,6** | **18,5** | **18,9** | **18,5** | **18,7** | **18,7** | **18,9** |

HOOP AND STRIP AND TUBEMAKING STRIP FROM SPECIAL MILLS

**Production**

*TABLE 58*

**Production and production potential by countries**

*(million tonnes)*

| Actual production 1979 | Country | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| *1,7* | *FR of Germany* | *2,6* | *2,8* | *2,9* | *2,9* | *2,8* | *2,8* | *2,8* |
| *0,0* | *Belgium* | *0,2* | *0,2* | *0,2* | *0,1* | *0,1* | *0,1* | *0,0* |
| *1,0* | *France* | *1,5* | *1,5* | *1,6* | *1,4* | *1,2* | *1,2* | *1,2* |
| *0,8* | *Italy* | *1,3* | *1,3* | *1,3* | *1,4* | *1,4* | *1,2* | *1,2* |
| *0,8* | *Luxembourg* | *1,2* | *1,2* | *1,3* | *1,3* | *1,3* | *1,3* | *1,3* |
| *0,0* | *Netherlands* | — | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* |
| *1,2* | *United Kingdom* | *1,7* | *1,7* | *1,5* | *1,4* | *0,8* | *0,8* | *0,8* |
| — | *Denmark* | — | —* | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **5,4** | **Total EUR 9** | **8,5** | **8,7** | **8,8** | **8,5** | **7,7** | **7,6** | **7,5** |

**HOOP AND STRIP AND TUBEMAKING STRIP FROM COILS**

**Production**

*TABLE 59*

**Production and production potential by countries**

*(million tonnes)*

| Actual production 1979 | Country | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| *0,9* | *FR of Germany* | *1,8* | *1,7* | *1,7* | *1,7* | *1,7* | *1,7* | *1,7* |
| *0,0* | *Belgium* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* |
| *0,3* | *France* | *0,7* | *0,9* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| *0,1* | *Italy* | *0,3* | *0,4* | *0,5* | *0,4* | *0,4* | *0,5* | *0,5* |
| *0,0* | *Luxembourg* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* | *0,0* |
| *0,3* | *Netherlands* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* |
| *0,1* | *United Kingdom* | *0,2* | *0,1* | *0,1* | *0,3* | *0,7* | *0,7* | *0,7* |
| — | *Denmark* | — | — | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **1,8** | **Total EUR 9** | **3,5** | **3,7** | **3,5** | **3,6** | **4,0** | **4,1** | **4,1** |

*TABLE 60*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 0,1 | Northern Germany | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| 2,4 | North-Rhine/Westphalia | 3,8 | 3,9 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 |
| 0,1 | Southern Germany | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| 0,1 | Saar | 0,3 | 0,3 | 0,3 | 0,3 | 0,2 | 0,2 | 0,2 |
| *2,7* | *FR of Germany* | *4,4* | *4,5* | *4,6* | *4,6* | *4,5* | *4,5* | *4,5* |
| *0,0* | *Belgium* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,1* |
| 1,0 | Eastern France | 1,5 | 1,6 | 1,7 | 1,5 | 1,3 | 1,3 | 1,3 |
| 0,1 | Northern France | 0,3 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| 0,1 | France - other areas | 0,4 | 0,5 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| *1,3* | *France* | *2,2* | *2,3* | *2,1* | *2,0* | *1,8* | *1,8* | *1,8* |
| 0,3 | Italy - coastal areas | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,6 | 0,6 |
| 0,6 | Italy - other areas | 0,8 | 1,0 | 1,0 | 1,0 | 1,0 | 1,1 | 1,2 |
| *0,9* | *Italy* | *1,6* | *1,8* | *1,8* | *1,8* | *1,8* | *1,7* | *1,8* |
| *0,8* | *Luxembourg* | *1,2* | *1,3* | *1,4* | *1,4* | *1,4* | *1,4* | *1,4* |
| *0,3* | *Netherlands* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* |
| — | Scotland | — | — | — | — | — | — | — |
| 0,1 | Wales | 0,3 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| 0,3 | Northern England | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 |
| 0,8 | England - other regions | 1,1 | 1,2 | 1,0 | 0,9 | 0,9 | 0,9 | 0,9 |
| *1,2* | *United Kingdom* | *1,9* | *1,9* | *1,7* | *1,6* | *1,5* | *1,5* | *1,5* |
| — | *Denmark* | — | — | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **7,2** | **Total EUR 9** | **12,0** | **12,4** | **12,2** | **12,0** | **11,7** | **11,7** | **11,6** |

**HOT-ROLLED PLATE AND SHEET FROM SPECIALIZED MILLS (INCLUDING WIDE FLATS)**

**Production**

*TABLE 61*

**Production and production potential by countries**

*(million tonnes)*

| Actual production 1979 | Country | Production potential | | | Expected production potential | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
| *4,1* | *FR of Germany* ..... | *8,6* | *8,8* | *8,7* | *8,7* | *8,7* | *8,7* | *8,7* |
| *1,0* | *Belgium* ..... | *1,6* | *1,6* | *1,6* | *1,6* | *1,6* | *1,6* | *1,6* |
| *1,1* | *France* ..... | *1,6* | *1,6* | *1,5* | *1,5* | *1,5* | *1,5* | *1,5* |
| *1,9* | *Italy* ..... | *3,7* | *4,1* | *4,0* | *3,9* | *3,9* | *3,9* | *3,9* |
| *0,1* | *Luxembourg* ..... | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* |
| *0,2* | *Netherlands* ..... | *0,5* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| *1,5* | *United Kingdom* ..... | *2,5* | *2,5* | *2,2* | *2,1* | *1,9* | *1,9* | *1,9* |
| *0,4* | *Denmark* ..... | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| — | *Ireland* ..... | — | — | — | — | — | — | — |
| **10,2** | **Total EUR 9** | **19,2** | **19,9** | **19,3** | **19,1** | **19,0** | **19,0** | **19,0** |

*TABLE 62*

**Production and production potential by countries**

*(million tonnes)*

| Actual production 1979 | Country | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| *1,0* | *FR of Germany* | *2,0* | *2,0* | *2,0* | *2,0* | *2,0* | *2,0* | *2,0* |
| *0,5* | *Belgium* | *0,8* | *1,0* | *0,9* | *0,9* | *0,9* | *0,8* | *1,0* |
| *1,0* | *France* | *1,3* | *1,5* | *2,0* | *2,0* | *2,0* | *2,0* | *2,0* |
| *0,1* | *Italy* | *0,7* | *0,7* | *0,8* | *0,8* | *0,8* | *0,8* | *0,8* |
| *0,1* | *Luxembourg* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* | *0,1* |
| *0,1* | *Netherlands* | *0,2* | *0,2* | *0,2* | *0,2* | *0,2* | *0,2* | *0,2* |
| *0,4* | *United Kingdom* | *0,5* | *0,6* | *0,5* | *0,5* | *0,5* | *0,5* | *0,5* |
| — | *Denmark* | — | — | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **3,1** | **Total EUR 9** | **5,8** | **6,2** | **6,5** | **6,5** | **6,5** | **6,5** | **6,6** |

**HOT-ROLLED PLATE AND SHEETS (INCLUDING WIDE FLATS)**

**Production**

*TABLE 63*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 0,6 | Northern Germany ..... | 1,1 | 1,1 | 1,1 | 1,1 | 1,1 | 1,1 | 1,1 |
| 3,6 | North Rhine/Westphalia .. | 7,2 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 | 7,5 |
| 0,0 | Southern Germany ..... | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| 0,8 | Saar ..... | 2,3 | 2,3 | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 |
| *5,0* | *FR of Germany* ..... | *10,7* | *11,0* | *10,8* | *10,8* | *10,8* | *10,8* | *10,8* |
| *1,5* | *Belgium* ..... | *2,7* | *2,9* | *2,8* | *2,8* | *2,8* | *2,9* | *3,1* |
| 0,5 | Eastern France ..... | 1,1 | 1,1 | 0,9 | 0,9 | 0,9 | 0,9 | 0,9 |
| 0,9 | Northern France ..... | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 |
| 1,5 | France - other areas ..... | 0,7 | 0,9 | 2,1 | 2,1 | 2,3 | 2,3 | 2,3 |
| *2,9* | *France* ..... | *3,2* | *3,5* | *4,6* | *4,6* | *4,7* | *4,7* | *4,7* |
| 1,5 | Italy - coastal areas ..... | 3,8 | 4,3 | 4,4 | 4,4 | 4,4 | 4,4 | 4,4 |
| 0,5 | Italy - other areas ..... | 1,0 | 0,8 | 0,8 | 0,8 | 0,7 | 0,7 | 0,7 |
| *2,0* | *Italy* ..... | *4,8* | *5,2* | *5,2* | *5,2* | *5,1* | *5,1* | *5,1* |
| *0,2* | *Luxembourg* ..... | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* |
| *0,3* | *Netherlands* ..... | *0,7* | *0,8* | *0,9* | *0,9* | *0,9* | *0,9* | *0,9* |
| 0,4 | Scotland ..... | 0,7 | 0,8 | 0,5 | 0,8 | 0,8 | 0,8 | 0,8 |
| 0,3 | Wales ..... | 0,6 | 0,2 | 0,2 | 0,3 | 0,3 | 0,3 | 0,3 |
| 1,1 | Northern England ..... | 1,6 | 1,9 | 1,6 | 1,3 | 1,3 | 1,3 | 1,3 |
| 0,2 | England - other regions ... | 0,3 | 0,3 | 0,3 | 0,2 | 0,0 | 0,0 | 0,0 |
| *2,0* | *United Kingdom* ..... | *3,3* | *3,2* | *2,7* | *2,6* | *2,5* | *2,5* | *2,5* |
| *0,4* | *Denmark* ..... | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| — | *Ireland* ..... | — | — | — | — | — | — | — |
| **14,4** | **Total EUR 9** | **26,4** | **27,4** | **27,9** | **27,8** | **27,7** | **27,7** | **27,9** |

*TABLE 64*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 1,5 | Northern Germany | 2,7 | 2,7 | 2,8 | 2,8 | 2,8 | 2,8 | 2,8 |
| 5,3 | North Rhine/Westphalia | 8,1 | 8,0 | 8,2 | 8,2 | 8,2 | 8,2 | 8,2 |
| 1,8 | Southern Germany | 2,9 | 3,0 | 3,0 | 3,1 | 3,1 | 3,1 | 3,1 |
| — | Saar | — | — | — | — | — | — | — |
| *8,7* | *FR of Germany* | *13,7* | *13,7* | *14,0* | *14,1* | *14,2* | *14,2* | *14,2* |
| *3,7* | *Belgium* | *5,0* | *5,5* | *5,5* | *5,5* | *5,5* | *6,0* | *6,0* |
| 2,8 | Eastern France | 3,8 | 3,3 | 3,4 | 3,4 | 3,4 | 3,4 | 3,4 |
| 3,4 | Northern France | 4,9 | 5,3 | 5,4 | 5,4 | 5,4 | 5,4 | 5,4 |
| 0,4 | France - other areas | 0,5 | 0,5 | 0,5 | 0,6 | 0,6 | 0,6 | 0,6 |
| *6,6* | *France* | *9,2* | *9,1* | *9,3* | *9,4* | *9,4* | *9,4* | *9,4* |
| 1,3 | Italy - coastal areas | 2,9 | 2,3 | 2,3 | 2,5 | 2,7 | 2,7 | 2,7 |
| 2,8 | Italy - other areas | 3,0 | 3,8 | 3,9 | 4,1 | 4,1 | 4,1 | 4,1 |
| *4,0* | *Italy* | *5,9* | *6,0* | *6,3* | *6,6* | *6,8* | *6,8* | *6,8* |
| *0,3* | *Luxembourg* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* | *0,4* |
| *1,8* | *Netherlands* | *2,7* | *2,9* | *2,9* | *3,0* | *3,0* | *3,0* | *3,0* |
| 0,4 | Scotland | 0,6 | 0,6 | 0,5 | 0,6 | 0,6 | 0,6 | 0,6 |
| 3,5 | Wales | 5,1 | 4,7 | 4,7 | 4,7 | 4,8 | 4,9 | 4,9 |
| 0,1 | Northern England | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| — | England - other regions | — | — | — | — | — | — | — |
| *4,0* | *United Kingdom* | *5,8* | *5,4* | *5,3* | *5,4* | *5,5* | *5,6* | *5,6* |
| — | *Denmark* | — | — | — | — | — | — | — |
| — | *Ireland* | — | — | — | — | — | — | — |
| **29,0** | **Total EUR 9** | **42,7** | **43,0** | **43,8** | **44,4** | **44,8** | **45,4** | **45,5** |

*TABLE 65*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 1,9 | Northern Germany | 3,1 | 3,7 | 3,4 | 3,3 | 3,3 | 3,4 | 3,5 |
| 6,3 | North Rhine/Westphalia | 12,5 | 12,4 | 10,9 | 10,4 | 10,3 | 9,4 | 9,4 |
| 1,6 | Southern Germany | 1,9 | 2,2 | 2,4 | 2,6 | 2,8 | 2,6 | 2,6 |
| 2,5 | Saar | 4,5 | 4,0 | 3,6 | 3,6 | 3,6 | 3,6 | 3,6 |
| *12,4* | *FR of Germany* | *22,0* | *22,2* | *20,3* | *20,0* | *19,8* | *19,0* | *19,1* |
| *3,1* | *Belgium* | *5,6* | *4,9* | *5,1* | *4,7* | *4,9* | *5,0* | *5,0* |
| 4,4 | Eastern France | 7,1 | 6,4 | 6,2 | 6,2 | 6,2 | 6,2 | 6,2 |
| 2,4 | Northern France | 3,1 | 3,5 | 3,5 | 3,2 | 3,3 | 3,3 | 3,3 |
| 0,6 | France - other areas | 0,8 | 0,9 | 0,9 | 1,0 | 1,0 | 1,0 | 1,0 |
| *7,4* | *France* | *11,0* | *10,8* | *10,7* | *10,4* | *10,5* | *10,5* | *10,5* |
| 1,3 | Italy - coastal areas | 2,9 | 1,8 | 2,2 | 2,5 | 2,5 | 2,2 | 2,2 |
| 9,3 | Italy - other areas | 10,2 | 12,8 | 14,1 | 14,1 | 14,4 | 14,6 | 14,6 |
| *10,7* | *Italy* | *13,1* | *14,6* | *16,3* | *16,6* | *17,0* | *16,7* | *16,7* |
| *2,3* | *Luxembourg* | *4,0* | *3,9* | *3,7* | *3,7* | *4,0* | *4,0* | *4,0* |
| *0,7* | *Netherlands* | *1,1* | *1,3* | *1,3* | *1,3* | *1,3* | *1,3* | *1,3* |
| 0,1 | Scotland | 0,4 | 0,4 | 0,2 | 0,1 | 0,2 | 0,3 | 0,3 |
| 0,6 | Wales | 0,8 | 0,8 | 0,7 | 0,9 | 0,9 | 0,9 | 0,9 |
| 4,8 | Northern England | 7,5 | 7,3 | 6,8 | 6,4 | 6,3 | 6,2 | 6,2 |
| 1,8 | England - other regions | 1,8 | 2,5 | 2,4 | 2,3 | 2,3 | 2,3 | 2,3 |
| *7,3* | *United Kingdom* | *10,5* | *11,0* | *10,1* | *9,7* | *9,7* | *9,7* | *9,7* |
| *0,2* | *Denmark* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* | *0,3* |
| *0,0* | *Ireland* | *0,1* | *0,1* | *0,1* | *0,1* | *0,3* | *0,3* | *0,3* |
| **44,1** | **Total EUR 9** | **67,7** | **69,2** | **68,1** | **67,0** | **68,0** | **67,0** | **67,0** |

*TABLE 66*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 2,2 | Northern Germany | 4,1 | 4,1 | 4,2 | 4,2 | 4,2 | 4,2 | 4,2 |
| 11,4 | North Rhine/Westphalia | 19,1 | 19,4 | 19,6 | 19,7 | 19,7 | 19,7 | 19,7 |
| 1,9 | Southern Germany | 3,0 | 3,2 | 3,2 | 3,2 | 3,2 | 3,2 | 3,2 |
| 0,9 | Saar | 2,6 | 2,6 | 2,5 | 2,5 | 2,4 | 2,4 | 2,4 |
| *16,4* | *FR of Germany* | *28,8* | *29,2* | *29,5* | *29,6* | *29,5* | *29,5* | *29,5* |
| *5,2* | *Belgium* | *8,0* | *8,7* | *8,6* | *8,6* | *8,6* | *9,1* | *9,2* |
| 4,3 | Eastern France | 6,4 | 5,9 | 6,0 | 5,8 | 5,7 | 5,7 | 5,7 |
| 4,5 | Northern France | 6,7 | 7,0 | 7,2 | 7,2 | 7,2 | 7,2 | 7,2 |
| 2,0 | France - other areas | 1,7 | 1,9 | 2,9 | 2,9 | 3,1 | 3,1 | 3,1 |
| *10,8* | *France* | *14,7* | *14,9* | *16,0* | *15,9* | *15,9* | *15,9* | *15,9* |
| 3,1 | Italy - coastal areas | 7,5 | 7,4 | 7,5 | 7,7 | 7,9 | 7,8 | 7,8 |
| 3,8 | Italy - other areas | 4,8 | 5,6 | 5,8 | 5,9 | 5,8 | 5,9 | 5,9 |
| *6,9* | *Italy* | *12,3* | *13,0* | *13,3* | *13,6* | *13,7* | *13,7* | *13,7* |
| *1,3* | *Luxembourg* | *1,9* | *1,9* | *2,0* | *2,0* | *2,0* | *2,0* | *2,0* |
| *2,4* | *Netherlands* | *3,9* | *4,1* | *4,1* | *4,3* | *4,3* | *4,3* | *4,3* |
| 0,8 | Scotland | 1,3 | 1,4 | 1,1 | 1,4 | 1,4 | 1,4 | 1,4 |
| 4,0 | Wales | 6,0 | 5,2 | 5,2 | 5,2 | 5,3 | 5,4 | 5,4 |
| 1,4 | Northern England | 2,2 | 2,4 | 2,2 | 1,9 | 1,9 | 1,9 | 1,9 |
| 1,0 | England - other regions | 1,5 | 1,5 | 1,3 | 1,1 | 0,9 | 0,9 | 0,9 |
| *7,2* | *United Kingdom* | *11,0* | *10,4* | *9,7* | *9,6* | *9,5* | *9,7* | *9,7* |
| *0,4* | *Denmark* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* | *0,6* |
| — | *Ireland* | — | — | — | — | — | — | — |
| **50,6** | **Total EUR 9** | **81,2** | **82,9** | **83,9** | **84,2** | **84,2** | **84,8** | **85,0** |

[1] Except coils - finished products.

**TOTAL FINISHED ROLLED PRODUCTS [1]**

**Production**

*TABLE 67*

**Production and production potential by regions**

*(million tonnes)*

| Actual production 1979 | Region | Production potential 1977 | 1978 | 1979 | Expected production potential 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|
| 4,1 | Northern Germany | 7,2 | 7,8 | 7,6 | 7,6 | 7,5 | 7,6 | 7,7 |
| 17,7 | North Rhine/Westphalia | 31,6 | 31,7 | 30,5 | 30,1 | 30,0 | 29,2 | 29,2 |
| 3,6 | Southern Germany | 4,9 | 5,3 | 5,6 | 5,8 | 5,8 | 5,8 | 5,8 |
| 3,5 | Saar | 7,1 | 6,5 | 6,1 | 6,1 | 6,0 | 6,0 | 6,0 |
| *28,8* | *FR of Germany* | *50,8* | *51,4* | *49,8* | *49,6* | *49,3* | *48,5* | *48,6* |
| *8,3* | *Belgium* | *13,7* | *13,7* | *13,7* | *13,3* | *13,5* | *14,1* | *14,2* |
| 8,6 | Eastern France | 13,5 | 12,4 | 12,2 | 12,1 | 11,9 | 11,9 | 11,9 |
| 6,9 | Northern France | 9,8 | 10,5 | 10,7 | 10,4 | 10,5 | 10,4 | 10,5 |
| 2,7 | France - other areas | 2,5 | 2,8 | 3,8 | 3,9 | 4,1 | 4,1 | 4,1 |
| *18,2* | *France* | *25,8* | *25,7* | *26,7* | *26,3* | *26,4* | *26,4* | *26,5* |
| 4,4 | Italy - coastal areas | 10,4 | 9,2 | 9,7 | 10,2 | 10,5 | 9,9 | 9,9 |
| 13,1 | Italy - other areas | 15,0 | 18,4 | 19,8 | 19,9 | 20,3 | 20,4 | 20,5 |
| *17,5* | *Italy* | *25,4* | *27,7* | *29,5* | *30,1* | *30,7* | *30,4* | *30,4* |
| *3,6* | *Luxembourg* | *5,9* | *5,8* | *5,8* | *5,8* | *6,1* | *6,1* | *6,1* |
| *3,1* | *Netherlands* | *5,0* | *5,5* | *5,5* | *5,6* | *5,6* | *5,6* | *5,6* |
| 0,9 | Scotland | 1,7 | 1,8 | 1,3 | 1,5 | 1,6 | 1,7 | 1,7 |
| 4,6 | Wales | 6,8 | 5,9 | 5,8 | 6,1 | 6,2 | 6,4 | 6,4 |
| 6,2 | Northern England | 9,6 | 9,7 | 9,0 | 8,4 | 8,2 | 8,1 | 8,1 |
| 2,8 | England - other regions | 3.3 | 4,0 | 3,7 | 3,4 | 3,2 | 3,2 | 3,2 |
| *14,5* | *United Kingdom* | *21,5* | *21,4* | *19,9* | *19,4* | *19,2* | *19,3* | *19,3* |
| *0,7* | *Denmark* | *0,9* | *0,9* | *0,9* | *0.9* | *0,9* | *0,9* | *0,9* |
| *0,0* | *Ireland* | *0,1* | *0,1* | *0,1* | *0,1* | *0,3* | *0,3* | *0,3* |
| **94,7** | **Total EUR 9** | **149,1** | **152,1** | **152,0** | **151,3** | **152,2** | **151,8** | **152,0** |

[1] Except coils — finished products.

*TABLE 68*

**Actual and expected rates of growth of production for finished steel products**

| Products | Actual production | | | Production potential | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1973 (million tonnes) | Average annual movement % | 1979 (million tonnes) | 1974 (million tonnes) | Average annual movement % | 1979 (million tonnes) | Average annual movement % | 1983 (million tonnes) |
| Heavy and light sections, incl. tube rounds and squares, rolled | 37,4 | −2,8 | 31,6 | 49,9 | −0,3 | 49,1 | −0,5 | 48,1 |
| Wire rod | 12,0 | +0,8 | 12,6 | 15,3 | +4,4 | 18,9 | −0,1 | 18,9 |
| **Total sections** | **49,4** | **−1,9** | **44,1** | **65,2** | **+0,9** | **68,1** | **−0,4** | **67,1** |
| Hoop for tubemaking | 8,6 | −2,9 | 7,2 | 10,9 | +2,4 | 12,2 | −1,4 | 11,6 |
| Hot-rolled sheet | 16,0 | −3,0 | 14,4 | 22,9 | +2,4 | 27,9 | +0,1 | 27,9 |
| Cold-rolled sheet | 29,2 | −0,1 | 29,0 | 37,7 | +3,0 | 43,8 | +0,9 | 45,5 |
| **Total flats** | **53,8** | **−0,1** | **50,6** | **71,5** | **+3,3** | **83,9** | **+0,3** | **85,0** |
| **Total finished rolled products**[1] | **103,2** | **−1,4** | **94,7** | **136,7** | **+2,1** | **152,0** | **+0,0** | **152,0** |
| Coils finished products | 7,9 | +6,7 | 11,6 | 11,7 | +6,0 | 15,6 | +4,6 | 18,7 |
| **Grand total EUR 9** | **111,1** | **−0,7** | **106,3** | **148,4** | **+2,5** | **167,6** | **+0,5** | **170,7** |

[1] Exclusive of coils rating as end products.

**RATE OF UTILIZATION OF PRODUCTION POTENTIAL**

**Production**

*TABLE 69*

**Movement by stages in production since 1960** [1]

(%)

| Sectors | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pig-iron ..... | 94,3 | 90,9 | 85,5 | 81,0 | 88,2 | 83,8 | 77,0 | 79,2 | 84,8 | 89,7 | 85,4 | 76,6 | 79,9 | 84,4 | 87,5 | 64,8 | 66,7 | 61,5 | 63,9 | 70,1 |
| Crude steel ... | 95,6 | 91,7 | 87,3 | 83,4 | 90,0 | 84,3 | 78,7 | 80,0 | 85,9 | 88,8 | 86,1 | 76,1 | 81,0 | 86,0 | 86,9 | 66,1 | 67,8 | 62,8 | 65,6 | 69,2 |
| Finished products [2] .... | 89,6 | 87,2 | 82,9 | 78,9 | 83,9 | 75,9 | 69,5 | 68,9 | 73,2 | 80,4 | 78,3 | 69,3 | 71,1 | 78,4 | 78,6 | 57,6 | 60,3 | 57,5 | 58,4 | 62,3 |

[1] Up to and including 1972, Community in its original form only.
[2] Except coils—finished products.

*TABLE 70*

**By stages of production and countries 1979**

*(in %)*

| Country | Pig-iron | Basic Bessemer and other | OBM, LWS | Open-hearth | Electric | LD, Kaldo and other | Crude steel total | Continuous casting | Coils | Heavy sections | Light sections | Wire rod | Hoop and skip | Hot rolled plate | Cold-reduced sheet <3 mm | Finished rolled products Total (excl. coils—finished products) | Pro memoria finished rolled products – Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | 1977 | 1978 |
| FR of Germany | 67,2 | — | 75,9 | 68,0 | 76,2 | 64,2 | 66,8 | 76,8 | 74,8 | 54,8 | 59,9 | 69,0 | 57,7 | 46,9 | 61,8 | 57,8 | 52,4 | 51,7 |
| Belgium | 68,8 | — | 52,3 | — | 48,1 | 72,6 | 68,4 | 76,0 | 74,3 | 62,4 | 61,5 | 56,4 | 13,7 | 57,1 | 66,6 | 60,5 | 54,2 | 56,8 |
| France | 74,3 | 67,6 | 79,0 | 76,2 | 74,5 | 70,7 | 72,9 | 83,0 | 74,4 | 59,4 | 75,7 | 70,4 | 59,9 | 60,2 | 70,6 | 67,9 | 61,0 | 64,3 |
| Italy | 66,3 | 80,0 | 0,0 | 40,9 | 74,5 | 62,9 | 66,9 | 70,5 | 59,7 | 53,4 | 71,1 | 58,1 | 47,9 | 41,5 | 64,5 | 59,5 | 65,0 | 61,6 |
| Luxembourg | 69,9 | — | 73,6 | — | — | 67,9 | 68,3 | — | 73,0 | 65,8 | 54,7 | 68,7 | 59,5 | 70,4 | 72,7 | 62,2 | 53,1 | 59,4 |
| Netherlands | 68,8 | — | — | 0,0 | 77,2 | 69,5 | 68,9 | 0,0 | 67,1 | 51,4 | 60,3 | 42,6 | 72,0 | 41,2 | 60,7 | 55,8 | 55,6 | 55,6 |
| United Kingdom | 78,1 | 76,7 | — | 84,9 | 69,2 | 77,0 | 74,4 | 62,8 | 71,0 | 68,0 | 71,8 | 76,4 | 74,5 | 69,7 | 74,5 | 72,8 | 64,4 | 64,9 |
| Denmark | — | — | — | 61,0 | 73,6 | — | 68,1 | 72,8 | — | 0,0 | 64,5 | 0,0 | — | 72,5 | — | 69,6 | 58,7 | 66,4 |
| Ireland | — | — | — | — | 80,0 | — | 80,0 | 0,0 | — | 29,2 | 47,8 | — | — | — | — | 43,9 | 31,1 | 72,4 |
| **Total EUR 9** | **70,1** | **67,9** | **73,0** | **63,1** | **72,8** | **68,1** | **69,2** | **74,4** | **71,2** | **59,3** | **67,2** | **66,3** | **58,7** | **51,7** | **66,3** | **62,3** | **57,5** | **58,4** |
| **EUR 9 - P.M. 1977** | **61,5** | **36,4** | **56,9** | **60,7** | **71,5** | **62,4** | **62,8** | **65,8** | **65,8** | **56,3** | **59,5** | **58,1** | **53,1** | **48,5** | **63,6** | **57,5** | | |
| **1978** | **63,9** | **59,3** | **65,5** | **63,1** | **72,1** | **63,9** | **65,6** | **70,3** | **69,2** | **59,5** | **60,4** | **60,3** | **53,4** | **47,5** | **64,6** | **58,4** | | |

**RATE OF UTILIZATION OF PRODUCTION POTENTIAL**

*TABLE 71*

**Rate of utilization of crude steel production potential by regions in 1979**

*(million tonnes %)*

| | Unit | Production potential | Rate of utilization | | | |
|---|---|---|---|---|---|---|
| | | | <30% | 31-60% | 61-80% | ≥81% |
| Northern Germany | million tonnes | 13,5 | 0,0 | 5,2 | 6,2 | 2,1 |
| | % | 100,0 | 0,0 | 38,1 | 46,3 | 15,5 |
| North Rhine/Westphalia | million tonnes | 42,3 | 1,4 | 0,2 | 30,5 | 10,1 |
| | % | 100,0 | 3,4 | 0,5 | 72,3 | 23,8 |
| Southern Germany | million tonnes | 3,9 | — | 0,0 | 2,8 | 1,1 |
| | % | 100,0 | 0,0 | 0,5 | 71,1 | 28,4 |
| Saar | million tonnes | 9,1 | 2,1 | 2,9 | 1,9 | 2,2 |
| | % | 100,0 | 23,0 | 31,5 | 21,2 | 24,3 |
| *FR of Germany* | *million tonnes* | *68,8* | *3,5* | *8,3* | *41,5* | *15,5* |
| | *%* | *100,0* | *5,2* | *12,0* | *60,3* | *22,5* |
| *Belgium* | *million tonnes* | *19,7* | *0,1* | *6,8* | *8,8* | *4,0* |
| | *%* | *100,0* | *0,3* | *34,4* | *45,1* | *20,2* |
| *Eastern France* | million tonnes | 12,8 | — | 1,6 | 5,7 | 5,6 |
| | % | 100,0 | 0,0 | 12,2 | 44,2 | 43,6 |
| Northern France | million tonnes | 13,7 | — | 0,1 | 11,9 | 1,7 |
| | % | 100,0 | 0,0 | 1,0 | 86,6 | 12,4 |
| France - other areas | million tonnes | 5,5 | 0,1 | 0,3 | 4,7 | 0,5 |
| | % | 100,0 | 1,0 | 6,0 | 83,4 | 9,6 |
| *France* | *million tonnes* | *32,0* | *0,1* | *2,0* | *22,1* | *7,8* |
| | *%* | *100,0* | *0,2* | *6,3* | *69,1* | *24,4* |
| *Italy - coastal areas* | million tonnes | 19,1 | 0,4 | 5,0 | 11,6 | 2,1 |
| | % | 100,0 | 1,8 | 26,2 | 60,9 | 11,0 |
| Italy - other areas | million tonnes | 18,0 | 0,4 | 3,0 | 6,8 | 7,8 |
| | % | 100,0 | 2,1 | 16,5 | 38,0 | 43,4 |
| *Italy* | *million tonnes* | *37,0* | *0,7* | *8,0* | *18,4* | *9,9* |
| | *%* | *100,0* | *1,9* | *21,5* | *49,8* | *26,7* |
| *Luxembourg* | *million tonnes* | *7,3* | — | *2,5* | *3,8* | *1,0* |
| | *%* | *100,0* | *0,0* | *33,8* | *52,8* | *13,4* |
| *Netherlands* | *million tonnes* | *8,4* | *0,1* | *0,0* | *8,3* | — |
| | *%* | *100,0* | *1,3* | *0,1* | *98,6* | *0,0* |
| *Scotland* | million tonnes | 2,3 | — | — | 2,3 | — |
| | % | 100,0 | 0,0 | 0,0 | 100,0 | 0,0 |
| Wales | million tonnes | 9,2 | 1,3 | — | 3,0 | 4,9 |
| | % | 100,0 | 13,7 | 0,0 | 32,8 | 53,5 |
| Northern England | million tonnes | 14,6 | 0,0 | 0,1 | 10,7 | 3,9 |
| | % | 100,0 | 0,0 | 0,5 | 73,0 | 26,5 |
| England - other regions | million tonnes | 2,8 | 0,3 | 0,0 | 0,4 | 2,1 |
| | % | 100,0 | 9,0 | 0,5 | 14,4 | 76,1 |
| *United Kingdom* | *million tonnes* | *28,9* | *1,5* | *0,1* | *16,4* | *10,9* |
| | *%* | *100,0* | *5,2* | *0,3* | *56,8* | *37,7* |
| *Denmark* | *million tonnes* | *1,2* | — | — | *1,2* | — |
| | *%* | *100,0* | *0,0* | *0,0* | *100,0* | *0,0* |
| *Ireland* | *million tonnes* | *0,1* | — | — | *0,1* | — |
| | *%* | *100,0* | *0,0* | *0,0* | *100,0* | *0,0* |
| **Total EUR 9** | **million tonnes** | **203,5** | **6,0** | **27,6** | **120,8** | **49,0** |
| | % | **100,0** | **2,9** | **13,6** | **59,4** | **24,1** |

*TABLE 72*

**Rate of utilization of production potential — 1979**

*(en million tonnes %)*

| | Unit | Production potential | Rate of utilization | | | |
|---|---|---|---|---|---|---|
| | | | <30% | 31-60% | 61-80% | ≥81% |
| Pig-iron | million tonnes | 140,5 | 1,9 | 20,9 | 86,2 | 31,6 |
| | % | 100,0 | 1,3 | 14,9 | 61,3 | 22,5 |
| Crude steel | million tonnes | 203,5 | 6,0 | 27,6 | 120,8 | 49,0 |
| | % | 100,0 | 2,9 | 13,6 | 59,4 | 24,1 |
| Continuous casting | million tonnes | 58,7 | 2,5 | 6,5 | 22,7 | 26,9 |
| | % | 100,0 | 4,3 | 11,1 | 38,7 | 45,9 |
| Hot-rolled wide strip | million tonnes | 69,8 | 1,0 | 8,9 | 36,6 | 23,2 |
| | % | 100,0 | 1,5 | 12,7 | 52,5 | 33,3 |
| Heavy sections (incl. tube rounds and squares, rolled) | million tonnes | 18,4 | 0,8 | 8,0 | 8,4 | 1,2 |
| | % | 100,0 | 4,1 | 43,4 | 45,7 | 6,8 |
| Light sections | million tonnes | 30,8 | 2,1 | 7,7 | 12,1 | 8,9 |
| | % | 100,0 | 6,8 | 25,1 | 39,3 | 28,8 |
| Wire rod | million tonnes | 18,9 | 1,3 | 4,5 | 8,4 | 4,7 |
| | % | 100,0 | 6,8 | 23,9 | 44,3 | 25,0 |
| Hot strip and tube strip | million tonnes | 12,2 | 1,1 | 4,4 | 5,4 | 1,4 |
| | % | 100,0 | 8,9 | 36,0 | 43,8 | 11,3 |
| Hot-rolled sheets | million tonnes | 27,9 | 1,9 | 16,1 | 8,7 | 1,1 |
| | % | 100,0 | 6,9 | 57,9 | 31,3 | 3,9 |
| Cold-rolled sheets | million tonnes | 43,8 | 0,2 | 11,0 | 24,7 | 7,9 |
| | % | 100,0 | 0,5 | 25,0 | 56,5 | 18,0 |

European Communities — Commission

**Investment in the Community Coalmining and Iron and Steel Industries 1980 survey—**

Luxembourg: Office for Official Publications of the European Communities

1980 — 126 pp.: 9 graphs — 21.0 × 29.7 cm

DA, DE, EN, FR, IT, NL

ISBN 92-825-2009-9

Catalogue number: CB-30-80-835-EN-C

| | | | | |
|---|---|---|---|---|
| BFR 500 | DKR 97,40 | DM 31,40 | FF 72,50 | |
| IRL 8.30 | LIT 14 900 | HFL 34 | UKL 7.50 | USD 17.50 |

The attached report has been prepared on the results of the 1980 survey of investments in the Community coal and steel industries. The survey, which is conducted annually, collects information on actual and forecast capital expenditure and production potential of coal and steel enterprises.

The introductory chapter summarizes the results of the survey and the conclusions on them.

Subsequent chapters of the report examine in detail the results of the survey for each producing sector, namely:

— the coalmining industry;
— coking plants;
— briquetting plants;
— iron-ore mines;
— iron and steel industry.

The annex to the report contains a statement of the definitions under which the survey was carried out, together with tables giving a complete analysis of the results of the survey, including tables of capital expenditure and production potential by region and by category of plant for all sectors and categories of coal and steel products falling within the ECSC Treaty.