X/746/72-E

industry research and technology

WEEKLY

Brussels, 18 December 1972
No. 169

Owing to the Christmas and New Year holiday period the next issue (No. 170) of "Industry, Research and Technology" will be dated 3 January 1973

** The proposals for a MULTIANNUAL RESEARCH PROGRAMME put forward by the European Commission (see IRT No. 165), in particular those regarding the Joint Research Centre, were examined in detail by the Community's Council of Ministers on 12 December 1972. The six Ministers for research in the member countries were joined by their ministerial counterparts from the three acceding countries (Denmark, Ireland and the United Kingdom). The Ministers decided to resume their discussion on 18 January 1973.

** OUTPUT OF CRUDE STEEL IN 1973, in the enlarged Community as a whole, could exceed 145.5 million tonnes, an increase of 5.6% over 1972.

These are the estimates given by the European Commission in the 1973 forward programme for Steel, on which the Consultative Committee of the Coal and Steel Community recently rendered a favourable opinion, and which is to be published in the Official Journal of the European Communities in the very near future. ANNEX 1 contains a brief note on this programme.

./.

This bulletin is published by the Directorate General Press and Information of the Commission of the European Communities

For further information please apply to the

Commission of the European Communities
Directorate-General for Press and Information
Division for industrial and scientific information
200, avenue de la Loi
1040 Brussels – Tel. 3500 40

or any of the Information Offices of the European Communities (list inside cover)

The information and articles published in this Bulletin concern European scientific cooperation and industrial development in Europe. Hence they are not simply confined to reports on the decisions or views of the Commission of the European Communities, but cover the whole field of questions discussed in the different circles concerned.

PRESS AND INFORMATION OFFICES OF THE EUROPEAN COMMUNITIES

1 BERLIN 31
Kurfürstendamm 102
tel. 886 40 28

BONN
Telmannstraße 22
tel. 22 60 41

1040 BRUSSELS
200, rue de la Loi
tel. 35 00 40

GENEVA
72, rue de Lausanne
tel. 31 87 30

THE HAGUE
22, Alexander Gogelweg
tel. 33 41 23

LONDON SW 1
23, Chesham Street
tel. 235 4904/07

LUXEMBOURG
Centre européen du Kirchberg
tel. 479 41

NEW YORK 10017
277 Park Avenue
Tel. 371-3804

PARIS 16e
61, rue des Belles-Feuilles
tel. 553 53 26

ROME
Via Poli, 29
tel. 68 97 22 à 26

SANTIAGO DI CHILE
Edif. Torres de Tajamar-Apt. 4
Torre A, Casilla 10093
Avda Providencia 1072
Tel. 43872

WASHINGTON, D.C. 20037
2100 M Street, N.W.
Suite 707
tel. (202) 296–5131

** Work in connection with the setting-up of a EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS as part of scientific and technical cooperation between nineteen European countries (see IRT No. 122) is progressing well, and the final decisions, which concern in particular the selection of the site of the Centre, should be taken at the next meeting, in January 1973, of the Member States' senior officials who were given the task of laying the foundations for European scientific and technical cooperation. A brief note on the benefits to be derived from the establishment of a European Centre for Medium-Range Weather Forecasts and the tasks that would be assigned to it will be found in ANNEX 2.

** On the initiative of the European Commission, the first coordination meeting between the RAILWAY AUTHORITIES of the countries of the enlarged Community, Austria and Switzerland, and the two branches of the ROLLING STOCK MANUFACTURING INDUSTRY, namely, the International Association of Rolling Stock Manufacturers (AICMR) and the European Steam and Electric Locomotive Builders (CELTE), was held in Brussels on 7 December 1972.

The exchange of views at the meeting showed that the extension of relations between the Railways and Industry, under the auspices of the European Commission, would be beneficial to both sides, and it was agreed that the Commission, with a view to adding greater depth to the dialogue, would prepare for the next meeting a number of papers on specific problems facing the railway sector in the economic and technical fields, due to the liberalization of public contracts and increased cooperation between railway companies. Future discussion will also make it possible to include the railway equipment sector in the projects for which the European Commission is to prepare the ground in the fields of industrial and technology policy.

** A representative of the Commission of the European Communities attended the International Symposium on the NEW PROBLEMS OF ADVANCED SOCIETIES, held in Tokyo on 20-24 November 1972 by the Japan Economic Research Institute. It is planned that the topics discussed at the Tokyo conference will again come up for consideration at similar Symposia which may be held in rotation in various countries.

** The European Commission has directed its attention to THE EFFECT ON THE ENVIRONMENT OF THE WASTE HEAT FROM ELECTRICITY GENERATION. In the Community programme for the environment which it forwarded to the Council of Ministers in March 1972 (see IRT No. 138), the Commission proposed in particular measures relating to the energy sector, particularly recommendations and proposals for studies on thermal discharges. While it cannot be ruled out that the introduction of tougher measures to protect the environment may being about a rise in the cost of energy and alter the respective shares of the market enjoyed by the various primary energy sources, the Commission is nevertheless not of the opinion that they will inevitably lead to a shortage of electricity.

This was one of the main points brought out recently by the Commission in a reply to a written question from Mr Schwörer, a Member of the European Parliament, about environmental conservation and energy production.

The Commission considers that it is necessary to formulate common regulations on thermal discharges into river systems overlapping the territory of several Member States. These regulations should take account of differences in climate and provide for fair allocation between the riparian countries of the rivers' heat-carrying capacity.

Generally speaking, all the problems, which arise in this area make it essential to define and then implement at Community level - if not on an even wider basis - a policy of earmarking appropriate sites for future installations for the generation and transmission of electricity.

In addition, the Joint Research Centre, in view of the experience that it has accumulated, could make a useful contribution to research into thermal effects, particularly where mathematical methods and computer programmes are concerned; research into the heat-transfer properties of plastic materials; and the effects of heat discharges on biological conditions in rivers and lakes.

** With the construction of prototype reactors, the DEVELOPMENT OF FAST REACTORS can now be considered to have reached the stage of industrial application. The European Commission is pleased to observe the efforts made by the constructors with the aim of establishing a competitive Community nuclear industry. It will support with all the resources at its command the formation of multinational industrial groups capable of capitalizing jointly on the experience obtained from the various Member States' programmes.

This was recently stated by the European Commission in a reply to a written question put down by Mr Glinne, a Member of the European Parliament, concerning the programme for breeder reactor development by the enlarged Community.

Furthermore, the Commission proposes, as part of its duties generally, to take initiatives in fields which are plainly matters of public concern at Community level, paying particular regard to safety problems - in the widest sense of the word safety -

./.

with a view to protecting the public and the environment in connection with the construction and operation of nuclear power plants, the transport of fuel elements and radioactive materials, and the fabrication, reprocessing and refabrication of fuel, including the processing and storage of radioactive waste.

** The European Commission has decided to grant aid totalling 658,147.46 u.a. to eight research projects adopted under the second programme for ANTI-POLLUTION MEASURES IN THE IRON AND STEEL INDUSTRY. The research topics include: aspiration and wet purification of the emissions from a battery of coke ovens installed under cover; the development of ventilation and dust-control procedures for electric steelworks; the adaptation of continuous measuring systems for monitoring dust emissions from steelmaking plant.

These research projects are to be undertaken by the Steinkohlenbergbauverein (Essen) (air pollution in coking plants), V. Deh (Düsseldorf) and Leces (Maizières-les-Metz). The time-scale of these research projects varies between two and five years.

** The European Commission has had a study made on POLLUTION DUE TO THE PULP AND PAPER INDUSTRY. The purpose of this study is to:

- analyse, and if necessary supplement, the results of the OECD's survey now in progress on this problem, and draw conclusions, by category of manufactured product, concerning the technical, economic and commercial aspects, with regard to the position of the industry in the Member States and the acceding countries in relation to its chief international competitors;

./.

- determine and assess the efficiency of the leading feasible methods of reducing the level of air and water pollution attributable to the various branches of the pulp and paper industry;

- assess the repercussions - on the various sizes of unit in the industry - of present and planned requirements for the regulation of emissions due to the manufacture of pulp and paper.

** In view of the enlargement of the Community, the two bodies representing the chemical industry associations of Western Europe (SIIC and CEFIC) at European level have decided to merge to form the EUROPEAN COUNCIL OF CHEMICAL INDUSTRY FEDERATIONS (CEFIC), which will have its headquarters in Brussels.

** Two proposed directives recently submitted to the Council of Ministers by the European Commission have been published as a Supplement to the Bulletin of the European Communities, namely:

- Proposed Directive and Draft Council Recommendation on a PROSPECTUS TO BE PUBLISHED WHEN SECURITIES ARE ADMITTED TO STOCK-EXCHANGE QUOTATION (see IRT No. 160);

- Proposal for a fifth Directive on the STRUCTURE OF LIMITED LIABILITY COMPANIES (a summary of which was printed in IRT No. 161).

They can be obtained from the Office for Publications of the European Communities (Case postale 1093, Luxembourg 1), in Dutch, English, French, German and Italian.

FORWARD PROGRAMME FOR STEEL - 1973

Output of crude steel in 1973, in the enlarged Community as a whole, could exceed 145.5 million tonnes, an increase of 5.6% over 1972.

These are the estimates given by the European Commission in the 1973 forward programme for Steel. This is the first time that the forward programme for Steel, prepared each year by the European Commission, has covered the Community of Nine.

The year 1972 has been marked by a very modest up turn in the business done by the steel-using industries, and 1973 should see this trend accentuated, although it remains contingent upon the expected revival in sectors producing capital goods.

Production of crude steel by the Six will probably reach 112 million tonnes in 1972, a rise of 8.3% over the 1971 figure. This may seem a large increase by comparison with 1971, but it amounts only to 2.5% over the 1970 level.

The improvement in economic conditions in certain exporting countries and the efforts made by the Community steel industry resulted in a comparatively large increase in exports; this partially offset the rise in imports, which are still at a very high level.

The productive plants' utilization factor is still low; it was 86% in 1970, since when crude steel-making capacity has grown by over 5% per year, i.e., by almost 15 million tonnes, whereas production advanced by approximately 1% per year, i.e., 2.8 million tonnes. In 1972 the utilization factor will probably be no higher than 79%.

Crude steel production in the original six member countries in 1973 is expected to be around the 116.60 million-tonne mark - 4.1% up on the previous year. In view of the increase in capacity (6.6 million tonnes between 1972 and 1973), this increase would hardly do more than keep the utilization factor at its 1972 level.

From a study of the outlook for steel production in the original Six and the three new member countries, a difference emerges between the rates of increase forecast for 1973: +4.1% for the original countries as a whole, and +12% for the new member countries. The faster growth of output expected to occur in the new member countries must, however, be largely regarded as a "catching-up" process following a down turn which lasted longer in the United Kingdom than in the original Six.

The enlargement of the Common Market is certain to give the market for steel a shot in the arm, the effects of which will hardly be felt in 1973 but will become more pronounced in the course of time.

Trade in steel between the six Community countries (the sum of purchases from other Common Market countries), which accounted for only 5.6% of crude steel production in the Community in 1952, rose to 22.8% in 1971, clear evidence of the exceptional degree of interpenetration that has been attained over that period within the Common Market.

On the other hand, there has so far been very little interpenetration between the Six and the United Kingdom: in 1971, the Community's steel imports from the UK were no more than 0.4% of the Community's crude steel output, while imports into the UK from the Community amounted to 3.8% of British output.

(In the case of Denmark and Ireland, however, whose steel imports already come mainly from the Six and the UK, there is probably no need to expect any major changes in trade flows.)

The enlargement of the Common Market and the establishment of the free-trade areas will therefore open up outlets on markets hithorto separated by customs duties, but at the same time each country's steel industry will be exposed to enhanced pressure of supply from competitors in the other countries of the enlarged market. In coming years the steel industry will therefore have to embark upon

a process of adjustment to the new market conditions, which will lead to a more or less pronounced division of work.

Furthermore, since the first phase of the steel industry's adjustment to enlargement and the free-trade zones will be during a period when the plant utilization factor in steel industries is generally unsatisfactory, it will be necessary to match supply to the estimated requirements of the various Community markets in order to avoid jeopardizing the equilibrium that has recently been restored.

Forecast of availabilities and requirements for steel products in the original six Member States

(million tonnes crude steel equivalent)

		1970	1971	1972[1]	1973[2]
	Utilization				
1.	Actual consumption	94.79	94.32	96.10	100.60
2.	Variations in stocks				
	a) held by users	+2.29	-3.97	+1.60	+1.40
	b) held by merchants and plants	+3.14	-1.31		
3.	Exports[3]	17.71	21.24	22.50	23.00
	TOTAL	117.93	110.28	120.20	125.00
	Resources				
4.	Crude steel output	109.19	103.38	112.00	116.60
5.	Scrap consumption in rolling mills	0.22	0.21	0.20	0.20
6.	Imports[4]	8.52	6.69	8.00	8.20
	TOTAL	117.93	110.28	120.20	125.00

[1] Incomplete estimates

[2] Forecasts

[3] Includes exports to Denmark, Ireland and the United Kingdom

[4] Includes imports from Denmark, Ireland and the United Kingdom

A EUROPEAN MEDIUM-RANGE WEATHER FORECASTING CENTRE

Considerable savings in a number of sectors of the economy (in particular agriculture, construction, energy, transport and water distribution) will be made possible by setting up a European Medium-Range Weather Forecasting Centre. In 1980, the estimated economic benefit of four- to ten-day weather forecasts, in the chief sectors concerned will amount to 400-500 million units of account for the European countries involved in the setting-up of the Centre. The ratio between the benefits deriving from the forecasts and the cost of the European Weather Forecasting Centre would thus be over 25:1.

Scientific and technical progress in recent decades, particularly the new observational capabilities offered by weather satellites, and the use of high-powered electronic computers have given meteorology fresh impetus and enabled new techniques of weather forecasting to be developed.

On the basis of an observed initial situation, these forecasting methods - known as "numerical weather forecasts" - can be used to calculate how the state of the atmosphere will evolve. The calculations are so complex, however, that forecasts that are usable in practice can be prepared in time only if very-high-speed electronic computers are employed.

At the present time, numerical weather forecasting is used by all major meteorological centres for short-range forecasts, i.e., for periods ranging up to two or three days.

Certain teams of researchers have already obtained encouraging results in the field of medium-range forecasting (approximately

.//.

four to ten days). However, since this requires the use of highly complex models simulating the atmosphere and since, moreover, a global observation system able to provide the basic data needed to operate these models is still in the process of being set up, a great deal of further research will have to be done before medium-range forecasts can be produced on an operational basis.

The setting-up of a medium-range forecasting service for Europe is thus a very large and expensive undertaking, beyond both the financial resources and the research capacity available to most European meteorological centres: this is therefore a field in which international cooperation is necessary.

These are the reasons why, when the ministers in charge of research, from 19 European countries, met in Brussels on 23 November 1971 to decide upon a number of projects formulated by the Community's PREST Committee (on scientific and technical research policy) and proposed as appropriate for European cooperation, confirmed their interest in the setting-up of a European Medium-Range Weather Forecasting Centre (see IRT No. 122).

The Centre should take the form of an autonomous central international institution. Its tasks will comprise:

1) Research and Development

The Centre shall develop a forecasting model which can be used for the production of medium-range weather forecasts. It shall also elaborate upon and adapt methods of processing the basic meteorological data which will be supplied by national meteorological centres. Subsequently, after the operational stage has begun (probably about five years after the Centre's start-up date), there will be a need for constant improvement of the forecasting model used on the basis of the experience accumulated and the most recent research findings.

The Centre will make the results of its research studies and experiments available to national meteorological services. Its activities will give fresh impetus to short-range forecasting, which will remain the province of national meteorological services.

2) The regular dissemination of medium-range weather forecasts

The Centre shall be linked by high-speed data-transmission lines to the national weather forecasting centres, which it will supply with medium-range forecasts which they will use and interpret in accordance with their own specific requirements.

3) Supplementary training of scientific personnel working in Europe in the field of numerical weather forecasting.

4) The provision of a certain amount of computing capacity

Since the lack of computing capacity often hampers research conducted on a national basis regarding the short-range forecasting of special regional features, the Centre shall make up to a third of its computing capacity available to national meteorological services desirous of using it.

5) Build-up and provision of access to a data bank

In order to discharge its tasks, the Centre shall build up a data bank to which the national meteorological services shall be given access for the purpose of their own investigations. The Centre shall also participate in the work of the World Meteorological Organization.

The European Medium-Range Weather Forecasting Centre will have an establishment for a staff of about 120. During the start-up period, which will last five years, the capital and running costs will total (according to the estimates) approximately 20 million units of account. In the operational period (from the sixth year after the establishment of the Centre), the estimated annual current expenditure will be 7.6 million units of account (these cost estimates being based on the situation as in 1970).