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** In the context of the general programme for the REMOVAL OF TECHNICAL BARRIERS TO TRADE, the Commission of the European Communities recently sent the Council of Ministers seven new proposals for directives on the approximation of the various Member States' laws concerning:

- a) the classification, packaging and labelling of dangerous substances;
- b) the classification, packaging and labelling of dangerous preparations (solvents);
- c) the measures to be taken against polluting exhausts from the diesel engines of motor vehicles;
- d) the internal fittings of motor vehicles;
- e) reinforced plastic tanks for road transportation of dangerous substances;
- f) the fertilizer sector;
- g) precision weights.

Thus the Council of Ministers now have before them 25 proposed directives aimed at removing technical barriers to trade; 21 other directives have already been adopted by the Council (see in particular "Industry, Research and Technology" Nos. 108 and 110), and some 50 drafts are at present being prepared by the Commission. ANNEX 1 contains a short memorandum on the growth and general orientation of the Commission's work in this field.

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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.

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** "THE IMPROVEMENT OF EUROPEAN BUSINESS MANAGEMENT is a factor essential to the adjustment of industry to the new conditions arising out of the widening of the markets. It calls for a manpower training and mobility policy on a wider than national scale", wrote the Commission of the European Communities in its memorandum on the Community industrial policy (see "Industry, Research and Technology" No. 48). This recognition of the importance of management accounts for the large number of Commission experts taking part in the second European Management Symposium to be held at Davos, Switzerland, on 22 January - 1 February 1972 (see "Industry, Research and Technology" Nos. 113 and 123). It also explains why the Commission attaches such importance to the recent setting-up of the European Management Foundation. ANNEX 2 contains a brief note on the improvement of European business management.

** The following figures emerge from the updating, to 31 December 1971, of the percentage BREAKDOWN by system of NUCLEAR REACTOR CAPACITY operating or under construction in the Community:

Gas/graphite	2,565 MWe, or 19.1%
Boiling light water	3,681 MWe, or 27.4%
Pressurized light water	6,391 MWe, or 47.6%
Heavy water	221 MWe, or 1.6%
High temperature	313 MWe, or 2.3%
Other advanced converters	41 MWe, or 0.3%
Fast breeders	233 MWe, or 1.7%

A list of the power plants in service, under construction or planned in the Community at that date, with a breakdown of capacity by degree of completion and country of location, is given in ANNEX 3.

** THE LOANS ADVANCED BY THE EUROPEAN COAL AND STEEL COMMUNITY (ECSC)
from funds borrowed and from its own funds between 1 January and
31 December 1971 total 112 million u.a.; other loans amounting to
46 million u.a. have also been decided upon and will shortly be
advanced out of the proceeds of loans contracted during recent
weeks. It will be recalled (see "Industry, Research and
Technology" No. 118) that the ECSC helps to finance capital
investment projects which accord with its industrial objectives
or are likely to facilitate the implementing of its redevelopment
policy.

The table below shows the history and distribution of the ECSC
loans:

(in millions u.a.)

	1966	1967	1968	1969	1970	1971 (paid out)	1971 (decided on)	1971 (total)
Loans to steelworks and collieries	68	45	60	40	14	67	27	94
Redevelopment loans	17	27	33	24	16	44	10	54
Loans for workers' housing	5	6	4	4	2	1	9	10
Total	90	78	97	68	32	112	46	158

** EXCLUSIVE MANUFACTURING LICENCES are liable to restrict competition if the licencer undertakes not to authorize other firms to use his patents in the contractual territories; nevertheless, where the parties to the agreements only hold a very small fraction of the market and they are all free to sell the patented goods anywhere in the Common Market, the competition is not seriously restricted: this is the interpretation recently given by the Commission of the European Communities when it took a decision in favour of two exclusive licensing agreements concluded by the American Burroughs Corporation, Detroit, with the German Geha Werke GmbH, Hanover, and the French Etablissements L. Delplanque et Fils, Bagnolet, for the manufacture of plastic-coated carbon paper.

** In replying to a written question from Mr Vredeling, a Dutch member of the European Parliament, concerning the signing of an agreement between France, Germany and the United Kingdom on the REPROCESSING OF IRRADIATED FUELS, the Commission of the European Communities thought it advisable to point out that irradiated fuel reprocessing is now coming into the industrial stage, and although there is excess capacity for the moment it is normal that steps should be taken at the industrial level in readiness for the future market. It is a good thing to encourage transfrontier agreements which provide the advantage of scale effects and a means of evening out the rate of capital spending.

As it has already had occasion to mention, however, the Commission considers that, in order to comply with the aims and the nature of the Euratom Treaty, such ventures should be undertaken in a Community context, so that a concerted policy on the utilization and development of the reprocessing facilities of the Community - and doubtless the UK also - can be formulated and implemented in the light of the nuclear industry's development prospects.

** The European Investment Bank has granted the Société Nationale Industrielle Aérospatiale (whose products include the Concorde, Caravelle and Corvette) a loan with an exchange value of 80 million French francs (14.4 million u.a.) to FINANCE THE REQUISITE CAPITAL SPENDING FOR THE CONSTRUCTION AND TESTING OF THE AIRBUS A 300B at that company's works. The AIRBUS A 300B, a medium-range twin-engined aircraft which can carry up to 300 passengers, is being developed on a basis of European cooperation by Aérospatiale in France, Deutsche Airbus, Messerschmidt-Bolkow-Blohm and Vereinigte Flugtechnische Werke-Fokker in Germany, Hawker Siddeley in the UK, Fokker-Vereinigte Flugtechnische Werke in the Netherlands and CASA in Spain (see "Industry, Research and Technology" Nos. 77, 81 and 90).

The European Investment Bank has also granted the Istituto Mobiliare Italiano (IMI) two loans with a total exchange value of It.L.18,375 million (29.4 million u.a.) as a contribution to the FINANCING OF TWO INDUSTRIAL PROJECTS now being carried out by the FIAT group in SOUTHERN ITALY, which should provide jobs for some 4,000 people including a large proportion of skilled labour.

** The Commission of the European Communities has asked the Council of Ministers for authorization to sign an agreement for COOPERATION ON NUCLEAR DOCUMENTATION with the US Atomic Energy Commission. In 1964 the European Atomic Energy Community signed an initial agreement with the USAEC which provided for exchanges of nuclear documentation; this agreement expired at the end of 1968. The proposed new draft agreement would cover both the Community and the Member States, so that exchange documentation from the European side would include the results of the Community's joint nuclear research programme and of nuclear research conducted at the national level. In return the USAEC would supply its own nuclear literature on magnetic tapes and, if possible, the nuclear literature of the other countries or international organizations with which it concluded similar agreements. The Centre for Information and Documentation (CID) of the Commission of the European Communities would be responsible for negotiating the technical data parameters with the USAEC, on behalf of the five Member States (France having concluded a bilateral agreement with the USAEC) and on its own account.

** The Commission of the European Communities has refused to authorize the PRICING AGREEMENT concluded by the "Vereniging van Cementhandelaren" (VCH), the association representing the Dutch cement trade. The Commission decision prevents the VCH members from reselling cement imported from Common Market countries at uniform fixed or target prices and from granting uniform rebates and conditions of sale.

** SUBSTANTIAL INCREASES IN THE UNIT CAPACITY OF ELECTRIC POWER PLANTS, and of nuclear plants in particular, are held up by the limitations imposed by technology or by the fabrication processes for major components (reactor vessels, turbines, alternators, etc.). The Commission of the European Communities is having these bottle-necks listed. Under this programme it has requested Electricité de France, Paris, and the Fichtner company, Stuttgart, to carry out a survey of the bottle-necks in the field of turbogenerator technology and manufacture. The survey will attempt to specify the level to which the present manufacturing methods can be used without being fundamentally altered. It will also investigate the various technological obstacles that arise with the raising of unit capacity (transportation, rotor fabrication, etc.).

REMOVAL OF TECHNICAL BARRIERS TO TRADEGrowth and General Orientation of the Commission's Activities

Awareness of the serious environmental problems and the danger to human health and Nature caused by the pollution that has accompanied the growth of industrial civilization adds a new dimension to the efforts of the Commission of the European Communities to do away with the technical barriers to trade, for the approximation of the technical regulations is one of the most efficacious means by which the Commission can take action to protect human health and the environment (see the summary of the Commission's first statement on the Community's environmental policy published in "Industry, Research and Technology" No. 109).

The stepping-up of intra-Community trade and the industrial development in certain sectors have also shown the urgent need to solve problems which escaped attention during the preparation of the general programme to remove technical barriers to trade, adopted by the Council in May 1969, which defined the range of action contemplated and short-listed the sectors and products that should be dealt with first.

The enlargement of the Community will herald a useful contribution of new ideas and, probably, some changes in the order of priority. If this should slightly slow down the work during a transitional "running-in" period, it ought not to be hard to offset any delays by speeding up the work when the draft directives are before the Council of Ministers.

For these various reasons, the bases of action defined in 1969 in the context of the General Programme will have to be revised and added to, so as to make due allowance for the changes in the economic and political situation. This General Programme, which was to lead to the adoption of over 100 directives for industrial products before 1 January 1971, is far from being achieved, since only 46 directives have been submitted to the Council, which has adopted 21 of them. The results obtained should not be underestimated, however, for they are by no means negligible.

ANNEX 1 p.2

The motor vehicles sector, in which 10 directives have been adopted, is one of the major sectors of Community industry since it provides direct or indirect employment for one out of every eight workers. The directives adopted in this field, particularly those relating to air pollution by petrol engines, the permissible sound level and braking systems, have not only brought the laws of the various Member States into line but have often helped to prevent the countries from taking divergent steps which would have complicated intra-Community trade still further. We need not enlarge on the advantages, from the road safety angle, of the dual braking circuit now required in all new vehicles or the regulations contained in the directive on steering systems. The directives adopted in regard to motor vehicles, when supplemented by those still being prepared by the Commission or awaiting the Council's decision, will allow a complete Community acceptance procedure to be implemented, by which vehicles which have fulfilled the acceptance conditions in any one Member State can be used and marketed in all the States.

As to measuring instruments, the eight directives adopted in 1971 are the first fruits of the Commission's efforts to allow these multiple-purpose products free access to the whole Community market. The laying down of precise rules for the inspection and evaluation of weights and measures in the Community, and reciprocal recognition of inspections, will simplify the procedures in force, thus facilitating the free movement of goods and at the same time making for better understanding between contractors of different nationalities. Special mention should be made of the "Units of Measurement" directive adopting the SI (Système International), the most modern system of units.

The regulations that will stem from the directives on crystal glass and on textile designations will facilitate understanding of the market conditions, lead to better knowledge of the goods on the part of retailers and consumers, permit comparison between products of different origin and make it easier for purchasers to choose.

The directive on the classification, packaging and labelling of dangerous substances is motivated by similar reasons, to which must be added the protection of health and the environment.

In drawing up the majority of these directives the Commission's departments worked closely with the bodies that deal with standardization at the Community level or on a wider scale, and took part in the work done by international organizations on the removal of technical barriers to trade.

Aware of the scope of the action it can take through the policy of removing technical barriers to trade - action not simply confined to abolishing technical barriers that hinder free competition in the common market, but involving important social aspects through its effects on public health, safety at work and protection of the environment - the Commission of the European Communities is concerned to amend and amplify the General Programme for the removal of technical barriers to trade so as to take due account of the imperative economic, political and social needs. It will very shortly submit a project on these lines, based on the experience acquired in the work already achieved, in regard to knowledge of the sectors and of the measures to be contemplated and the methods to be employed.

The harmonizing of the national laws, which must be done before a true internal market can be created, presupposes and promotes convergence of the economic and social objectives and aims relating to public health, industrial development and protection of the environment. Thus, because of this aspect of its fight against technical barriers to trade, the Commission's role is even broader and more fundamental than it might seem at first sight. This is why the schemes in hand are so important and why it is essential to obtain concrete results. It is also probably the reason why the obstacles are so hard to overcome.

IMPROVING EUROPEAN BUSINESS MANAGEMENT

"The improvement of European business management is an essential factor in the adjustment of industry to the new conditions arising out of the widening of the markets. It calls for a manpower training and mobility policy on a wider than national scale", wrote the Commission of the European Communities in its memorandum on the Community industrial policy (see "Industry, Research and Technology" No. 48).

When preparing its proposals on industrial policy matters, the Commission could not neglect that unquantifiable factor, management, that is so important an element of competition. It was therefore delighted at the recent creation of the European Management Foundation (see "Industry, Research and Technology" No. 119), whose objectives largely coincide with those it advocated in its Memorandum on Industrial Policy, in which it hoped to see a European centre set up for the study and dissemination of management and training techniques, which might serve as the foundation for concerted action by the teaching world, industry and government authorities. It is highly desirable to establish a permanent European-level link between industry and the educational world, both in the traditional universities and with the independent management training institutes.

Obviously, management being basically the utilization of given resources in a given environment, the outcome of economic activities will to a large extent depend on the quality of the resources and the environment as much as on the calibre of the people utilizing them. Consequently one of the Commission's first tasks, in connection with the common industrial policy, must be to improve the economic environment and remove the obstacles that still hold up the necessary process of readapting and modernizing the firms. The removal of the technical barriers to trade, the harmonization of legal and fiscal systems, the creation of a European statute for companies and groups of economic interest, and the setting-up of an information office to promote cooperation between firms in different Member States are the principal steps that the Commission has already taken or will take very shortly. The task is a difficult one, which cannot be carried through without the constant support of the industrial world.

ANNEX 2 p.2

The human factor is essential, however. Due allowance has already been made for it in the context of the Community scheme; the existence of a common programme on occupational training, the establishing of the renewed Social Fund which will contribute greatly to workers' mobility, the development of a comprehensive social policy which is now being elaborated and which gives generous room to training problems, the concerted educational arrangements now being planned - all these are so many signs of the preferential effort being exerted in this field.

All the same, in management as in other fields, Europe still has some way to go. While she would be wrong not to make use of the lessons other continents can offer her from their longer experience and the undeniable lead they have gained in many respects, Europe, as she becomes aware of her strength and inventive power, recognizes that the home-grown brand of civilization she wants to achieve includes specific requirements as to the conduct of economic activities, both on the overall scale by the governments and at the company level.

In this civilization there is no room for an exclusive regard for results, the subordination of people to production targets, or the feudal predominance of firms. Europe's ambition must be to preserve this regard for the human being whilst striving to attain the efficiency that exists in other parts of the world.

Hence, according to the Commission of the European Communities, one of the leading aims of the European Management Foundation must be to define the specific requirements and constraints of European management and to develop appropriate management methods.

The European Management Foundation was assured of the support of the Commission of the European Communities and has received immediate confirmation in the award of a contract for surveys on the training requirements of managerial staff in Western Europe.

Net electrical capacity of nuclear power plants in service, under construction or planned in the Community at 31 December 1971

1. Net electrical capacity of nuclear power plants in service, under construction or planned; 27,662 MWe net, namely:

	Country	In service MWe	Under construction MWe	Planned MWe
a) <u>PROVEN REACTORS</u>				
<u>Gas/graphite</u>				
Chinon 1/Loire (EDF)	F	70	-	-
Chinon 2/Loire (EDF)	F	200	-	-
Chinon 3/Loire (EDF)	F	480	-	-
St. Laurent 1/Loire (EDF)	F	480	-	-
St. Laurent 2/Loire (EDF)	F	515	-	-
Bugey 1/Rhone (EDF)	F	-	540	-
G 2 Marcoule/Rhone (EDF)	F	40	-	-
G 3 Marcoule/Rhone	F	40	-	-
ENEL (Latina) ¹	I	200	-	-
<u>Boiling water</u>				
KRB (Gundremmingen)	D	237	-	-
KWL (Lingen) ²	D	174	-	-
VAK (Kahl)	D	15	-	-
ENEL (Garigliano)	I	150	-	-
GKN (Dodewaard)	N	52	-	-
KKW (Würgassen, Weser)	D	640	-	-
KKB (Brunsbüttel)	D	-	770	-
ENEL 4 (Caorso)	I	-	783	-
KKP 1 (Badens./EVS) Philipsburg	D	-	860	-
KKP 2 (Badenw./EVS) Philipsburg	D	-	-	860
KKI (Bayernw./IsarAmperW.) Ostu	D	-	-	860
Geestacht/elbe (HEW + NWK)	D	-	-	1200

¹Owing to a permanent outage, operates in practice at 153 MWe

²Not including superheat (fuel-oil; natural gas is planned)

	Country	In service MWe	Under construction MWe	Planned MWe
<u>Pressurized water</u>				
KWO (Obrigheim)	D	328	-	-
SENA (Chooz) ¹	F	270	-	-
ENEL (Trino Vercellese)	I	247	-	-
BR-3 (Mol)	B	10	-	-
KKS (Stadersand/Elbe) NWK + HEW	D	-	630	-
SEMO (Tihange/Meuse) ²	B	-	870	-
Doel (Doel/Escaut)	D	-	780	-
PZEM (Borssele)	N	-	450	-
Biblis/Rhine 1 (RWE)	D	-	1146	-
Biblis/Rhine 2 (RWE)	D	-	-	1178
Fessenheim 1 (Rhine) EDF	F	-	890	-
Fessenheim 2 (Rhine) EDF	F	-	-	890
Unterweser (Preuss.Elektra) Esenshamm	D	-	-	1235
GKN Neckarwestheim/Nockar	D	-	770	-
Bugey 2 (EDF)	F	-	-	890
Bugey 3 (EDF)	F	-	-	890
<u>b) ADVANCED CONVERTERS</u>				
<u>Heavy water</u>				
MZFR (Karlsruhe)	D	51	-	-
KKN (Niederaichbach)	D	-	100	-
EL-4 (Monts d'Arrée)	F	70	-	-
CIRENE (Latina)	I	-	-	32
<u>High temperature</u>				
HKG (Schmehausen)	D	-	300	-
AVR (Jülich)	D	13	-	-
KWSH (Schleswig-Holstein)	D	-	-	22
<u>Sodium/zirconium hydroxide</u>				
KNK (Karlsruhe)	D	19	-	-
<u>Nuclear superheat</u>				
HDR (Grosswelzheim)	D	22	-	-

¹ Franco-Belgian (50/50) power plant

² With 50% French participation (EDF)

	Country	In service MWe	Under construction MWe	Planned MWe
c) <u>FAST BREEDERS</u>				
Phénix (Marcoule)	F	-	233	-
SNR (Kalkar) ¹	D	-	-	300
d) <u>TYPE NOT YET DETERMINED</u>				
BASF (Ludwigshafen)	D	-	-	660
Berg Rheinfeld/Schweinfurt (Bayernw. - GKF)	D	-	-	1000
Grosswelzheim (RWE) bei Aschaffenburg	D	-	-	1200
Badbreisig (RWE) Kreis Ahrweiler	D	-	-	1200
Koblenz (RWE)	D	-	-	1200
Breisach/Rhine (BW + EVS)	D	-	-	pm.
Preussen Elektra + ...	D	-	-	pm.
Maasvlakte	N	-	-	600
TOTAL		4,323	9,122	14,217
GRAND TOTAL			27,662	

2. Breakdown by degree of completion and country where sited (in MWe)

	W. Germany	France	Italy	Netherlands	Belgium	Community
<u>Reactors</u>						
In service	1499	2165	597	52	10	4323
Under construction	4576	1663	783	450	1650	9122
Planned	10915	2670	32	600	-	14217
Total	16990	6498	1412	1102	1660	27662

¹Joint project, Germany 70% + Benelux