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** At a time when five major AIRCRAFT projects (Concorde, A-300B Airbus, Mercure, Fokker F-28 and VFW 614) in the European Community have reached an advanced stage of development or are beginning to be marketed, it is worthwhile to review the RELATIVE SIZE OF THE VARIOUS MARKETS AND THE SHARES OF THEM OBTAINED BY THE INDUSTRIES of the Community, United Kingdom and United States respectively.

A table on this subject will be found in Annex 1.

** The Commission of the European Communities recently decided to carry out an investigation into the IMPACT OF CERTAIN CASES OF DIRECT FOREIGN INVESTMENT IN THE COMMUNITY COUNTRIES. The enquiry will concern ten companies in one of the six member countries whose capital originated in another member country or outside the Community.

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The information and articles published in this Bulletin concern European scientific cooperation. 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 circles concerned in European cooperation in science and technology.

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** The six Community countries are continuing their discussions aimed at defining the Commission's terms of reference for its negotiations with the International Atomic Energy Agency (IAEA) on A VERIFICATION AGREEMENT IN ACCORDANCE WITH ARTICLE 3 OF THE NON-PROLIFERATION TREATY (NPT). It will be recalled that ratification of the NPT by the five signatory countries of the Community (the Six less France) is contingent on the signing of such an agreement.

A short note on this subject will be found in Annex 2.

** As has already been announced (see "Research and Technology" No. 80), the Commission of the European Communities plans to place an order with a Community firm or consortium for the design of a "SORA" PULSED REACTOR and, possibly, its construction at the Joint Research Centre's Ispra Establishment, as part of the Community's research programme into CONDENSED STATE PHYSICS. The Commission is also issuing invitations to interested firms for whom a briefing will be held at Ispra on 2-4 February 1971.

** The Commission of the European Communities has decided to have a study carried out on CHEMICAL ENGINEERING in the European Community and the United Kingdom. This sector is subject to strong competition from firms outside the Community. The aim will be to carry out an analytical and comparative study on the set-up, operation and specific problems of the chemical engineering industry in each of the Community countries and the UK. Any differences in organization and methods thus revealed will be examined from the efficiency angle, the yardstick applied being the extent to which they ensure competitiveness in the various markets, i.e., the European Community, the industrialized non-member countries and the developing countries. Competitiveness will be assessed by comparison with that of American and Japanese firms.

- ** The "UNION DES INDUSTRIES DE LA COMMUNAUTE EUROPEENNE" (UNICE - or the European Community Industries' Union) has set up a special office for the purpose of bringing together industrial firms wishing to cooperate with each other and, more generally, encouraging various forms of cooperation. This office will operate hand in hand with professional bodies throughout the Six.
- ** The Commission of the European Communities recently held an information meeting on the TRINO VERCELLESE REACTOR in Italy. The serious damage suffered by this reactor in 1966 provided an opportunity for the world's first experiments and quantitative measurements on the nature and oscillation mode of neutron noise.
- ** The Commission of the European Communities recently approved financial assistance amounting to 888,005.15 u.a. for research projects relating to ENGINEERED DUST IN MINES. The research will be undertaken by three Community institutes specializing in mining research; completion is planned in two to three years. The main aim will be to improve methods of dust suppression in coal-getting and to perfect existing techniques for measuring dust levels.
- ** The Commission of the European Communities has decided to carry out a mathematical and statistical forward study AVAILABILITY TRENDS FOR NUCLEAR MATERIAL in the various branches of the industry and other nuclear activities in the Community.
- ** Some 3,000 visitors were shown around the facilities at the Central Bureau for Nuclear Measurements (Geel Establishment of the Joint Research Centre) by technicians during its recent open day.

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FIVE SMALL MULTILINGUAL FOLDERS were published for the occasion, with the following titles: "The Central Bureau for Nuclear Measurements", "Nuclear Physics and Technology", "Neutron Measurements", "Accelerators" and "The Preparation of Samples". They will be sent free of charge on request. Enquiries should be sent to the following address: Scientific and Technological Information Service, 200 rue de la Loi, 1040 Brussels, Belgium.

** The Commission of the European Communities recently gave the go-ahead for three study contracts on methods of industrial analysis involving the use of ISOTOPE TECHNIQUES IN THE PRECIOUS METALS INDUSTRY. The studies will deal with (a) a method of neutron activation analysis, (b) a method of isotopic X-ray fluorescence analysis, and (c) a method of gamma ray and charged particle activation analysis.

AIRCRAFT CONSTRUCTIONThe Relative Size of the Community Market
and the European Industry's Share of it

At a time when five major aircraft projects (Concorde, A-300B Airbus, Mercure, Fokker F-28 and VFW 614) in the Community have reached an advanced stage of development or the early stages of commercial service, it is worthwhile to review the relative size of the various markets and to examine the place occupied by the Community, United Kingdom and United States industries respectively.

At the beginning of 1970 the position was as follows with regard to jet aircraft in commercial service:

Market	Value \$ millions	%	Share (%) of the market taken by aircraft produced in:			
			EEC	UK	USA	Total
EEC	2,523.8	10.3	15.2	1.4	83.4	100.0
UK	1,077.2	4.4	-	71.9	28.1	100.0
Rest of Europe)	1,524.4	6.3	18.0	5.1	76.9	100.0
Europe ((5,125.4)		12.8	17.3	69.9	100.0
USA	15,616.4	63.9	0.5	1.6	97.9	100.0
Rest of Western world)	3,696.0	15.1	5.2	7.0	87.8	100.0
Western world (24,437.8	100.0	3.8	5.7	90.5	100.0

The European Community's Safeguards and
Controls System

At the present time the European Community is the only regional or international organization having an international body for the inspection and control of fissile material which works to the satisfaction of all concerned and is of universally acknowledged efficacy. This is why the Community Member States which signed the Treaty for the Non-Proliferation of Nuclear Weapons (NPT), following a proposal by the Commission of the European Communities, declared at the time of signing the said Treaty that they would make ratification thereof contingent upon verification of the European Community's safeguards and controls by the International Atomic Energy Agency (IAEA), based in Vienna.

The aim was thus to rule out any direct surveillance by the Vienna Agency on Community territory, where the European Community's safeguards and controls are already enforced, the Agency confining itself to verifying the effectiveness of the inspection methods and accounting procedures used by the Community's Safeguards and Controls Branch.

Owing to the difference between the situation of the five Community countries which have signed the NPT and that of France, which is a nuclear power but not a signatory, it has not yet been possible for the Six to reach agreement on the terms of reference for negotiation requested by the Commission last spring with a view to the conclusion of a verification agreement between the Community and the IAEA.

The Community's need for a verification agreement rather than direct surveillance by the IAEA arises from the fact that all the Community countries are covered by the Community's own internationally recognized and fully effective inspectorate.

Designed by the authors of the Treaty of Rome as a means of exercising continuous surveillance over the use of fissile materials and of ensuring that they are not diverted to uses for which they are not intended, the Community's inspectorate monitors every gram of fissile material from the moment it enters the Community, maintains continuously updated records of it and carries out inspections in the user facilities - fuel fabricating plants, reprocessing plants, nuclear research centres, research and power reactors, etc.; these controls also extend to stocks of nuclear materials and uranium mines.

The rapid growth in all forms of nuclear work in the Community, the increase in the number of facilities using fissile materials and the establishment of large-scale fuel element fabrication and reprocessing industries handling large quantities of uranium-235 and plutonium have caused the Commission to expand its Safeguards and Controls Branch considerably. Today it numbers about 60 personnel, its budget has been raised from 31,000 u.a. in 1968 to 270,000 u.a. in 1970, and a research programme on inspection methods has been started with annual spending running at 600,000 u.a. Needless to say, the recruitment procedure for this branch is particularly stringent, which ensures that the checks are thorough and objective as well as remaining confidential. The ranks of the inspectorate include specialists in practically all nuclear disciplines - metallurgy, health physics, electronics, nuclear chemistry, engineering, etc.

The Commission also takes care to ensure that its controls and safeguards are continuously improved so as to keep in step with the development of the sector under supervision and to thwart the risk of a black market in nuclear materials springing up anywhere.