

# research and technology

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- \*\* The numerous requests we receive for information prompt us to remind readers that the information services of the Commission of the European Communities form a Directorate-General for Press and Information, within which the SCIENTIFIC AND TECHNOLOGICAL INFORMATION SERVICE (200 rue de la Loi, Brussels 4, Belgium - Telephone: 35.00.40, Ext. 4134 - Telex: 21.877) is responsible for questions concerning public information on the Community's activities in the sectors of research, technology and leading industries.
- \*\* THE HAZARDS CONNECTED WITH RADIATION will be the subject of five meetings of experts to be held in Brussels between now and the end of the year by the Commission of the European Communities. The aspects relating to the contamination of man and his environment will be studied on 18 November (soil and plant contamination) and 28 November (marine contamination); the aspects relating to hereditary effects will form the subject of three meetings dealing with cell culture (21 November), the primary effects of radiation on nucleic acids (5 December) and radiogenetics in entomology (11 December).

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\*\* A new FRAMEWORK CONTRACT FOR THE LEASING OF ENRICHED URANIUM came into force on 1 November 1969 between Euratom and the US Atomic Energy Commission (USAEC). This contract is valid up to 31 December 1970, the date when, in accordance with American law, the USAEC must review the terms governing supplies to all lessees of special fissile material. The new framework contract follows on the one concluded on 1 December 1963, and improves on it notably in the provisions concerning the mixture of special fissile materials, the lease of which is no longer subject to previous written permission from the USAEC; this relaxation fits in with the practical needs of the Community's industry.

The value of the enriched uranium now available to the Community through implementation of the framework contract between Euratom and the USAEC is assessed at 19 million dollars.

\*\* ARE THE LEATHER AND SHOE INDUSTRIES ABOUT TO ENTER THE AGE OF RADIATION AND ISOTOPEs? A working meeting arranged by the Commission will bring specialists together in Brussels on 12 November to discuss:

- the potential uses of radiometry for the automation and rationalization of the shoe industry, e.g., determination of leather thickness, humidity, etc.;
- development of a method for diagnosing fabrication processes (determination of wetting agents, tannin or oil absorption, etc.) by nuclear tracers;
- the application of irradiation to the manufacture of new or improved products: for preserving skins, removing hair, producing synthetic leathers by the radiochemical grafting of polymers onto synthetic or natural fibres, or by vulcanization under radiation of rubber and polymer mixtures.

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\*\* Some forty European specialists, at a meeting arranged by the Commission in Brussels at the end of October, defined a COMMUNITY PROGRAMME FOR THE ASSAYING OF OXYGEN IN NON-FERROUS METALS. There are various methods, in existence, under study or potential, but uncertainties persist as regards their respective sensitivity, accuracy and comparative value. Consequently the Commission, in view of the great industrial interest in the matter, decided to set up working parties which will define, for each type of non-ferrous metal, the potentialities of the three activation processes suitable for use in assaying oxygen traces (fast neutrons, charged particles and gamma photons) and will propose methods of standardization.

\*\* Updating to 24 October 1969 of the percentage BREAKDOWN, by reactor type, of the NUCLEAR REACTOR CAPACITY in operation, under construction or planned within the Community gives the following figures:

Graphite gas  
Boiling light water  
Pressurized light water  
Heavy water  
Other advanced converters  
Fast breeders

A list of the power plants in operation, under construction or planned in the Community at that date is given in an ANNEX.

\*\* A recent report has summarized the initial conclusions from the tests that have been going on for some months at the experimental station at Mézière-lez-Metz, France, concerning the STRESSES and FIRE RESISTANCE OF METAL CONSTRUCTIONS. The building and operation of the ..../..

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Mézière-lez-Metz station stem from an agreement concluded between the Commission of the European Communities on the one hand, on the other hand, the Centre technique français des industries de la construction métallique and the Deutscher Stahlbau Verband. This agreement has two objectives:

- to make available to the Community countries' official fire-fighting organizations a body of new information that can be used as a basis for rational changes in the existing regulations;
- to improve the opportunities for using steel in building by structures rendered fire-resistant by improved or new protective measures or by original structural and assembly concepts.

\*\* Following on the symposium organized by the Commission on the USE OF IRRADIATION FOR PRESERVING POTATOES, a test programme will be run for ten months using irradiated and non-irradiated potatoes which the Dutch centre at Wageningen will send to five other Community centres. The non-irradiated potatoes will then be locally treated with irradiation and by chemical processes, after which a series of analyses will be carried out on the physical, chemical and even technological properties of the potatoes (e.g., suitability of irradiated potatoes for processing into crisps by the food industry, which is the one chiefly interested in these experiments).

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

as at 24 October 1969

1. PROVEN-TYPE REACTORS

Gas/graphite

	country	in service <sup>1</sup> MWe	under construction MWe	planned MWe
Chinon 1 (EDF-1)	F	70	-	-
Chinon 2 (EDF-2)	F	200	-	-
Chinon 3 (EDF-3)	F	480	-	-
St. Laurent 1 (EDF-4)	F	480	-	-
St. Laurent 2	F	-	515	-
Bugey 1 (St. Vulbas)	F	-	540	-
G-2 Marcoule	F	40	-	-
G-3 Marcoule	F	40	-	-
ENEL (Latina)	I	200	-	-

Boiling water

KRB (Gundremmingen)	G	237	-	-
KWL (Lingen) <sup>(1)</sup>	G	155	-	-
VAK (Kahl)	G	15	-	-
ENEL (Garigliano)	I	150	-	-
GKN (Dodewaard)	N	52	-	-
KWW (Würgassen, Weser)	G	-	640	-
HEW/NWK (Brunsbüttelkoog)	G	-	-	750

Pressurized water

KWO (Obrigheim)	G	283	-	-
SENA (Chooz)	F/B	266	-	-
ENEL (Trino Vercellese)	I	257	-	-
BR-3 (Mol)	B	10	-	-
KKS (Stadersand, Elbe)	G	-	630	-
SEMO (Tihange s/Meuse)	B/F	-	-	750
Doel/Scheldt	B	-	-	780
PZEM (Borssele)	N	-	400	-
RWE (Biblis)	G	-	-	1,100

2. ADVANCED CONVERTERS

Heavy water

MFZR (Karlsruhe)	G	50	-	-
KKN (Niederaichbach)	G	-	100	-
EL-4 (Monts d'Arrée)	F	70	-	-
CIRENE (Latina)	I	-	-	32

(1) not including fuel-oil superheat

	country	in service MWe	under construction MWe	planned MWe
<u>High temperature</u>				
HKG (Schmehausen)	G	-	-	300
AVR (Jülich)	G	13	-	-
KSH Geesthacht 2 (Schl. Holstein)	G	-	22	-
<u>Sodium/zirconium hydroxide</u>				
KNK (Karlsruhe)	G	-	19	-
<u>Nuclear superheat</u>				
HDR (Grosswelzheim)	G	22	-	-
<b>3. <u>FAST BREEDERS</u></b>				
Phénix (Marcoule) <sup>(2)</sup>	F	-	250	-
SNR (Weisweiler) <sup>(2)</sup>	G	-	-	300
<b>4. <u>TYPE NOT YET DETERMINED</u></b>				
Kernkraftwerk Neckar <sup>(3)</sup> (Lauffen)	G	-	-	750
BASF (Ludwigshafen) <sup>(3)</sup>	G	-	-	1,200
ENEL-4 (Lombardy)	I	-	-	650
ENEL-5	I	-	-	650
EV Badenwerk (Oberhausen)	G	-	-	600
Chem. Werke HULS + VEW (Marl.)	G	-	-	600
Fessenheim 1	F	-	-	p.m.
Fessenheim 2	F	-	-	p.m.
KKW Schmehausen	G	-	-	600
GKM + Badenwerk	G	-	-	700
Bayernwerk + Isaramperwerke	G	-	-	600
Total		3,090	3,116	10,412
Total General			16,618	

(2) participation: Germany 70%, Netherlands 15%, Belgium 15%

(3) including 400 MWe for steam supply