

is not yet decided. The Government is determined to see that the Library has an adequate expert staff; there will be ample provision for photocopying, and the new Library will co-operate fully in research into information techniques.

#### Nestor: a New Reactor at Winfrith

A NEW 10-kW. reactor, *Nestor*, was put into operation for the first time at the Atomic Energy Establishment, Winfrith, on March 13. Its purpose is to act as a source of neutrons for sub-critical assemblies of nuclear fuels and moderators. The reactor core, control gear and instrumentation were designed and installed by the Hawker Siddeley Nuclear Power Co., which modified the design of its *Jason* reactor to enable up to five sub-critical assemblies to be driven simultaneously by the reactor. This concept represents a major advance in the use of a reactor as a neutron source. The Turriff Construction Corporation, Ltd., was responsible for the installation of the special shielding and the civil work generally. The nuclear fuel in *Nestor* is an alloy of highly enriched uranium and aluminium in the form of aluminium clad plates arranged in an annulus around a graphite cylinder, and natural water is used both as coolant and moderator. The reactor is provided with control and safety rods, and additional control is possible by varying the water-level. The experimental assemblies will be placed in 'caves' formed in the shielding at the sides and above the reactor. The whole shielding is arranged to be demountable so that the caves can be rebuilt to accommodate major changes in the requirements of the experimental programme.

The reactor is capable of operation at 10 kW. (heat), giving a thermal neutron flux of  $10^{11}$  neutrons/cm.<sup>2</sup>/sec. in the centre of the core and of up to  $10^8$  neutrons/cm.<sup>2</sup>/sec. in the sub-assemblies. The thermal neutron flux for each sub-critical assembly can be varied by altering the reactor power-level, by using neutron shutters or by rearranging the fuel loading in the annular core.

#### Netherlands Atom Forum

A NUMBER of Netherlands industries together with the Reactor Centre of the Netherlands have taken the initiative for the establishment of the 'Netherlands Atom Forum'. The object of the new body is to give publicity to the developments in the field of nuclear energy, in particular to the activities in this domain, of the Netherlands industry and of institutes engaged in the subject. The intention is to do this by means of publications, the organization of conferences and information meetings, and the co-ordination of Netherlands participation in exhibitions. The Forum will also attend to the documentation and information on the development and application of nuclear energy, if possible in co-operation with existing organizations at home and abroad. It will in future represent the Netherlands in the 'Forum Atomique Européenne', which was established in Paris on July 12, 1960, and in which corresponding organizations from other Euratom countries, as well as from non-Euratom countries, have been brought together. Mr. W. A. de Haas, secretary of the Industrial Commission of the Reactor Centrum Nederland, has been elected chairman of the Netherlands Atom Forum; the secretariat is accommodated at Reactor Centrum Nederland, Scheveningseweg 112, Den Haag.

#### Sea-water Purification Unit based on New Principles

A NEW type of evaporator developed for sea-water by the General Electric Co. of America may have application to other forms of heat exchangers, particularly because of the greater heat transference it achieves per unit area. The basis of its present form is a conventional steam-jacketed vertical copper tube 50 in. long and 6 in. diameter, from which evaporated vapour leaves at the top and concentrated brine at the bottom. The novel feature is the addition of wiper blades on a hollow shaft which sweep the inner surface of the tube at a speed of 300 ft./min. and spread sea-water issuing from the shaft and a header as a film some 0.001 in. thick on the wall. The tube is 0.05 in. thick and fluted lengthwise externally to provide increased heat exchange surface and improved removal of condensate; together with the wiper action heat transfer-rates of 40,000 B.T.H.U./sq. ft./hr. can be obtained without perceptible carry-over of spray. It is claimed that with a throughput evaporation of 40 per cent a purity of one part of salt per million is achieved. The makers expect to realize a saving in weight and space of some 40 and 60 per cent, respectively, over conventional plants and have in mind systems evaporating 1,000–1,000,000 gallons daily.

#### Arts Graduates and Imperial Chemical Industries, Ltd.

A NOVEL method of directing attention to the opportunities existing at Imperial Chemical Industries, Ltd., for arts graduates is set out in an attractive handbook (*A Degree nearer Industry*. Pp. 40. By Kenneth Harris (London: Recruitment Section, Imperial Chemical Industries, Ltd.), 1960). Kenneth Harris, a well-known industrial journalist, was invited to carry out a survey of his own devising to find out what had happened to arts graduates in the different companies of the Imperial Chemical Industries, Ltd., during recent years. The report prepared by Harris is frank and not always complimentary to Imperial Chemical Industries, Ltd., but clearly shows that here is a company where young men of the right qualities are needed and can find their way to the top. The booklet could well be read by all arts graduates contemplating a career in industry—the picture painted by Harris is not dissimilar from that of many other large industrial organizations.

#### Durban Museum and Art Gallery

THE report of the Durban Museum and Art Gallery for the municipal year 1959–60 records the development of the new Marine Gallery on modern museum lines, and pleads once again for new buildings for both the Museum and Art Gallery (Pp. 20. Durban: Durban Museum and Art Gallery, 1960). A large and varied selection of temporary exhibitions were staged during the year and the collections at the Old House have been expanded and their display considerably improved.

#### British Technology Index

If sufficient support is forthcoming, a new endeavour is to be made to index the contents of British technical periodicals. There have been at least two earlier attempts to do this, and it is probable that part of the reason for their failures was the absence of a cumulative index or volume. The new *Index* will have 11 monthly parts (no August issue)