

system. Accordingly, while substantial achievements like the establishment, in March 1948, of first degree courses in civil, electrical, mechanical and mining engineering, and, in March 1949, of degree courses in applied chemistry, and chemical engineering and the first postgraduate course in electronic engineering are recorded, and some indication is given of the research projects being undertaken in physics, applied chemistry and branches of engineering, the picture presented in this report is rather one of the development of a college of technology than of an autonomous university as such an institution is understood in Great Britain. The general principle of a Faculty of the Humanities and the establishment of a chair in this field have been approved, and so far as possible the course in humanities is to be common to all faculties. Language and literature, economics, history and psychology are to be included in all undergraduate courses; a further feature is the programme for extensive practical training in industry which supplements lecture and laboratory work.

## SOUTH AFRICAN COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

### ANNUAL REPORT FOR 1950-51

THE sixth report of the South African Council for Scientific and Industrial Research\* covers the year ended October 4, 1951, and includes the accounts for the financial year ended March 31, 1951, together with lists of publications during the year by the Council or its staff or by holders of research awards from the Council, and also details of the five senior and fifty-nine student research bursaries and twenty-one assistantships awarded during the year. The permanent staff of the Council now numbers three hundred and fifty, with about a hundred and twenty temporary members, and subsidies to the six industrial research associations and to the South African Institute for Medical Research totalled £46,000. Fellowships for long-term investigations into marine stand-oils, the processing of groundnuts and the treatment of dairy wastes have been established by industrial firms, and three by the Institution of Municipal Engineers for investigating methods of preventing the corrosion of cement sewers; and one, sponsored by the blue-lime manufacturers, on the production and uses of blue lime, is in its third and final year. The National Housing and Planning Commission has created five fellowships for research into the methods of reducing the cost of native-African housing.

Selection and classification procedures established by the National Institute for Personnel Research are now being applied as a normal recruiting medium by the Defence Forces and several gold-mining groups. The laboratories of the Paint Industries Research Institute in the new science block at Howard College, University of Natal, Durban, were opened in May 1951, and the foundation stone of the building for the Sugar Milling Research Institute was laid in June 1951. The Bituminous Binder Research Unit started operations early in the year, and temporary accommodation for the South African Wool Textile Research Institute has been provided by Rhodes

\* South African Council for Scientific and Industrial Research. Sixth Annual Report, 1950-51. Pp. viii + 80. (Pretoria, P.O. Box 395; 1952.)

University, Grahamstown. Eight medical research units supported by the Council are working smoothly, and a ninth, dealing with applied physiology, has been taken over by the Transvaal Chamber of Mines.

In the National Chemical Research Laboratory, X-ray diffraction technique and differential thermal analysis have permitted the identification of the occurrence of attapulgite, a clay with many industrial uses. A survey of Transvaal chromites is almost complete, and fundamental work on the spontaneous combustion of coal has been continued. The mechanism of decomposition of dolomite at 600-900° C. has been elucidated, and research on seaweeds initiated. A survey of the Berg River in the Cape area has thrown much light on the breeding seasons, periods of maximum abundance and preferences in substratum of individual species of flora and fauna of the stream. The behaviour of superphosphate in South African soils is being studied with the aid of radioactive phosphorus.

In the National Physical Laboratory, a recording photometer is being developed for astronomical sequences, an integrating photometer for the accurate measurement of light from very faint sources and a microphotometer for rapidly scanning photographic plates are being designed. Acoustic equipment for determining the elastic properties of samples of concrete has been developed for the National Building Research Institute, and further work has been done on checking the accuracy of the equipment used in maintaining the International Temperature Scale. A Consolidated-Nier mass spectrometer has been used for studying the exchange of carbon between gases and solid carbonates and to determine small amounts of hydrogen in gases in which carbon dioxide and nitrogen are present. A simple and powerful method has been developed for predicting the number of carbon atoms in the chains of synthetic crystalline hydrocarbons in which 'basal reflexions' at small angles of glancing incidence are accentuated so that they can be measured on the Geiger-counter spectrometer. The Telecommunications Research Laboratory has been concerned mainly with the study of radio propagation and radio-noise levels and with the development of a crystal-controlled all-wave receiver. The National Building Research Institute has continued its work on the use of high-magnesia limestone and the transmission of heat through the elements of buildings. A new advisory committee has been appointed for the National Institute for Personnel Research, and the eight medical research units have consolidated their work, that on amoebiasis having established the extreme value in immediate control of the antibacterial drugs.

## NATIONAL RESEARCH COUNCIL OF CANADA

### RECENT APPOINTMENTS

THREE appointments to the National Research Council of Canada have recently been announced as follows: Dr. E. W. R. Steacie to be president of the Council in succession to Dr. C. J. Mackenzie, who has been appointed president of the newly created Crown Company, Atomic Energy of Canada, Ltd. (see p. 1037); Dr. Leo Marion to be director, jointly with Dr. Steacie, of the Division of Pure Chemistry at the National Research Laboratories; and Dr. Ira E. Puddington to be director of the