

RECENT SCIENTIFIC INQUIRIES IN PARLIAMENT

AT question time in the House of Commons on May 16, the Parliamentary Secretary for Science, Mr. D. Freeth, was faced with no fewer than 39 questions relating to scientific matters, ranging from the performance of the reactors at Calder Hall and Chapel Cross, progress with production of nuclear reactors for research and teaching purposes, to arterial disease and fire hazards of domestic equipment.

In the course of his replies, Mr. Freeth said that rather more than three-quarters of Great Britain has been covered by the Geological Survey in the primary 6-in. survey. At the present rate of progress the primary 6-in. solid and drift survey would be completed in about 55 years; it is hoped to reduce this to 35-40 years. Nearly as much secondary survey as primary survey is being carried out, and work is now being done on the more difficult mountainous regions. The Survey has also prepared the tectonic map of the United Kingdom as part of a co-operative scheme for a tectonic map of Europe.

On research into coal utilization, Mr. Freeth said that besides the British Coal Utilization Research Association, the British Coke Research Association and the Coal Tar Research Association are primarily concerned with the utilization of coal. All three research associations are doing very valuable work and there is a great deal of co-operation between them and between the National Coal Board, the Central Electricity Generating Authority, the Gas Council and the appliance and equipment makers. The total income last year of the Coal Utilization Research Association was £450,000, of the Coke Research Association more than £150,000 and of the Coal Tar Research Association less than £113,000. There was the fullest possible co-ordination on the matter between the Minister for Science and the Minister of Power.

Mr. Freeth was also asked what research was being conducted into the better use of the mineral resources of Britain; he referred to the basic information supplied by the Geological Survey and Museum in its maps and memoirs. The Warren Spring Laboratory and the National Chemical Laboratory undertake research on processing ores and extracting metals, and various research associations, industrial

firms and universities undertake research into the better use of minerals.

Asked as to the action taken to apply scientific development to the machine tool industry, Mr. Freeth said that besides the scientific development work of the Machine Tool Industry Research Association and the Production Engineering Research Association, research of direct value to such scientific development was carried out at the National Engineering Laboratory and the National Physical Laboratory. In addition, 12 grants totalling more than £170,000 have been made for research and development work in this field in the past two years to six universities and two colleges of technology in England and Wales. The Machine Tool Advisory Council is reviewing progress made in implementing the recommendations of the Mitchell Sub-Committee. Mr. Freeth also referred to a ten-fold increase in the accuracy of large modern gears over the past twenty years, to which research and development work at the National Physical Laboratory and the National Engineering Laboratory had contributed. Gears up to 16 ft. in diameter can now be made with an error of one-quarter of a thousandth of an inch from the true form and spacing of the teeth and the automatic error-correcting system developed recently by the National Engineering Laboratory have been applied to a gear-cutting machine.

While the Department of Scientific and Industrial Research has not sponsored any research into the use and operation of multi-purpose pipe-lines for the transport of both liquids and solids, it is itself carrying out research into the subject, and the Department is always willing to discuss with industry the part it could play in assisting research and developing techniques in every field.

In response to a specific request which had been made for a breakdown of the figure of £42.9 million for Government expenditure on civil research and development in 1958-59 given in the report of the Advisory Council on Scientific Policy, Mr. Freeth gave the following figures for the source of the funds concerned: defence departments, £2.9 million; civil departments, £34.7 million; private industry, £4.5 million; other organizations, £0.8 million.

MAWSON INSTITUTE OF ANTARCTIC RESEARCH

ON April 15 the Prime Minister of Australia (the Rt. Hon. R. G. Menzies) inaugurated, within the University of Adelaide, the Mawson Institute of Antarctic Research. In his inaugural address Mr. Menzies referred to the great achievements of Sir Douglas Mawson in science and exploration, and affirmed that Mawson had accomplished so much because he possessed, in the highest degree, the qualities of imagination, courage and endurance.

The University of Adelaide has established the Institute, believing that it would provide the best

means to commemorate one of its most distinguished members. Mawson joined the University staff in 1905 as lecturer in mineralogy and petrology. In 1921, he was appointed professor of geology and mineralogy, and he retired in 1952. He remained a member of the University Council until his death in 1958.

The main purpose of the Institute will be to foster polar studies and research. In order to do this it will maintain and develop reference collections of geological and biological materials from the Antarctic.

It will maintain and develop a library of papers and maps as well as books on Antarctica. It will provide accommodation for workers engaged in antarctic research. It will promote public interest in polar matters by means of lectures and a museum devoted to antarctic materials and equipment.

The University plans to accommodate the Institute in a major annex to the geology school. This would contain a library in which the map collection would be included, a museum which would serve as a meeting-room, generous storage space and a number of small research rooms.

The basis of the reference collections will naturally be the materials collected by Mawson and members of the expeditions which he led, although valuable collections from other parts of Antarctica have been obtained by exchange with the British Museum and other institutions. At present these are largely housed in the Geology Department of the University. Many periodicals and other books have been segregated in a 'polar' room in the University library, and their number will soon be greatly increased as Lady Mawson has announced that she will present to the Institute the extraordinarily fine library collected by Sir Douglas.

To mark the inauguration of the Institute a small 'Antarctic Room' has been partitioned from the geological museum. This is mainly occupied by rocks arranged on a regional basis and well documented with maps and geological sections. It also serves to illustrate the achievements of the expeditions of which Mawson was a member or which he led.

The interest created by the inauguration of the Institute has been very wide. Representatives of the Royal Society and the Academy of Science of the U.S.S.R. were present and the Australian Academy of Science was represented by its president. Other institutions which were represented included the Royal Geographical Society, the American Geographical Society, the Argentina Institute of Antarctic Affairs and the Scott Polar Research Institute. Messages of goodwill and congratulations were read. In addition, the Governments of the United Kingdom and New Zealand sent representatives and, from the South Australian Government, two Ministers of the Crown attended. Many men with personal experience of antarctic exploration and research were present. The occasion revealed wide approval of the University's move and paid high tribute to a very great Australian.

A. R. ALDERMAN

TRAINING IN OCCUPATIONAL HYGIENE

THE twelfth Conference of the British Occupational Hygiene Society was held in London on April 11. The morning session, with Dr. J. C. Gilson in the chair, dealt with the need for training, and the afternoon, with Dr. L. G. Norman as chairman, covered present and future facilities in universities.

Dr. Gilson opened the proceedings by contrasting the considerable effort now being put into radiation monitoring with the meagre resources available for checking dust and fumes, which he estimated to be a risk to some 150 times as many people as were exposed to nuclear hazards. The disparity of effort on the job was reflected in training resources, and no university course in occupational hygiene existed.

The interest of management in working conditions was emphasized by Mr. H. F. Spencer, managing director of Richard Thomas and Baldwins, Ltd., who criticized the term 'occupational hygienist'. Dr. J. M. Rogan, of the National Coal Board, who directs one of the largest epidemiological investigations at present being made in the world, considered that the existing employment of industrial medical officers in large concerns, with specialist laboratory help when required, might be more satisfactory than the appointment of broadly trained occupational hygienists.

Dr. K. P. Whitehead of Imperial Chemical Industries, Ltd., and Dr. P. G. Swann of Esso gave accounts of the ranges of activity of the personnel whose health, as industrial medical officers, they had to safeguard. The former emphasized the diversity of the chemicals handled. In his firm an industrial hygiene research laboratory studied toxicity and advised on works policy and plant design. He could see little need for the employment of industrial hygienists at factory-level in large, well-organized industries although they might be of considerable benefit to smaller firms.

Dr. Capel's firm employed an industrial hygienist, a graduate in chemistry, who had been trained in the United States. His reports were countersigned by one of the medical staff. It was advantageous for the candidate for such a post to have a degree related to the activities of the firm, or possibly a degree in general science, in which case a six months' course in the principles and practice of industrial hygiene would be sufficient. The parent American company maintained a medical research division which served affiliates all over the world and provided toxicological data on all materials handled.

Mr. H. Collinson, chairman of the Trades Union Congress Social Insurance and Industrial Welfare Committee, concentrated on the problem of the small employer with a back-street factory where conditions were often appalling, although work in the highest tradition of craftsmanship might emanate from it. To some extent this was a matter of educating the employer who was unaware and unco-operative towards suggestions for improving working conditions, but it was unlikely that voluntary action was going to be sufficient. The responsibility for making occupational hygiene available to the whole range of industry rested on the Government. The T.U.C. attached great importance to the pioneer work being done by group health services, such as that at Slough. The Nuffield Foundation had recently placed a quarter of a million pounds at the disposal of the Ministry of Labour for the encouragement of such schemes.

It was important that training should include practical experience in factories, which could only be achieved by the persuasive powers of those planning courses.

Ten years experience in providing an occupational hygiene service for the 200 member firms of the Slough Industrial Health Service was described by Dr. D. Hickish. The firms ranged in size from 2 to 2,000 employees and the backing of the group medical