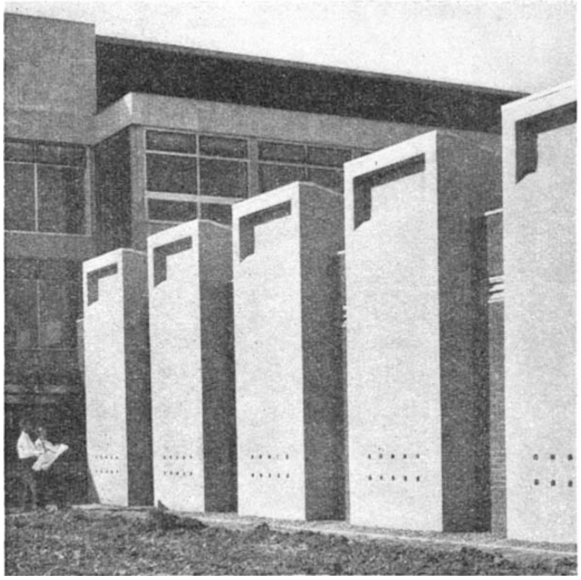

Fig. 2. Autoclave annexe showing reinforced concrete cubicles

of heated replacement air which is sufficient to allow the construction of further fume hoods. At one end of the chemistry building there is a 'tall apparatus area'. This is a 36-ft. high space occupied by a staircase with two landings, the floors of the landings being readily removable so that the full height of the building can be used if required.

The physics building, recently completed, is of the same height as the chemistry building but initially of only half its length. Since there is no longer the same need for plentiful fume cupboards and service provision, the internal layout is rather different, being designed to cater for the larger space and greater power requirements of the physicist. The unit laboratory, of which there are four per floor, is a 2-graduate unit some 38 ft. × 24 ft. overlooked by offices for the technical staff. There is no corridor as such, but a notional 5 ft. outside the offices is reserved for traffic.

The engineering building, also recently completed, is a single storey one basically designed to give a large interior space without obstruction and an 18-ft. high roof, in which can be placed or built any engineering apparatus which is necessary. This open space is overlooked by a double tier of offices at one end and is capable of extension by doubling its length. Outside the building, and along one of its sides, has been built the autoclave annexe. This contains eleven cubicles, six of steel and five of reinforced concrete, in which moderate pressure experiments can be carried out with maximum safety (Fig. 2). There is provision for remote control of the experiments and for the release of any pressure or fume generated in the cubicles. Nevertheless, the autoclave annexe is not intended for very hazardous or very high-pressure work; other more suitable sites are available, for example the Winnington Laboratories of the Mond Division some twelve miles away, where there is a wealth of experience of, and very good facilities for, work at really high pressures.

So far as the real purpose of establishing the Imperial Chemical Industries, Ltd., Petrochemical and Polymer Laboratory is concerned, it will of course be obvious from what has been said here that so far only the foundations have been laid. The laboratory is now entering on the period when the plans by which it has been shaped, both in terms of buildings and staff, will be really tested by the stern criterion of success or failure in inventing new products and processes for Imperial Chemical Industries, Ltd. Unfortunately, all those engaged in speculative research know only too well that no amount of planning can guarantee success; chance must play a part. However, one can at least attempt to reduce to a minimum the part played by chance in bringing about success, and this has been the aim throughout in planning and establishing the Petrochemical and Polymer Laboratory.

NEWS and VIEWS

The Advisory Council on Technology

THE following have been appointed members of the Advisory Council on Technology under the chairmanship of Mr. Frank Cousins, Minister of Technology: Sir Leon Bagrit, chairman and managing director of Elliott-Automation, Ltd.; Mr. W. B. D. Brown, chairman of the Glacier Metal Co., Ltd.; Sir William Carron, president of the Amalgamated Engineering Union; Mr. C. F. Carter, vice-chancellor of the University of Lancaster; Dr. S. C. Curran, principal and vice-chancellor of the University of Strathclyde; Sir Arnold Hall, managing director and vice-chairman of the Hawker Siddeley Group and vice-chairman of Bristol Siddeley Engines; Mr. C. F. Kearton, chairman of Courtaulds, Ltd.; Prof. M. J. Lighthill, Royal Society research professor at the Imperial College of Science and Technology, and formerly director of the Royal Aircraft Establishment, Farnborough; Lord Nelson of Stafford, chairman and chief executive of the English Electric Co., Ltd.; and Mr. H. C. Tett, chairman of Esso Petroleum Co., Ltd. Prof. P. M. S. Blackett, professor of physics in the Imperial College of Science and Technology, is deputy chairman.

The 1964 Nobel Prize for Chemistry : Prof. Dorothy Crowfoot Hodgkin, F.R.S.

THE work for which Prof. Dorothy Crowfoot Hodgkin was awarded the 1964 Nobel Prize for Chemistry consists of a remarkably coherent and well-planned series of investigations covering the whole field of organic structures of medical and biological importance. In 1932, when she started her work in Cambridge, all that X-rays could do was to confirm or correct formulæ arrived at by essentially organic chemical methods. Prof. Hodgkin's achievements lay in her transcending these limitations and making the X-ray method one of the major tools for the complete analysis down to accurate atomic positions. All the way through, her work was characterized by a consciously evolved strategy of analysis which showed itself both in the choice of the crystals to be examined and the crystallographic methods successively evolved to study them. She began with the sterols and combined extensive comparative method with intensive, accurate structural investigations of selected crystals, notably those of calciferol and lumisterol. The structure of cholesterol iodide, which she carried out with Dr. C. H. Carlisle, was, in fact, the first complex organic structure without molecular symmetry to be analysed completely by X-rays. She was also at the very beginning of the X-ray analysis of proteins, and was the first to show that the insulin molecule, and, by extension, those of all proteins, possessed a rigid inner structure independent of the state of hydration.

On her return to Oxford she continued with a more definite bias towards molecules of physiological and medical importance. Her first great triumph was the elucidation with Bunn and others of the structure of penicillin, with 17 atoms in the molecule, in advance of