

an effective radiated power of 500 kW., in accordance with the allocation made at the European Broadcasting Conference at Stockholm in 1952. It was decided, however, that the station should open with a power of about 200 kW., but that the building and the power plant should be planned so as to facilitate raising the output to the higher value in the future. A second paper, read at the Institution of Electrical Engineers meeting referred to above, by Messrs. V. J. Cooper and W. J. Morcom (of Marconi's Wireless Telegraph Co., Ltd.) described in detail the television transmitting equipment, which is designed to operate in two parallel chains to ensure the maximum reliability in service.

The station building is buried below the terrace on a two-acre site at the Crystal Palace, and incorporates two vision transmitters of 15 kW. and two sound transmitters of 4 kW., with provision for raising these to 50 kW. and 12 kW., respectively, when necessary. The aerial system consists of eight tiers of dipoles erected around a self-supporting tower, which is tapered to a height of 440 ft. (134 m.) above ground-level, and will later be surmounted by a parallel-sided structure for a further 250 ft. (76 m.) to carry the aerial systems for future transmissions in higher-frequency bands. For the transmission of programmes between Broadcasting House and Crystal Palace, a distance of 9 miles (14 km.), two coaxial cables of 0.975 in. (2.5 cm.) diameter have been provided, for direct transmission between the terminals without intermediate equipment. The cables and their associated terminal equipment are designed for transmission in either direction, since it is proposed to use the Crystal Palace as a pick-up point for television outside broadcasts and carry the signals by the cable to the Broadcasting House switching centre for connexion to the main television network. Full details of this cable link and of its performance are given in a third paper presented at the meeting by Dr. A. R. A. Rendall and Mr. S. H. Padel, of the B.B.C. staff.

Preliminary field-strength measurements made around the Crystal Palace site have confirmed the original theoretical expectations that the population within the service area will be 1.5-2.5 millions greater than the number hitherto served by the Alexandra Palace station. The outer coverage in Kent, Surrey and Sussex is much improved, while only the area immediately surrounding Alexandra Palace and some districts to the north of London experience a decrease in field-strength. Although these areas still receive an adequate service, a minority of viewers may need better receiving aerials.

#### Future of Colour Television in Britain

At a meeting of members of the International Radio Consultative Committee, held in London on April 5, Sir Ian Jacob, director-general of the British Broadcasting Corporation, discussed the problem of colour television, with particular emphasis on conditions in Great Britain and the work and future plans of the Corporation. He began by pointing out that the present television programme will soon be capable of being received by 97 per cent of the British population and that there are at present six million television receivers in the hands of the public or, in other words, that 40 per cent of the population have receivers in their homes. The Corporation is conducting a series of technical tests on the N.T.S.C. system of colour television developed by the American radio industry and adopted by the Federal Com-

munications Commission for public use in the United States; for these tests the system has been adapted to the British 405-line television standards, and the object is to determine whether the system gives a satisfactory colour picture without being degraded to any noticeable extent as a black-and-white picture on an existing receiver. The results so far indicate the possibility of a compatible system on 405 lines, and thus it may be feasible eventually to transmit a colour programme on the Band I frequencies that are at present being used and on the Band III ones which are reserved for a future second programme. If, however, a compatible system is not possible, then the only hope for colour television in Britain is to use different transmissions on Bands IV and V frequencies, and this will involve setting up completely new transmitter networks on frequencies which, from the technical point of view, are less favourable; it is not a prospect to be relished.

Turning to the question of reception, Sir Ian pointed out that, besides the technical problems, there are economic and social factors which must inevitably weigh heavily on any decision by the Government with regard to the development of colour television. He is not convinced that a colour receiver has yet been developed, even in the United States, which is satisfactory for large-scale production. The cost of such receivers still seems to be prohibitively high, and the present economic situation is such that the Government wants to restrict home demand and to limit capital expenditure. Sir Ian doubts if all the information is yet available to arrive at any national policy for colour television; but he put in a special plea that the representative bodies of the various countries of the world should keep in close touch with one another so as to secure the greatest possible amount of international standardization.

#### Institute of Wood Science

In view of the widespread interest in the technical aspects of wood, it has been felt for some time that there is a need in Great Britain for a national body with the avowed object of advancing scientific knowledge of wood and allied subjects, and as a result of a number of discussions held during the past year an Institute of Wood Science has been formed, with Mr. David D. Irvin, deputy chairman of the Timber Development Association, Ltd., as chairman of the Council and honorary secretary of the Institute. The main purpose of the Institute is "to advance the scientific, technical, practical and general knowledge of persons interested in the study of wood and allied subjects", and it is proposed to interpret this in the broadest possible sense. Thus, besides the study of the anatomy and chemistry of wood, etc., the words ". . . and allied subjects" are intended to include such subjects as wood adhesives, the chemistry of preservatives, pulp, woodworking machinery and similar matters which involve wood indirectly. An immediate objective of the Institute is to start a journal, and Prof. A. R. Gemmell, of the University College of North Staffordshire, has been appointed as editor.

The Institute intends to concern itself directly with education in timber technology or wood science, and ultimately it hopes to become the examining body in at least the senior examinations in this subject. Other aims and activities include the organization of meetings, lectures and excursions, co-operation with other bodies having similar objects