

per cent compared with 19 per cent at Berkeley, Gloucestershire. He thought much more basic research was required before Britain embarked on a larger programme than that announced by the Government.

Replying for the Government, Lord Derwent pointed out that the magnox system might still show advantages in some other countries and that Britain should not take too insular a view of these developments. The building and commissioning of the present stations had involved a great partnership between the Authority and the

Generating Board as well as with the Consortia, the contracting firms and the inspectorate of nuclear installations. The Government was satisfied that there was effective collaboration between the Generating Board and the Atomic Energy Authority, and there was, and always had been, close organization between the Consortia and the various firms in the contracting industry and these bodies. He agreed that the suggestion for adoption of systems and arrangements similar to that used in Canada merited careful consideration.

THE MUSEUMS ASSOCIATION

THE seventieth annual conference of the Museums Association was held in Nottingham during July 13-17 under the presidency of Dr. D. John, director of the National Museum of Wales at Cardiff.

The proceedings opened in the spacious Great Hall in the Trent Building of the University with a welcome from the Lord Mayor of Nottingham. Dr. John in his presidential address outlined the financial difficulties which beset the Association and mentioned some of the proposed measures to be taken to remedy this state of affairs. He congratulated the Area Museum Councils on the work they had achieved in the early stages of their plan to regionalize museums. He also referred to the 1963 report of the Standing Commission and to the recommendations, some of which had not been implemented by H.M. Government. In conclusion, he considered that at the present time there was a greater consciousness concerning museums among the general public and that much is moving forward in the museum world.

The general theme of the conference was that of "Public Relations" and this was introduced by Mr. C. Mann (president of the Institute of Public Relations), who gave a stimulating address on the importance of the public. He considered that the value of a work of art is in proportion to the number of people who see it, and for this reason museums should make every endeavour to attract the public to their galleries. A genuine belief that the public really matters was a curatorial necessity and he urged his audience to make more use of exciting entrance features, friendly and helpful attendants, and the creation of an atmosphere of goodwill.

Mr. C. Gibbs-Smith of the Victoria and Albert Museum

followed with a paper on "The Fault . . . is . . . in Ourselves". He stated that good public relations meant plain good manners from the whole of the staff. He also felt that public relations should be the special duty of one member of staff who would be directly responsible to the director.

The theme was continued by Sir Frank Francis, director, British Museum, who said that museums though not in competition with themselves were certainly striving to gain customers in these days of more leisure and many interests. The aim of the curator should be to stimulate members of the public at all levels.

Mr. P. Johnstone (producer, B.B.C. Television) stressed the need for close co-operation between museums and the British Broadcasting Corporation. Both used visible communication methods and mutual help was essential. He advocated the setting apart of a special gallery in the museum for television work. Mr. I. Finlay, director of the Royal Scottish Museum, pertinently asked for what image was the museum striving and what public did we serve. A paper by the Rev. J. Jones-Davies describing the transformation of a small collection into a County Museum at Brecon closed the conference.

At the annual meeting, Mr. N. Cook, Guildhall Museum, London, was elected president for the year 1964-65 and an invitation to hold the annual meeting in Dublin in June 1965 was accepted with thanks.

Both the University and the City entertained the delegates at receptions, and during the meeting visits were arranged to the Newark and Derby Museums, Newstead Abbey, Boots Factory, Lincoln, Bakewell, Mansfield, Boston and other places.

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PENDULAR MOISTURE IN PACKINGS OF EQUAL SPHERES

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EXPERIMENTAL relationships between capillary pressure, P , and saturation, s_w , often feature an 'irreducible' fluid content shown in Fig. 1 as the saturation s_w^* . In a random packing of equal spheres of radius R , the pendular rings found at the minimum saturation are not in equilibrium with each other and cover a distribution of sizes¹. Values of PR/γ calculated from the tables given by Fisher² fall largely in the range 3-11 which is also the range of PR/γ over which random packings of equal-sized hydrophilic spheres desaturate (Fig. 1, curve R_0), γ being the air-water interfacial tension. Direct measurements of ring pressures by means of a micro capillary-probe showed that, for a given ring, the ring pressure is equal to the capillary pressure, P , at the time of formation, the error in measurement being not more than 5 per cent³. The ring pressure remains

constant once the ring has formed, provided that mass transfer to or from the ring is negligible³.

In the work recorded here, random packings of equal-sized chrome steel spheres were saturated with dilute acid and then the packing was drained in a fine-pored, fritted-glass Buchner filter to the irreducible saturation. After about 0.5 h, the spheres were clearly etched over the areas of contact with the retained fluid; this occurred as isolated or linked rings of fluid held around points of contact between the spheres. Circles, or for linked rings equivalent circles, were selected at random and from their diameter, L (inset in Fig. 1), the volume, V , and pressure deficiency of each ring were calculated³. The distribution of L was found for three sphere sizes (diameter, $D = 3.18, 4.76, 6.35$ mm) taking two samples of 125 circles for each size of spheres. The cumulative