Measurement

THE extended use in industry of more accurate measuring instruments of all kinds led the Chamber of Commerce of Paris in 1932 to institute at the Conservatoire National des Arts et Métiers a course of lectures on measurement which have been delivered annually by Prof. Pierre Fleury of the University of Lille. They cover units and standards, legislation, calculation for all types of measurement, details of the methods available for making measurements in geometry, kinematics, statics, dynamics, heat, sound, light and radiology. As no treatise existed in French dealing with these subjects completely, Prof. Fleury decided to compile a work covering the whole field, and the first part, entitled "Généralités sur les mesures", appears as No. 236 of the series of "Actualités scientifique et industrielle" (Paris : Hermann et Cie. 15 francs). It is a pamphlet of about 80 pages, and deals with choice of methods, estimation of errors, calculations and verifications, units and standards. With six others which are to appear in the same series, it will constitute Prof. Fleury's "Leçons de Métrologie générale et appliquée" and should prove of great value in introducing more systematic methods into industry.

Development of Marine Engines

THERE is nowhere a finer collection of marine engineering models than in the Science Museum, South Kensington, and the collection also contains actual engines of great historical interest, including Symington's engine of 1788, the engine of the *Comet* of 1812 and the complete turbine installation of the *Turbinia*. The collection is therefore one which should be widely known. A catalogue of the engines and boilers and their accessories compiled by Mr. G. L. Overton, the keeper of the Water Transport Section of the Museum, was issued in 1926, and he has now written a handbook tracing their history and development (London : H.M. Stationery Office, 2*s*. net). In this, there are chapters on experimental and early marine propulsion, paddle engines, reciprocating steam screw engines, marine steam turbines, marine internal combustion engines, marine steam boilers and marine propellers. In such a work, it is, of course, only possible to trace the main lines of progress ; but it may be safely said that anyone desirous of studying marine engineering history could not have a better foundation on which to build than this well-written and well-illustrated handbook. The book includes a list of the more important works on the subject to be found in the Science Library.

Bacon Production

"THE PRODUCTION OF PIGS FOR BACON" formed the subject of the nineteenth of the Rothamsted Conferences (Secretary, Rothamsted Experiment Station, Harpenden. 1*s*. 6*d*.). Bacon production involves a number of persons, and it is essential that a better understanding between them should be reached if the industry is to be carried on successfully. The papers deal with different practical problems, and are published in full, together with the discussion, in which representatives of all points of view took part. On the production side, Mr. A. E. Law sets out the details of his management and Mr. H. R. Davidson critically examines the present bacon contract, showing that in the matter of belly measurement, conditions imposed in England are more severe than those in Denmark. Dr. J. Hammond discusses the points that constitute good carcase quality in a bacon pig, and Mr. A. E. Marsh gives the curer's point of view. The requirements of the factory are discussed by Mr. J. B. Busby. Although these are fairly well defined, the best way of meeting them is admittedly less definite, and further scientific work is also needed on breeding and feeding problems.

The Pasteur Institute of Southern India, Coonoor

THE annual report of the director of this Institute, Major K. R. K. Iyengar, for the year 1933, has recently been issued. During the year under review, 417 patients underwent the complete course of treatment, and 83 underwent incomplete treatment. For the first time since the Institute was opened twenty-seven years ago, there were no deaths from hydrophobia among those treated. The Paris 'fixed virus' was in use throughout and was in its 912th passage at the close of the year, Semple's carbolised 5 per cent sheep vaccine being employed. Besides treatment at the Institute, 10,477 courses of anti-rabic vaccine were issued to a number of other centres, together with 22,550 c.c. of vaccine for veterinary use, 335 animals being thus treated. In addition, 298 brains of rabid or suspected rabid animals were examined, and 1,530 specimens were received for clinical and bacteriological examination.

Plant Diseases in New South Wales

A VERY extensive list of more than 1,260 plant diseases recorded in New South Wales has recently appeared (Dept. Agric. N.S.W., Science Bulletin No. 46. Sydney : A. J. Kent, Govt. Printer, 1935). It is compiled by Dr. R. J. Noble, Messrs. H. J. Hynes, F. C. McCleery and W. A. Birmingham. The territory under investigation has been divided into sixteen geographical divisions, but the records mostly indicate the actual district in which a particular disease has been found. The names of host plants are arranged very conveniently in alphabetical order, and the names of the parasites follow a similar plan. Common names and dates of first appearance are included. Diseases of major importance are indicated by an asterisk, and many parasites of fruit and the commoner agricultural crops come into this category. The publication is certainly as complete and useful as a list can be.

Japanese Beetle in the United States

ACCORDING to Science Service, Washington, D.C., the Japanese beetle (*Popillia japonica*) was at its peak of abundance in the United States during July and early August. The insect appears to be still extending its range in the eastern United States, and large metropolitan areas of New York, Philadelphia, Baltimore,