

## Biographical Note



**Dr. C. E. Kenneth Mees**, the internationally known scientist, retired on November 15, 1955, as Vice-President in Charge of Research for the Eastman Kodak Company. Dr. Mees continues as a member of the Board of Directors. He has taken up permanent residence at his home in Honolulu, Hawaii.

The son of a Wesleyan minister, Dr. Mees was born at Wellingborough, England, on May 26, 1882. He received a classical education but his interest in general science was aroused by a demonstration of the making of chlorine gas by a school instructor.

Although Dr. Mees' interest in science and photography dates from his early boyhood, he did not become interested in photographic science until after he entered University College, London. A short time previous to that, and while at St. Dunstan's College, he had met S. E. Sheppard. He and Sheppard often discussed what happened to a plate when it was exposed in a camera and developed to a negative. Their search of published information in the University College library, however, revealed very little until Sheppard came upon the classical paper by Hurter and Driffeld, which had been published in 1890 in the *Journal of Chemical Industry*. This paper laid down the basic principles of photographic exposure and development. Using more refined apparatus built by themselves, Mees and Sheppard repeated and extended the work of Hurter and Driffeld. The results were submitted to the examiners as theses for the B.Sc. degree by research, the first and last time such a degree was granted by London University.

Following the granting of the degrees to them in 1903, the two students continued their work on the theory of the photographic process and in 1906 published their researches jointly as a book, *Investigations on the Theory of the Photographic Process*. On the basis of this work, each was granted the Doctor of Science degree.

When he had completed this work, Dr. Mees said he thought he would like to re-

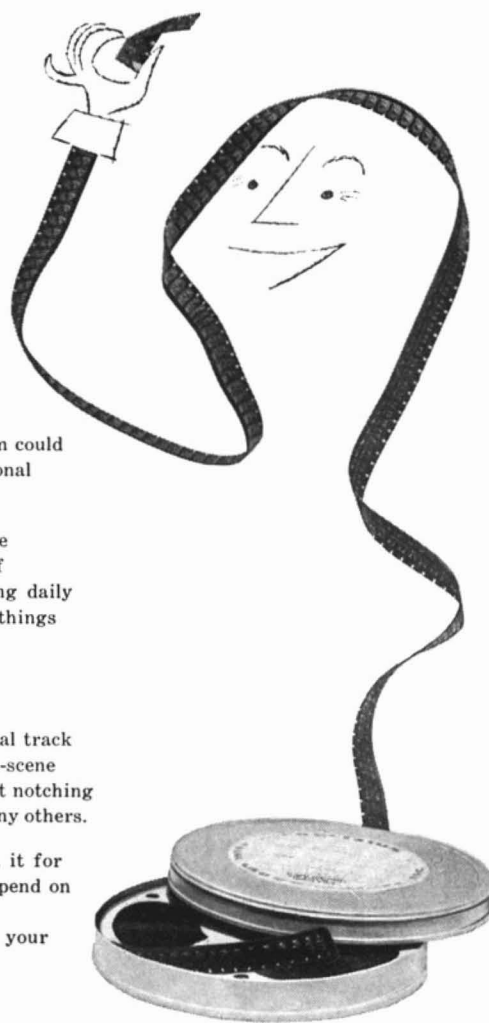
main at college as a teacher, but his professor, the great physical chemist, Sir William Ramsay, persuaded him to enter the field of industry where Ramsay said research workers were needed. He joined the small photographic firm of Wratten and Wainwright Ltd. at Croydon, England, in 1906 as a partner and joint managing director.

For six years, Dr. Mees worked at Wratten and Wainwright. His first important photographic achievement was to sensitize photographic dry plates in manufacture to light of all colors, and he thus produced panchromatic plates. He studied photographic sensitizing and the spectrophotometric characteristics of dyes, and worked out methods for the manufacture of light filters and safelights, special plates for photoengravers and spectroscopists, and

did research on the resolving power of photographic materials. He had little time then to work on the basic theory of photography.

In 1912, at Mr. Eastman's invitation, he joined the Eastman Kodak Company and went to Rochester, N.Y., to organize and direct a research laboratory. In the years 1912-1913, the Kodak Research Laboratory was one of a small number of such laboratories in industries in the world. As a director of an industrial research laboratory, Dr. Mees pioneered. Furthermore, the Kodak Research Laboratory was one of the first in industry in the United States to conduct a program of fundamental research, which up to that time had been restricted almost exclusively to universities.

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As originally organized by Dr. Mees, the Kodak Research Laboratory had three basic departments: chemistry, physics and photography. Fundamental and applied research has been conducted in all these fields of science ever since the formation of the Research Laboratory and nearly 1800 scientific communications from the Laboratory have been published in technical journals in many countries. Dr. Mees also initiated in 1915 the publication the *Monthly Abstract Bulletin* in which abstracts are published of articles on photographic and allied subjects from the world's literature. He established in the Research Laboratory a library that has grown into the most important one of its type.

During the forty-four years in which Dr. Mees was concerned with operations of the Research Laboratory at Kodak Park, he realized two of his life ambitions: (1) the development of a science of photography and (2) the application of science to industry. While considerable work of the Laboratory staff has been done on fundamental research in the theory of photography, much time has been spent on development of new processes and improvement of existing ones. The latter program has resulted in the introduction of new photographic materials for the amateur and the professional, the industrial worker and the scientist. Of widest popular interest perhaps was the introduction of 16mm Cine-Kodak Film and equip-

ment in 1923 and of Kodachrome Film in 1935, on both of which research and development were initiated in the Kodak Research Laboratories.

Other significant developments under Dr. Mees' direction were: (1) the founding at Kodak Park in 1917 of the first school of instruction in aerial photography; (2) the establishment in the Laboratory in 1918 of a department for the manufacture of synthetic organic chemicals when the supply of such products from Germany was cut off during World War I; (3) the organization of a department in 1919 for the development of photographic apparatus; (4) the establishment in 1931 of a department of emulsion research which has made important contributions to the knowledge of emulsion manufacture; and (5) the establishment in 1934 of a department in the Laboratory to carry out research on cellulose ester yarn and plastics for the Tennessee Eastman Company.

Dr. Mees was named a director of the Kodak Company in 1923 and was elected Vice-President in Charge of Research and Development in 1934.


In the last half century, Dr. Mees has been prolific also as a writer, lecturer and world traveler. He has published nine books and some 160 scientific articles and pamphlets. For 34 years he has been a contributor to the *Journal* of this Society, his first paper in the *Journal* being one on color photography (May 1922). The greatest of his publications is his book *The Theory of the Photographic Process* published in 1942 and revised in 1954. His book *The Path of Science*, published in 1946, is an account of science for historians and of world history for scientists. With J. A. Leermakers, an assistant director of the Laboratory, he is coauthor of the book *The Organization of Industrial Scientific Research*, a complete revision of his book published in 1920 which was the first of its kind.

Dr. Mees' work has been recognized by awards and honors presented to him from societies and organizations in many countries of the world. That his work is valued on the highest level is evident from his being a Fellow of the Royal Society of London, a member of the American Philosophical Society, a member of the National Academy of Sciences, and a Fellow of the Society of Motion Picture and Television Engineers. He has been particularly interested in giving service to science, especially in fields where the special knowledge and experience of the Kodak Research Laboratories could be applied. In particular, he contributed very greatly to the recent advances in astronomy; he received the Henry Draper Medal for 1936 of the National Academy of Sciences.

The high regard in which he is held by his associates on the Board of Directors of the Eastman Kodak Company is well expressed in the following quotation from their tribute to him on November 15, 1955:

"Many others have done him great honor which we cannot enhance, but we alone can give our personal testimony of appreciation and gratitude for the inspiration of his genius and leadership in Kodak affairs, and for the heritage of high aims and great accomplishment which he has left to us."

—Glenn E. Matthews



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