Equipments exhibited by Marconi's Wireless Telegraph Co. at the Second Industrial and Television Exhibition, held in London in November, included the Marconi-Siebe, Gorman underwater television camera. There was also a selection of closed-circuit television units and accessories. The underwater camera is designed to be handheld and can be buoyancy-adjusted for virtual weightlessness under water. Overall dimensions are 3 ft by 2 ft, 3 in. The closed-circuit equipment exhibited included a camera Type 4339A, lens turret, weatherproof housing and an industrial synchronizing generator.

Biographical Note

Fred E. Altman

Retirement of Fred E. Altman, Assistant Director of Optical Design for the Apparatus and Optical Division of Eastman Kodak Co., has been announced.

Widely known as an authority on optical design, he is a Fellow of the Society and his interests during his 45-year career with Kodak have been reflected in papers published in the *Journal*. He presently holds more than 40 U.S. Patents in the field of optical design. As early as 1934 he was engaged in the development of a lens for the "the so-called wide film...70mm" ("A Revolving Lens for Panoramic Pictures," by F. Altman, *Jour. SMPE, 24:* 383–394, May 1935).

With the Kodak Lens Design Department during World War I, Mr. Altman was engaged in designing optics for gunsights and for the new field of aerial photography. During World War II, with the same department, he again worked on military optics, participating in the development of a telescopic tank sight in the short space of three weeks. Among Mr. Atlman's inventions and the developments on which he worked is the $f/1.9$ Cine lens which has been continuously manufactured for 35 years.

Other interests of Mr. Altman's described in *Journal* papers include "An Optical System for the Reproduction of Sound From 35mm Film (co-author, J. H. McLeod), *Jour., 31:* 36–45, July, 1938, and "35mm to 16mm Sound Reductions printer," (co-authors, C. W. Clutz and J. G. Streiffert) *Jour., 52:* 669–675, June 1949.

Mr. Altman's retirement plans include further studies in optics, and a number of recreational activities including golf, woodworking, mountain hiking and photography.

Abstracts

Abstracts from other Journals, chosen for importance and timeliness, are published in the *Journal* from time to time. The greater numbers of these abstracts are translations, chiefly from the U.S.S.R., and made available by the *Kodak Monthly Abstract Bulletin*

The subject areas are grouped below

High-Speed Photography and Instrumentation
Printing and Optics
Projection
Sensitometry and Image Structure
Sound Recording and Reproduction
Televison

HIGH-SPEED PHOTOGRAPHY AND INSTRUMENTATION

Light Sources and Shutters for High-Speed Photography and Cinematography. (in Russian), V. G. Pell', *Tekh. Kino i Televideniya, 4:* 79–86, June 1960.

Western developments in spark, flash and discharge lamps and in Kerr-cell, Faraday and other high-speed shutters are reviewed.—S.C.G.

New Flash Lamps (in Russian), I. S. Marshak, V. I. Vasil'ev, A. I. Mironova, V. P. Ivanov and R. G. Vdovchenko, *Uspekhi Nauch. Fotografii, 6:* 43–52, 1959.

The characteristics of a number of flash-discharge tubes now being produced in the Soviet Union are described, and an attempt is made to classify them.—S.C.G.

Physical Mechanism of the Discharge in Tubular Electronic Flashlamps and Their Loading Limits (in Russian), I. S. Marshak, *Uspekhi Nauch. Fotografii, 6:* 16–26, 1959.

An analysis is made of the conditions during the quasistationary state of the discharge in an electronic flashtube when a large current is flowing. The theory of the striking of the discharge by the application of the small, high-frequency pulse is discussed. Formulas are worked out for the limiting loads set by the incipient destruction of the glass or quartz envelope.—S.C.G.

Study of the Brightness of a Flash-Discharge Channel (in Russian), K. S. Vul'fson and F. A. Charnaya, *Uspekhi Nauch. Fotografii, 6:* 27–30, 1959.

The variation of the maximum brightness of the discharge in an electronic flashlamp filled with different gases, as the pressure and electrical parameters are varied, is studied experimentally.—S.C.G.

Spectral Characteristics of Electronic Flashtubes (in Russian), B. M. Vodovatov and M. I. Epshtein, *Uspekhi Nauch. Fotografii, 6:* 35–42, 1959.

The method of testing of a number of Soviet-produced electronic flashlamps is described. The relative spectral-energy densities of the lamps are tabulated, and, for one of the lamps, a table gives the variation of the relative spectral-energy