

# ABSTRACTS

## HIGH VOLTAGE ENGINEERING SECTION

1. A SIMPLE A.C. MAINS OPERATED THYRATRON RELAY. Dr. G. K. M. Pfestorf, *Jour. of Scientific Instruments*, London, 1952, 29, 378.

A new simple, reliable and cheap electronic relay which will operate on A.C. mains has been described.

The relay contact, e.g., the contact-thermometer is in the grid-circuit of a standard or miniature thyatron tube and operates practically wattless. The phase-shift between grid and plate current is produced by means of  $0.1 \mu f$  condenser between the 2 transformer windings which are available in every 40 W, 280/6.5/5 V radio transformer.

The relay-circuit is fool-proof and has been successfully in operation in Australian Industries for more than 2 years continuous operation. It is an ideal means for thermostats and calibration of standard thermometers to an accuracy of  $\cdot 01^\circ \text{C}$ .

2. NEW SLIDE RULE. Prof. Dr. G. K. M. Pfestorf, *Review of Scientific Instruments* (N.Y.), 1952, 28, 107.

To meet the demand for higher accuracy and the convenience of a conventional slide rule, a 10" slide rule with twice folded scales has been made. Thus a 10" slide rule will have 40" long log. scales which compare favourably with a 4-figure logarithm table. To arrange the twice folded scales on the slide rule the new principle uses the obverse and reverse side of the slide rule the scales on both sides being connected by the cursor.

A 10" slide rule with its high mechanical stability and with its greatly increased accuracy according to the new principle will be the daily calculating instrument of physicists and a pocket slide rule with the same arrangement of scales will give twice the accuracy of an ordinary 10" slide rule so that the pocket slide rule will become a practical and useful calculating means of every engineer.

3. NEUES HOCHSPANNUNGS LABORATORIUM IN INDIEN. Dr. G. K. M. Pfestorf, *Elektrot. Zeitschrift*, 1952, 73, 124.

The paper describes in German the new high voltage laboratory and its equipment which is now available at the Indian Institute of Science.

4. NEW HIGH VOLTAGE LABORATORY IN INDIA. Dr. G. K. M. Pfestorf and D. J. Radkas, *Power Engineering*, 1952, 2, 179.

The paper describes the new high voltage laboratory with 9 photos and the equipment which is now available at the Indian Institute of Science.

5. HISTORY AND DEVELOPMENT OF THE ABSOLUTE UNITS. Dr. G. K. M. Pfestorf, *Electrotechnics (India)*, 1952, No. 24.

The paper describes the development of our measuring standards and the reasons for changing over from the international units to the absolute units by introducing a fourth electrical unit, viz., amp. The paper gives a comprehensive set of conversion tables which are very handy especially in these days when the old and new units are still in use side by side.