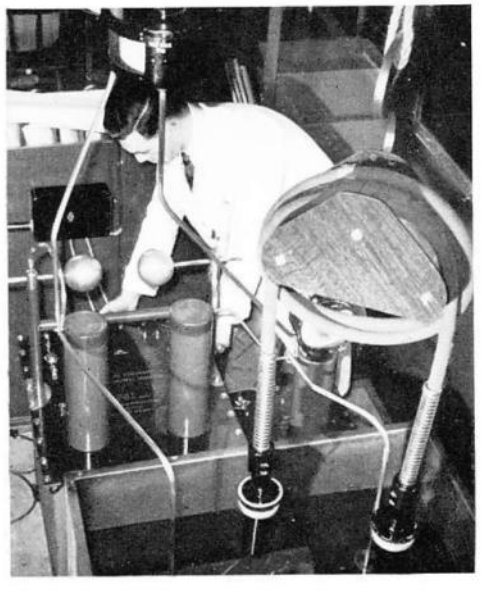
Low voltage tests at M.I. by Stan Howe, John Rose, Trevor Overett and Bert Barber. Below, John Rose prepares a breakdown test on H.T. cables which are checked up to 150,000 *volts*

X-ray Test

MARCONI INSTRUMENTS X-RAY apparatus is installed all over the British Isles and in countries overseas. The range includes both diagnostic and therapy units.

The name Marconi carries a reputation of impressive stature in this field. Exhaustive tests are one essential in upholding this fine tradition. All parts, as well as the finished units, are subjected to tests, which include complete mechanical and electrical checks and, finally, calibration of the complete unit working under H.T. conditions. Two factors, especially, necessitate the greatest care in testing—the extremely high voltages involved and the need for protecting the operator and patient from any possibility of stray radiation.



The final test in Final Test. The X-ray output is here being checked by Ken Murphy, using an ionization chamber

The safety factor, of course, plays a large part in the design of the equipment. Much of the X-ray circuitry is devoted to automatic safety devices, interlocks and controls which ensure the absolute safety of patient, operator and equipment. Besides the possible dangers of the enormously high voltages in use, from a few thousand to a quarter of a million, X-rays themselves are destructive. The human body will only stand a certain dosage over a given period. So it can be seen that "Test", although the last stage in X-ray production, is by no means the least in importance.

(Top left). H. O. Crafer (right), Chief of X-ray Test, discusses output figures of Deep Therapy Apparatus TF 1554*A with Bert Barber*

(Below). These rectifier valves have passed their H.T. tests, up to 150,000 *volts, made by Trevor Overett. A specially processed oil is used as an insulator*