

# NOTES FROM THE RESEARCH LABORATORY WEST- INGHOUSE ELECTRIC AND MANUFACTURING COMPANY.\*

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## WIRE TESTING EXTENSOMETER.

By P. H. Brace.

AN extensometer for testing wire and other thin sections has been developed at this laboratory. It consists essentially of a metal block to which two flexible side pieces are attached, the free ends of these carrying rollers. The wire to be tested is clamped at the block and passes between the rollers. Extensions of the wire between the blocks and rollers due to loading the wire results in rotation of the rollers which are held in contact with the wire by the flexibility of the side pieces.

Light from a small straight filament galvanometer lamp passes through a collimating lens to a mirror in the axis of one roller. From there it is reflected to a similarly placed mirror on the other roller, and reflected from there to a white scale divided into millimetres.

An extension of approximately .0001" causes a movement of the spot of light to a distance of 1 millimetre on the scale. The position of the spot of light could be read to  $\frac{1}{5}$  mm.

The instrument has been in constant use over a period of several months with very satisfactory results. Specimens have been tested having sectional areas ranging from one-tenth to twenty millionths of a square inch, with satisfactory results. A patent application has been made covering this instrument.

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## THE MICROSTRUCTURE OF VERY LOW CARBON STEEL.

By R. E. Bedworth.

VERY little information is available regarding the structures which may be produced in steel containing but a few hundredths of one per cent. of carbon. W. J. Brooke and F. F. Hunting<sup>1</sup>

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\* Communicated by the Engineer in charge.

<sup>1</sup> *Journal of the Iron and Steel Institute*, 1917, No. 2, p. 233.