

AN IMPROVEMENT OF TENSILE TESTING CAPABILITY  
OF A UNIVERSAL TESTING MACHINE

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The Universal Testing Machine at the Faculty of Engineering, University of Peradeniya can be used to obtain the load Vs crosshead displacement curves during testing. Auxilliary equipment has been connected to a machine to obtain an accurate load Vs elongation curve during tensile testing.

The load on the tensile specimen, detected by the hydraulic pressure on the ram, is converted to an electrical output by a pressure transducer. A strain-gauge type extensometer is used to measure the elongation of a 25 mm gauge length of the specimen. The extensometer module gives an electrical output corresponding to the elongation of the gauge length of tensile specimen. These electrical outputs are fed to a X-Y plotter to obtain a load Vs elongation curve. This curve is converted to the Engineering Stress Vs Engineering strain curve.

With this arrangement, mechanical properties such as young's modulus, Upper and Lower yield strengths Ultimate tensile, Strength, and work hardening properties of a material can be obtained accurately.

C-14 :10th Dec. 1987 (Thursday) 01.00 p.m. - 01.15 p.m.

C-15 :10th Dec. 1987 (Thursday) 01.15 p.m. - 01.30 p.m.