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Review Paper

Retrospective Investigations of Force Measurement

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Abstract

The present investigation discusses an in-depth retrospective study of different aspects of force measurement. The paper discusses the different force realizing methods (machines) like dead weight force machines, hydraulic amplification force machines as well as recently developed low force standard machine. Different types of force measuring instruments (transducers) like ring shaped force transducers, strain gauged force transducers, Hall Effect based force transducers etc. are discussed. Different types of force transducers developed as modification of simple shaped force transducers have also been discussed. A brief discussion on the standard calibration procedure has been made. Attempts have been made to emphasize over the need to develop simple shaped force transducers for their practical viability in addition to their salient features.

Keywords

Force measurement – Force transducer – Dead weight force machine – Tuning fork type force transducer – Uncertainty