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The method of dimensional analysis for the viscometer with falling weight

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Abstract

This article discusses the possibilities of falling weight method in comparison with other methods of measuring the coefficient of dynamic viscosity of gases and liquids. The analysis of current calibrations of viscometers and proposed the general pattern for the group of similar viscometers with loads of various configurations on the basis of the dimensional analysis with the aim of deriving the universal equation suitable for calculating the dynamic viscosity of gases and liquids in the wide range of temperature changes and pressures.