Determination of Viscosity Versus Pressure by Means of a Clearance Seal

This paper describes the construction and testing of a simple, experimental tool setup that enables determination of the pressure–viscosity relationship for high viscosity oils. Comparing the determined pressure–viscosity relationship with a reference rheometer measuring the viscosity at ambient pressure yields reasonable agreement. The computed viscosity at elevated pressures was well represented by the Chu and Cameron model.

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Corresponding author: Bay, N. O.
Contributors: Christiansen, P., Schmidt Hansen, N., Lund, M. T. O., Spangenberg, J., Bay, N. O.
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