

HYDRAULIC OILS DYNAMIC VISCOSITY AND POUR POINT DETERMINATION

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Physical properties such as viscosity and temperature interval of thermal stability are very important factors of hydraulic oils, bio-lubricants or bio-fuels which influence the possibilities of their use. This article presents the experimental results of dynamic viscosity and pour point of three hydraulic oil OSO S 46 AGIP samples – new oil and two used oils. Measurements were made under laboratory conditions with laboratory viscometer DV2T by Brookfield. Examination of the dynamic viscosity in the temperature interval from 25°C to 90°C was made. The exponential dependency of viscosity on the temperature for the each sample was obtained in accordance with Arrhenius equation. Monitoring of pour point was provided by differential scanning calorimetry (DSC) this method gives information on thermal effects in the sample subjected to the temperature programme was realised in the temperature range from 20°C to the temperature of -45°C by using differential scanning calorimeter DSC 1 Mettler Toledo. It was determined that temperature of freezing (pour point) of used oil samples is lower than new oil sample.