

DESIGN OF A VISCOMETER

by

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Project Report

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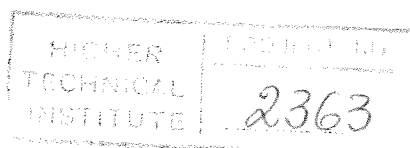
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SUMMARY

The work that follows is having to do with the property of the fluids, called viscosity, the different types of suitable instruments (viscometers) used for measuring this parameter and a design of a DIN-cup viscometer..

The first chapter deals with the issue of fluid viscosity. It gives a definition of this property of fluids, explains the different terms that can be represented, states some laws of viscosity and gives a brief definition of the different types of fluids and viscosity scales.

Chapter two gives the various methods used for the design of viscometers representing for each type of viscometer its main principle and figure as well as giving a review of the instruments used in Cyprus Industry.

A specialization on the Efflux type-Flow cup and the DIN-cup (with interchangeable orifices) viscometers together with their main equations characteristics and method of operation are given in Chapter three. The DIN-cup is simple in design and use locally available materials. The whole theory is concentrated upon the paints mainly and the Newtonian or near-Newtonian fluids.

At the following Chapter four detailed drawings are represented which are constructed using the AutoCAD 12. The dimensions are based on the SADOLINS' Paint Industries DIN-cup.

The last Chapter deals with the construction of the DIN-cup within the boundaries of the Cyprus Industry and Technology explaining some methods of constructions choosing one of them as the most suitable for the case giving also a concept for the cost.

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