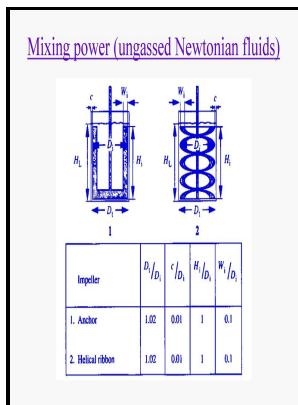


Agitation and mixing by helical impellers in highly viscous and non-Newtonian liquids.

University of Salford - CONSTRUCTION AND OPERATION OF AN IMPELLER RHEOMETER FOR ON



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Tags: #Industrial #Agitators

Agitator Impeller

Finally, it shows a comparison between the performance of the constructed apparatus and that of a commercial bench rheometer by considering experimental data from Aspergillus awamori batch cultivation. Isotropic turbulence is the rare case in which the root, mean and square fluctuating velocity measurements are the same. Rapid mixing takes place near the impeller, with slower mixing, which depends on the pumping circulation rate, in the outer zones.

Power Correlations for Close

The apparatus proposed for on-line rheological measurements showed a good performance, considering its easy operation as well as the accurate experimental data generated. INTRODUCTION Several economically important fermentation processes utilize filamentous microorganisms, generating broths very different from those of bacteria or yeast cultures.

[PDF] EFFECTS OF GEOMETRICAL VARIABLES OF HELICAL RIBBON IMPELLERS ON MIXING OF HIGHLY VISCOUS NEWTONIAN LIQUIDS

Chemical Engineering Science, 65 15 : 4511-4518 Hu, Y. One type of static mixer has a series of fixed helical elements Note that most mixers have from six to 20 elements. The dual pumping action produces a flow pattern similar to low viscosity fluids.

Power Correlations for Close

The numerical study of the stirred tank with helical ribbon HR and helical ribbon with screw HRS impellers was carried out successfully.

Power Correlations for Close

Figure 7: Time course of K and n obtained through on-line and off-line measurements.

[PDF] Experimental and CFD studies of power consumption in the agitation of highly viscous shear thinning fluids

Figure 3: N P vs Re plot in the region of laminar flow for the Newtonian calibration fluid.

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