

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

University of Salford - Agitation and Mixing of Fluids and Power Requirements



Description: -

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

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Notes: PhD thesis, Chemical Engineering.

This edition was published in 1972



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

## Numerical Study of Mixing of Different Newtonian and Non

The Canadian Journal of Chemical Engineering 1998, 76 4 , 689-695. Note: colour scale logarithmic Owing to the reduction in relaxation time at increasing shear rates, the relation between local shear rate and local Weissenberg number is complex, leading to a disconnection between the location of maximum shear rate and maximum Weissenberg number.

## Mixing Flow Characteristics in a Vessel Agitated by the Screw Impeller With a Draught Tube

The ideal result of mixing is a uniform, completely homogeneous solution.

## Agitation and mixing

Chemical Engineering Science 1979, 34 9 , 1160-1162. You may also lower or raise the blade.

## Power Correlations for Close

Figure 6: Flow curves obtained for *Aspergillus awamori* broths by using the on-line impeller rheometer. However, it can be seen that over the whole measured range, Boger A displays lower values of  $N_1$ , and thus lower levels of elasticity.

## Agitation and mixing

Food and Bioproducts Processing, 73 C2 : 49-56 Patel, D. The variations of entropy generation due to only viscous dissipation with Reynolds number, tank geometry, etc. For volumes less than 5 m<sup>3</sup> and homogenization of medium viscosity products, we have our standard VPP3 range with immediate delivery times.

### **Mixing of Newtonian and viscoelastic fluids using “butterfly” impellers**

PASTES WITH EACH OTHER AND WITH SOLIDS.

### **Mixing Flow Characteristics in a Vessel Agitated by the Screw Impeller With a Draught Tube**

Homogenization Efficiency of Helical Ribbon and Anchor Agitators. The flow mechanisms to cause these effects were delineated in detail. Little guidance has been published on this matter.

### **Optimize Heat Transfer of Viscous Fluids in Agitated Vessels**

The Canadian Journal of Chemical Engineering 1992, 70 6 , 1071-1082. The simplest class of devices suitable for gentle blending is the tumbler. The Reynolds number,  $N_{Re}$ , is a measure of how turbulent or laminar the flow is, and is defined by: where  $D$  is the impeller diameter,  $N$  is the shaft speed, and  $\rho$  is the liquid density.

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