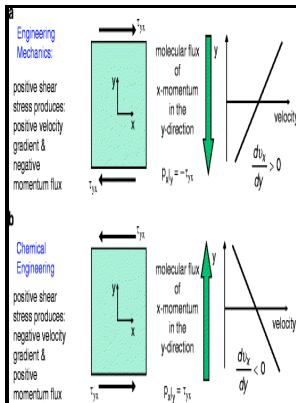


Velocity field in the laminar boundary layer induced by a disc rotating in rheologically complex fluids.

University of Salford - Laminar Boundary Layer Near the Rotating End Wall of a Confined Vortex



Description: -

- Velocity field in the laminar boundary layer induced by a disc rotating in rheologically complex fluids.

- D24172/78 Velocity field in the laminar boundary layer induced by a disc rotating in rheologically complex fluids.

Notes: PhD thesis, Chemical Engineering.

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Tags: #Characterization #of #Mixing #in #a #Simple #Paddle #Mixer #Using #Experimentally #Derived #Velocity #Fields

NUMERICAL MODELLING AND PARTICLE IMAGE VELOCIMETRY MEASUREMENT OF THE LAMINAR FLOW FIELD INDUCED BY AN ENCLOSED ROTATING DISC, International Journal for Numerical Methods in Fluids

The primary effects of rolls on the boundary layer fluxes are inherently nonlocal and nongradient and hence cannot be captured by standard downgradient turbulence parameterizations used in hurricane simulations. The limitations for this process include the fact that centrifuges often cannot be used for clarification since they may fail to remove less-dense solids and those small enough to remain in suspension.

Experimental Investigation of the Laminar Boundary Layer Flow on a Rotating Wavy Disk

The shape and length of propeller blades can be modified when constructed of an EAP material. This is a different situation than the typical midlatitude roll—containing BL where the dynamical mode is relatively weaker than in the hurricane BL. Сравнение с более Ранними исследованиями, основанными на одночленном представлении профиля скорости, устанавливает диапазон справедливости этих исследований.

Experimental Investigation of the Laminar Boundary Layer Flow on a Rotating Wavy Disk

As will be appreciated by those skilled in the art the length of the micro propeller array will vary depending upon curvature of the aircraft or airship and density of the air and speed of the aircraft or airship. Observations indicate that hurricane rolls represent a secondary circulation embedded in the mean BL flow.

Complex Effects in Turbulent Flows

In this study, detailed measurements of the velocity profiles were performed within the laminar boundary layer flow on a wavy disk. Consistent with this scaling the basic-state flow is assumed to be locally parallel; R_e and r_e are large, of comparable magnitude and increase with increasing radius from the storm center. Although the smaller propeller 11 has a proportionally thinner and narrower blade 12, the total moment load force at the

root of the blade 12 is also proportionally smaller.

Experimental Investigation of the Laminar Boundary Layer Flow on a Rotating Wavy Disk

The present article reviews recent theoretical, experimental, and computational research on wind-turbine and wind-farm flows, with emphasis on turbine wakes and their interaction with the ABL. However, at low altitudes, i. The primary effect of curvature is to establish the basic-state flow.

Mixing of Newtonian and viscoelastic fluids using “butterfly” impellers

One of the recently developed major visualization technique is the high-speed three dimensional flow visualization technique developed by Thurow and Lynch 2009.

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