

Contributions at the Define of the Vortex Plane Cyclic Motion

Authors : Petre Stan, Marinica Stan

Abstract : In this paper, a new way to define the vortex plane cyclic motion is exposed, starting from the physical cause of reacting the vortex. The Navier-Stokes equations are used in cylindrical coordinates for viscous fluids in laminar motion, and are integrated in case of a infinite long revolving cylinder which rotates around a pintle in a viscous fluid that occupies the entire space up to infinite. In this way, a revolving field of velocities in fluid is obtained, having the shape of a vortex in which the intensity is obtained objectively, being given by the physical phenomenon that generates this vortex.

Keywords : cylindrical coordinates, Navier-Stokes equations, viscous fluid, vortex plane

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