



What is fluid mechanics?

Fluid mechanics is the branch of physics that studies the behavior of fluids (liquids and gases) at rest and in motion. It is concerned with the principles that govern the flow of fluids, the forces that act on them, and the impact of those forces on solid objects immersed in the fluid or in contact with it.

Fluid mechanics is a broad field that encompasses a wide range of phenomena and applications, including the study of laminar and turbulent flow, the motion of fluids in pipes and channels, the behavior of fluids in containers and tanks, the motion of fluids under the influence of gravity and other forces, and the interaction of fluids with solid surfaces.

Some of the key concepts in fluid mechanics include density, viscosity, pressure, and flow rate. Fluid mechanics also involves the use of various mathematical tools and techniques, such as conservation laws and differential equations, to analyze and predict the behavior of fluids.

Fluid mechanics has many practical applications, including in the design of aircraft and ships, the operation of power plants and hydraulic systems, the analysis of fluid flow in chemical and biological processes, and the prediction of weather patterns and ocean currents.

We have done multiple water, power, and natural gas projects that take advantage of the latest on this topic. And we continue to work on and advance multiple aspects of these solutions today and look forward to sharing more soon.

--

Written by

Andres Carvallo
CEO & Founder
CMG Consulting LLC
Author of "The Advanced Smart Grid"
Series Editor, Power Engineering at ArtechHouse
Chairman, SAE Austin
ASME, IEEE, SAE, SIM member

Co-Director, CIEDAR Consortium
Fellow, Materials Applications Research Center
Professor of Innovation, College of Science & Engineering
Texas State University