FLUID DYNAMICS

Fluid Mechanics

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STUDY OF MOTION OF FLUID FLOW ALONG WITH THE FORCE CAUSING THE FLOW

- **NEWTON'S SECOND LAW**

F= ma

- For flow in x-direction

$F_x = m \cdot A_x$

Fg= gravity force

Fp = pressure force

Fv = viscous force

Ft = force due to turbulence

Fc = force due to compressibility

$Fx = (F_x)_g + (F_x)_p + (F_x)_v + (F_x)_t + (F_x)_c$

$$Fx = (F_x)_g + (F_x)_p + (F_x)_v + (F_x)_t + (F_x)_c$$

$Fx = (F_x)_g + (F_x)_p + (F_x)_v + (F_x)_t$ Rhenold's equations

$Fx = (F_x)_g + (F_x)_p + (F_x)_v$ Navier stokes equation

$Fx = (F_x)_g + (F_x)_p$ Euler's equation