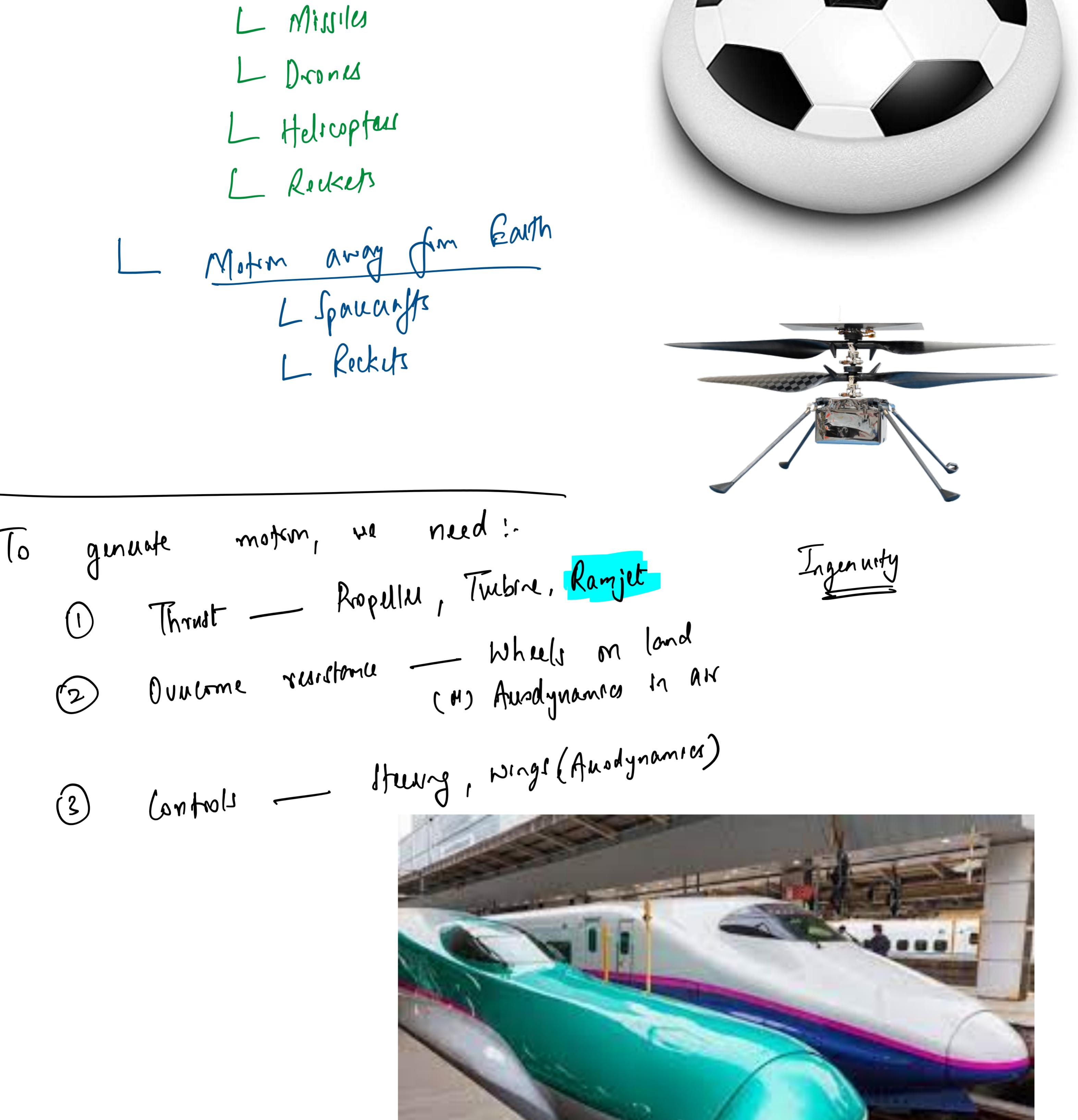


Solid Mechanics
L Deformation

Fluid Mechanics
L Deformation - rates of flow.



L Motion in air : Aerodynamics

- L Aircrafts
- L Missiles
- L Drones
- L Helicopters
- L Rockets

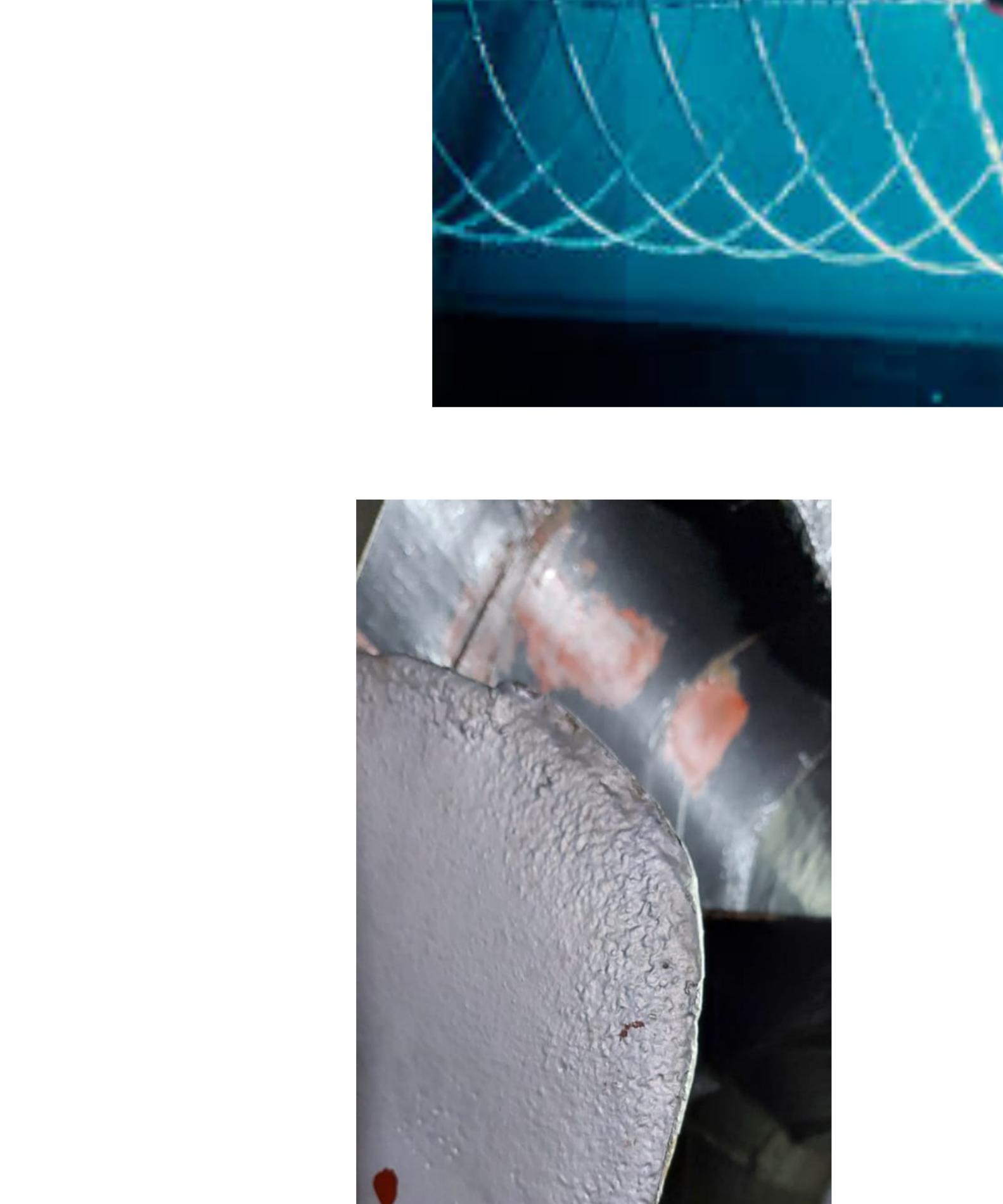
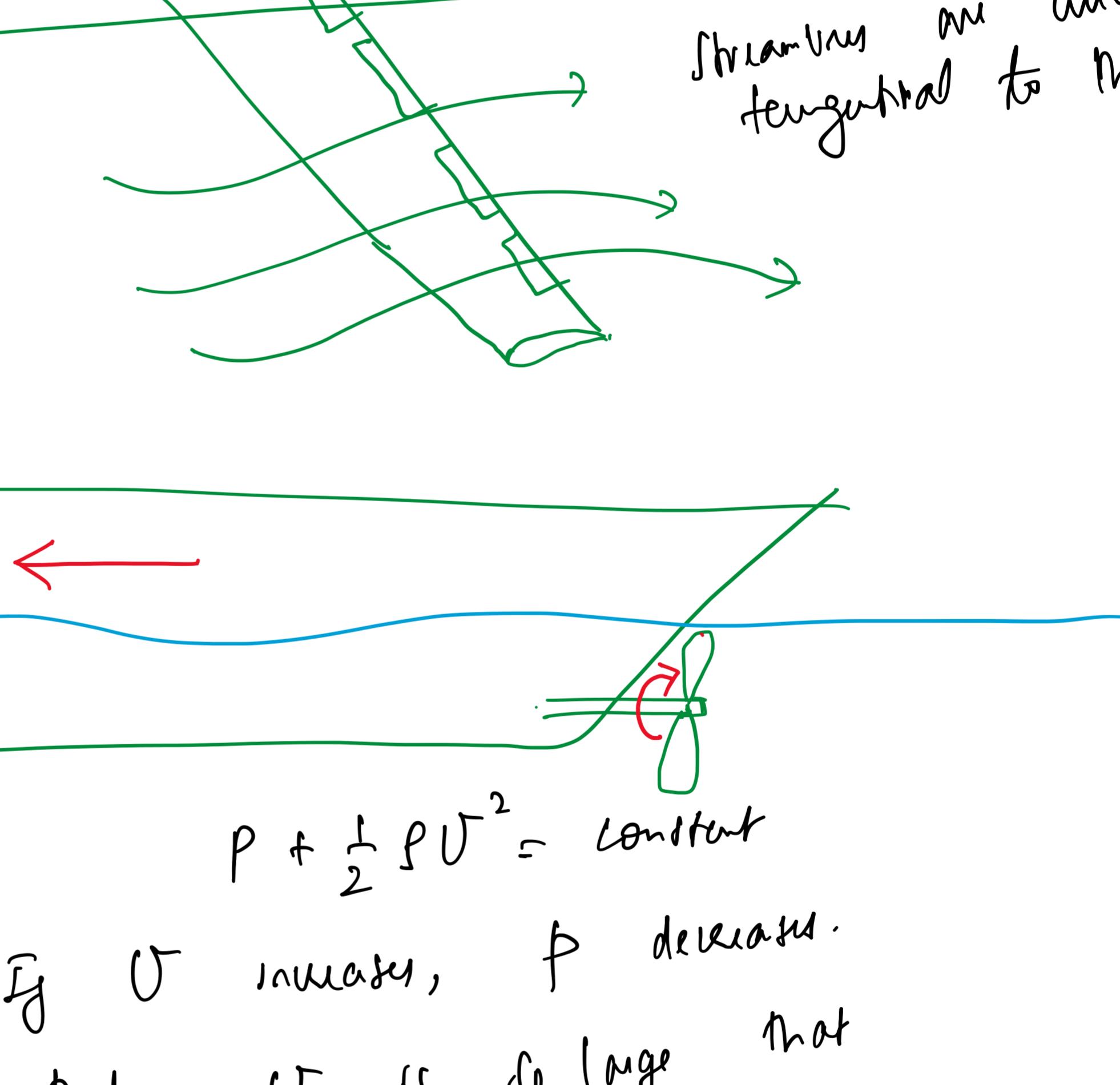
L Motion away from Earth
L Spacemissions
L Rockets



To generate motion, we need :-

- ① Thrust — Propeller, Turbine, Ramjet
- ② Overcome resistance — Wheels on land (Air Aerodynamics in air)
- ③ Controls — Steering, wings (Aerodynamics)

Ingenuity



Pratt & Whitney Propeller engine
suitable for short distance flights w.r.t less load



propeller of ship

BERNOULLI'S EQUATION:-

$$\frac{P}{\rho} + \frac{1}{2} V^2 + gZ = \text{constant}$$

streamlines tangential to the flow

∴ If V increases, P decreases.

If may happen that V is so large that P goes below the vapour pressure of water

It may happen that V is so large that P goes below the vapour pressure of water



INS Kursura



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