SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF AEROSPACE ENGINEERING

23AST206 – AERODYNAMICS

II YEAR IV SEM

UNIT 1 – BASIC AERODYNAMICS AND FLUID MECHANICS

TOPIC – CENTRE OF PRESSURE

CENTRE OF PRESSURE

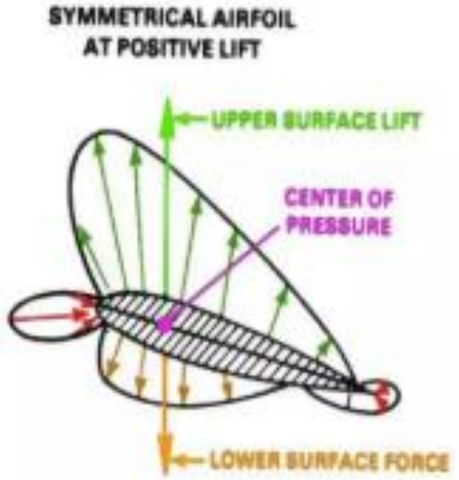
WHAT IS CENTRE OF PRESSURE ?

Center of pressure is the term given to the origin of force vector which represents the sum of all forces acting between a force applicator and supporting surface.The center of pressure corresponds to the single intersection point of a family of lines about which the moments of distributed forces of either side of a line in equilibrium.

CENTRE OF PRESSURE

DETERMINATION OF CENTER OF PRESSURE

In case of a irregular shaped punch the summation of irregular shearing forces on one side of the ram may generally exceed the forces on the other side .This results in a bending moment in the press ram and undesirable effect and misalignment. It is therefore necessary in case of irregular shaped punches to find out the exact center of pressure, and lay out the punch position on the punch holder in such a way that the center of pressure and center of ram hole or the center line of the shank are in the same straight line.



CENTRE OF PRESSURE

IMPORTANCE OF CENTER OF PRESSURE

It is important for the engineers to know about center of pressure, since it allows them to easily balance the lift on objects like aircrafts etc., Because center of pressure is the average location where the average weight of an object, is except this time is the location of the average pressure.

The center of pressure is where the forces of lift and drag are exerted, therefore it is important to calculate the center of pressure of a object.


Thank You