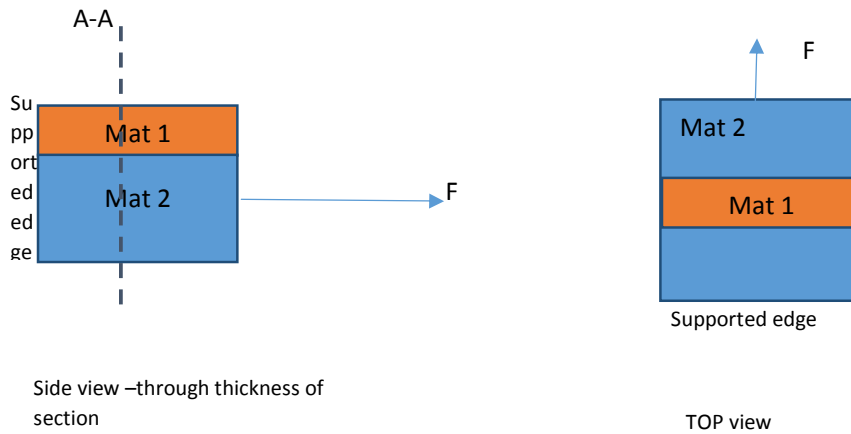
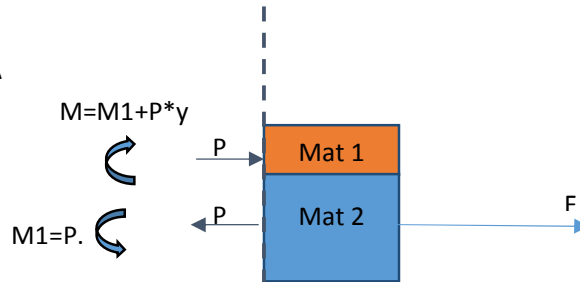


The force (F) passing through the centroid of the Mat2. Due to the stiffness (thickness and modulus) of Mat 1, the natural axis in Mat 2 shift introducing eccentricity and then bending component.



Section A-A



y = distance centre/centre of Mat1 & Mat2

For section Mat2, (P) relates to horizontal displacement (u), and M1 relates to mid-plane rotation. The stiffness matrix can be written in terms of forces and displacements.

My question is:

What is the difference in terms of the deformations and stiffness matrix when we have shear force instead of an extension force applied?

