

The hypothesis of Navier Bernoulli consists in assuming that the sections normal to the average fiber remain flat during the deformation of the beam to the plates.– The principle of Navier Bernoulli amounts to neglecting shear and warping of the cross sections in the study of displacement and deformation of a beam element to plate. Similarly, when we study the torsion, we see that a non-circular section, with two symmetric axes, holds under the effect of a torsional torque a radial warp. It can therefore only be applied to very thin structures.