

AUTO EVALUATION EXERCISE

A wing box has the cross-section shown diagrammatically in the next figure and it is subjected to the following loads:

- A bending moment in a vertical plane of 20 kN m
- A shear load of 100 kN in its vertical plane of symmetry
- A torque of 100 kN m

The thickness of the skins is 2 mm and the shear modulus G is 25000 N/mm².

Calculate:

- The maximum normal stress.
- The shear stress at the mid-point of the web 3-6.
- The rate of twist of the section and the maximum shear stress.

