FINITE ELEMENT METHOD

HOMEWORK 5

TORSION

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TORSIONAL RIGIDITY

THEORETICAL VALUE
\[ D_t = k \times (2a)^3 \times (2b) \times G \]
\[ = 0.229 \times 5^3 \times 10 \times 1000 \]
\[ = 286250 \]

STRESS FORMULATION VALUE
\[ D_s = 231326 \]

DISPLACEMENT FORMULATION VALUE
\[ D_d = 333667 \]

MESH GENERATION
3 NODE – TRIANGULAR ELEMENTS :
TORSION
CONTOUR GRAPHIC OF STRESSES

CONTOUR GRAPHIC OF DISPLACEMENTS