

ENGLISH SUMMARY

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Warping effect in beam structures consists of primary (contour) and secondary (thickness) warping. Beam under torsional loading is assumed to deform without distortion. Strains due to the contour warping cause uniaxial membran stresses, and strains due to the thickness warping cause plane stresses. The secondary warping has only a small effect on location of the shear center as well as on deformations of the whole structure. However, the secondary warping has a considerable effect on local stresses, and it should be taken into account for e.g. in fatigue analysis of the structure.