Evaluation of web buckling test results on welded beams and plate girders subjected to shear

Marta Sulyok - Selimbegović

Faculty of Architecture, University of Zagreb, HR-10000 Zagreb, Fra Andrije Kačića Miošića 26, CROATIA

Theodore V. Galambos

Department of Civil Engineering, University of Minnesota, Minneapolis, MN 55455-0220, USA

SUMMARY

The limit state design requirements for welded beams and plate girders in shear, and combined bending and shear, are analyzed and criteria for two codes (AISC and EUROCODE 3) are compared. As the differences in the design requirements are substantial, the comparison of the achieved reliability indices is made in order to find out the model which is closer to the target reliability level. The statistical parameters of the experimental results are evaluated and the FOSM method is used for the procedure of the calibration. The results vary for two examined models and it is necessary to achieve target values of reliability by correction of the models by the resistance factors.