NUMERICAL MODEL FOR THE NONLINEAR ANALYSIS OF SPATIAL FRAMEWORK SYSTEMS

Markić, R.; Mucić, S.; Radnić, J.; Harapin, A. & Grgić, N.

Abstract: This paper briefly presents numerical model for the nonlinear analysis of spatial concrete framework systems. The model is based on the linear-elastic bar model and the model for dimensioning of general composite cross sections loaded with excentric axial force. The model of material behaviour can be set arbitrarily according to the experiment or the relevant standards.

On a quite simple example of total restraint beam, the features of the model have been analysed and some common delusions made by engineers have been commented on.

Key words: spatial framework system, nonlinear analysis.



Authors' data: Markić, R.[adoslav], Mucić & CO d.o.o., Put za Međugorje b.b., Ljubuški, Bosnia and Herzegovina; Mucić S.[tanislav], Mucić & CO d.o.o., Put za Međugorje b.b., Ljubuški, Bosnia and Herzegovina; Prof. Radnić, J.[ure], Ph. D., University of Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Croatia, jure.radnic@gradst.hr; Prof. Harapin, A.[len], Ph. D., University of Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Croatia, alen.harapin@gradst.hr; Grgić, N.[ikola], University of Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Croatia, alen.harapin@gradst.hr; Grgić, N.[ikola], University of Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Croatia, alen.harapin@gradst.hr; Grgić, N.[ikola], University of Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Croatia, alen.harapin@gradst.hr; Grgić, N.[ikola], University of Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Croatia, alen.harapin@gradst.hr; Grgić, N.[ikola], University of Split, Faculty of Civil Engineering and Architecture, Matice hrvatske 15, Split, Croatia.