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UTICAJ DEFORMACIJE TLA NA PRORAČUN SISTEMA PO TEORIJI DRUGOG REDA

Sažetak:

U radu je prikazan proračun sistema po teoriji drugog reda na elastičnim osloncima. Pri proračunu je usvojen linearnan odnos naprezanje-slijeganje tla. Prezentiran je metod proračuna nosača oslonjenih na krute i deformabilne oslonce uvodeći geometrijsku nelinearnost u proračun. Izvedeni su izrazi za krutosti oslonaca u vertikalnom pravcu i na obrtanje temelja, usljed elastične deformacije tla. U numeričkim primjerima pokazana je primjena opisanog postupka. Kroz dijagrame i tabele statičkih i deformacijskih uticaja izvršena je usporedba rezultata proračuna.

Ključne riječi:

Teorija drugog reda, deformabilni oslonci, geometrijska nelinearnost

THE IMPACT OF SOIL DEFORMATION ON THE CALCULATION OF SYSTEM ACCORDING TO THE SECOND ORDER THEORY

Summary:

The paper shows the calculation of the system by second order theory on elastic supports. At the calculate it adopted a linear relationship of stress-displacement soil. The method of calculating the beams based on rigid and deformed supports was presented by introducing geometric nonlinearity into the calculate. Expressions were performed for the rigidity of the supports in the vertical direction and on the rotation of the foundation, due to the elastic deformation of the soil. Numerical examples show the application of the procedure described. Through diagrams and charts of static and deformation, a comparison of calculate results was made.

Key words:

The second order theory, deformed supports, geometric nonlinearity

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