



INTERPRETACIJA METODOLOGIJE PROJEKTIRANJA PODZEMNIH GRAĐEVINA

Sažetak:

U radu se prezentuje metodologija projektiranja podzemnih građevina kroz konkretni primjer nosivosti i stabilnosti jedne izvedene podzemne građevine. Za projektovanje podgradnog sustava podzemne građevine koristi se analitički pristup sa analitičkim rješenjem i numeričkom metodom (metoda konačnih elemenata) sa programskim paketom PHASE2. Podzemne građevine su prostorni problemi (3D model) u kojem imaju uticaj širina, visina i dužina podzemne građevine, dok je PHASE2 napravljen za ravninske probleme (2D model). Iz tih razloga za proračun koriste se empirijski podaci koji omogućavaju pravilan izbor optimalnog 2D modela za numeričku analizu programom PHASE2. Za primjenu empirijskih podataka u numeričkoj analizi koristi se empirijska metoda Vlachopoulos i Diederich. Dat je pregled i analiza rezultata dobijeni analitičkim rješenjem i numeričkom metodom.

Ključne riječi:

Podzemna građevina, analitičko rješenje, numerička metoda, empirijska metoda Vlachopoulos i Diederich, PHASE2.

INTERPRETATION OF METHODOLOGY OF PROJECTING UNDERGROUND STRUCTURES

Summary:

This paper presents a methodology for the design of underground structures through a concrete example of the bearing capacity and stability of a built underground structure. The design of the composition of the lining underground structures uses an analytical approach with an analytical solution and a numerical method (finite element method) with the PHASE2 program package. Underground structures are spatial problems (3D model) in which the influence of the width, height and length of the underground structure while PHASE2 is made for plane problems (2D model). For these reasons, empirical data is used to enable the correct choice of the optimal 2D model for numerical analysis by the PHASE2 program. For the use of empirical data in the numerical analysis, the empirical method Vlachopoulos and Diederich is used. An overview and analysis of the results obtained by analytical solution and numerical method is given.

Key words:

Underground structure, analytical solution, numerical method, empirical method Vlachopoulos and Diederich, PHASE2.

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