



“Gheorghe Asachi” Technical University of Iasi, Romania



GROUNDWATER - UNDERGROUND STRUCTURES INTERACTION IN URBAN ENVIRONMENT IN BUCHAREST AREA

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Abstract

Underground space represents an area with multiple management problems, mainly related to water resources management, difficulties for new underground constructions (as diaphragm walls, tunnels, dewatering systems etc.), interpretation of hydro-geological data or influence of the new constructions on the existing ones. The management of this area is even more difficult due to the multitude of works, of the (sometimes) chaotic development, of the poor legislation, various ownerships of the land, as well as of the lack of a real authority to manage the underground space. The research presented in the paper is part of a larger research project called „Management platform for groundwater in sedimentary media in urban areas – SIMPA”, a project of the Technical University of Civil Engineering Bucharest, granted by the National Authority for Research. The project aims to develop a GIS platform of the sedimentary media in Bucharest area. It presents the geological and hydro-geological conditions of a limited area of Bucharest (Romania), the models developed and the numerical modeling for illustrating the interaction between different types of underground works with the groundwater, including hydro – mechanical coupling.

Key words: groundwater, interaction, numerical modeling, soil, underground structures

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