

APPROACH TO ASSESSING THE CONSEQUENCES OF EMERGENCIES IN SEWER TUNNELS

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Abstract

The paper deals with the approach to assessing the consequences of emergencies in sewer tunnels based on multicriteria analysis. A detailed analysis was performed of tendencies of research interests and areas in the world concerning the issue of the reliability of sewer networks. The main causes of deterioration of sewer tunnels resulting in the occurrence of emergencies were identified. A classification was proposed of the factors of their deterioration according to the following groups: production factors; factors of durability of materials of linear portions of a network; organizational and technological factors; operational factors; factors of the external operating environment. The main groups of consequences caused by emergencies were classified; in particular, the following groups were identified: ecological, economic, technical, social, innovative. The method was proposed for determining ranks of consequences of an emergency by means of the corresponding scale of ranks developed by the authors and the system of their determination. The main criteria and the range of their values were determined according to which an assessment is given and a rank is determined according to the emergency.

Keywords: Consequences; Corrosion; Demolition; Emergency; Sewer tunnel.