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Reconstruction Methods of Continuous Working Groundwater Canals

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Abstract

The article describes the methods of reconstruction of groundwater irrigation canals, which work continuously or intermittently during the year. In Azerbaijan 50% of main canals with a total length of 2370.45 km, 82% of first-class distribution canals with a total length of 8867.2 km and 75% of second and third distribution canals with a total length of 41,985.3 km are operated in the ground canal. An average of 30–35% of the irrigation water transported through these canals is exposed to leakage losses, and therefore there is a shortage of

water during the irrigation season. At the same time, as a result of global climate change in recent years, freshwater resources in the world, including Azerbaijan, are gradually declining. In the first method, to carry out reconstruction work the canal is divided into separate parts, a temporary transmission canal is laid in parallel and the main canal is covered. At the same time, the hydraulic structures on the canal are being repaired or reconstructed. In the second method, the main canal is divided into two parts by longitudinal partition boards, and the dried part of the canal is reconstructed. After the completion of this work, the second part will be reconstructed. In the third method, without compromising the operation of the canal, the bottom and slopes of the canal are covered with prefabricated reinforced concrete or asphalt concrete, as well as with the mats made of bentizol materials. In the fourth method, underwater concreting is carried out with the help of caisson chambers, it means the bottom and slopes of the canal are provided with a waterproof coating. There is also information about the advantages and disadvantages of the methods described in the article.

Keywords

Irrigation canal Lining Facelift

Continuous operation Reconstruction

Method

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