

RESEARCH ON STRUCTURAL AND FUNCTIONAL STATUS OF SUPPLY CHANNELS IN IRRIGATION SYSTEMS

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Abstract

Irrigation systems in Romania were built 40-60 years ago, and those that are still in operation have varying degrees of infrastructure degradation. The degradation of the structural components of the irrigation system determined the appearance of water losses and the decrease of the exploitation efficiency. Research conducted over about 15 years has shown the state of advanced degradation of the supply channels and a significant decrease in their operating yields up to 40-60%. The absence of maintenance, repair and rehabilitation works determined the structural degradation of the canals. The degradation phenomena are represented by clogging, compaction, erosion of the slab sealing joint, cracking - breaking - movement of the slabs on the perimeter of the canal, etc. Important degradations are highlighted in the constructions on the canals: hydrotechnical derivation nodes, underpasses of roads, water intake of the pumping stations, etc. All this causes a large part of the volume of water transported by the canals to be lost through infiltration. The current structural and functional state of the irrigation canals requires the immediate application of rehabilitation works.

Key words: hydraulic efficiency, flow section, water leaks, waterproofing
