

Polemidhia Dam

The Polemidhia Dam is constructed on the Garyllis River, at the profile which is about 6 km far from its estuary and also not far from the town of Limassol. The water impounded in the storage reservoir of 3.4×10^6 cu.m capacity is used for irrigation of cultivated land located downstream from the dam site.

The dam site area is made up of stratified marly and sandstone layers occurring at the river bed and right river bank. These layers are locally fissured at the right bank and overlain by river sediment in the river bed. The left river bank is made up of very disturbed sandstone layers, appearing in blocks, with large fissures and cavities. This sandstone is partly overlain by consolidated debris. The whole left abutment, where the spillway is constructed, is characterized by a very high rate of permeability. Therefore, considerable grouting works were required and a great quantity of grouting mass used.

In order to prevent the lateral seepage of water at the left abutment a side grout curtain was constructed. The definite length of the curtain was determined after the storage reservoir had been filled up for the first time in 1965.

The observations and measurements carried out at the piezometers and springs located downstream from the dam profile provide satisfactory results.

GENERAL DATA

LOCATION: The Republic of Cyprus
DAM SITE GEOLOGY: Sandstone and marl
YEAR OF CONSTRUCTION: 1965
INVESTOR: Department of Water Development

DAM DATA

TYPE: Gravel-fill dam with central clay core
HEIGHT: 38 m.
CREST LENGTH: 137 m.

TOTAL EMBANKMENT VOLUME: 215,000 cu.m

SPILLWAY DATA

MAXIMUM SPILLWAY CAPACITY: 550 cu.m/sec.
TYPE OF SPILLWAY: Free overflow side channel
TYPE OF CHUTE: Trapezoidal channel, concrete lined, L = 100 m.
ENERGY DISSIPATOR: Ski jump over large rock blocks