

Yermasoyia Dam

The Yermasoyia Dam is constructed on the Yermasoyia River at the profile which is about 5 km. far from its estuary. The dam is located in the vicinity of the town of Limassol and the water from the storage will be used both for irrigation of arable land (940 hectares) and to meet the town water supply requirements (potable and industrial water requirements, etc.).

The total capacity of the storage reservoir is 1.5×10^6 cu.m.

The dam site area is made up of marly limestone and sandstone appearing in layers ranging from 10 cm to 1 m in thickness. A 15 metres thick gravel sediment overlies the bedrock in the river bed. The bedrock is ununiformly fissured due to tectonic movements, therefore, the rate of water permeability is considerably higher at the left river bank.

The selected dam profile enables usage of material taken from the excavations for the spillway and chute and its placing in to the downstream shell zone and secures enough time required for carrying out the grouting works in the alluvial sediment by applying clayey - cement and chemical-silicate mass. Immense grouting works have been carried out both in alluvial sediment and at the left bank, i.e. in the bedrock.

The observations carried out at the piezometers after the storage reservoir was filled up in 1968 indicated that the grouting works had been done properly and, in consequence, the rate of seepage through sediment and banks may be considered negligible; the piezometric levels are enough below the structure foundations.

GENERAL DATA

LOCATION: The Republic of Cyprus
DAM SITE
GEOLOGY: Sandstone, marly limestone, marl
YEAR OF
CONSTRUCTION: 1969
INVESTOR: Department of Water Development

TOTAL
EMBANKMENT
VOLUME: 515,000 cu.m

DAM DATA

TYPE: Gravel and random-fill dam with central clay core
HEIGHT: 50 m.
CREST LENGTH: 290 m.

SPILLWAY DATA

MAXIMUM
SPILLWAY
CAPACITY: 800 cu.m/sec.
TYPE
OF SPILLWAY: Gate with counterweight
TYPE
OF CHUTE: Trapezoidal channel, concrete lined, L = 100 m.
ENERGY
DISSIPATOR: Ski jump over rock strengthened by concrete