

PROJECT SUMMARY

Karakurt Dam and HEPP Kars, Turkey

Project Description

The Karakurt Dam and HEPP project is a hydropower plant with an installed capacity of 99.5 MW which is located on Aras River, in the province of Kars, northeast part of Turkey.

The surface powerhouse contains Francis turbines. The units have an energy generation capacity of 345 GWh. The project scheme comprises of a 137 m high asphalt core rockfill dam, a gated spillway, an energy tunnel and a surface powerhouse.

By the time the asphalt core rockfill dam went into service, it was the highest of its type in Turkey.

Technical Data

Installed Capacity: 99.5 MW

Asphalt Core Rockfill Dam (ACRD):

- Rockfill volume: 6.4 million m³
- Asphalt core volume: 30 500.0 m³
- Crest length: 497.0 m
- Dam height: 137.0 m

Types of turbines: Francis

Client

AGE İnşaat ve Ticaret A.Ş.

Project

Karakurt Dam and HEPP

Services

AFRY Austria carried out a check of the dam design and technical specifications and supported the client (civil contractor of the dam) in the dam fill works.

On-site large-scale material testing of granular materials was carried out to determine in-situ material characteristics and prove the suitability of the same.

AFRY engineers developed together with the client a suitable asphalt mix design for high seismic regions. Site assistance was carried out for asphalt trial in-situ tests. Before starting of asphalt placing works, comprehensive quality assurance and quality control program was developed and established.

The client's key-staff were technically supported while on duty to ensure a high-quality asphalt placing process.

Execution Period

2018 – 2019