

Low Head Plants

Kale Weir and Hydroelectric Power Plant TURKEY



Kale Weir and Hydroelectric Power Plant is a hydropower scheme located on Yeşilırmak River in Amasya province, in Middle Black Sea region of Turkey. It is licensed by the Energy Market Regulatory Authority (EMRA). The project is planned to be operational at the beginning of the year 2013

The power tunnel having diameter 6.05m and length of 4176m, is followed by valve chamber. 6.0m diameter penstock continues from valve chamber to bifurcation point. At bifurcation point, the penstock, which is divided into three branches with a diameter of 3.10m, reaches to powerhouse structure.

The powerhouse is a reinforced concrete structure with three vertical axis Kaplan type turbines, and installed capacity of each unit is 12.0 MW.

Client:

Avkal Enerji Elektrik Üretim Ticaret Ltd. Şti.

Powerhouse:

- | | |
|----------------------------------|-----------------------------|
| • no.s/type of turbines | 3/kaplan, vertical axis |
| • rated capacity/rated discharge | 36MW/110.0m ³ /s |
| • rated head | 37.5 m |
| • rotation/frequency | 333 rpm/50 Hz |
| • firm energy production | 20.13 GWh/a |
| • second energy production | 88.59 GWh/a |

Execution :

2011-2013

Services :

- Review, appraisal and recommendations for feasibility study
- Preparation of final design reports and drawings
- Preparation of technical specifications and tender documents
- Programming site investigations and evaluation of the works
- Preparation of detailed construction drawings for project structures.