

Small Water Power Station Troja



Characteristics:

SWPS is installed on the left-hand side of the Vltava River in Prague at the point of Císařský island, between Troja weir and a lock chamber. Conceptually, it was dealt with as an underground structure of which the part above the ground level is formed only by a staircase leading to the SWPS. Width of the structure measured through axis of turbines is 18m, length of the intake and outflow is 130 m, foundation depth 13m below the surface level.

Parameters:

2 x tubular horizontal Kaplan turbine with the impeller diameter of 2,6m and an angle transmission
 Absorption cap. : $Q = 2 \times 40 = 80 \text{ m}^3 / \text{s}$
 Design head: $H_n = 3 \text{ m}$
 Range of heads: $H = 1,5 - 3,6 \text{ m}$
 Maximum output: $P = 2 \text{ MW}$
 Expected annual production of electrical energy : $E = 13 \text{ GWh/year}$

Construction period:

construction 8.10.2007 – 3.8.2009
 testing operation 08/2009 – 02/2010
 commissioning 17.2.2010

Locality: Císařský island in Prague, The equipment is situated on the left-hand side of the Vltava River between the existing Control Room of the Troja weir and Troja lock chamber.

State: Czech Republic

Investor: Povodí Vltavy, s. p. (Vltava Waterways gov. org.), company "Dolní Vltava"
 Grafická 36
 150 21 Praha 5

Supplied works:

Surveying
 Geological investigation
 Study
 Doc. for Land Use Permit (DLUP)
 Doc. for Building Permit (DBP)
 Construction Documentation (CD)
 As-Built Documentation
 Project Supervision
 Coordination of the civil and mech./el activities on the project

The implementation costs:

350 mill. CZK (VAT exclusive)

Supplier:

General Designer:
 PÖYRY Environment a.s, Botanická 834/56, 602 00 Brno

The civil part was implemented by an association of companies represented by its leader - Metrostav a.s. Koželužská 2246, 180 00 Praha 8, Section 6

Mech./El. part was implemented by association of companies Siemens Engineering a.s., Doudlebská 1699/5 140 00 Prague 4, the turbine was supplied by a subcontracting company VA TECH Escher Wyss AG Escher-WYSS-Str.25, D-88212 Ravensburg, Germany

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