



Design of cooling water intake for a 1,700 MW Power station

The Dutch electricity production company EPON has built an extension of her electricity plant at the Eems Harbour. The cooling water intake has a total capacity of 200,000 m³ per hour.

Svašek Hydraulics was asked to design the layout of the access canal of the cooling water intake and outlet channel. After completion of the extension Svašek Hydraulics has evaluated the performance of the hydraulic design and the siltation predictions. It was found that the system performed very well in accordance with the design.

The following services were provided:

- determination of the concentration of fines near the cooling water intake channel
- transport of fines in the cooling water intake channel
- 3-dimensional flow computations of the cooling water intake channel
- guidance of physical model tests of the intake structure
- dynamic aspects in the cooling water intake channel due to switching on and off the pumps
- evaluation of hydraulic design aspects in the operational phase of the project

Client
EPON

Location
Eems Harbour, Groningen,
The Netherlands

Date
1992 (study)
1999 (evaluation)

Services
3D flow computations, sediment
transport in intake channel,
guidance physical model tests,
evaluation of hydraulic design in
the operational phase