Lysebotn II Kraftverk









SHORT DESCRIPTION

Lysebotn power plant is the main power plant of the Lyse Group and was opened in 1953 with a capacity of 210 mW. The development of Lysebotn II has provided a new output of 370 mW and was commissioned in 2018. The development took place while the existing power plant was in operation during construction.

THE PROJECT

The project included blasting of tunnels, caverns and concrete works, including inlet tunnels, outlets in the sea, shafts, tunnel portals and extensive concrete works inside the power station. The station itself is located 1.5 km inside the mountain and 15 meters below sea level.

Tunneling was done using traditional drilling and blasting. The three longest hatch shafts of the project of 58, 55 and 44 meters respectively were wire sawn and thus concrete work could be carried out in parallel. Other shafts were drilled and blasted.

Injection was carried out from tunnel level at pressures of up to 70 bar. A-B and C screens were drilled at hatches, plugs and pressure pipes to measure water loss before injection was carried out in the A-C-B sequence. Only industrial cement

was used.

The project was carried out with three penetrations under water. These were performed by filling water to the indicated level behind the established hatch, while the last part remained air-filled against the ointment to dampen the air pressure against the hatches. All penetrations were successful.

Water and frost protection works were carried out in the form of PVC cloth and sprayed concrete, this was done in accordance with the Norwegian Public Roads Administration Manual R510 edition 2006-10. Water from the tunnel was pumped through treatment plants with sludge separators, pH adjustment and filtration before discharge to the sea, and the tunnel masses were put to socially beneficial use by being used to construct a new breakwater for a marina in Lysebotn.

FACTS

Location	Lysebotn , Norway
Status	completed
Construction volume (value of our services)	610 M NOK
Start of construction	May 2014
Completion	February 2018
Building owner	Lyse Produksjon AS

SERVICES

Tunnelling

Infrastructure