

Ejector Dredge

Necaxa Reservoir, Mexico

Challenge

After more than a century of operation, the Necaxa Reservoir had accumulated substantial sediment deposits in front of the intake tower. The lower intake gates were partially blocked by highly consolidated sediments, creating operational challenges and limiting access to the full intake capacity. Sediment depths reached up to 16 m, with water depths of up to 40 m.



General view of the SediCon Ejector Dredge



Sediment discharge

Solution

SediCon designed, manufactured and commissioned a custom Ejector Dredge capable of disintegrating highly consolidated clay with undrained shear strength up to 160 kPa.

The system combines hydraulic jetting and water ejector technology to remove sediment and relocate material up to 200 m from the intake structure. During site acceptance testing, dredging rates exceeding 80 m³/h were achieved.



Project Location

Project facts

Client: HPM ENERGY SA de CV
Project: Necaxa Reservoir
Location: Mexico
Technology: Ejector Dredge
Installed capacity: 199 MW
Sediment depth: Up to 16 m

Results and benefits

- Dredges consolidated clay
- Handles sediments up to 160 kPa
- Restores intake functionality
- Relocates sediment 200 m
- Achieved >80 m³/h capacity
- Operates at depths up to 40 m

For more than 30 years, SediCon has developed and supplied proprietary sediment handling technologies from Trondheim, Norway. Our solutions for reservoirs, intakes, desanders and tunnels have been successfully implemented in hydropower projects in more than 20 countries across five continents.