

HydroSuction Dredge

Tinguiririca & Tricahue, Chile

Challenge

The Tinguiririca and Tricahue reservoirs receive large volumes of sediment from the Andes mountain range. The client required a flexible dredging solution capable of operating in two reservoirs with varying water levels and sediment conditions, while handling both coarse material and cohesive sediments.



Tinguiririca reservoir



SediCon HydroSuction Dredge installed in Tinguiririca reservoir

Solution

SediCon designed, supplied and commissioned a mobile SediCon HydroSuction Dredge for operation in both reservoirs. The dredge was designed for a nominal capacity of 80 m³/h and can remove rocks and debris up to 200 mm as well as cohesive sediments with shear strengths up to 20 kPa.

During performance testing, the system achieved dredging rates of up to 183 m³/h, more than doubling the nominal design capacity. The dredge is equipped with GPS positioning, concentration monitoring, remote operation and live camera surveillance, allowing all functions to be controlled directly from shore.



Project Location

Project facts

Client: Tinguiririca Energia
Project: Tinguiririca & Tricahue
Location: Chile
Technology: HydroSuction Dredge
Installed capacity: 155 MW + 170 MW
Reservoirs: 2

Results and benefits

- Achieved 183 m³/h capacity
- Removes debris up to 200mm
- Operates in two reservoirs
- Handles cohesive sediments
- Integrated GPS monitoring
- Flexible deployment

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.