

Large-Scale Sluicer system

Coca Codo Sinclair Hydropower Plant, Ecuador

Challenge

Coca Codo Sinclair is a 1500 MW run-of-river hydropower plant and Ecuador's largest power station. The river carries several million tonnes of sediment annually, while the intake pond provides virtually no sediment storage.

Eight large desanders are therefore required to continuously remove sediments and protect downstream equipment.



One of eight desanders equipped with five SediCon Sluicers each



Continuous sediment discharge during operation

Solution

SediCon supplied 40 fully independent Sluicers, with five units installed in each of the eight desanders. The system continuously removes settled sediments and discharges them into the bypass channel while maintaining uninterrupted power production.

Each desander is equipped with five echo sounders for continuous sediment level monitoring, enabling fully automated or remote operation from the intake control room.



Project Location

Project facts

Client: Sinohydro Ltd. / Coca Codo Sinclair Ltd.
Project: Coca Codo Sinclair HPP
Location: Ecuador
Technology: 40 x SediCon Sluicers
Installed capacity: 1,500 MW
Annual production: 8.6 TWh
Net head: 604 m
Design discharge: 220 m³/s

Results and benefits

- 40 SediCon Sluicers installed
- 8 desanders equipped
- Removes up to 6 million t/year
- Fully automated operation
- Continuous sediment monitoring
- Uninterrupted power production

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.