SediCon®
Removing sediments

Reference Project 2012

SediCon Dredge for El Canada HPP, Guatemala

The SediCon Dredge have been operating in El Canada HPP since 2012 with a monthly average sediment removal rate of 20,000 m^3.

January 2012

February 2012

Project Description: The 47 MW Power plant has a forebay with a total capacity of about 200,000 m^3 and a live storage of 185,000 m^3. The annual production of the project is 178 GWh, with a net head of 380 m and a discharge of 15 m^3/s.

Location: Retalhuleu, Guatemala. Coordinates: 14°42'32.0"N 91°31'56.4"W

Client: Enel Guatemala SA

Sediment Challenge: An average of 50,000 m^3 of sediment are deposited in the reservoir annually, including garbage, debris and organic material. Besides, the sediments are highly cohesive, making removal by flushing impossible, and the pond has a delicate PE lining.

Solution: A customized 10”/12” hydrosuction reservoir dredge with efficient water jetting was especially designed for the forebay. The existing 600 mm diameter drainage pipe is used to discharge the sediments. The SediCon Dredge was installed, tested and commissioned in December 2011 / January 2012.

Results: Water jetting in combination with gravity powered suction removed the 8 years old and 8 m thick cohesive sediments. Sediment deposits are continuously being removed at an average rate of more than 100 m^3 per hour.

Reduction of CO2 emissions It is estimated that recovering the peaking capacity of this project reduces emissions in the order of 6,000 tons of CO2 per year by reducing the required amount of electricity generated with carbon. Besides, it was estimated that emissions of hydrosuction dredging are only around 2% of the emissions from a diesel dredge.

SediCon is the leading supplier of sediment handling worldwide and provides reliable solutions with low water consumption and uninterrupted power production.