

Sluicer

Miwa Dam, Japan

Challenge

Miwa Dam is Japan's national test facility for sediment management technologies. Due to two major geological weakness zones, the reservoir experiences one of the highest sediment loads in the country, resulting in rapid loss of storage capacity.

The Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT) required a full-scale demonstration of an efficient reservoir sediment removal technology.



Full-scale SediCon Sluicer installed at Miwa Dam



Sediment discharge during testing

Solution

SediCon designed, supplied and commissioned a full-scale SediCon Sluicer for demonstration at Miwa Dam. The system utilizes the available head difference to discharge sediments without mechanical equipment.

During the demonstration, the 30 m long Sluicer successfully removed up to 5 m thick sediment deposits by simply opening the outlet valve, demonstrating the effectiveness of the SediCon Sluicer concept.



Project Location

Project facts

Client: Khwa Engineering Co. Ltd. / MLIT
Project: Miwa Dam Test Facility
Location: Japan
Reservoir length: 4 km
Implementation: 2008

Results and benefits

- Full-scale validation
- Removed 5 m sediment deposits
- 1,200 m³ removed during test
- Gravity-driven operation
- No mechanical equipment
- Verified Sluicer performance

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.