

The giant from Mannheim will be used in the hydropower plant on the island of Sumatra, Indonesia

HYDROPOWER PLANT > AREA OF APPLICATION HYDROPOWER PLANT > AREA OF APPLICATION HYDROPOWER



24

VAG On-site

12/10

Medan, North Sumatra, Indonesia

In the north of the island of Sumatra lies the metropolitan region of Medan. With some 3 million inhabitants, it is the third largest city in Indonesia.

It is here, on the banks of the Asahan River, that the China Huadian Engineering Corporation, one of China's largest plant manufacturers, built the Asahan hydropower plant within the framework of a joint venture.

China Huadian Engineering Corporation and the plant manufacturer Beijing Guodian hydro- & water

conservancy design institute built the power station together, free of cost for the Indonesian government, and will be running it themselves for 10 years. At the end of the 10 years, the plant will become the property of the Indonesian government, who will run it independently.

The parties quickly realized during the planning and tender phase for this huge power project that many manufacturers could not meet the valve's specifications. All of the manufacturers offered a dual-valve solution that the parties rejected because of the additional costs for an additional valve chamber and because controlling and operating the valves would be too complex.

The 150 km long Asahan River flows out of Lake Toba in north Sumatra, the biggest volcanic lake in the world.

Project overview

Project:

Build the Asahan hydropower plant on the island of Sumatra

Valves:

1 VAG KSS Hollow Jet Discharge Valve
DN 1600, PN 25

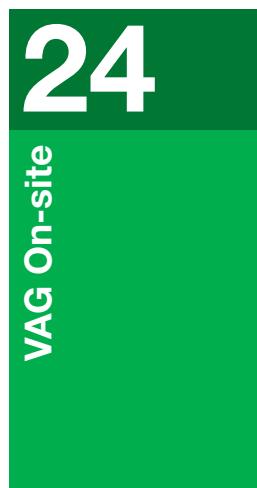
Project duration:

Putting into operation 8/2009

Awarding authority:

China Huadian Engineering Corporation





VAG-Armaturen GmbH was the only company that knew that it could meet the operational requirements with only one valve:

Standard pressure: 170 mWs
Maximum pressure: 240 mWs
Open and close within 120 seconds
Automatic, dual control

The desired flow rate of 68/m³ would make this valve unique because it would be the biggest valve ever made in the world.

In addition, VAG's international service network enables the company to be present at ever more sites so the company can assemble the valves, install the controls, optimize the control process and carry out the required inspections itself.

An excellent reputation and a number of important references swayed the Chinese companies' decision in favour of collaborating with VAG.

In August 2009, the 'giant baby' arrived at the port of Belawa. Because there is neither a railway nor a motorway between Belawa and Asahan, the huge crate, which was the size of a ready-made garage, had to be transported over rural roads. It took over 50 hours for the precious cargo to reach its goal.

Three VAG service engineers from China and Germany were already waiting to connect the giant to the complex control technology.

The extremely heavy valve was installed quickly and skilfully. The special WATTS hydro drive was also added without any problems.

And then the moment everyone dreaded: the shipment of connection cables was not complete. Waiting for a new shipment would set the project back by at least one month, and the cables were not available locally.

The three VAG engineers and the project manager studied the circuit diagram, the connections - and found a solution: they could accommodate for the missing cable by adding a relay and making a few changes to the circuit diagram. They got to work.

And it worked: the thorough function test showed that all of the changes had been made successfully. Each and every communication and control requirement had been met.

But then came a second moment of dread: the butterfly valve from a local manufacturer jammed during the wet test and simply would not budge. A dangerous situation. Thinking on their feet, the engineers got the VAG Hollow-jet Discharge Valve working. And thanks to its faster closing time, the drain was immediately sealed off.

At the end of the gruelling wet test, Mr Zhang Ji Xiong, project leader at China Huadian Engineering Corporation said: 'I am incredibly impressed by the design and the quality of VAG's products. Their valve is the most reliable I have ever seen. If the budget of our next project permits, we'd like to buy as many valves as possible from VAG.'



The VAG KSS Hollow Jet Discharge Valve is carefully packaged for its long journey at the plant in Mannheim.