Nechranice Dam

Field of application:	Dams / Hydropower
Location:	Kadaň, Czech Republic
Date:	2011-2014
Products:	2x VAG KSS Hollow-Jet Discharge Valve DN 1800 PN 6 with PATIG coating

Project description:

Until 2011 two control valves (DN 1800, PN 6) were in service in the Nechranice hydropower plant, or more precisely in turbines TG1 and TG2. However, these valves had already been repaired several times and were coming to the end of their useful lives. This is why Ohře Basin ordered two replacement valves from VAG. What was special with this order was the fact that the turbine towers and thus also the pipelines are not located directly on the dam but about 100 to 150 metres away from it – right in the middle of the water. Because of this design the valves work under very special conditions as their outlets are submerged and water is discharged into a permanently flooded pipeline.

The turbine tower in the middle of the dam

It was extremely important to the operator that the new valves would not only function reliably but also have a long service life and allow for precise control. In addition to this, the customer wanted a valve whose inside area around the valve seats is particularly well protected as it is most heavily exposed to high flow velocities and cavitation. As the VAG KSS Hollow-Jet Discharge Valve met all these requirements, it was shortlisted. What made the customer decide in favour of the

VAG KSS Hollow-Jet Discharge Valve inside the tower

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product was the extremely sturdy design of the VAG KSS Hollow-Jet Discharge Valve combined with the adjustable bronze guides of the cylindrical sleeve. These guides prevent vibration, thus ensuring a longer service life. The premium-quality PATIG ceramic coating reduces friction and protects the inside of the valve from abrasion.

To take them to their place of destination, JMA [an affiliated company of VAG based in the Czech Republic] transported the hollow-jet discharge valves past the actual dam and through a long submerged tunnel to reach the turbine towers.

“It actually didn’t take us very long to decide in favour of the VAG KSS Hollow-Jet Discharge Valve,” says Engineer Fuksa. “But we didn’t only impose high requirements on the product. We also wanted a project partner who would support us during installation or commissioning. JMA promised us to provide this service. And with the Skalka project (2009), they had also in the past demonstrated that this worked extraordinarily well. And so we placed the order. And when we look back again now on how the project was implemented and see the valves that have been in operation for six months now, we couldn’t be more satisfied!”

Transport of the VAG KSS Hollow-Jet Discharge Valve through the flooded tunnel