



The Schwarze Pumpe power plant

Application field:	Power Plant
Place:	Spremberg, Germany
Date:	1996-2011
Products:	4 x VAG EKN® Butterfly Valves DN 2000 with electric actuator and UVV safety interlock on one side; > 50 x VAG EKN® Butterfly Valves with electric actuator up to DN 1000; > 50 x VAG BETA® Gate Valves up to DN 300; > 10 x VAG SKR Slanted Seat Tilting Disk Check Valves up to DN 600; > 10 x VAG hydrants DN 100; various accessories

Project description:

The Schwarze Pumpe power plant operated by Vattenfall was built between 1993 and 1998, and, in June 1998, officially took up commercial operation after unit A had come online in May 1997 and unit B in October 1997. The double unit plant has a total gross electricity output of 1600 MW with each unit having an output of 800 MW. The brown-coal fired power plant is located on the site of the Schwarze Pumpe industrial estate which has served as a power plant location since the 1950s. Before that, the power plants Schwarze Pumpe West, Mitte and Ost were located there which have meanwhile been decommissioned and pulled down. With an output between 25 and 100 MW, they generated both electrical energy and process steam. The new power plant follows this tradition and besides electrical energy it also generates process steam for the companies located in the nearby industrial estate Schwarze Pumpe. Additionally, one of the most important tasks of this power plant is the supply of district heat to the village of Schwarze Pumpe and the cities of Spremberg and Hoyerswerda.



VAG SKR slanted seat tilting disk check valve
DN 600 PN 10 in water treatment



VAG EKN® Butterfly Valves DN 800
PN 10 in the condenser section



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The power plant – with its 162 m high steam generator building and the two separate natural draught wet cooling towers – is characterised by its futuristic architecture. On each of the two stair towers of the steam generator building, a glazed observation deck can be found which also is open to visitors.

The power plant used to cover base load power demand is supplied with raw brown coal by the nearby Welzow-Süd and Nochten strip mines (about 36,000 tonnes per day). Like all modern power plants, the Schwarze Pumpe power plant, which has an efficiency of almost 40 %, is equipped with a multistage flue gas cleaning system.

A specialty of this location is its pilot plant for CO₂ separation which officially went into operation in September 2008 after a test stage. The carbon dioxide generated by combustion is compressed and liquefied in the plant.

In the past 15 years, VAG has supplied over 50 VAG EKN® Butterfly Valves to the Schwarze Pumpe power plant, including four VAG EKN® Butterfly Valves with safety interlock which serve as safety valves. Additionally, a great number of VAG BETA® Gate Valves, VAG SKR slanted seat tilting disk check valves and VAG hydrants were installed in the primary and auxiliary cooling circuits and / or the fire-fighting system of the power plant.



VAG EKN® Butterfly Valve DN 2000 PN 6 as pump safety valve with hydraulic brake-and-lift unit installed in the pump-house downstream of the main cooling water pump



VAG EKO®plus Gate Valve DN 100 PN 16
Installed in the ash settling pond