



Sea water valves for the Maasvlakte power plant

Application field:	Power Plant
Place:	Maasvlakte, The Netherlands
Date:	2008-2013
Products:	19 x sea-water resistant VAG EKN® Butterfly Valves DN 500 – DN 2200 with UJV safety interlock; 2 x VAG SKR Slanted-Seat Tilting-Disk Check Valves DN 250

Project description:

In the year 2000, E.ON acquired a state-owned energy company in the Rotterdam/The Hague area, thus laying the foundations for E.ON Benelux. Due to this acquisition, also five gas- and two coal-fired plants with a total output capacity of 1,052 megawatts (MW) changed hands. Five years later, E.ON Benelux takes over another company which supplies power to 250,000 consumers in the Eindhoven region.

In 2008, E.ON began with the construction works for the new plant which was put into service in 2013. The coal-fired power plant with a gross output capacity of 1,100 MW is known by the name of Maasvlakte Power Plant 3 (MPP3). The company commissioned E.ON New Build & Technology GmbH based in Gelsenkirchen, Germany, with the engineering works and thus the selection of valves.

It is particularly in sea-water conveying water circuits that special corrosion protection is vital for all parts of a valve coming into contact with



The coal-fired Maasvlakte Power Plant 3 (MPP3) by day and night



Employees of E.ON New Build & Technology during the acceptance of a VAG EKN® Butterfly Valve



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the medium. As E.ON New Build & Technology GmbH had had positive experience with VAG in previous projects, they decided to purchase the system valves to be installed in the primary and secondary cooling water circuits from VAG. The order comprised 19 sea-water resistant VAG EKN® Butterfly Valves with nominal diameters of DN 500, 700, 1200, 2000 and 2200. As the power plant is located on the North Sea, the pipelines have to be accessible at all times to clean the plant from molluscs. To avoid having to install a second valve according to the accident prevention regulations, VAG installed VAG EKN® Butterfly Valves with TÜV-approved UUV safety interlock.

E.ON New Build & Technology also decided to install VAG SKR Slanted-Seat Tilting-Disk Check Valves. They complied with the requirements of the E.ON specification and reliably prevent leaks. As neither the lever nor the weight are located on the valve, the valve remains completely steady in the volumetric flow even when it is fully open – and that at a minimum flow of 1.5 m/sec. When the pump switches off, a hydraulic damper prevents pressure surges and at the same time secures the pump against running backward at flow reversal.

The customer was highly satisfied and described VAG as a “very reliable partner” that ensures safety and trouble-free operation of the power plant with its premium-quality products.



VAG EKN® Butterfly Valve suitable for seawater applications (with rubber lining)



VAG SKR Slanted-Seat Tilting-Disk Check Valve suitable for seawater applications with a hydraulic damper controlled by its own medium