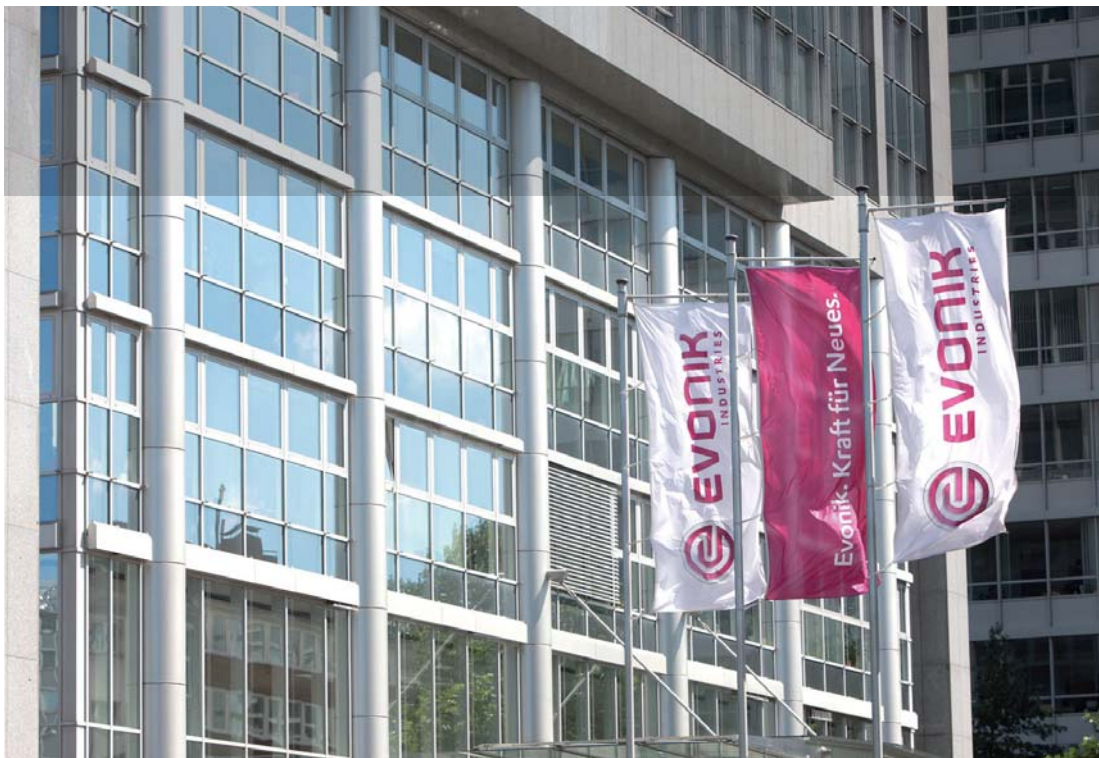


VAG valves complete Evonik's new recooling plant in Wesseling, Germany

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Evonik Industries, Wesseling Plant

The Wesseling plant, one of Evonik Industries' largest facilities, is located south of Cologne in the middle of the chemical region of the Rhineland.

Here, in an area covering 330,000 m², 1,200 employees produce a variety of chemical products that are mainly used in personal care products, tyres and rubber items, paper, paints and lacquers and the synthesis of drugs.

A prerequisite for error-free production in chemical

plants and power stations is the dependable supply of recooling water. Chemical processes cannot take place without cooling.

Until now, four wooden crossflow cooling towers generated enough cooling water, which was distributed across the industrial estate through a widely ramified pipeline network. The network was equipped with numerous valves, many of which were over 30 years old.

Project overview

Project:

Construction of a new recooling plant and refurbishment of the cooling water system

Valves:

3 VAG EROX® Sluice Gate DN 1400,
6 VAG EKN® Butterfly Valves DN 700,
6 VAG EKN® Butterfly Valves DN 800 and various
VAG EKN® Butterfly Valves DN 200 to DN 500

Project duration:

May 2008 to May 2009

Awarding authority:

Evonik Degussa GmbH

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VAG On-site



The growing range and volume of products manufactured also increased the need for cooling water. The old cooling towers were reaching their limits: the pipeline system needed to be refurbished and expanded.

In 2008, the chemical company's board of directors decided to invest millions in the construction of a unique glass-fibre reinforced-plastic (GFRP) counterflow cooling tower. The structure is very special, not just because it is 50 metres long and 15 metres high, but also because of the three colossal air-extracting rotors. It is the largest cooling tower of its kind in the world.

The planning and scheduling for this huge project were remarkably accurate and the construction of the plant astonishingly fast. Just one year later, in May 2009, the new plant was put into operation during a maintenance-related shutdown.

Today, the new heart of the cooling circuits in Wesseling can cool 12,500 m³ of water from 35 to 25 degrees and pump it back into the different production areas.

It will not be long before the investment is amortized. During the design phase, a lot of emphasis was put on using advanced materials and the latest technology. This is how the cooling performance could be increased by 25% while decreasing the energy costs by up to 30% at the same time.

Heinz Blindert, the responsible planning engineer at Evonik, has every reason to be proud about how smoothly his project ran. 'You cannot complete a project of this size in such a short period of time without competent and reliable partners. For the valves, I knew I could rely fully on the advice of our consultant at VAG-Armaturen, Mr. Reinsch. We not only wanted to use the best material in the cooling tower, we also wanted the best valves. That's why we've been working closely with VAG for many years.'



For the supply and draining of cooling water to and from the tower, VAG recommended VAG EROX® Sluice Gate Valves because they are particularly reliable and have a tight seal.



While the cooling tower and its supply lines were being built, the pipeline network was extended, refurbished and expanded with larger dimensions.

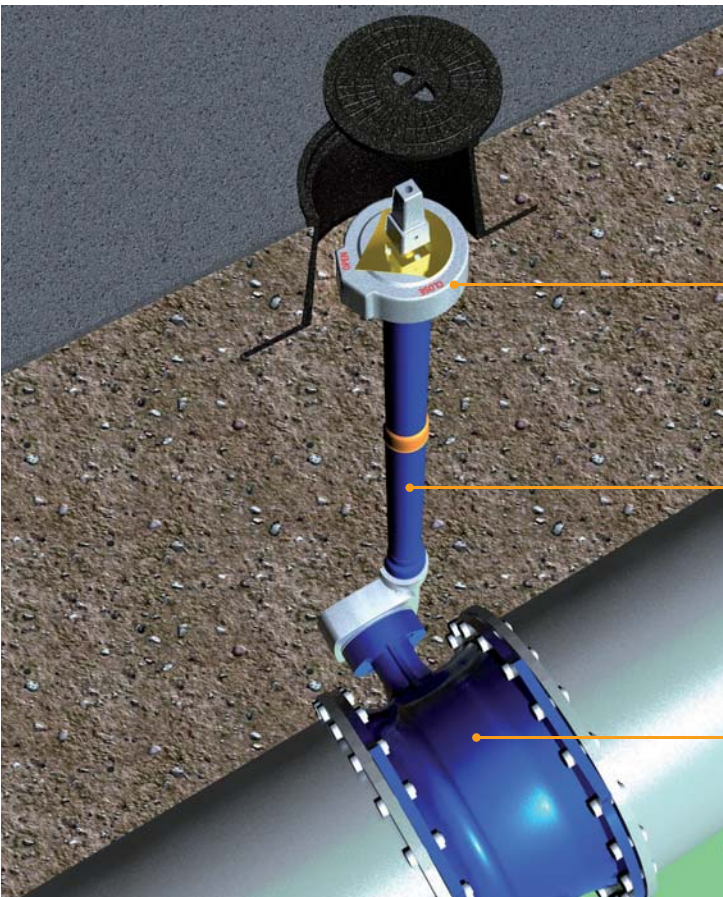
This gave Bogdan Gluszek, the responsible planning engineer for the pipeline network, the opportunity to solve a problem that had been causing annoying and costly damage for years:

Many of the valves that had been installed underground 30 years ago had become sluggish and no longer sealed tightly.

How could this have happened?

Because it was impossible to determine whether the buried valves were closed or open, employees had overwound the adjusting spindle or worm gear. The valves had to be dug up and the defective parts replaced.

Bogdan Gluszek turned to VAG consultant Wilfried Reinsch for advice to make sure he did not repeat the mistakes that had been made 30 years ago.



Position indicator on the installation equipment

Extension to above-ground operation

Underground Butterfly Valve

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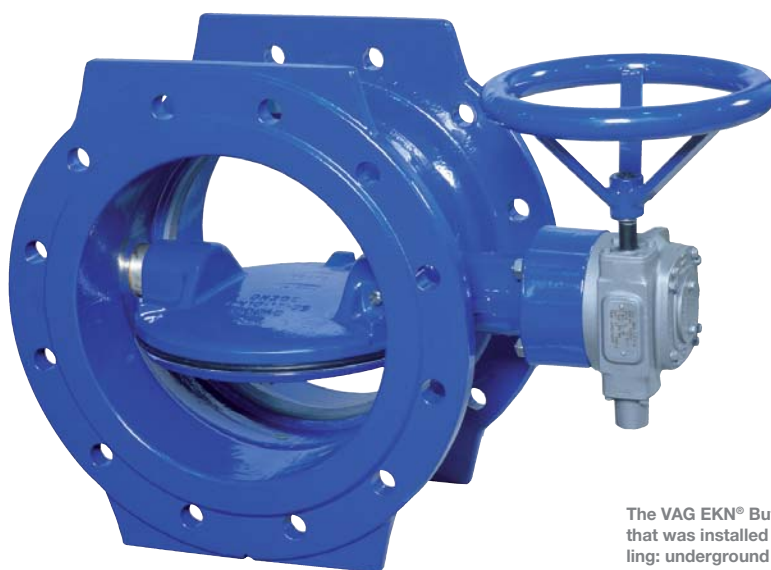
VAG On-site



'The high quality and delivery reliability are clear reasons for us to continue using VAG's products. But what keeps impressing us is the knowledge of VAG's employees. Mr Reinsch solved our problem with the buried Butterfly Valves in the wink of an eye by introducing us to the VAG TELEMAT Stem Extension with VARIO position indicator.'

The VAG TELEMAT installation equipment with VARIO position indicator transmits the 'open' or 'closed' position of the valve to the surface, making it impossible to operate the equipment incorrectly due to 'uncertainty' about its position. This prevents the gear being damaged by overwinding it.

Heinz Blindert is happy that this project, which was carried out on the premises of Evonik Degussa GmbH, was successfully completed: 'A year from planning to completion: that's not bad for a project of this size. We're proud of ourselves, but we do have to add that we couldn't have done it without reliable suppliers like VAG. One supplier for all our products, high quality and an excellent consultant who gives us invaluable advice. Projects like this are fun!'



The VAG EKN® Butterfly Valve that was installed in Wesseling: underground with the VAG TELEMAT Stem Extension with above-ground hand-wheel operation.



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