

Flush rings for the chemical industry by AS-Schneider:

To keep the environment clean

Nordheim - 25 November 2014 - Strict conditions apply to process plants in the chemical industry: Safety and environmental protection always have to be ensured because not all processed substances are harmless to man and nature. This also means that no gases or liquids from the plants may escape either during operation or maintenance. The flush rings by the Armaturenfabrik Franz Schneider (AS-Schneider) help operators to properly dispose of accumulating gas and liquid residues during the maintenance and repairs of measuring assemblies.

Whether in the pharmaceutical industry, agriculture, electronics, production of construction materials, food or automotive: Hardly any industry today gets along without the services of the chemical industry. It produces paints and varnishes for our houses and cars, fertilizer for our crops, synthetic fibres for our clothes - and much, much more. The chemical industry is one of the most important economic sectors globally. It generates annual sales of several trillion euros and offers a workplace for millions of people

The industry is characterised by a high degree of mechanisation. Often modern processing plants are used in the company. In these, for example oil, fuel, gas, waste water and various chemicals are stored and processed. They include, in part, huge tanks whose holding capacity can amount to several million litres. The requirements for the safety of these facilities are extremely high: After all, some of the substances contained therein are toxic, corrosive, harmful to the environment and/or health or easily flammable. But even less sensitive media should not simply escape into the environment. According to the law, the operator must ensure that, except for drinking water, nitrogen and oxygen, all liquids and gases are captured and disposed of.

Technical Paper

November 2014

For process monitoring, all plants are equipped with measuring devices. These include various parameters such as pressure, differential pressure and filling level. The measurement gauges are connected to the system via a separate impulse line. In contrast to the process lines, there is no flow here only the static pressure of the medium. Every now and again, the technicians have to check, calibrate or repair a measurement gauge. For this to happen, it has to be removed from the impulse line. So that no leak is created at the measuring point in such a case, all measuring devices have an initial shut-off with a needle valve or ball valve. This valve seals the transition between the process and impulse line and prevents a leakage of the medium.

Residual medium remains between the primary isolation valve and the transmitter

This structure does not offer a completely satisfactory solution: Even after closing the primary isolation valve, a residual amount of the pressurised medium still remained in the pipeline section between the primary isolation valve and the transmitter. This residual medium must be properly collected and disposed of in a manner that meets regulatory requirements. A leading chemical company and operator of numerous process plants was dealing with this same problem and was looking for a reliable method to empty the cavity between the primary isolation valve and transmitter.

The company obtained support from AS-Schneider, one of the world leading manufacturers of Instrumentation Valves, Manifolds and Accessories based in Nordheim near Heilbronn (Germany). AS-Schneider is a long-time partner of many well-known companies in the chemical sector and knows the needs and requirements of the industry. Special solutions which exactly meet the specifications of the customers are one of the great strengths of our fitting specialists.

Technical Paper

November 2014

As was also the case here. AS-Schneider developed a flush ring according to the chemical group's specifications. It is mounted with a flange connection located between the primary isolation valve and the diaphragm seal. One or two ventilation and flushing connections are located on the outside of the flush ring. If the ring only has one connection, the cavity between diaphragm seal and primary isolation valve can be flushed in a controlled manner - for example, via a connected hose and a suitable collection container. The ring can, for example, be filled with compressed air or a cleaning fluid via the second connection and flushed out depending on requirements which the corresponding medium places on the system operator.

The optimal valve for each plant

"We make the flush rings exactly according to our customers' requirements", Björn Bofinger, Key Account Manager at AS-Schneider explains. "This can vary greatly, depending on which type of plant the rings are used in." AS-Schneider supplies the flush rings in different materials: Carbon and Stainless Steel, but also Exotic Alloys for specific applications. "The flush rings must also be lined with Teflon on the inside when handling certain media", Bofinger reported. And of course, the operator needs rings in different sizes and with different connection options. "Thanks to our flexible production, we can react quickly and reliably to all requests", emphasises Bofinger.

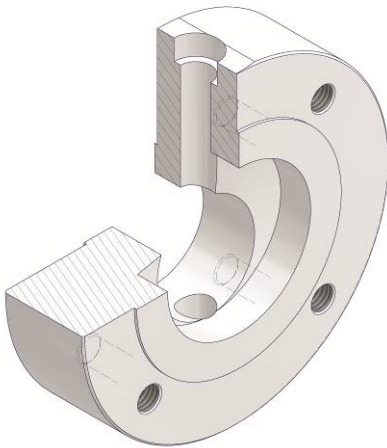
Our customers appreciate this exceptional flexibility: After all, they get all instrumentation exactly according to their specifications and within a very short time. AS-Schneider also delivers the flush rings completely pre-assembled. This greatly reduces installation expenditures. The flush rings have been successfully used in numerous plants all over the world.

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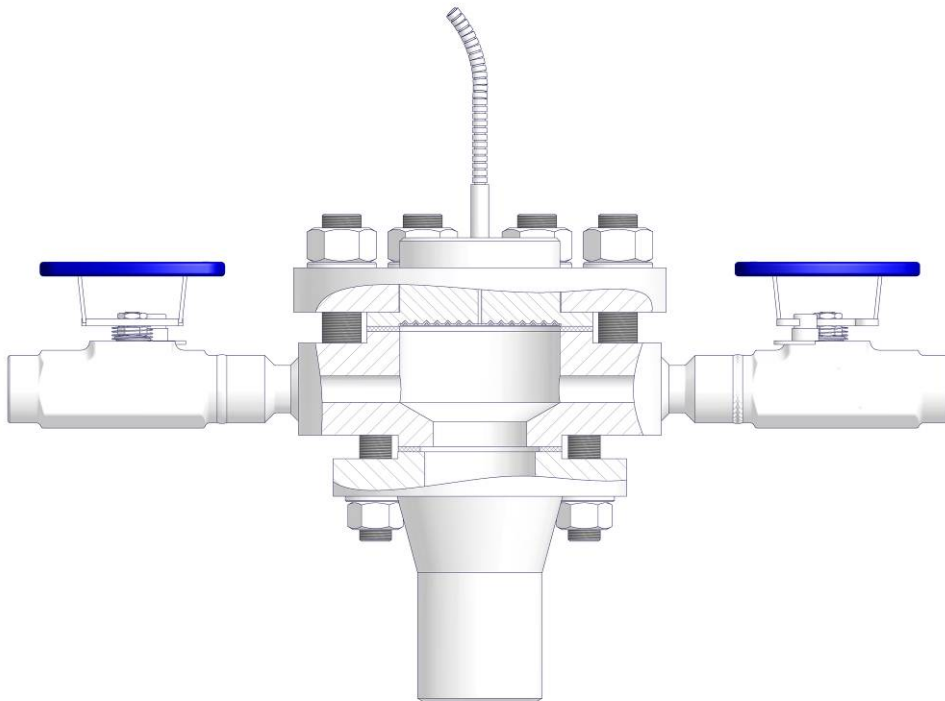
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November 2014

Captions:



Picture 1: Special flush rings by AS-Schneider allow a controlled emptying of the cavity between diaphragm seal and primary isolation valve.



Picture 2: Assembly example of flush rings by AS-Schneider.

Technical Paper

November 2014



Pictures 3 and 4: Mounting examples: The ring is mounted with a flange connection between the primary isolation valve and transmitter.

Technical Paper

November 2014



Picture 5: Björn Bofinger (author), Area Sales Manager and Key Account Manager for one of the largest chemical groups in the world at AS-Schneider.

Pictures by: Armaturenfabrik Franz Schneider GmbH + Co. KG

About the author - Björn Bofinger

Björn Bofinger, born 1982 in Heilbronn, learned the trade of Engineering Mechanics from 1999 to 2002 in an accelerated apprenticeship programme with a specialisation in: Precision Mechanics. After working for 2 years in his occupation, he continued his education to become a Mechatronics Technician in the specialised area of: Automation technology. After passing the exam in 2006, he began his professional career at AS-Schneider. There he worked in the Sales Department Germany as a sales engineer. Since 2013, he has taken over the area of Eastern Europe as Area Sales Manager. Furthermore, Björn Bofinger is a Global Key Account Manager for one of the largest chemical groups in the world, as well as project manager for the biggest project in the company's history - the Sadara project in Saudi Arabia.

About AS-Schneider

The family-run company, AS-Schneider, was founded in 1875 and with over 350 employees, is one of the leading manufacturers of Instrumentation Valves and Manifolds worldwide. In the market segment for Large-Bore Diesel Engine Valves such as those used in marine propulsion and the generation of electricity, AS-Schneider is even the world market leader. With our own subsidiaries in Romania, Singapore, Dubai (UAE) and Houston (USA) and professional partners in more than 20 countries worldwide, we are located everywhere our customers need us.

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