

TA-Luft at SCHNEIDER

The strict regulations of the current TA-Luft are placing extremely high demands on the stem sealings of industrial valves with regard to fugitive emissions.

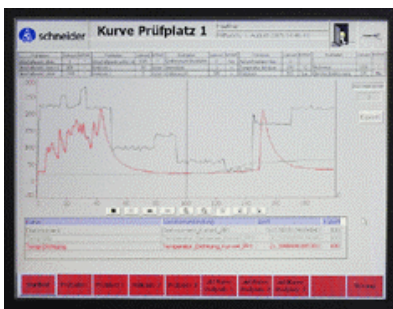
Armaturenfabrik Franz Schneider GmbH & Co. KG has several decades of experience with premium stem sealings to reduce emissions, e.g. bellows sealed head units or special packing systems. For the further development of premium stem sealings we have invested in the development and construction of a test stand in order to meet the increasing requirements.

From now on, our product line also includes industrial valves with packings which meet the requirements of the current TA-Luft 2002 and of the guideline VDI 2440 (revision November 2000).

Manufacturer certifications can be downloaded on www.as-schneider.com.



-50°C up to +300°C



Sensitivity
 (min. detectable leakages:
 up to $1,0 \cdot 10^{-11}$ mbar * l / s



Pressures up to 600 bar



Requirements TA-Luft 2002	Performance of SCHNEIDER
<p><i>"Chapter 5.2.6.4 Industrial Valves</i></p> <p><i>For industrial valves like globe valves or gate valves, stem sealings have to be of following design:</i></p> <ul style="list-style-type: none"> ▪ <i>premium sealed metallic bellows or</i> ▪ <i>equivalent stem sealings</i> <p><i>Stem sealings are to be considered as equal if the temperature specific leak rates are proved to be in accordance with the guideline VDI 2440 (revision November 2000)."</i></p>	<p>The temperature specific leak rates were not only measured at the stem sealing but as total leakage of the stem sealing and the body to bonnet seal.</p>
Requirements of the guideline VDI 2440	Performance of SCHNEIDER
<p>Chapter 3.3.1.3</p> <p><i>"The design of the stem sealing is expected to guarantee a long-life cycle under operating conditions."</i></p>	<p>SCHNEIDER attached a great importance to the term "long-life cycle".</p> <p>All our TA-Luft valves passed a complete thermal cycle. This means:</p> <p>After having determined the leakage at the upper design temperature, all valves were tested again at ambient temperature up to the maximum operating pressure.</p> <p>Note: Many stem sealings meet the requirements of VDI2440 at the upper design temperature. Nevertheless, they start to leak after they have cooled down to ambient temperature (leak 10^{-1} mbar*I/s).</p>
Annex test method / Demands of the valves to be tested	
<p><i>"Depending on the operating conditions (number of mechanical cycles), a representative quantity of mechanical cycles have to be carried out before the start of the tests."</i></p>	<p>The mechanical cycles were not only carried out before the start of the test but also at the nominal pressure and the upper design temperature (at reduced pressure).</p>
Annex test method / Test procedure	
<p><i>"Determination of the leak rate at higher test pressures up to the maximum operating pressure"</i></p> <p><i>"Determination of the leak rate at elevated or low temperatures up to the maximum operating temperature"</i></p>	<p>The leak rates were determined from the atmospheric pressure up to the maximum operating pressure.</p> <p>Leak rates were determined at the upper and the lower design temperatures</p>