

## FIRE PROTECTION

In pipeline systems for transporting hazardous substances, considerable hazards can occur in the event of a malfunction.

In addition to complying with current guidelines such as TA-Luft, VDI guidelines, etc., we have not only dealt with the tightness of a flange connection in trouble-free operation, but have also included the case of fire in our considerations.

In relevant regulations in which "Fire Safe" requirements are addressed, reference is made to the BS 6755 or ISO 10497 standard and these requirements are also applied to flange connections.

These standards concern the testing of shut-off valves to maintain their tightness when exposed to a temperature of > 650°C for a period of 30 minutes.

If the requirements are applied to bolted flange connections, the gasket in the braced flange connection must maintain its function under the influence of a flame wall at the specified temperature and for the specified time. The seal can only accomplish this if the flanges and bolts are able to maintain the required surface pressure on the seal during this time.

In order to prevent a corresponding, short-term chain reaction with fatal consequences in the event of a malfunction, we have further developed the following type of seal.

For example, gaskets with an outer ring can be provided with a coating consisting of an intumescent substance on the upper and lower sides.

At high temperatures above 300°C, this inflates to an insulating carbon skeleton with 10 to 20 times its original volume. The space in front of the seal between the two flanges, i.e. also around the screws, is completely and safely protected against the effects of hot flame gases and radiation.

The reaction or intervention time in the event of a fault is up to 4 times faster than with conventional seals with FS approval. This leaves enough time to prevent a dangerous chain reaction in the case of smaller sources of fire.



### ADVANTAGES

- Sealing element is protected against temperature rise in case of fire
- Time to critical accident temperature is increased up to 4 times
- Compound can be removed without residue
- Increased of plant safety
- Environmental protection

At YouTube – **Passive Fire Protection** – you can experience the reaction of FIRE PROTECTION in a simulated fire.