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Flanged Joints

A Product Information Sheet by the Plant Engineering Business Unit

Tightness of flanged joints

To guarantee safety during plant operation only a limited amount of load acting on a flanged joint is permitted (proof of strength). Beyond this a sufficiently high pressure level acting on the gasket surface is necessary to ensure tightness (proof of tightness). Therefore suitable and commonly accepted calculation methods are required. TÜV SÜD relies on analytical calculation methods, such as EN, KTA, ASME, as well as on detailed Finite Element Analyses.

Our Services

The systematic involvement of our experts for the testing and qualification of gasket materials and our combined know-how of the design of flanged joint systems guarantee excellent and cost-efficient results.

As an independent consultancy we provide the following services:

- Compliance with national and international regulations
- Proof of design applying computational methods

- Simulation of stress distribution and deformation behaviour of complex flanged joints
- Emission control of process plants
- Determination of failure root causes
- Expert opinions

Your Benefits

Tight flanged joints prevent problems and additional costs.

- ▶ Economical aspects,
- ▶ demands to minimize plant emissions,
- ▶ modifications of relevant regulations and
- ▶ the common use of modern gasket materials

have noticeably increased requirements regarding flanged joints in the past few years. This applies not only to piping systems and pressure vessels but also to any sealed device.

An appropriate and suitable design and qualification of flanged joints is essential for ensuring safe and smooth plant operation.

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