KLINGER

Information

Gaskets with inner eyelets

This type of gasket material is termed an "eyelet gasket" or a „gasket with metal inner rim".
The gasket material with inner eyelet has given proven service in many types of application and provides the following advantages in contrast to simple cut joints material:

The shielding of the seal section against liquid or gaseous media:

- *Protection of the sealant against corrosive agents*
- *Prevent of contamination of the liquid or gaseous agent by disintegration of the gasket material*
- *Enhancement of the sealing properties.*

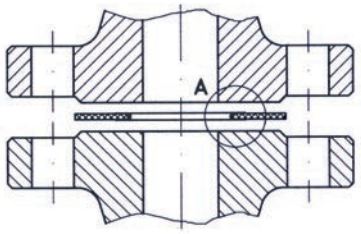
The mechanical strengthening of the gasket:

- *For protection against the slipping out of the gasket in case of loss of flange pressure*
- *For use with flat flange faces instead of flanges of male and female or tongue and groove type*

The optimal use of those gaskets requires the working material specifics and the technical applicatory characteristics. Failure to observe such aspects can lead to faulty applications and, under circumstances to an avoidable leakage around the seal. The following notes are intended to provide prophylaction.

1. The thickness of the gasket material
The making of a secure seal requires, that the gasket material fills out and covers all unevenness' and working traces on the flange face outside of the eyelet flanging application zone. For this purpose, the sealant material should be pressed into half the uneven raw face of the flange. In the case of standardised (German DIN Standard) flanges, such would be up to DN 40 = 0.16 mm.

In the metal mantled zone, the thickness of the gasket material is to be additionally compacted to the gauge of the eyelet.



The minimum required malleability is as follows, independent on the thickness of the gasket material:

2 x ½ of raw uneven depth of the flange face of 0.16 mm	*= 0,16 mm*
2 x eyelet gauge of 0.15 mm	*= 0.30 mm*
minimum necessary malleability	*= 0.46 mm*

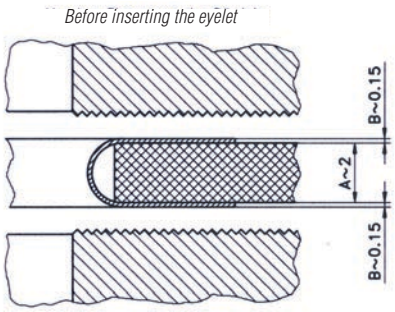
Interpolated to a thickness of 2 mm of the gasket material, the relative malleability is:

at 2 mm thickness	*= 23 %*

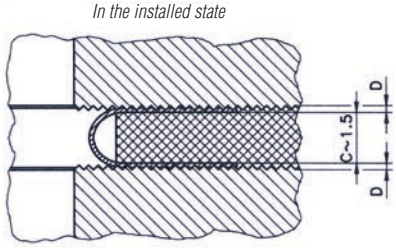
2. Advance compacting of the edge flanging
It is often required, that the eyelet in the fitting when supplied is to be compacted as far into the joint, so that its superficial surface is plane with the gasket upper surface. This will however provide no advantages in comparison with a slight superficion over the fitting.
Any entire compacting of the eyelet material into the joint will only however be possible by destroying the recovery properties of the sealant material itself and this will deprive the sealant material of its necessary functional elastic characteristics in the area of the eyelet. In addition, scarcely any lesser force should be required for installation, as the soft sealant material has merely obtained an essentially steeper force compression-characteristic through the prior compacting action under the eyelet.
The method of only compacting the eyelet into the joint so far as to obtain a certain superficial protrusion in the supplied state, will provide the gasket material with better elastic characteristics.
We would therefore recommend:
1. A gasket thickness of 12 mm per 0.15 mm edge flanging thickness;
2. A prior compacting within the elastic area.

Detail A

Before inserting the eyelet



In the installed state



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