Installation instructions

The following guidelines are designed to ensure the optimum performance of our gasket materials:

1. Choosing the gasket

There are many factors which must be taken into account when choosing a gasket material for a given application including temperature, pressure and chemical compatibility. Please refer to the information given in our brochure or, for advice to our software program KLINGER®expert. If you have any questions regarding the suitability of material for a given application please contact Klinger Technical Department.

2. Gasket thickness

The gasket should be as thin as technically practical. To ensure optimum performance a minimum thickness/width ratio of 1/5 is required (ideally 1/10).

3. Flange condition

Ensure all remains of old gasket materials are removed and the flanges are clean, in good condition and parallel.

4. Gasket compounds

Ensure all gaskets are installed in a dry state, the use of gasket compounds is not recommended as this has a detrimental effect on the stability and load bearing characteristics of the material. In its uncompressed form the gasket can absorb liquid, and this may lead to failure of the gasket in service. To aid gasket removal Klinger materials are furnished with a non sticking finish.

In difficult installation conditions, seperating agents such as dry sprays based on molybdenum sulphide or PTFE e.g. KLINGERflon spray, may be used, but only in minimal quantities. Make sure that the solvents and propellants are completely evaporated.

5. Gasket Dimensions

Ensure gasket dimensions are correct. The gasket should not intrude into the bore of the pipework and should be installed centrally.

6. Bolting

Wire brush stud/bolts and nuts (if necessary) to remove any dirt on the threads. Ensure that the nuts can run freely down the thread before use.

Apply lubricant to the bolt and to the nut threads as well as to the face of the nut to reduce friction when tightening. We recommend the use of a bolt lubricant which ensures a friction coefficient of between 0.10 to 0.14.

7. Joint Assembly

It is recommended that the bolts are tightened using a controlled method such as torque or tension, this will lead to greater accuracy and consistency than using conventional methods of tightening. If using a torque wrench, ensure that it is accurately calibrated.

For torque settings please refer to the KLINGER®expert or contact our Technical Department which will be happy to assist you.

Carefully fit the gasket into position taking care not to damage the gasket surface.

When torquing, tighten bolts in three stages to the required torque as follows:

Finger tighten nuts. Carry out tightening, making at least three complete diagonal tightening sequences i.e. 30%, 60% and 100% of final torque value. Continue with one final pass – torquing the bolts/studs in a clockwise sequence.

8. Retightening.

Provided that the above guidelines are followed retightening of the gasket after joint assembly should not be necessary.

If retightening is considered necessary, then this should only be performed at ambient temperature before or during the first start-up phase of the pipeline or plant. Retightening of compressed fibre gaskets at higher operating temperatures and longer operating times may lead to a failure of the gasket connection and possible blow out.

9. Re-use

For safety reasons never re-use a gasket.