

Stress corrosion cracking - No more!

Brass is a versatile and economical material. The quality of brass used in SERTO unions is checked regularly according to DIN standards. The parts, which are subjected to tensile stress, are heat treated in a special process, thus relieving the stress.

Under unfavourable conditions, stress corrosion cracking can occur. Cracks suddenly appear on the component, without any previously discernible signs.

Three conditions must be present simultaneously to trigger such a rare occurrence of damage:

- Humidity from the environment
- Ammonia compounds in larger concentrations
- Structural stress in the component

Ammonia compounds in hazardous concentrations can be found, for example, in pump shafts, concealed installations, in agricultural and electroplating installations. The possibility of stress corrosion cracking cannot therefore be completely excluded.

It can, however, be prevented by taking appropriate measures.

Installation measures

- The installation must be completed by following SERTO instructions exactly. The nut may not be over-tightened.
- It is not advisable to mix materials of unions and pipes (for example, brass unions with INOX pipes)
- External protection against corrosion, by means of a protective tape or shrink tubing according to DIN 30672-1, prevents corrosion from humidity and ammonia. See the following photos 1 to 3.

Photo 1
Corrosion protection tape



Photo 2
Mounted union
Doubly protected



Photo 3
Protection with shrink tubing



Stress corrosion cracking can be prevented effectively with these measures. The cost for this protection is low, compared to the possible consequences of damage.

Please consult our specialists for further information.