Stress Corrosion Cracking

Stress corrosion cracking (SCC) is a phenomenon that occurs occasionally with brass compression fittings. Specific conditions are required for this to occur.

1. A susceptible material, in this case brass.
2. A degree of internal stress in the material originating either from the manufacturing process or introduced during installation.
3. An environment containing, usually, ammonia or ammoniacal compounds. However, other contaminants such as sulphur dioxide can cause cracking.

Avoidance of SCC

1. Do not over tighten brass components during installation.
2. Minimise the risk of contamination with a potential corroding. Wrapping susceptible fittings in a vapour barrier r the application of the impermeable paints can be helpful in preventing contact with the corrodant.
3. Use parallel threaded adaptors to avoid stressing the female thread ends.

For chilled water applications, Yorkshire Fittings Ltd does not recommend the use of brass components that are likely to be stressed during installation. For such applications fittings made from SCC resistant or immune materials e.g. copper or gunmetal should be used. If compression fittings are used then they should be assembled exactly in accordance with the published instructions and securely bound by a moisture barrier such as Densotape® or equivalent to prevent moisture build up on the fitting.

Further information available at www.yorkshirefittings.co.uk