

**Galling of Stainless Steel Fasteners**

There is a commonly held belief that the use of Grade 304 nuts on Grade 316 bolts (or vice versa) will avoid galling. This is a myth.

Tyco Water has conducted tests to show that there is no difference in the galling effect regardless of the combinations of Grades 304 and 316 used.

In fact to have a reducing effect on galling, stainless steel materials with hardness differences of 50HB or more must be employed.

The most practical way to reduce the risk of galling is to ensure the fasteners and nuts are clean and free of grit and an anti-seize compound is liberally applied to all threads.

For best corrosion resistance Grade 316 bolts and nuts should be specified.

Where Stainless Steel fasteners are required we recommend Grade 316 Class 50 (min) stainless steel bolts and nuts for PN16 flanged joints and Grade 316 Class 70 (min) studs and nuts for PN35 flanged joints.

For interesting further reading on this topic visit the website of the Australian Stainless Steel Development Association at [www.assda.asn.au](http://www.assda.asn.au). Or the James Glen Training Manual available at [www.jamesglen.com.au/training/training.htm](http://www.jamesglen.com.au/training/training.htm)

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