

Technical Note 62

**Assembly and Tensioning of High Strength Bolts and
Nuts - Part 3: Class 4.6**

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1 Clarification of bolt tensioning

The purpose of this technical note is to define the acceptable requirements for the assembly and tensioning of Class 4.6 Bolts for Department of Transport and Main Roads (TMR) projects.

2 Reference documents

A number of reference documents have been used to compile this technical note. The reference documents are outlined below:

- Transport and Main Roads Technical Specification MRTS78 *Fabrication of Structural Steelwork*
- Australian Standard AS 4100 – 1998
- Australian Standard AS 1111 – 2015.

3 Identification of conforming materials

All bolts and nuts shall be from tested batches. All bolts and nuts shall be tested in accordance with MRTS78 *Fabrication of Structural Steelwork*.

The contractor shall only use bolts, nuts and washers complying with AS 1111.

Inspection by the contractor of bolts, nuts and washers for damage to the threads and the galvanising shall take place before fitting. The contractor shall discard any damaged bolts, nuts and washers.

4 Tensioning of Bolts

Class 4.6 bolts can only be tensioned so they are snug tight.

4.1 4.6/S

The bolts are installed and tensioned to “snug tight”. AS 4100 defines snug tight as, "The tightness attained by a few impacts of an impact wrench or by the full effort of a person using a standard podger spanner”, which brings the connecting parts into firm contact.

