

AS 1252: 2016

Part 1 & Part 2. A very brief overview

Peter Hobson

Part 1

This 2016 issue of AS 1252 significantly raises the Quality bar over the 1983/1996 standards, and when product is supplied that adheres to it, will result in higher quality structural assemblies.

Our technical team has a number of technical bulletins available and are also available to answer in depth questions, however this article is purely to give a simple overview of key matters.

The most significant aspect of the 2016 standard is the addition of a mandatory assembly test. The assembly test requires all components of a structural assembly (bolt, nut and washer) to be tested together. Where the nut is on the actual bolt (and not a mandrel) and the rotation is made. Test results of the assembly test give the truest indication of how that batch/lot/heat number of fasteners will perform in the field. It is a gruelling test that is designed to test many quality aspects of the structural assembly to provide a statistical indication that the batch is fit for purpose. Five samples are required to be tested from each diam x length x batch. Most product seen in the Australian market supplied to the 1983/1996 standard will not consistently be able to pass this test.

The assembly test is time consuming and specialised calibrated equipment is required to carry out the test to the standard and therefore adds extra cost to the product. Testing must be done at an ILAC accredited laboratory. In fact, a lot of the increased cost of supplying product to the 2016 issue is in the QA testing and subsequent test reports that are mandatory. Hobson Product conforms completely to Part 1.

Part 2: Independent Verification Testing

Unfortunately, Part 2 does require a number of tests that are not practical or commercially sensible. It was

envisaged an amendment would be issued to rectify these issues, however this has not occurred to date. Hobson Engineering introduced an expectation of independent testing on 1983/1996 product and is again leading the industry with the 2016 standard. We have adopted the sensible anticipated amendments to Part 2 which we refer to as Option 1 tests or “fit for purpose”. Our position is backed by AEFAC and Swinburne University (documents can be provided). In brief, we carry out all current testing requirements of Part 2 with the following exceptions:

Dimensional Testing

- This has already been done in Part 1, and the assembly test ensures product is fit for purpose and ensures major dimensions such as AF are correct via the socket test.
- We do however measure the washer dimensions, as these are not confirmed with the assembly test and are very important for the assembly to perform correctly.

Surface Integrity Testing

- An extremely expensive test on HDG items. The coating has to be removed by either acid or sand blasting, both of which alters the dimensions of the item. If there are critical surface discontinuities in the product, the assembly test will expose them.

Hardness Testing eight samples of washers and nuts

- We test three pieces, as eight pieces is illogical when we are testing only three of the bolts. Again, any issues are highlighted in the assembly test. Remember that these items are sold as assemblies, so eight assemblies would need to be sent to the ILAC lab instead of three. Considering the volume AS 1252 product is sold, this is a significant cost and offers no improvement in quality confidence.

Hobson Test Reports – Anti Fake feature and improved traceability over the requirements of the standard

Every AS 1252: 2016 bolt product we sell has a unique trace code to ensure full traceability once the product leaves the carton. This trace code can be entered into our website at ANY time in the future to recall all the supporting documentation. This is a Hobson initiative leading the way in supporting market confidence in Structural Bolting.

To ensure that the correct product is tested (very easy to fake), we show a photo of every bolt head on each Part 2 verification report. See below.

Product may be ordered to part 1, but it is **HIGHLY recommended** by Hobson Engineering, AEFAC and ASI that all product be ordered to Part 1 & Part 2 (Option 1, “fit for purpose”).

