

# Fake Allthread

*From the desk of Peter Hobson*

I have written a number of articles on the extremely poor quality allthread that some importers distribute in our market. Unfortunately, allthread is seen as a commodity and quality is not important. Like many other fasteners, this is the stance until a failure occurs resulting in property damage, or far worse, human injury.

## **A brief history of threaded rod in Australia.**

As told by my father, after the war, Mr Brooker traveled to the USA and saw the huge potential and market of threaded rod. He started manufacturing the product in Australia. At this time, Hobson Engineering was a small Company manufacturing a number of basic fasteners such as U bolts. Brooker Engineering then started manufacturing some products in opposition to Hobson Engineering and my father decided to manufacture threaded rod. My fathers' brilliance in manufacturing innovation soon prevailed, and Brooker Engineering failed.

Allthread was never a product that was imported in Australia until the late 90's. Hobson Engineering had a manufacturing facility unmatched in the world, drawing steel in house and thread rolling at extremely high speeds. The success of threaded rod in the market resulted in a lack of capacity of galvanising and zinc plating facilities in Australia capable of coating 3 metre lengths. Strict environmental laws and subsequent costs, proved too restrictive, and many facilities closed. Coinciding with this, was China becoming a viable supply source.

There were few quality issues in Australia related to threaded rod when product was manufactured in Australia. As allthread is a very low added "oncost" product, basically selling for the price of steel, there is always pressure to cut corners to save on the amount of steel used in the product.

The initial process was to reduce the rolling diameter of the steel used to manufacture the product. This resulted in the major thread dimension being undersize. It was and still is, a relatively easy short cut to pick up.

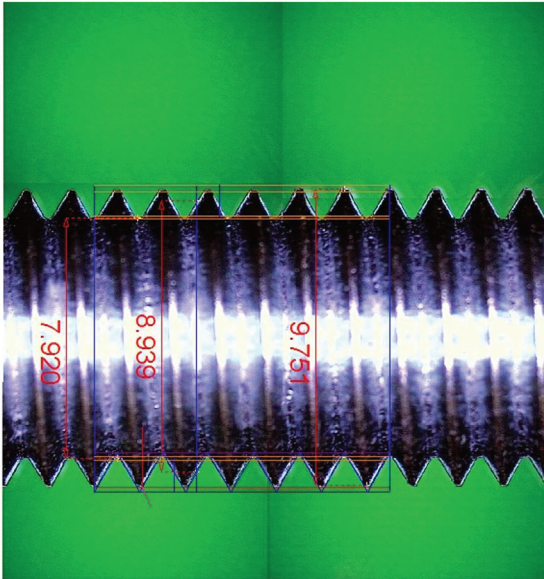
- Lighter unit weight
- Loose nuts
- Basic vernier measurement of major diameter

As with all innovation, those willing to cut corners and produce "fake product" came up with a much more sophisticated method that is not easy to detect. This is to alter the thread flank angles, in the case of a metric and UNC threadforms, below 60 degrees. This enables the major diameter to remain correct and hence not easily discovered by most of the above methods. It results in a saving of 10-15% on the cost of the product. This quality may be picked up only via :

- Lighter unit weight
- Thread profile projection.
- In most cases, via tensile tests where the product cannot meet the requirements due to the reduced thread profile.

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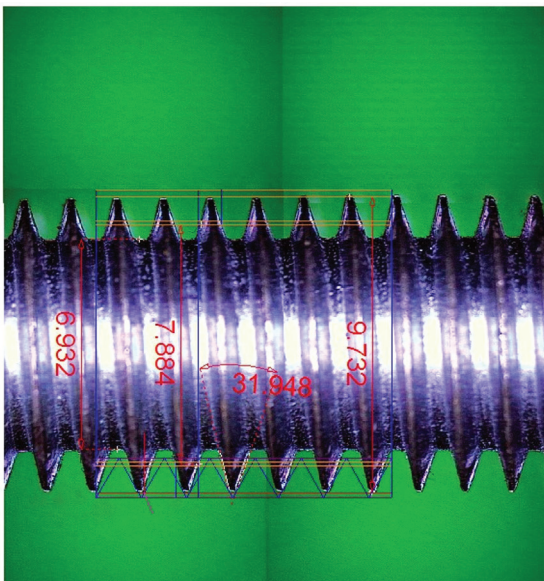




As can be seen from *Figures' 1 & 2*, the blue line is the correct thread profile of 60 degrees, and the product in *Figure 2* is clearly not adhering to the requirements of the thread profile.

So when you are next purchasing threaded rod, perhaps just consider what you are buying. All Hobson Grade 5, Grade 8, Class 8.8 and Class 10.9 allthread is batch tested via tensile tests, and the ILAC (NATA) reports are available through our website on EVERY BATCH. We also carry out random thread profile inspections on all allthread products and random tensile tests on Class 4.6 product. Threaded rod is NOT threaded rod, saving a few extra cents could result in SEVERE repercussions if you are receiving product in *Figure 2!*

**Figure 1:** Thread projection of Hobson Mild Steel Allthread carried out in our NATA accredited laboratory.



**Figure 2:** Thread Projection of "FAKE" allthread being sold in Australia

