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Report : BIR (083)

Item: BSM0008

Location: Worksafe Gear WA

Site Contact: Graham Genge

Problem: One rivet on a BSM0008 is missing; apparently it appears to have become dislodged during use

Testing: 26 hooks were returned and examined; with only 1 hook being faulty / damaged. 4 hooks were randomly selected from the ones returned and these were then tested in our NATA accredited laboratory in accordance with AS/NZS1891.1-2007 section 5.2.2

The tests included a proof test, 20kN hold test, gate side load and face load (as per the requirements of the standard)

Markings on the hooks is as follows: CE 1019 11/09, B-Safe BSM <25kN>

Observations: The hook which was missing the pin (rivet) was fully examined for any signs of damage (witness marks).

The only damage found was some missing black paint and scratches on the locking lever. The gate only had a scratch in line with where the missing rivets original location. After examining the scratch / mark on the gate it could not be concluded whether what caused this mark was responsible for the pin becoming dislodged / broken.

The bowl of the hook had some traces of what appeared to be blue paint; there were also a number of scratches in the Nickle Chrome plate.

Usage: As the exact circumstances surrounding the use of the scaffold hook missing the rivet are unknown then any comments based on said use would be purely speculative and therefore no comments will be made.

Comments: The hooks are manufactured from Alloy steel (S45C) and the main body is Nickle Chrome plated to a minimum of 7µm.

During manufacture a minimum of 1 in every 500 hooks is tested. The testing includes dimensional accuracy, proof test and break tests. The dimensions of the hooks are taken pre and post test and the elongation recorded (as are the minimum break loads). If during manufacture any batch tests fail to meet the prescribed values then that batch is rejected.

The tests in the factory record the following data:

- 1) Tension (kgf)
- 2) Tension (lbf)
- 3) Elongation (mm)
- 4) Yielding (mm)
- 5) Rate of elongation (mm)

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Once the hooks arrive in Beaver's Sydney warehouse further testing is carried out. These tests include proof tests, break tests, gate face resistance tests and also gate side load tests. (Tested to AS/NZS1891.1-2007 and ISO 10333-5)

The tests included a proof test, 20kN hold test, gate side load and face load (as per the requirements of the standard)

When the above tests are completed then 100% of the hooks are proof tested and then checked individually. Again should any hook show deformation or have a problem with the locking lever or gate then it is rejected a CAR raised and the goods transferred to our Quarantine warehouse.

As a result of this issue current stock holdings of BSM0008 scaffold hooks have been examined and no faults have been found. We have also tested 4 hooks selected from those returned by Worksafe Gear and all met or exceeded the requirements of AS/NZS1891.1-2007 (test certificates attached).

Also attached are the original test certificates from when the batches of Scaffold Hooks were received.

The 4 hooks taken from those returned all met or exceeded the requirements as per AS/NZS1891.1-2007 and also ISO10333-5 (certificates attached).

The tests included a proof test, 20kN hold test, gate side load and face load (as per the requirements of the standard)

However as the factory where the hooks are produced runs its manufacturing in strict accordance with its ISO accredited procedures and as Beaver batch tests and also proof tests 100% of the hooks. As a result of this isolated incident Beaver has reviewed its Testing, Quality and NATA procedures and found no irregularities found with the product or current stock holdings.



Jeff Pogson
National Product Development & Testing Manager