



Test Certificate

Office: **Lloyd's Register EMEA - Energy, Birmingham**

Date: **25 November 2020**

This Certificate is issued to **Gantry Railing Limited** to certify that the undersigned Surveyor to Lloyd's Register EMEA did, at their request, remotely witness on 12 November 2020 the testing at the Sudmeadow Works, Gloucester of the undernoted Gantry Railing Limited Clip in accordance with the requirements of Gantry Railing Limited Order No. 17824.

Gantrail Type 2524 Clip & M24 Washer - Design Load – 130KN

M24 Bolt Material BS EN ISO 898-1 Grade 8.8

M24 Nut Material BS EN ISO 898-2 Grade 8

Test Procedure

The above Clip assembly was subjected to lateral testing in accordance with Gantry Railing Limited Test Procedure No. Cliptst Issue 4 & recorded as GTR-0218. The procedure is based on BS 5950 Part 1:2000, Section 2.1.2.5 and Section 7. The Clip was bolted down at the middle position with the M24 bolt onto a test rig simulating normal fixing conditions with a measured torque of 600Nm.

Pre-Load Test (Design Load)

The Clip was subjected to a pre-load of 130kN for one-minute duration as a preliminary bedding in load.

Acceptance Test Load (1.3 x Design Load)

A test load of 169kN was applied in gradual stages. The desired 1.3 x Design Load was achieved.

Strength Test Load (1.6 x Design Load)

The proof load was increased in gradual stages to 208kN. The desired 1.6 x Design Load was achieved.

Failure Load

The proof load was increased in gradual stages to 260kN. The desired 2.0 x Design Load was achieved.

Proof / Strength Test Result

The pre-load test, proof load test & strength test were considered acceptable.

Post Test Inspection

Good Pass. On disassembly of the components, there were no signs of mechanical damage to the clip & washer. The bolt had deformed & had bent. The nut was in a serviceable condition.

**Pressure Gauge serial No. 5431041267, 0-700bar, calibrated
13/10/2020, HES Certificate Ref. No CC-0-317-4220.
Calibration verified to DH Budenberg (UKAS 0138)
Torque Wrench Serial No. 1999/54061, 300-1000 Nm, calibrated
12/10/2020, due 12/10/2021. Certificate No. U2009235,
Certificate Issued by Quasartronics Ltd (UKAS 0511)**



David Hodges
Surveyor to Lloyd's Register EMEA

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