



Test Certificate

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

Date: **23 July 2021**

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 09 July 2021 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. 18071.

Gantrail Type 1112/10/28 Clip - Design Load – 65KN

M12 Bolt Material BS EN ISO 898-1 Grade 8.8

M12 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-0238. 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 M12 bolt onto a test rig simulating normal fixing conditions with an approximate torque of 100Nm.

Pre-Load Test (Design Load)

The Clip was subjected to a pre-load of 65kN for one-minute duration as a preliminary bedding in load.

Acceptance Test Load (1.3 x Design Load)

A test load of 85kN 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 105kN. The desired 1.6 x Design Load was achieved.

Failure Load

The proof load was increased in gradual stages to 130kN. 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

On disassembly of the components, there were slight pressure marks on the clip face & deformation of the contact area of the bolt. During the test there was a slight slippage at x1.6 design load but no permanent deflection of any components. Failure not reached at x2 design load

**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)**

David Hodges
Surveyor to Lloyd's Register EMEA



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