



Test Certificate

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

Date: **13 May 2016**

This Certificate is issued to **Gantry Railing Limited** to certify that the undersigned Surveyor to Lloyd's Register EMEA did, at their request, attend their **Sudmeadow Works, Gloucester** on 27 April 2016 for the purpose of witnessing the testing of the undernoted Gantry Railing Limited Clip in accordance with the requirements of Gantry Railing Limited Order No. 15148.

Gantry Railing Limited Type 1220/21 Clip.
M20 Gantry Railing T Bolt, Material BS EN ISO 898-1 Grade 10.9
M20 Nut, Material BS EN ISO 898-2 Grade 10
Design Load 300kN

Test Procedure

The above Clip was subjected to lateral testing in accordance with Gantry Railing Limited Test Procedure No. Cliptst Issue 4 & recorded as GTR-107. The procedure is based on BS 5950 Part 1: 2000 – Section 2.1.2.5 and Section 7.

The Clip was welded to a plate with a 6mm (throat) fillet weld around the base.

The Clip was bolted down with the cap at centre position onto a test rig simulating normal fixing conditions with a measured torque of 350 Nm.

Pre Load Test (Design Load)

The Clip was subjected to a pre-load of 300kN for one minute duration as a preliminary bedding down load.

Acceptance Test Load (1.3 x Design Load)

A test load of 390kN was applied in gradual stages.

Strength Test Load (1.6 x Design Load)

The proof load was increased in gradual stages to 480kN.

Proof / Strength Test Result

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

Failure Load

The strength load was increased gradually to 552kN without failure. The test was stopped at 6200psi due to the test rig starting to deflect. The Clip withstood in excess of the Strength Test Load (1.6 x Design Load). Upon disassembly of the components, the clip & fixings were all in good serviceable condition with no sign of mechanical damage. Contact faces showed evidence of pressure & bearing but no deformation. The welds were all intact with no evidence cracking/shearing. Clip cap double bosses in great condition with only slight indentation from the rail but no deformation of entire boss.

Gantry Railing Ltd Equipment Record Card Item No. 150.
Pressure gauge serial No. S8814 (HFPG274 Hydraulic) 0-10000 psi,
calibrated 29/08/2014, Certificate No. PG274.
Certificate issued by Hi-Force Hydraulic Tools (UKAS 022)
Calibration due 28/08/2016 (Ref. E.R.C Item No. 150)
Gantry Railing Ltd Equipment Record Card Item No. 133
Torque Wrench Serial No. 1999/54063-1000 Nm, calibrated
10/07/2015, due 09/07/2016. Certificate No. U154083,
Certificate Issued by Quasartronics Ltd (UKAS 0511)



David Hodges
Surveyor to Lloyd's Register EMEA

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