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Office: Lloyd's Register EMEA - Energy, Birmingham

Date: 05 May 2017

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 25 April 2017 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. 15870.

Gantry Railing Limited Type 6124 Clip. M24 Bolt Material BS EN ISO 898-1 Grade 8.8 M24 Nut Material BS EN ISO 898-2 Grade 8 Design Load 125kN

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-0123. The procedure is based on BS 5950 Part 1: 2000 – Section 2.1.2.5 and Section 7.

The Clip was bolted down with the cap at the centre position 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 125kN for one minute duration as a preliminary bedding down load.

Acceptance Test Load (1.3 x Design Load)

A test load of 165kN was applied in gradual stages.

Strength Test Load (1.6 x Design Load)

The proof load was increased in gradual stages to 195Kn. The test was stopped as the assembly was unable to sustain pressure. The desired 1.6 x Design 200kN Load was not achieved.

Proof / Strength Test Result

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

Failure Load

At 195kN the bolt failed. Upon disassembly of the components, the clip body & special washer showed no signs of damage or deformation.

Gantry Railing Ltd Equipment Record Card Item No. 150 Pressure gauge serial No. S8814 (HFPG274 Hydraulic) 0-10000 psi, calibrated 16/01/2017, Certificate No. PG274. Certificate issued by Hi-Force Hydraulic Tools (UKAS 0822) Gantry Railing Ltd Equipment Record Card Item No. 138 Torque Wrench Serial No. 2007/223056-1000 Nm, calibrated 08/07/2016, due 08/07/2017. Certificate No. U164505, Certificate Issued by Quasartronics Ltd (UKAS 0511)



David Hodges BHM001.2015.05 CERT Surveyor to Lloyd's Register EMEA

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