



## Test Certificate

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

Date: **12 September 2014**

This Certificate is issued to **Gantry Railing Limited** to certify that the undersigned Surveyor did, at their request, attend their **Sudmeadow Works, Gloucester** on **02 September 2014** 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. 13436.

Gantry Railing Limited Type 3124 Clip..  
M24 Bolt Material to BS EN ISO 898-1 Grade 10.9  
M24 Nut Material to BS EN ISO 898-2 Grade 10

Design Load 140 KN

### Test Procedure

The above Clip was subjected to lateral testing in accordance with Gantry Railing Limited Test Procedure No. TESTBS5950. The procedure is based on BS 5950 Part 1: 2000 – Section 2.1.2.5 and Section 7.

The Clip was bolted down onto a test rig simulating normal fixing conditions with a measured torque of 750 Nm.

### Pre Load Test (Design Load)

The Clip was subjected to a pre-load of 140KN for one minute duration for a preliminary bedding down load.

### Acceptance Test Load (1.3 x Design Load)

A test load of 182KN was applied in gradual stages.

### Strength Test Load (1.6 x Design Load)

The proof load was increased in gradual stages to 224KN.

### Proof / Strength Test Result

The pre-load test, proof test and strength test to 1.6 x Design Load were all considered acceptable.

### Failure Load:

At 249KN the clip washer failed. There was permanent distortion of clip bolt along its axis due to bending moment. The clip body had no signs of distortion, and there was thread pressure in front of the slot.

**Calibration status of test equipment verified and traceability to UKAS verified.**



Stephen Meredith  
Surveyor to Lloyd's Register EMEA

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