

Load Test Report

Report Number: 34162 June 24, 2016

Client: KLEVAKLIP SYSTEMS PTY LTD Page 1 of 3

Address: Unit 3 / 176 South Creek Rd, Cromer NSW 2099

Client Contact: Greg Doupe

Order Number: Refer Greg Doupe

Test Requirements: Load test of floor joist as per client's instructions. **Site Address:** Unit 3 / 176 South Creek Rd, Cromer NSW 2099

Sample Identification: Nylon joist hangers 140mm x 45mm

Test Dates: 22/6/16

Test: AS 1170.1-2002 Part 3.4

<u>Test Equipment:</u> Hydraulic Pump and Ram, test blocks, 3000kg Hollow Load Cell, 50T hollow load cell, laser measure, stopwatch

<u>Test Setup:</u> Joist hangers were installed by client with joist span on 1.5m and 0.45m centres. Loads were distributed over the majority of the span via a steel plate testing four joist hangers simultaneously.

Test Requirement:

- The joist hangers were tested as follows to loads from AS 1170.1-2002 part 3.4:
 - A preload of 50% of the test load was applied for one minute in the same way the test load was to be applied (refer to results table for various applications) and base measurement recorded.
 - A serviceability load of 18kN was applied to the joists via the plate for 15 minutes.
 Displacement was measured.
 - Load was removed and the permanent set was measured.
 - The joist brackets were retested to an ultimate load of 30kN ultimate load in the same way as the previous load.
 - o Testing was repeated on two more sets of four hangers.
 - A final load of 38kN was applied to last set of joist hangers for 5 mins and measurement and observations made.

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http://www.alsglobal.com/~/media/Files/Divisions/Industrial/Asset Care/Asset Care Resources/Terms and Conditions/ALS-Terms-and-Conditions-Industrial-Australia.pdf Rhys James Metallurgist New South Wales







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Test Results:

Sample	Load (kN)	Pressure over area (kPa)	Observations	Deflection under load (mm)	Permanent set (mm)	Compliance
1	18	26.7	No damage or loosening	2.5	0.5	Complies
	30	44.4	No damage or loosening	3.0	0.0	Complies
2	18	26.7	No damage or loosening	1.5	0.0	Complies
	30	44.4	No damage or loosening	3.5	1.0	Complies
3	18	26.7	No damage or loosening	1.0	0.0	Complies
	30	44.4	No damage or loosening	2.5	0.5	Complies
	38	56.3	No damage or loosening	3.5	0.5	Complies

Compliance: The joist hangers tested comply with AS1170 for serviceability loading (permanent set < 30% of deflection) and ultimate loading (no collapse under load) when loaded to the loads outlined in AS1170.1 part 3.4.

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Figure 1: Joist hangers test setup



Figure 2: Example of joist hanger tested