



ENGINEERING ANALYSIS

Ref: RHE-LO-16-01

30 March 2016

Klevaklip Systems Pty Ltd
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Attention: Mr Greg Doupe

RFEA

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RE: FREP Joist Hanger

The structural testing for the NJH9045 FREP Joist hanger has been undertaken in conjunction with this firm.

We certify that the testing detailed in ALS test report 29765 is in accordance with normal engineering practice and principals and the relevant sections of the following Australian Standards:

- AS/NZS 1170.0:2002 Structural design actions – Part 0: General principles
- AS/NZS 1170.1:2002 Structural design actions – Part 1: Permanent, imposed and other actions
- AS 1720.1-2010 Timber structures Part 1: Design methods

From the test results detailed in the aforementioned report, we certify that the limit state design capacity of the Klevaklip NJH9045 joist hanger exceeds 3kN. This capacity corresponds to a joist span x joist spacing of 1.6m² for a live load of 1.5kPa or 1.2m² for a live load of 2.0kPa when combined with 0.5kPa dead load.

To achieve the structural design capacity, it is essential that the joists and joist hangers be installed in strict accordance with the fixing details provided by the manufacturer's specification.

It is noted that this certification relates to the joist hanger only, and does not extend to cover any connected joists, bearers or associated structure.

This certificate shall not be construed as relieving any other party of their legal responsibilities or contractual obligations.

Regards,

A handwritten signature in black ink, appearing to read 'Ryan Feller'.

Ryan Feller
MIEAust CPEng
for RFEA