LPS
CONSULTING ENGINEERS

LOGAN PROJECT SERVICES PTY LTD
STRUCTURAL & CIVIL
ABN 49 006 685 347
33 Wangara Road
Cheltenham VIC 3192 Australia
Email: logan.lps@gmail.com
Tel: 61 3 9583 1757
Fax: 61 3 9583 1259
Mobile: 0414 918 155

CERTIFICATION OF 'TECBEAM' - A COMPOSITE 'I' BEAM FOR USE AS STRUCTURAL FRAMING IN BUILDING CONSTRUCTION

Building Code of Australia Compliance

The product 'TECBEAM', complies with the requirements of the Building Code of Australia, when designed and installed in accordance with the relevant Australian Standards, and also with the published Design Guidelines, Installation Guidelines, Span Tables, and Section Properties (available from Tecbeam Australasia Pty Ltd or at www.tecbeam.com.au).

The Product

'TECBEAM' is a structurally engineered composite 'I' beam, with seasoned timber flanges fastened to a continuous press-formed galvanized sheet steel web with stiffening ribs and holes, designed by Tecbeam Australasia Pty Ltd and manufactured in Australia.

The published engineering properties:- first and second moment of areas are based on theoretical values, flexural and shear stiffness, beam shear and bending capacity, have been determined from test results on full size samples and the timber properties given in AS1720.1. The published values are based on the average of the tests, and are appropriate where several members share the loads as in floor joists. Moment capacity has been determined using the first moment of area and the modified stress grade of the flange material. *Where a single member is used to carry a significant load, a modification factor of 0.8, applied to the section properties, is recommended.*

Floor Joist Applications

The published span tables have been derived from: the relevant design criteria given in AS1684.1:1999 and AS1720.1:2010 and the design loadings specified in AS1170.1:2002.

The product is suitable for use as a structural building element in commercial, industrial and residential construction; it is also suitable for use in cyclone and earthquake areas because of its ductile behaviour. Suitable applications include:

- **floor joists** including; support of load bearing walls (non masonry but incl. Hebel wall panels), storage (up to 10kPa loading), concrete topped floors, Hebel floor panels (TecSlab), car parking, sports floors, etc,
- **floor beams** comprising single, double or multiple TECBEAM joists linked by one or more strong backs passing through the web holes and securely wedged in place,
- **moment connections** to columns or walls (incl. masonry) to form sway bracing frames,
- **roof framing**; rafters, purlins, hanging beams, ceiling joists, etc,
- **wall framing**; studs, girts, etc,
- other applications such as: A-frame and portal frame construction, portable buildings, temporary structures, formwork, bridges, etc can be designed using the beam section properties and standard engineering principles, refer to Tecbeam Australasia Pty Ltd or a registered structural engineer.

B R Logan CPEng, BE(Civil), Dip CE, MIE Aust, NPER-3, RBP(Vic) EC-1176

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