

To: Nexan Building Products, Inc.
From: Brian Waddell, Waddell Engineering Ltd.
Project: Lockdry Aluminum Decking
Project No.: 5648

To Whom it may concern,

Waddell Engineering Ltd. has been retained to provide a review concerning the structural adequacy of the Lockdry Aluminum deck flooring system in accordance with Ontario Building codes.

The structural review included the verification of various reports produced by other Engineering firms. Calculation reports completed by Childress Engineering Services (Richardson, TX, USA) on multiple dates in 2010, 2011, and March 26, 2012, were analyzed. An additional testing report from Wyle Laboratories (Huntsville, AL, USA) detailing gravity load tests conducted in September 1997, was also reviewed.

Ontario Building codes require that decking be designed for an unfactored uniformly distributed load of 4.8kPa(100psf) and meet the deflection criteria L/360. Results of the various Childress reports which meet these requirements are summarized, below.

Twin Span (in)	Point Load (lbs)	Deflection (in)	Deflection	Stress (ksi)
12	300	0.0040	OK	3.9
18	300	0.0136	OK	5.9
24	300	0.0322	OK	7.8
30	300	0.0629	OK	9.8

Twin Span (in)	Uniform Load (psf)	Deflection (in)	Deflection	Stress (ksi)
12	100	0.0008	OK	0.87
	240	0.0019	OK	2.1
18	100	0.0059	OK	2.9
	240	0.0142	OK	7.0
24	100	0.0250	OK	6.9
	240	0.0599	OK	16.6
30	100	0.0762	OK	13.5

NOTE: 240 psf loads and stresses are shown in case certain decking installations require additional load capacity.

Comments

It is the opinion of Waddell Engineering Ltd. that the aluminum decking calculation results produced by Childress Engineering Services presented in this review are adequate.

Waddell Engineering Ltd. certifies that the use of the FSI Home Products Inc. Lockdry Aluminum Decking system complies with the Ontario Building Code, when used within the limits of the table shown above.

Any questions or comments can be directed to the writer.

Regards, 

Brian Waddell P.Eng.

