

TEST REPORT

Intertek

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EVALUATION CENTER

INTERTEK TESTING SERVICES NA LTD.
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RENDERED TO

EXCELL RAILING SYSTEMS LTD.
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PRODUCT EVALUATED: 1.72 in. Durarail Welded Picket Railing System
EVALUATION PROPERTY: Load Requirements

THIS REPORT HAS BEEN EDITED BY EXCELL RAILING SYSTEMS. FOR A COPY OF THE ORIGINAL REPORT CONTACT EXCELL RAILING SYSTEMS.

Report of 1.72 in. Durarail Welded Picket Railing System for compliance with the applicable requirements of the following criteria: 2006 International Building Code, Section 1607.7.1

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1 Table of Contents

1	Table of Contents.....	2
2	Introduction.....	3
3	Test Samples.....	3
3.1.	Sample Selection	3
3.2.	Sample and Assembly Description.....	3
4	Testing and Evaluation Methods	3
4.1.	General (Clause 1607.7).....	3
4.2.	In-fill Load Test (Clause 1607.7.1.2).....	3
4.3.	Uniform Load Test (Clause 1607.7.1).....	4
4.4.	Concentrated Load Test (Clause 1607.7.1.1).....	4
5	Testing and Evaluation Results.....	4
5.1.	Results and Observations	4
6	Conclusion.....	5
Appendix A	Test Data.....	1 page
Appendix B	Drawings	8 pages

2 Introduction

Intertek Testing Services NA Ltd. (Intertek) has conducted a test program for Excell Railing Systems Ltd. on an aluminum railing system. The evaluation was carried out to determine whether the railing system would meet the loads specified in the 2006 International Building Code (IBC), Section 1607.7.1. The evaluation was conducted in the month of July 2008.

3 Test Samples

3.1. SAMPLE SELECTION

The client submitted one (1) aluminum picket railing sample to the Evaluation Center on July 7, 2008. Samples were not independently selected for testing and cannot be used for Intertek Certification.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

The sample was identified as the following:

- 6 ft. Durarail Welded Picket Railing System, which consists of the following:

Post: 1.72 in. x 1.72 in. 6061-T6 extruded aluminum post with 6 in. post insert

Base Plate (deck): 4 in. x 4 in. x 3/8 in. 6061-T6 aluminum base plate with 4 mounting holes

Top Rails: 42 in. high, 6063-T5 aluminum rail (Two-piece round profile)

Picket Insert: 5/8 in. x 5/8 in. 6063-T5 aluminum spaced 4-1/2 in. o/c

Connections: Connection details are provided in Appendix B.

Note: Post to sub-structure fastener evaluation is beyond the scope of this report. Four 3/8 inch Grade 5 bolts were used to install deck mount posts.

4 Testing and Evaluation Methods

Test specimen was loaded at a rate to achieve the specified loads between 10 seconds and 5 minutes. The specified test loads were held for one minute before the load was released. As per Section 1607.7.1 of the 2006 IBC, the following tests were conducted:

4.1. GENERAL (Clause 1607.7.1)

One complete railing system, consisting of two posts, was tested at maximum spacing and in the worst-case scenario.

4.2. IN-FILL LOAD TEST (Clause 1607.7.1.2)

A load consisting of 125 lbs was applied over 1 sq. ft. (0.0929 m²) normal to the in-fill in a worst-case scenario.

4.3. UNIFORM LOAD TEST (Clause 1607.7.1)

A load consisting of 125 lbf/ft was applied across the top rail of the system in a 45° vectored direction.

4.4. CONCENTRATED LOAD TEST (Clause 1607.7.1.1)

Two separate tests were conducted where the proof load of 500 lbf was applied horizontally to the top-rail at mid-span and directly adjacent to the post to evaluate the connection capacity.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

The product test results are shown in Table 1 below and the test data sheet is located in Appendix A.

Table 1. Test Results				
System Description	System Height (inches)	Maximum Post to Post Center Spacing (inches)	Test	Compliance
6 ft. Durarail Welded Picket Railing System	42	73-1/2	In-fill load	Complied
			Uniform Load	Complied
			Mid-span Concentrated Load	Complied
			Adjacent to Post Concentrated Load	Complied

6 Conclusion

The 1.72 in. Durarail Welded Picket Railing System identified in this test report has complied with the loads specified in 2006 International Building Code, Section 1607.7.1 as presented in Section 5 of this test report.

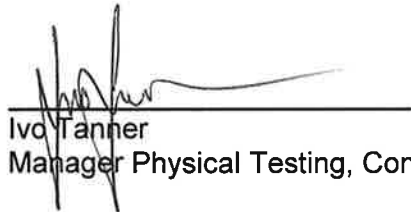
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