

Infinity Testing Solutions

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Concrete Slab Railing Post Strength Test

Report Number: 17010076B

Report for:	Conqueror Steel Inc. 3392 Colonial Drive Mississauga, ON L5L 5B9
Attention:	Reuben Massey
Telephone:	(416) 428-6697
Report Date:	March 13, 2017

1.0 INTRODUCTION

At the request of Conqueror Steel Inc., Infinity Testing Solutions (ITS) conducted strength testing of a concrete slab railing post.

The sample was assigned an ITS sample number as follows:

ITS Sample Number	Sample Description
17010076-1	Steel railing post clamped to 300mm concrete slab

Testing was performed on March 9th, 2017.

2.0 TEST PROCEDURE

2.1 Test Setup and Procedure

Testing was performed using a load frame equipped with a hydraulic actuator and load cell. The test was controlled and monitored using a LabVIEW-based control program.

Two concrete slabs, each 150mm in height, were stacked on top of each other and secured to a heavy-duty test bed. The sample was fastened to the concrete slabs according to the client’s specification. The actuator was positioned on the load frame such that the height of the loading point was 780 mm from the top surface of the concrete slab (Figure 1). Load was applied at a rate of 500 lbs/minute. Load and position data were recorded continuously a rate of 20 Hz.

2.2 Measurement Instruments

Instrument Name	Range	Serial Number	Calibration Due
Lebow 3174-5K load cell	5,000 lbs	2134	2017-05-06

3.0 RESULTS

Sample Number	Loading Height	Maximum Load
17010076-1	780 mm	523 lbs (2,327 N)

Note that load refusal had not yet occurred when the maximum recorded load was reached; the load was released prior to failure at the client’s request.

Setup and post-test photos are shown in Figures 1 through 3. Load data is shown in Figure 4.

Infinity Testing Solutions Inc.

Reported by:

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This report refers only to the particular samples provided, and is limited by the test and/or analysis performed. Similar articles may not be of like quality, and other testing and/or analysis methods might give different results.

Figures
(3 pages)



Figure 1: Test setup



Figure 2: Maximum load (523 lbs)



Figure 3: Clamp after testing

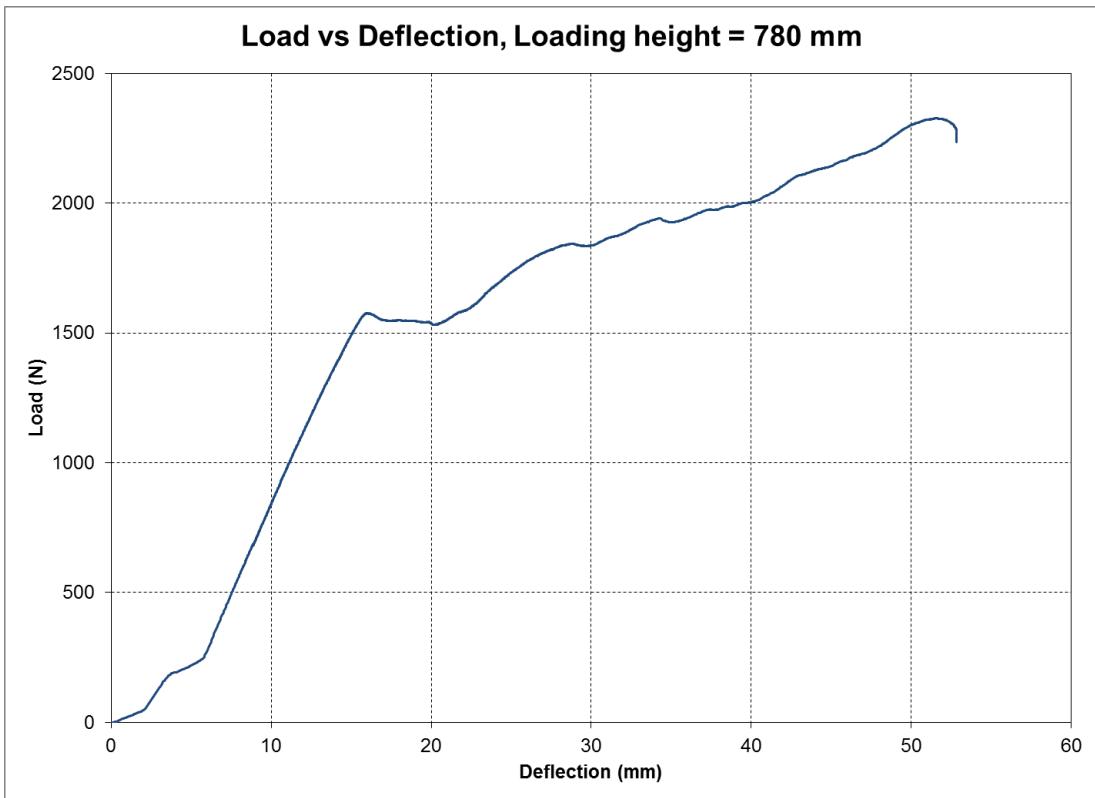


Figure 4: Load-deflection data plot