



R & B WAGNER, INC.
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Railing System Load/Deflection Testing

Test Type:	Horizontal pull test of 1701-2 cast brackets	Submitted By:	PWH	Date	8/10/2007
Railing Type:	Two 1701-2 MI Cast brackets welded to a single 1.90 rail				
Railing Specifications:	Brackets welded 4' OC				
Test Method:	Mount rail system to test bed in horizontal orientation (see pics below), load per ASTM E935 Section 15. System calculations determined per ASTM E985 para 7.1.5				

Test Specifications per ASTM E985:		Results:				
System Calculations:		Load	Displacement (in.)			Test AVG
			1	2	3	
Pre Load	UTL/2= 365/2 = 180 lbs	Preload	-			#DIV/0!
Released Test Load	PL/2= 90 lbs	RTL	-			#DIV/0!
Ultimate Test Load	365 lbs	100	(pre-load)			#DIV/0!
		200	0.021			0.021
		300	0.038			0.038
Max Deflection	=L/96: =48/96 =.5"	365	0.052			0.052
		RD	0.002			0.002
		900	0.175			0.175
Residual Deflection (At RTL)	=< of 20% MD or 0.5" =.10"	RD	0.017			0.017

NOTES:

Test not completed for 100 lbs load as system is zeroed at 90 lb Released Test Load

CONCLUSIONS:

Railing system complies to deflection/load bearing specifications per ASTM E985 at ultimate test load of 365 lbs.
 Following successful test, system loaded to 900 lbs. Railing system complies to deflection/load bearing specifications per ASTM E985 at 900 lbs



System at preload



System at Released test load, deflection zeroed



System at 200 lbs



System at 300 lbs



System at 365 lbs, Ultimate Test Load



Residual Deflection at Released Test Load



System loaded at 900 lbs

