



WESTERN ELECTRO - ACOUSTIC LABORATORY

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TESTING • CALIBRATION • RESEARCH

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SOUND TRANSMISSION LOSS TEST REPORT NO. TL13-211

CLIENT: **CEMCO**
263 N Covina Lane
City of Industry, CA 91744
TEST DATE: 28 February 2013

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1 March 2013

INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04^{E1}, *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*. Copies of the test standard are available at www.astm.org. The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by the United States Department of Commerce, National Institute of Standards and Technology under the National Voluntary Accreditation Program (NVLAP) Lab Code 100256-0 for this test procedure. This test report relates only to the item(s) tested. This report must not be used to claim product certification, approval, or endorsement by WEAL, NVLAP, NIST or any agency of the federal government.

DESCRIPTION OF TEST SPECIMEN

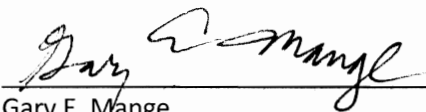
The test specimen was a wall assembly constructed from double metal studs and Type X gypsum board. The metal studs were 64 mm (2-1/2 inch) Cemco 25 gauge Viperstuds and were spaced at 610 mm (24 inches) O.C. on both sides of the wall. The sill track was also 64 mm (2-1/2 inch) Cemco 25 gauge metal. The head tracks were 20 gauge FAS track 1000 with a 12.7 mm (1/2 inch) intumescent strip on the web on the finish side only. There was a 1 inch (25.4 mm) gap between the two frames. The sills and edge studs were isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. The head tracks were screwed directly to the test chamber opening. Two layers of full width R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On the source room side, one layer of 15.9 mm (5/8 inch) thick Type X gypsum board was screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 31.8 mm (1-1/4 inch) drywall screws. The gypsum board was oriented vertically. On the receiving room side, two layers of 15.9 mm (5/8 inch) thick Type X gypsum board was screwed to the studs at 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field using 31.8 mm (1-1/4 inch) drywall screws on the first layer and 41.3 mm (1-5/8 inch) drywall screws on the second layer. The first layer was oriented vertically and the second layer was oriented horizontally. The joints were staggered on opposite sides of the wall. On both sides, a 12.7 mm (1/2 inch) gap was intentionally left at the head. On both sides, the joints and perimeters were sealed with a bead of caulking and metal foil tape except at the head. All screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 200 mm (7-7/8 inches) thick. The overall weight of the assembly was estimated to be 229 kg (505 lbs) for a calculated surface density of 38.5 kg/m² (7.89 lbs./ft²).

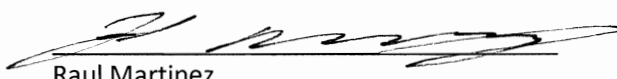
RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Outdoor-Indoor Transmission Class rating determined in accordance with ASTM E 1332-10a was OITC-46. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-62.

Approved:

Respectfully submitted,
Western Electro-Acoustic Laboratory


Gary E. Mänge
Laboratory Director


Raul Martinez
Acoustical Test Technician

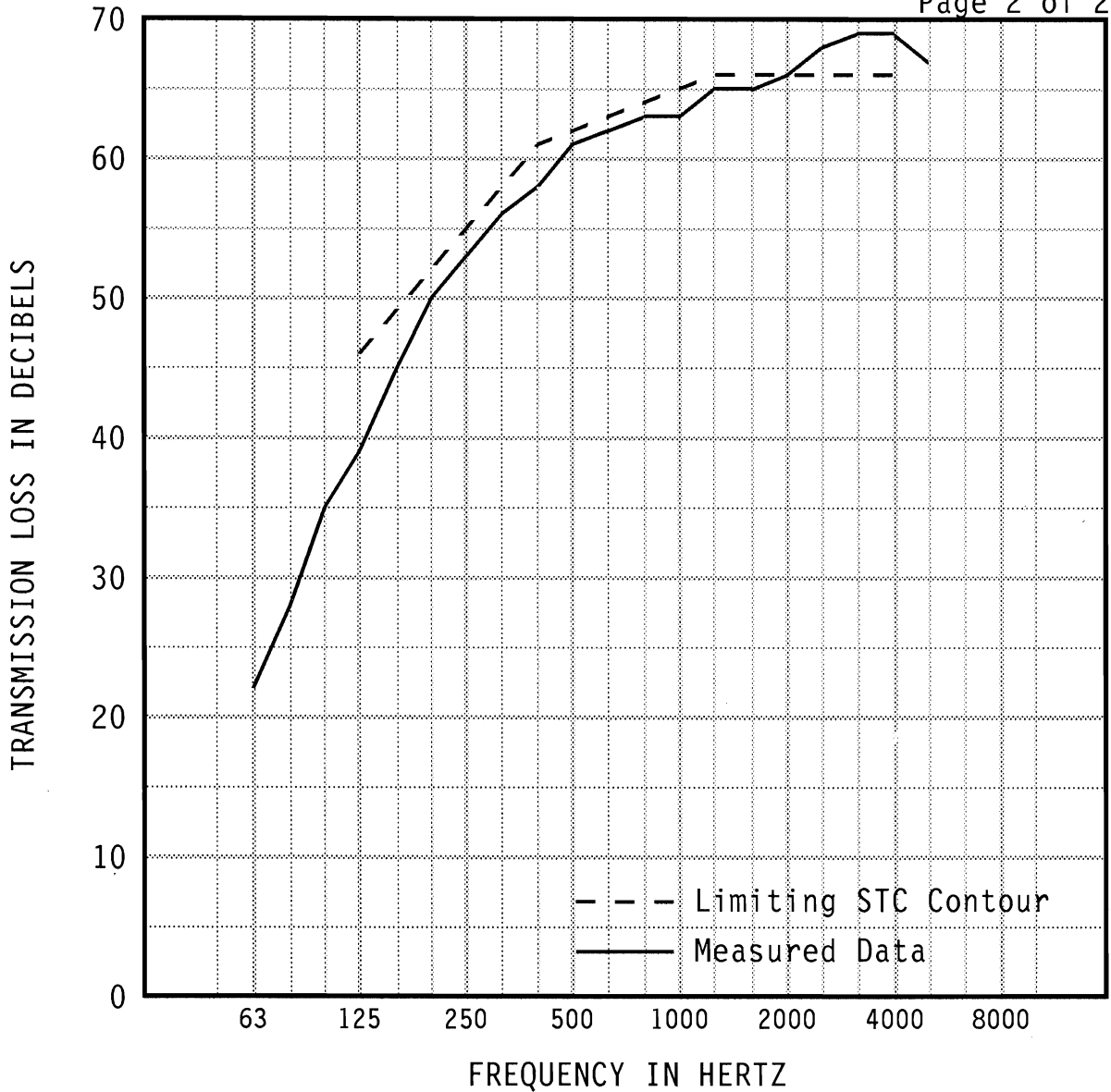
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NVLAP LAB CODE 100256-0

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1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		22	28	35	39	45	50	53	*56	*58	*61
95% Confidence in dB deficiencies		1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
					(7)	(4)	(2)	(2)	(2)	(3)	(1)
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		62	63	63	65	65	*66	*68	*69	*69	67
95% Confidence in dB deficiencies		0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
		(1)	(1)	(2)	(1)	(1)	(0)				

EWR 62	OITC 46	* Minimum estimate of transmission loss. Measurement limited by filler wall. Actual TL will be equal to or greater than value reported.	Specimen Area: 64 sq.ft.	STC 62 (27)
			Temperature: 69.6 deg. F	
			Relative Humidity: 33 %	
			Test Date: 28 February 2013	

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