



SOUND TRANSMISSION LOSS TEST REPORT NO. TL14-442

CLIENT: **Frametek Steel Products**
1495 Columbia Ave., Bldg. 4
Riverside, CA 92507

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4 February 2015

TEST DATE: 5 December 2014

INTRODUCTION

The test was performed in accordance with 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 metal studs and type X gypsum board. The studs were Prime Stud 92 mm (3-5/8 inch) 19 mil metal and were spaced at 610 mm (24 inches) O.C. The head and sill tracks were Prime Track 92 mm (3-5/8 inch) 19 mil metal. The frame was isolated from the test opening with 6.4 mm (1/4 inch) neoprene pads. Owens Corning R-13 un-faced fiberglass batts, 89 mm (3-1/2 inch) thick, were installed in the stud spaces. On the source room side, two layers of 15.9 mm (5/8 inch) thick USG type X gypsum board were 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 28.6 mm (1-1/8 inch) drywall screws on the first layer and 50.8 mm (2 inch) drywall screws on the second layer. On the receiving room side, Frametek 18 mil single leg resilient channels were screwed to the studs horizontally and spaced at 610 mm (24 inches) O.C. The channels were oriented with the resilient leg above the screw leg. The center of the top channel was 76 mm (3 inches) below the top of the wall and the center of the bottom channel was 76 mm (3 inches) above the bottom of the wall. Two layers of 15.9 mm (5/8 inch) thick USG type X gypsum board were screwed to the channels at 305 mm (12 inches) O.C. with 25.4 mm (1 inch) drywall screws on the first layer and 50.8 mm (2 inch) drywall screws on the second layer. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall and between layers. On both sides, the joints and perimeters were sealed with a bead of caulking and metal foil tape. 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 168 mm (6-5/8 inches) thick. The overall weight of the assembly was estimated to be 283 kg (624 lbs.) for a calculated surface density of 47.6 kg/m² (9.76 lbs./ft²).

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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-45. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-57.

Approved:



Gary E. Mange
Laboratory Director

Respectfully submitted,
Western Electro-Acoustic Laboratory

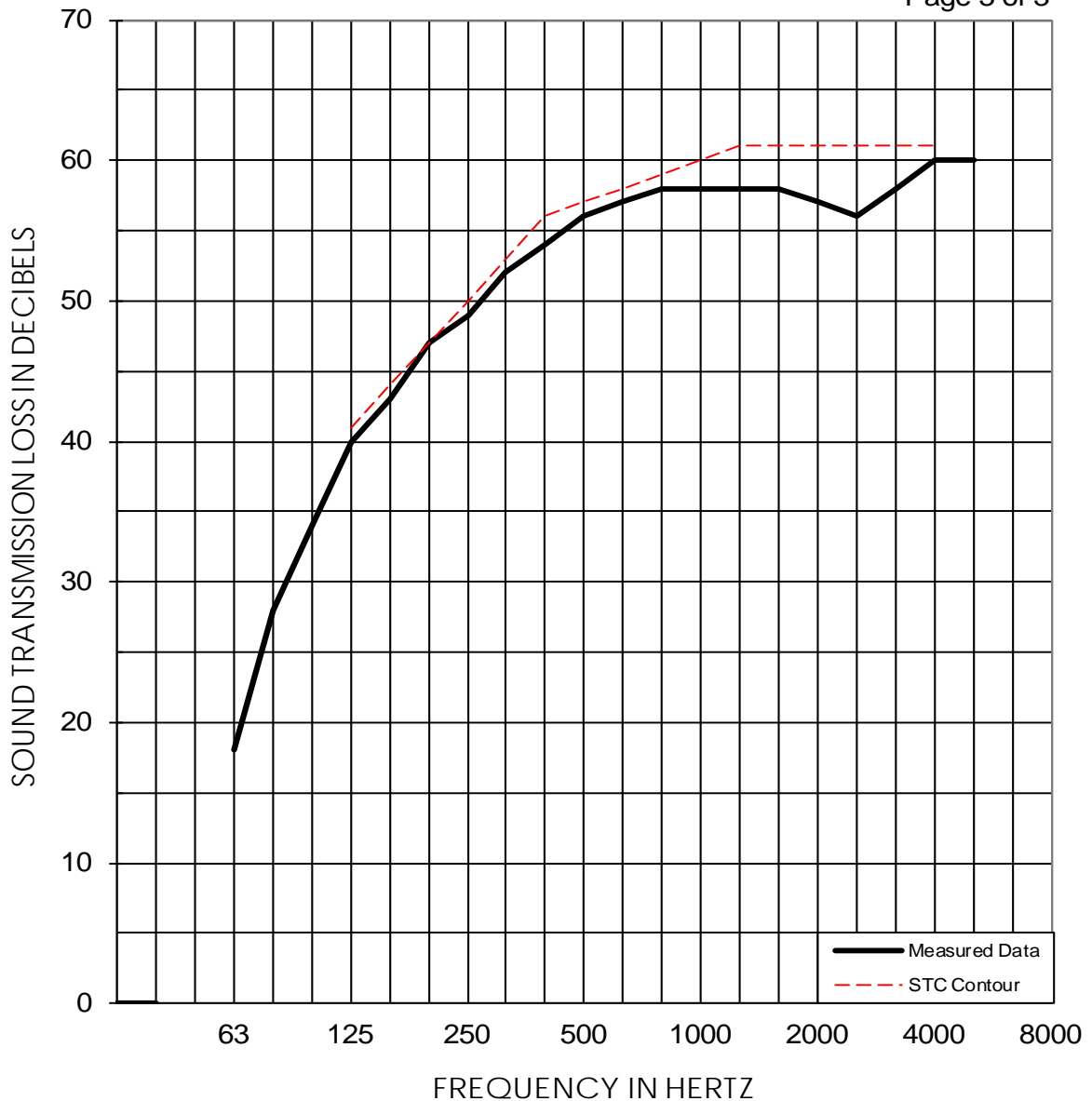


Raul Martinez
Acoustical Test Technician

WESTERN ELECTRO-ACOUSTIC LABORATORY

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1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	18	28	34	40	43	47	49	52	54	56
95% Confidence in dB deficiencies	1.42	1.92	2.07	1.47 (1)	0.89 (1)	0.76 (0)	0.80 (1)	0.52 (1)	0.36 (2)	0.38 (1)
1/3 OCT BAND CNTR FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB	57	58	58	58	58	57	56	58	60	60
95% Confidence in dB deficiencies	0.29 (1)	0.44 (1)	0.38 (2)	0.39 (3)	0.36 (3)	0.56 (4)	0.55 (5)	0.31 (3)	0.32 (1)	0.50

EWR	OITC	Test Date: 05 December 2014	STC
58	45	Specimen Area: 64 sq.ft.	57
		Temperature: 73.2 deg. F	(30)
		Relative Humidity: 50 %	

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