

# WESTERN ELECTRO - ACOUSTIC LABORATORY

A division of Veneklasen Associates, Inc.

#### CALIBRATION TESTING RESEARCH

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## SOUND TRANSMISSION LOSS TEST REPORT NO. TL14-439

CLIENT: Frametek Steel Products Page 1 of 2

4 February 2015

1495 Columbia Ave., Bldg. 4

Riverside, CA 92507

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<sup>£1</sup>, 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 both sides, one layer of 15.9 mm (5/8 inch) thick USG 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 28.6 mm (1-1/8 inch) drywall screws. All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall. 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 124 mm (4-7/8 inches) thick. The overall weight of the assembly was estimated to be 148 kg (327 lbs.) for a calculated surface density of 24.9 kg/m<sup>2</sup> (5.11 lbs./ft<sup>2</sup>).

### **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-30. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-48.

Approved:

Respectfully submitted,

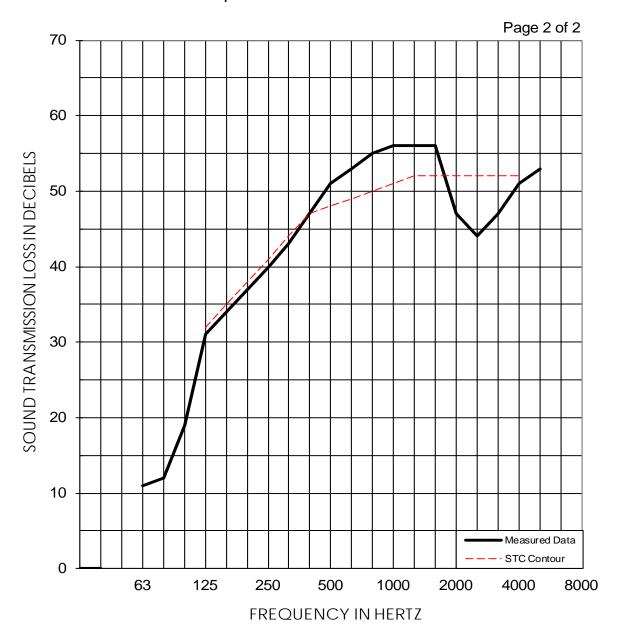
Western Electro-Acoustic Laboratory

Gary E. Mange Laboratory Director Raul Martinez

Acoustical Test Technician

# WESTERN ELECTRO-ACOUSTIC LABORATORY

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63	80	100	125	160	200	250	315	400	500
11	12	19	31	34	37	40	43	47	51
1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
			(1)	(1)	(1)	(1)	(1)	(0)	
630	800	1000	1250	1600	2000	2500	3150	4000	5000
53	55	56	56	56	47	44	47	51	53
0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
					(5)	(8)	(5)	(1)	
R OITC Test Date: 05 December 2014									STC
Specimen Area: 64 sq.ft.									48
Temperature: 72.7 deg. F									(24)
	11 1.42 630 53 0.29	11 12 1.92 1.92 630 800 53 55 0.29 0.44 Test Specimen	11       12       19         1.42       1.92       2.07         630       800       1000         53       55       56         0.29       0.44       0.38    Test Date: Specimen Area:	11       12       19       31         1.42       1.92       2.07       1.47         (1)       (1)         630       800       1000       1250         53       55       56       56         0.29       0.44       0.38       0.39         Test Date: 05 Dec         Specimen Area: 64 sq.f	11         12         19         31         34           1.42         1.92         2.07         1.47         0.89           (1)         (1)         (1)           630         800         1000         1250         1600           53         55         56         56         56           0.29         0.44         0.38         0.39         0.36    Test Date: 05 December Specimen Area: 64 sq.ft.	11       12       19       31       34       37         1.42       1.92       2.07       1.47       0.89       0.76         (1)       (1)       (1)       (1)         630       800       1000       1250       1600       2000         53       55       56       56       56       47         0.29       0.44       0.38       0.39       0.36       0.56         (5)    Test Date: 05 December 2014 Specimen Area: 64 sq.ft.	11         12         19         31         34         37         40           1.42         1.92         2.07         1.47         0.89         0.76         0.80           630         800         1000         1250         1600         2000         2500           53         55         56         56         56         47         44           0.29         0.44         0.38         0.39         0.36         0.56         0.55           (5)         (8)   Test Date: 05 December 2014 Specimen Area: 64 sq.ft.	11       12       19       31       34       37       40       43         1.42       1.92       2.07       1.47       0.89       0.76       0.80       0.52         (1)       (1)       (1)       (1)       (1)       (1)       (1)       (1)         630       800       1000       1250       1600       2000       2500       3150         53       55       56       56       56       47       44       47         0.29       0.44       0.38       0.39       0.36       0.56       0.55       0.31         Test Date:       05 December 2014         Specimen Area:       64 sq.ft.	11         12         19         31         34         37         40         43         47           1.42         1.92         2.07         1.47         0.89         0.76         0.80         0.52         0.36           630         800         1000         1250         1600         2000         2500         3150         4000           53         55         56         56         56         47         44         47         51           0.29         0.44         0.38         0.39         0.36         0.56         0.55         0.31         0.32           Test Date: O5 December 2014           Specimen Area: 64 sq.ft.

Relative Humidity: 48 %

