



WESTERN ELECTRO - ACOUSTIC LABORATORY

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TESTING • CALIBRATION • RESEARCH

25132 Rye Canyon Loop Santa Clarita, California 91355 Tel: (661) 775-3741 Fax: (661) 775-3742 www.weal.com

SOUND TRANSMISSION LOSS TEST REPORT NO. TL17-367

CLIENT: CEMCO
263 N Covina Lane
City of Industry, CA 91744
TEST DATE: 19 July 2017

01 September 2017

INTRODUCTION

The test was performed in accordance with ASTM E 90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04 (2012), *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 92 mm (3-5/8 inch) CEMCO Viper-X 22.3 mils (30EQ) metal studs and track, R-13 fiberglass insulation, and USG Type X gypsum board.

TEST CONFIGURATION

Layers Source Room Side	Stud	Insulation	Layers Receive Room Side
16 mm (5/8 inch) USG Type X	92 mm (3-5/8 inch) CEMCO Viper-X 22.3 mils (30EQ)	R-13 Fiberglass	16 mm (5/8 inch) USG Type X

- The metal studs were spaced at 610 mm (24 inches) O.C. The studs and track were isolated around the perimeter from the test chamber opening with 6 mm (1/4 inch) neoprene pads.
- On both sides, 16 mm (5/8 inch) USG Type X gypsum board was screwed 203 mm (8 inches) on center (O.C.) around the perimeter and 305 mm (12 inches) O.C. in the field.
- All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall. All the joints were sealed with a bead of latex 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 160.1 kg (353 lbs) for a calculated surface density of 26.9 kg/m² (5.52 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-29. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-46.

Approved:

Stephen A. Martin, Ph.D., P.E.
Laboratory Director

Respectfully submitted,
Western Electro-Acoustic Laboratory

Raul Martinez
Acoustical Test Technician

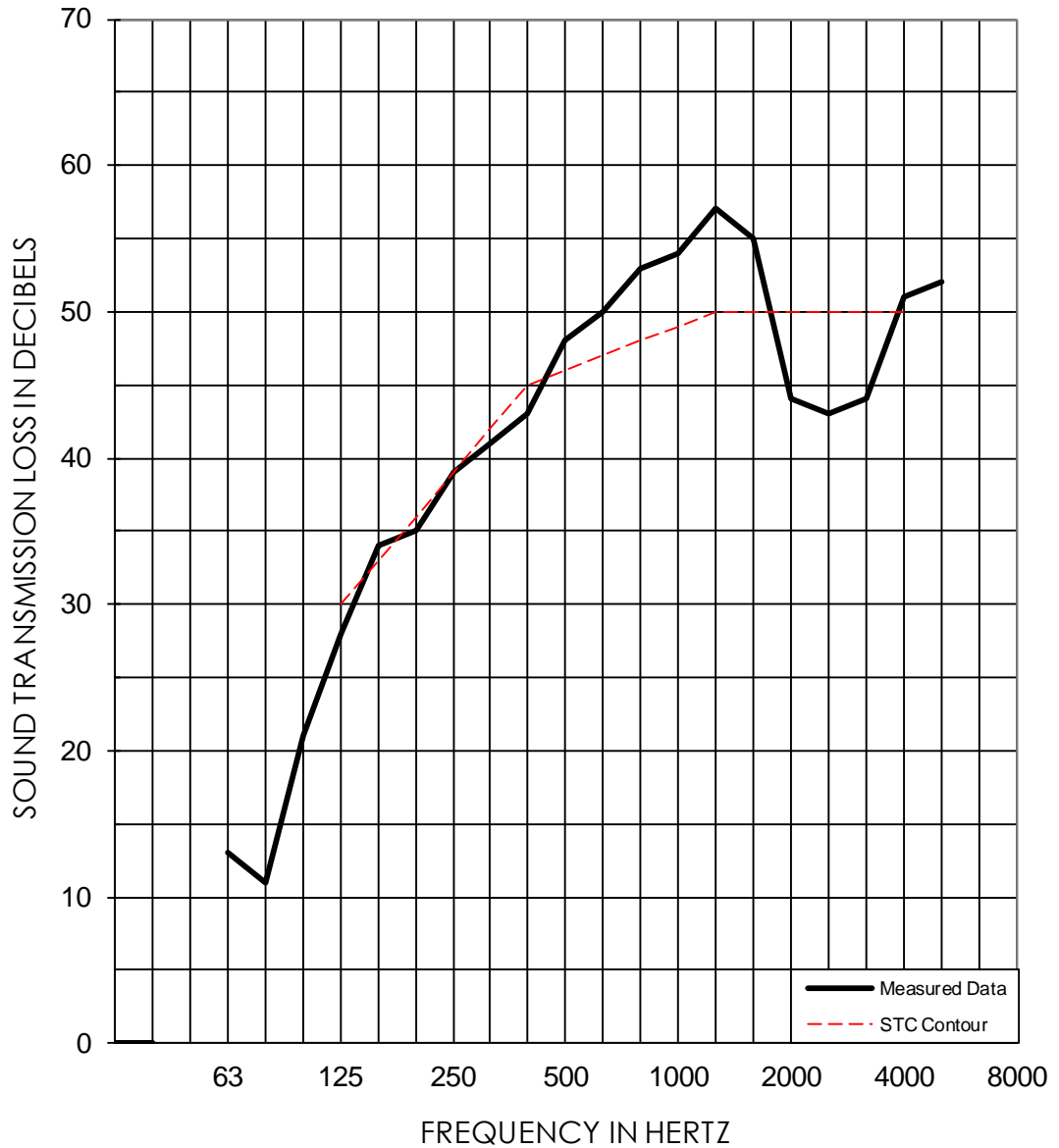
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1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	13	11	21	28	34	35	39	41	43	48
95% Confidence in dB deficiencies	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
				(2)		(1)	(0)	(1)	(2)	
1/3 OCT BAND CNTR FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB	50	53	54	57	55	44	43	44	51	52
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
						(6)	(7)	(6)		

EWR	OITC	Test Date: 19 July 2017	STC
47	29	Specimen Area: 64 sq.ft.	46
		Temperature: 75.4 deg. F	(25)
		Relative Humidity: 42 %	

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