WESTERN ELECTRO - ACOUSTIC LABORATORY
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TESTING • CALIBRATION • RESEARCH

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SOUND TRANSMISSION LOSS TEST REPORT NO. TL17-369

CLIENT: **CEMCO**
263 N Covina Lane
City of Industry, CA 91744

01 September 2017

TEST DATE: 19 July 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
2 layers of 16 mm (5/8 inch) USG Type X	92 mm (3-5/8 inch) CEMCO Viper-X 22.3 mils (30EQ)	R-13 Fiberglass	2 layers of 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, 2 layers of 92 mm (5/8 inch) USG Type X gypsum board was screwed 406 mm (16 inches) on center (O.C.) around the perimeter and 406 mm (16 inches) O.C. in the field.
- All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall and between layers. 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 156 mm (6-1/8 inches) thick.
- The overall weight of the assembly was estimated to be 294.4 kg (649 lbs) for a calculated surface density of 49.5 kg/m^2 (10.14 lbs./ft^2).

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-33. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-52.

Respectfully submitted,
Western Electro-Acoustic Laboratory

Approved:

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

Raul Martinez
Acoustical Test Technician

NVLAP LAB CODE 100256-0

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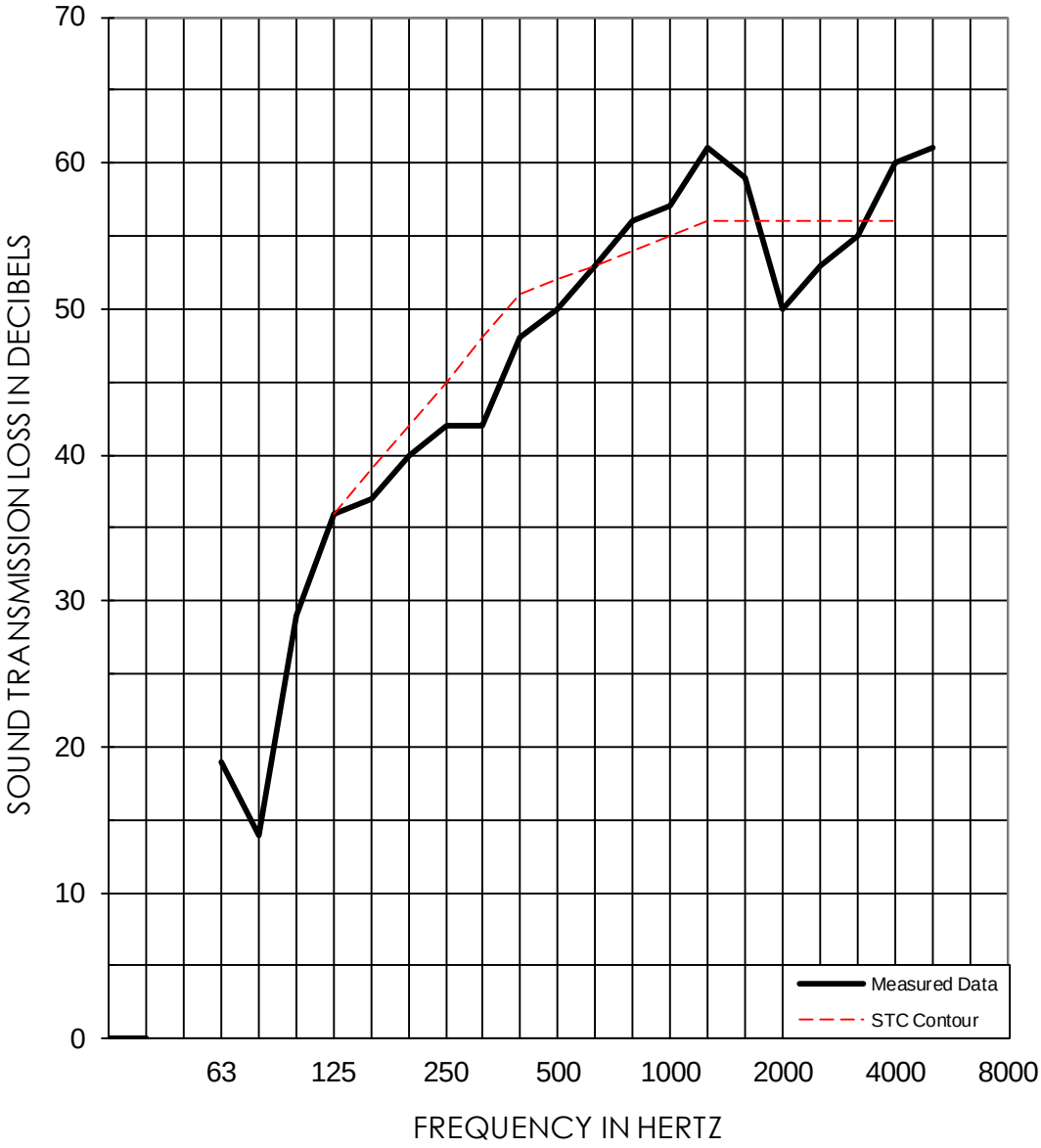

1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	**19**	**14**	**29**	**36**	**37**	**40**	**42**	**42**	**48**	**50**
95% Confidence in dB	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
deficiencies				(0)	(2)	(2)	(3)	(6)	(3)	(2)
1/3 OCT BAND CNTR FREQ	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**
TL in dB	**53**	**56**	**57**	**61**	**59**	**50**	**53**	**55**	**60**	**61**
95% Confidence in dB	0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
deficiencies	(0)					(6)	(3)	(1)		

EWR	OITC
52	33

Test Date: 19 July 2017
Specimen Area: 64 sq.ft.
Temperature: 72 deg. F
Relative Humidity: 40 %

STC
52
(28)

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