



## SOUND TRANSMISSION LOSS TEST REPORT NO. TL17-432

CLIENT: **CEMCO**  
263 N Covina Lane  
City of Industry, CA 91744  
TEST DATE: 24 August 2017

1 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](http://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 double wall assembly constructed from 64 mm (2-1/2 inch) CEMCO Viper 20EQ metal studs, CEMCO TAB Track 33MIL 20GA, R-13 fiberglass insulation, CEMCO HOTROD compressible Firestopping, and USG Type X gypsum board.

### TEST Configuration

Layers Source Room Side	Stud and Track With insulation	25.4 mm (1- inch) Air gap	Stud and Track With insulation	Layers Receive Room Side
1 layer of 16 mm (5/8 inch) USG Type X	64 mm (2-1/2 inch) CEMCO Viper 20EQ and CEMCO TAB Track 33 MIL 20GA with R-13 insulation		64 mm (2-1/2 inch) CEMCO Viper 20EQ and CEMCO TAB Track 33 MIL 20GA with R-13 insulation	1 layer 16 mm (5/8 inch) USG Type X

- The metal studs were spaced at 406 mm (16 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.
- Screw spacing was at 203 mm (8 inches) on center (O.C.) around the perimeter and 305 mm (12 inches) O.C. in the field.
- 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.
- At the head on both sides, a 19 mm (3/4 inch) gap was left open. CEMCO HOTROD compressible Firestopping was installed in the gaps. A joint compound was used to seal the top gap on both sides.
- The overall dimensions of the wall assembly were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 184 mm (7-1/4 inches) thick.
- The overall weight of the assembly was estimated to be 222 kg (491 lbs) for a calculated surface density of 24.9 kg/m<sup>2</sup> (5.11 lbs./ft<sup>2</sup>).



# WESTERN ELECTRO - ACOUSTIC LABORATORY

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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-61.

Approved:

Respectfully submitted,  
Western Electro-Acoustic Laboratory

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

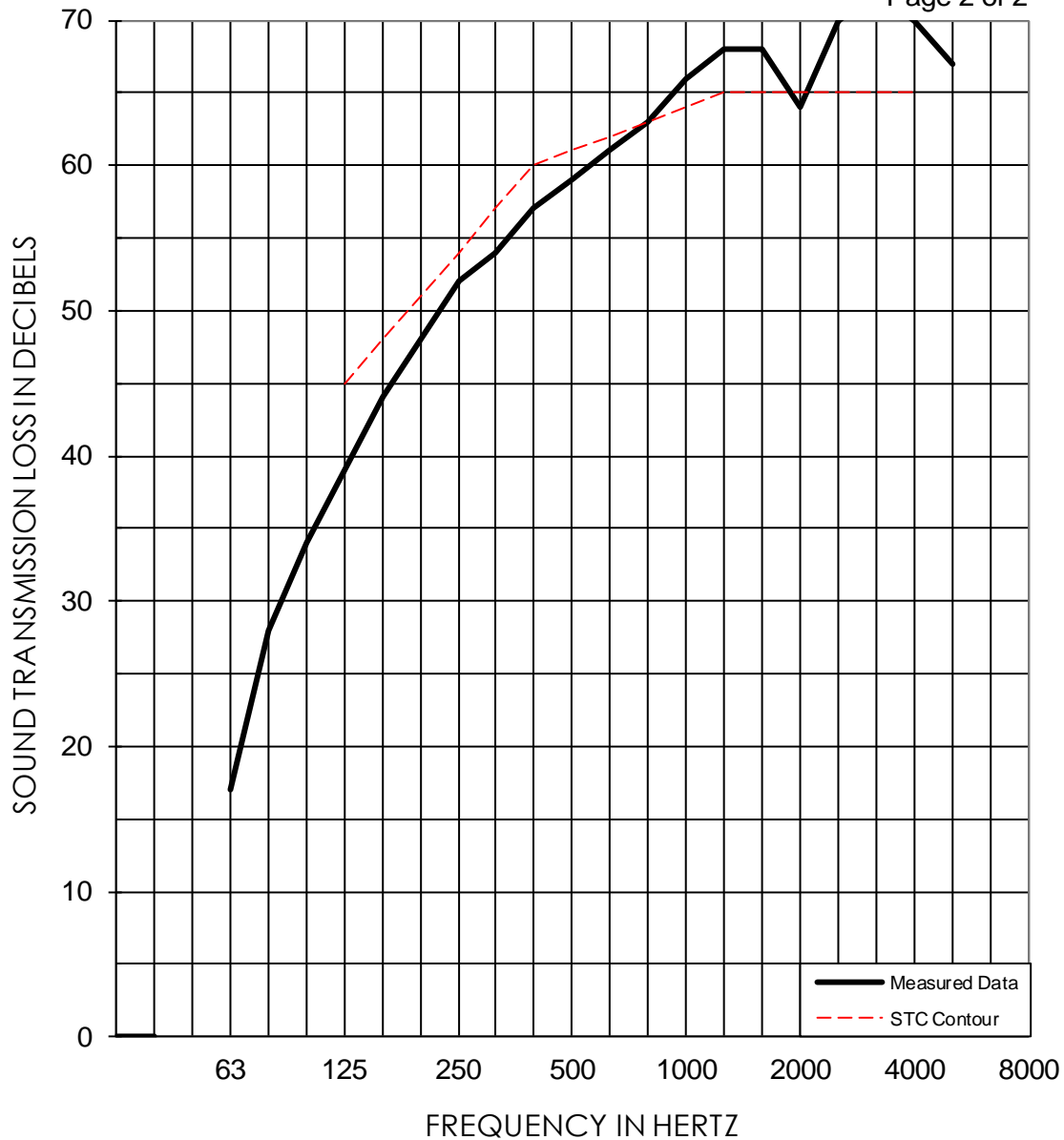
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Raul Martinez  
Acoustical Test Technician

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1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	17	28	34	39	44	48	52	54	57	59
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
				(6)	(4)	(3)	(2)	(3)	(3)	(2)
1/3 OCT BAND CNTR FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB	61	63	66	68	68	64	70	72	70	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)	(0)				(1)				
<b>EWR</b>	<b>OITC</b>	Test Date: 24 August 2017								<b>STC</b>
61	45	Specimen Area: 64 sq.ft.								61
		Temperature: 72.5 deg. F								(25)
		Relative Humidity: 40 %								

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