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**WESTERN ELECTRO - ACOUSTIC LABORATORY, INC.**

**TESTING • CALIBRATION • RESEARCH • CONSULTING**

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16 February 2004

TEST DATE: 12 February 2004

**INTRODUCTION**

The methods and procedures used for this test conform to the provisions and requirements of ASTM E90-02, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*. Details of the procedure will be furnished upon request. The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). This test report relates only to the item(s) tested. Any advertising that utilizes this test report or test data must not imply product certification or endorsement by WEAL, NVLAP, NIST or the U.S. Government.

**DESCRIPTION OF TEST SPECIMEN**

The test specimen was a steel stud and gypsum board wall assembly. 25 gauge 3-5/8" track was screwed to the top sill and bottom plate of the test chamber opening. 25 gauge 3-5/8" studs were attached to the track at 16' O.C. with #8 1/2" self tapping screws. One screw was used at the top and bottom of each stud. The stud space was filled with Natural Fiber Insulation. On the both sides of the studs, 5/8" thick gypsum board was attached with 1" self tapping drywall screws. The screws were approximately 8" O.C. at the perimeter and 12" O.C. in the field. The gypsum board was oriented vertically, parallel to the studs. The joints were unfinished and staggered across the partition. The specimen was sealed into the test chamber opening with a heavy duct seal putty around the entire perimeter on the receiving room side. The overall dimensions of the specimen were 96 inches (2.44 m) by 96 inches (2.44 m) by 4-3/4 inches (121 mm) deep.

**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 Sound Transmission Class rating determined in accordance with ASTM E 413-87 (Reapproved 1999) was STC-45.

Respectfully submitted,  
Western Electro-Acoustic Laboratory, Inc.

Gary E. Mange  
Laboratory Manager

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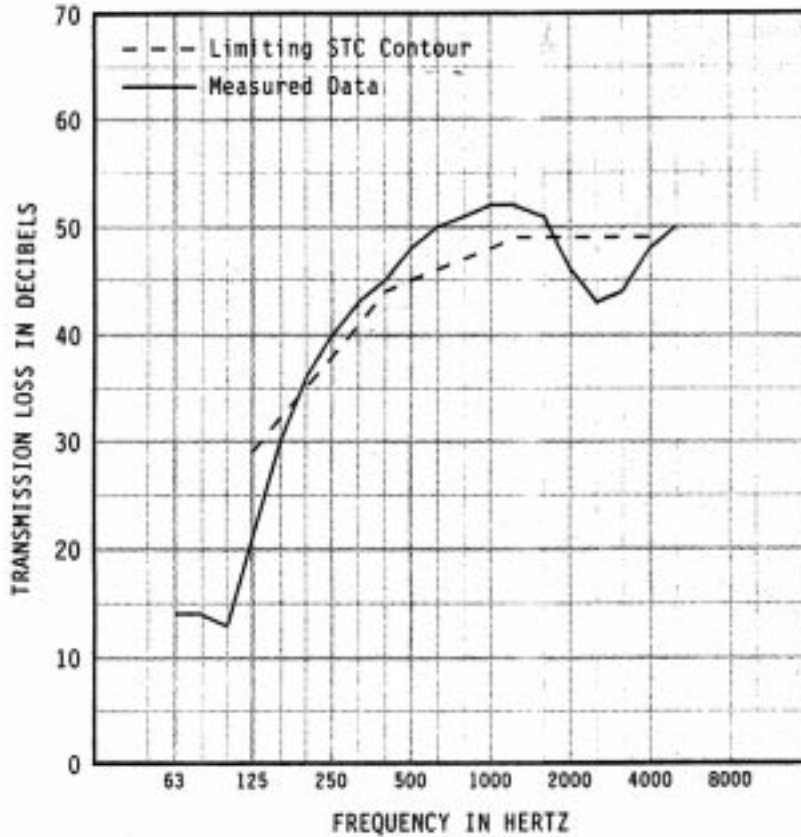
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1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		14	14	13	21	30	36	40	43	45	48
95% Confidence in dB deficiencies		1.42	1.92	2.07	1.47 (8)	0.89 (2)	0.76	0.80	0.52	0.36	0.38
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		50	51	52	52	51	46	43	44	48	50
95% Confidence in dB deficiencies		0.29	0.44	0.38	0.39	0.36	0.56 (3)	0.55 (6)	0.31 (5)	0.32 (1)	0.50
EWR	OITC	Specimen Area: 64 sq. ft.									STC
47	28	Temperature: 70 deg. F									45
		Relative Humidity: 42 %									(25)
		Test Date: 12 February 2004									

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