

RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

FOR: Overly Door Co.
Greensburg, PA

Sound Transmission Loss Test
RAL™-TL11-251

ON: Fully Operable Swinging Wood Door, Model
STC4511251

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CONDUCTED: 16 November 2011

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-09 and E413-10, as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure (NVLAP Lab Code: 100227-0). A description of the measuring technique is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a fully operable swinging wood door, Model STC4511251. The overall dimensions of the specimen as measured were nominally 908 mm (35.75 in.) wide by 2.13 m (83.7 in.) high and 44 mm (1.75 in.) thick. The specimen was placed directly in the client's adapter frame and tested in the 1.22 m (4 ft) by 2.44 m (8 ft) test opening. The adapter frame was sealed on the surface faces and periphery (both sides) with dense mastic. The door was opened and closed at least five times, and the test was conducted with no further adjustments.

The manufacturer's description of the specimen was as follows: The door was a typical sandwich array that consisted of a 1- 1/2" thick metal pan

This pan was then encased on its four edges by bonding wood framing members around the perimeter and laminating 1/8" thick wood veneer on both faces. The door was equipped with a 10" x 10" (100 sq. in.) dual glazed vision light with 1/4" laminated and 3/8" laminated glass, separated by a 7/8" airspace and held in place with 11 ga steel loosestops. The bottom of the door had a fixed felt seal and an adjustable "Super H" closed cell neoprene seal. The 14 gauge metal frame was equipped with Overly "H" compression seal system at the head and jambs. The frame also had 4.7 mm (0.187 in.) steel hinge reinforcements with mud boxes. The door was hung on three 127 mm (5.0 in.) full mortise Overly MCL-500 Cam-Lift hinges and was equipped with a functional heavy duty cylindrical lockset. A manufacturer's description is maintained on file. At the request of the manufacturer the details

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of the construction were purposely withheld from this report in order that the manufacturer may control full proprietary rights regarding the product. A visual inspection verified the manufacturer's description of the specimen.

The weight of the specimen as measured was 86.6 kg (191 lbs.), an average of 44.9 kg/m² (9.2 lbs/ft²). The transmission area used in the calculations was 2 m² (21 ft²). The source and receiving room temperatures at the time of the test were 23°C (73±1°F) and 51±1% relative humidity. The source and receive reverberation room volumes were 178 m³ (6,298 ft³) and 140 m³ (4,929 ft³), respectively.

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TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the TL test data is within the limits set by the ASTM Standard E90-09.

<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	31	1.02		800	47	0.16	
125	29	0.66		1000	47	0.11	1
160	31	0.64	1	1250	48	0.17	1
200	29	0.56	6	1600	49	0.12	
250	31	0.39	7	2000	52	0.10	
315	33	0.30	8	2500	52	0.12	
400	40	0.36	4	3150	51	0.08	
500	44	0.18	1	4000	51	0.08	
630	46	0.18		5000	51	0.06	

STC=45

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)

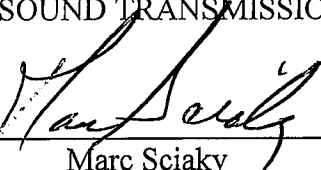
T.L. = TRANSMISSION LOSS, dB

C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT

DEF. = DEFICIENCIES, dB < STC CONTOUR (SUM OF DEF = 29)

STC = SOUND TRANSMISSION CLASS

Tested by



Marc Sciaky
Experimentalist

Approved by



David L. Moyer
Laboratory Manager

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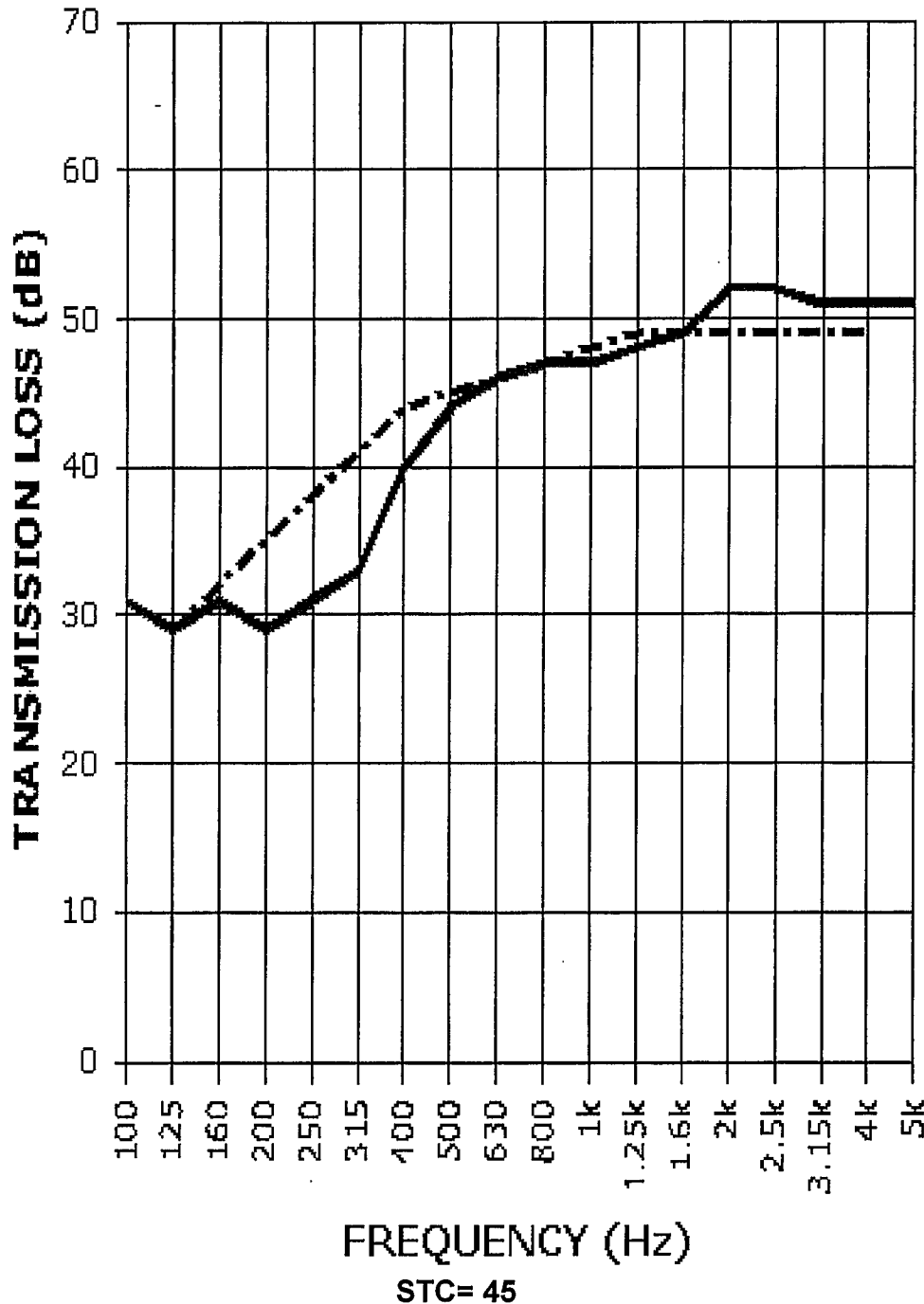
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SOUND TRANSMISSION REPORT RAL - TL11-251



TRANSMISSION LOSS
SOUND TRANSMISSION LOSS CONTOUR

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