

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™-TL12-043

ON: Fully Operable Swinging Wood Door, Model
STC4312043

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CONDUCTED: 22 February 2012

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 STC4312043. The overall dimensions of the specimen as measured were nominally 908 mm (35.75 in.) wide by 2.13 m (83.688 in.) high and 44.5 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 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 15" x 20" (300 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 gauge steel loosestops. The bottom of the door was equipped with a Zero #360 full mortised automatic door bottom. The 14 gauge metal frame was equipped with two rows of Bubble seals at the head and jambs, one set stop mounted and one set mounted on the door side rabbet. 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 heavy weight level swing 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 of the construction were purposely withheld

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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 specimen was opened and closed at least five times, and the test was conducted with no further adjustments.

The weight of the specimen as measured was 93.9 kg (207 lbs.), an average of 48.6 kg/m² (10 lbs/ft²). The transmission area used in the calculations was 2.0 m² (21 ft²). The source and receiving room temperatures at the time of the test were 22±1°C (71±1°F) and 51±1% relative humidity. The source and receive reverberation room volumes were 178 m³ (6,298 ft³) and 132 m³ (4,660 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	32	0.72		800	44	0.20	1
125	29	0.48		1000	43	0.16	3
160	30	0.94		1250	45	0.12	2
200	28	0.54	5	1600	47	0.10	
250	33	0.39	3	2000	49	0.09	
315	32	0.37	7	2500	50	0.05	
400	37	0.52	5	3150	49	0.11	
500	42	0.26	1	4000	49	0.07	
630	44	0.18		5000	48	0.07	

STC=43

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)

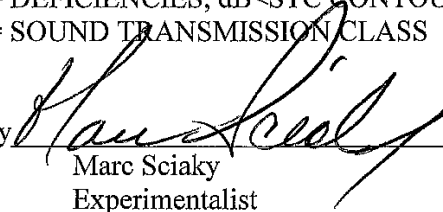
T.L. = TRANSMISSION LOSS, dB

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

DEF. = DEFICIENCIES, dB<STC CONTOUR (SUM OF DEF = 27)

STC = SOUND TRANSMISSION CLASS

Tested by


Marc Sciaky
Experimentalist

Approved by


Dean Victor
Senior Experimentalist

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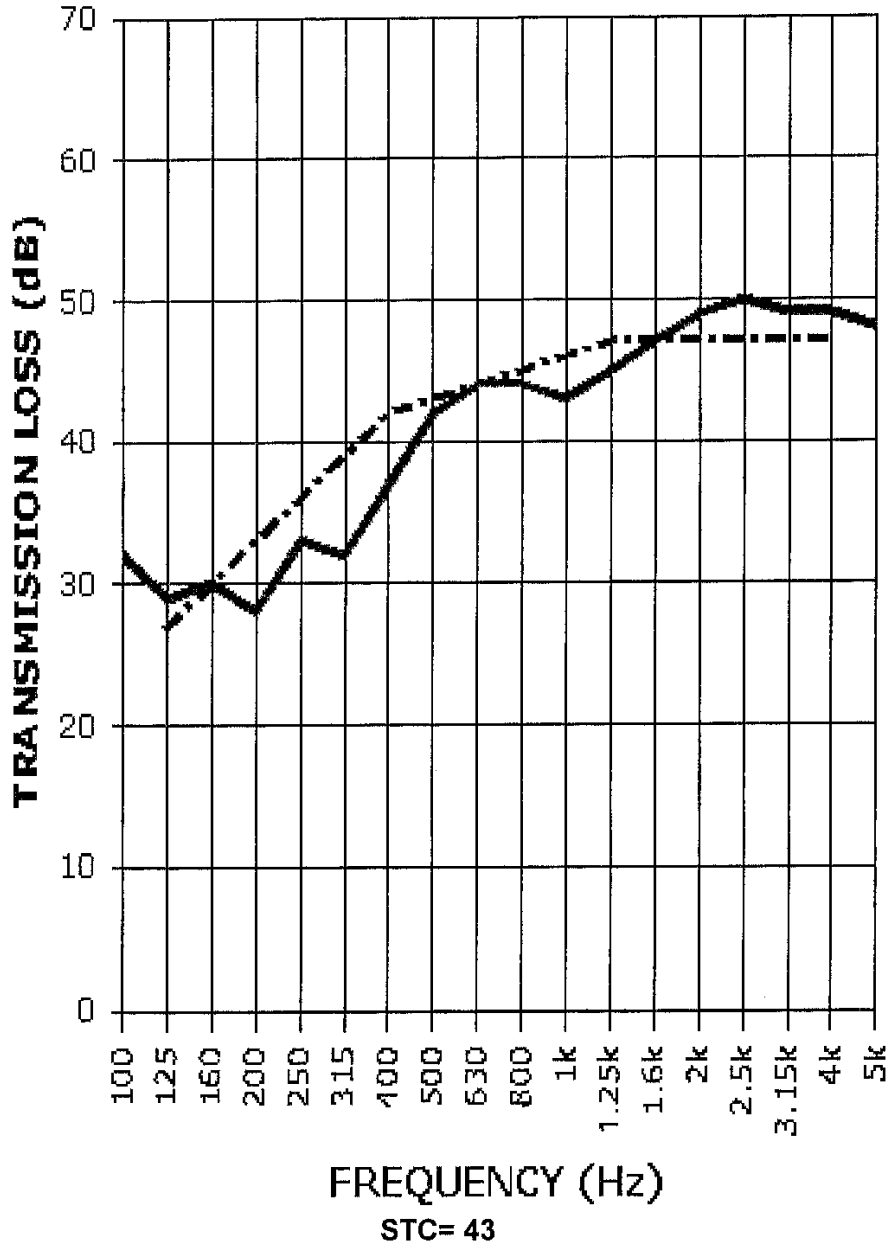
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 TRANSMISSION LOSS
 SOUND TRANSMISSION LOSS CONTOUR

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