

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
RAL™-TL12-168

CONDUCTED: 8 August 2012

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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 door, Model STC4712168. The overall dimensions of the door panel were nominally 914 mm (36 in.) wide by 2.13 m (84 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 a dense mastic. The manufacturer's description of the specimen was as follows:

Both the lock and hinge edges of the door were continuously welded. The door was equipped with a Zero #362 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 from this report in order that the manufacturer may control full proprietary rights regarding the product. The weight of the door panel as determined was 75.9 kg (167 lbs) an average of 38.99 kg/m² (8.04 lbs/ft²). The transmission area used in the calculations was 1.95 m² (21 ft²). The specimen was opened and closed at least five times, and the test was conducted with no further adjustments. The source room temperature at the time of the test was 26±0°C (78±0°F) and 48±0% relative humidity. The receiving room temperature at the time of the test was 25±0°C (77±1°F) and 49±0% 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	26	0.68		800	48	0.15	1
125	30	0.54	1	1000	49	0.16	1
160	33	0.77	1	1250	49	0.17	2
200	33	0.76	4	1600	49	0.11	2
250	35	0.34	5	2000	50	0.09	1
315	40	0.35	3	2500	51	0.10	
400	46	0.31		3150	51	0.14	
500	45	0.22	2	4000	50	0.15	1
630	47	0.19	1	5000	51	0.14	

STC=47

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 = 25)
STC = SOUND TRANSMISSION CLASS

Tested by

Marc Sciaky
Marc Sciaky
Experimentalist

Approved by

Eric P Wolfram
Eric P Wolfram
Laboratory Manager

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NVLAP

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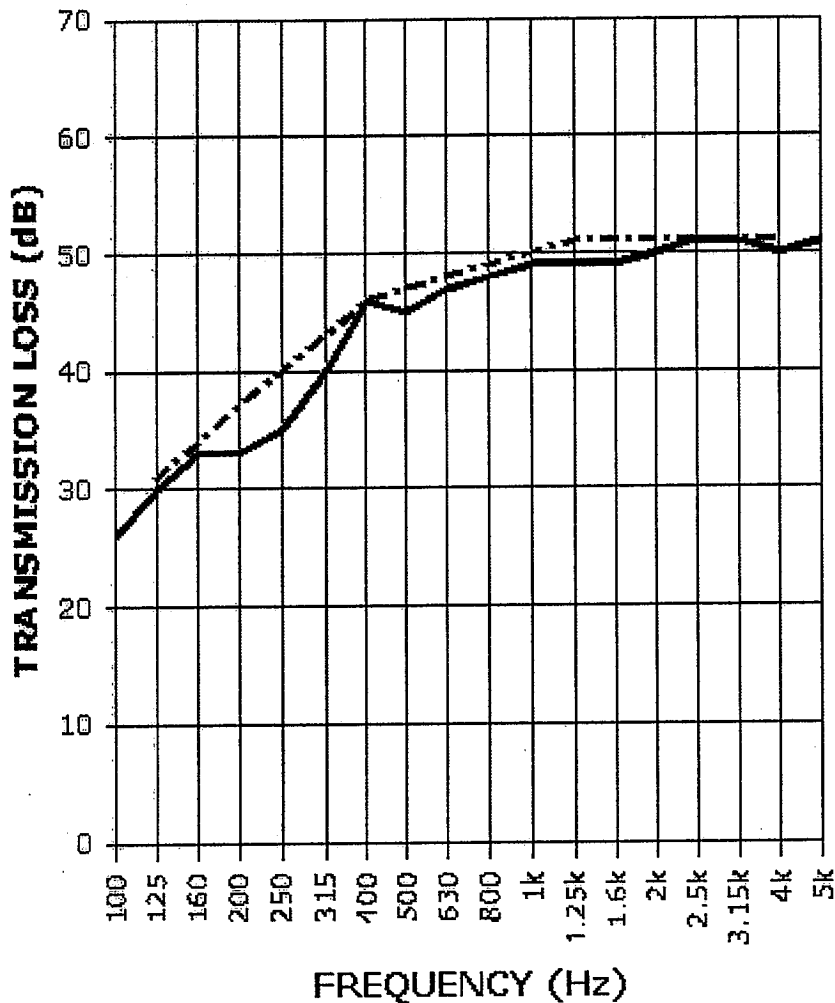
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SOUND TRANSMISSION REPORT RAL - TL12-168



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TRANSMISSION LOSS
SOUND TRANSMISSION LOSS CONTOUR

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