

RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

OF
IIT RESEARCH INSTITUTE

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Overly Manufacturing Company

Sound Transmission Loss
Test RAL™-TL97-18

ON: A Fully Operable Swinging Door
Model STC449718

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CONDUCTED: 29 January 1997

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-90 and E413-87, 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. A description of the measuring technique is available separately. The microphone used was a Bruel & Kjaer serial number 951371.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as a fully operable swinging door, Model STC449718. The overall dimensions of the door 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 periphery (both sides), and both surface faces of the frame, with a dense mastic. The manufacturer's description of the specimen was as follows:

The bottom of the door was equipped with a Zero #627A threshold. The door was equipped with a 15" x 20" (300 sq. in.) dual glazed vision with 1/4" laminated and 3/8" laminated glass separated by a 7/8" airspace. A 14 gauge metal frame was prepared with two (2) rows of "double bubble" seals at the head and jams. The door was hung on three 5" full mortised level swing hinges and equipped with a fully functional heavy duty cylindrical lockset. The specimen was opened and closed at least five times, and the test was conducted with no further adjustments. A manufacturer's description is maintained on file. At the request of the manufacturer a full inspection was not performed in order to preserve the condition of the test specimen. The weight of the door panel as measured was 93 kg (205 lbs) an average of 47.7 kg/m² (9.8 lbs/ft²). The transmission area used in the calculations for transmission loss was 2.0 m² (21 ft²). The source and receiving room temperatures at the time of the test were 19°C (67±2°F) and 54±3% relative humidity.

THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



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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 are within the limits set by the ASTM Standard E90-90.

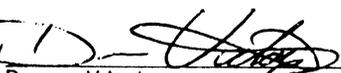
<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	28	0.26	0	800	44	0.22	2
125	29	0.36	0	1000	42	0.19	5
160	32	0.37	0	1250	42	0.16	6
200	30	0.39	4	1600	45	0.17	3
250	31	0.32	6	2000	46	0.15	2
315	37	0.32	3	2500	48	0.13	0
400	42	0.27	1	3150	49	0.09	0
500	45	0.19	0	4000	51	0.09	0
630	46	0.24	0	5000	52	0.08	0

STC = 44

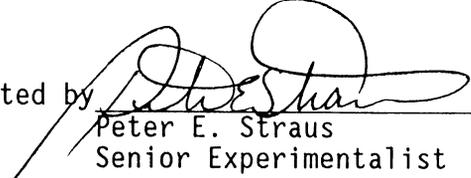
ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)
T.L. = TRANSMISSION LOSS, dB
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
DEF. = DEFICIENCIES, dB<STC CONTOUR
STC = SOUND TRANSMISSION CLASS

Tested and
Reviewed by


Dean Victor
Senior Experimentalist

Submitted by


Peter E. Straus
Senior Experimentalist

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NVLAD

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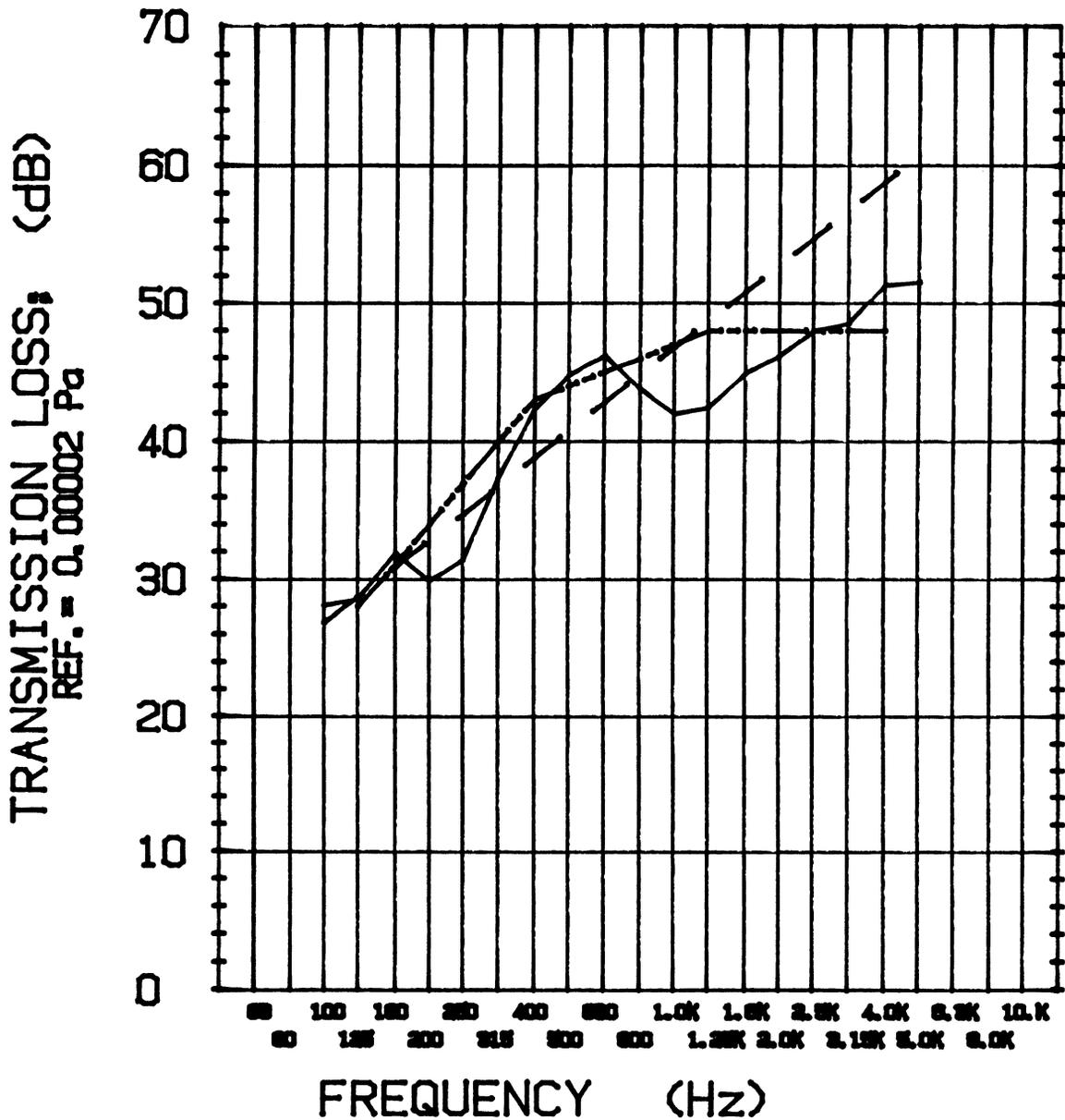
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- TRANSMISSION LOSS
- - - SOUND TRANSMISSION CLASS CONTOUR
- . - MASS LAW CONTOUR

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