

RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

OF
IIT RESEARCH INSTITUTE

312/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Overly Manufacturing Company

Sound Transmission Loss
Test RAL™-TL89-107

ON: Fully Operable Swinging
Door Model STC4989107

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CONDUCTED: 8 March 1989

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-87 and E413-87, as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Bureau of Standards under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. A description of the measuring technique is available separately. The serial number of the measuring microphone was 1440522.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a fully operable swinging door, Model STC4989107. The overall dimensions of the specimen as measured were 90.8 cm (35.75 in.) wide by 2.13 m (83.69 in.) high and 4.4 cm (1.75 in.) thick. The specimen was placed directly in the client's adapter frame and tested in the 1.22 m (48 in.) wide by 2.44 m (96 in.) high test opening. The adapter frame was sealed on the periphery (both sides) with a dense mastic. The manufacturer's description of the specimen was as follows:

The 14 gauge metal frame was equipped with single "H" seals of felt/neoprene composition at the head and jambs of each door. The frame also had 4.7 mm (0.187 in.) steel hinge reinforcements with mud boxes. The door was hung on three 11.4 cm (4.5 in.) full mortise extra heavy hinges and was equipped with a functional heavy duty cylindrical lockset. The door was equipped with a Zero Model No. 362 semi-mortised door bottom with Overly composite "H" seal in place of Zero gasketing. A visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0293, page 2 of 3 are 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

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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DESCRIPTION OF THE SPECIMEN (con't)

proprietary rights regarding the product. A full inspection was not performed in order to preserve the condition of the test specimen. The weight of the door panel as determined was 127.5 kg (281 lbs) an average of 65.4 kg/m² (13.4 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 and receiving room temperatures at the time of the test were 20°C (68±2°F) and 40±2% relative humidity.

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 E90-87.

<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	33	0.33	0	800	49	0.37	2
125	33	0.33	0	1000	48	0.25	4
160	35	0.20	1	1250	50	0.25	3
200	36	0.29	3	1600	52	0.17	1
250	39	0.35	3	2000	52	0.15	1
315	43	0.36	2	2500	50	0.13	3
400	45	0.37	3	3150	53	0.10	0
500	47	0.36	2	4000	54	0.08	0
630	49	0.37	1	5000	53	0.02	0

STC = 49

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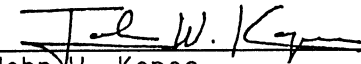
ABBREVIATION INDEX

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

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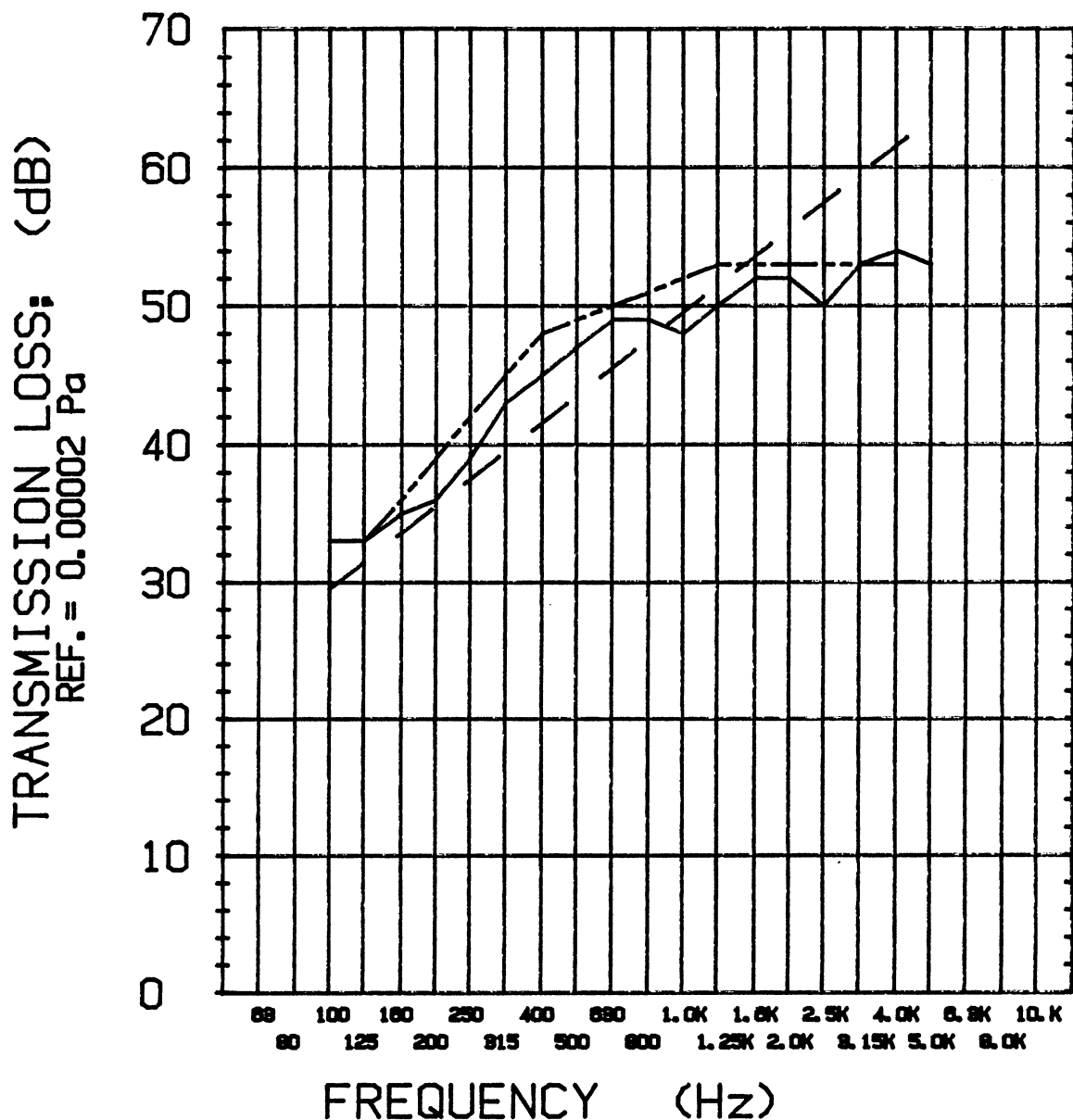


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REPORT

TRANSMISSION LOSS REPORT

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

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