

RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

OF
IIT RESEARCH INSTITUTE

312/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Therma-Tru®
ON: Style No. 118

Sound Transmission Loss
Test RAL™-TL83-183

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CONDUCTED: 4 August 1983

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the American Society for Testing and Materials Designations E90-81 and E413-73, as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by 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 951371.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a Style No. 118. The overall dimensions of the entire specimen were 95.568 cm (37.625 in.) wide by 208.28 cm (82 in.) high and 4.286 cm (1.6875 in.) thick. The specimen was placed directly in the laboratory's adapter frame and tested in the 1.22 m (4 ft) by 2.44 m (8 ft) test opening and was sealed on the periphery (both sides) with a dense mastic. A visual inspection verified the client's description of the specimen as a fully operable door assembly. The door was fabricated out of 24 gauge steel skins with polyurethane foam core, housed by a wood peripheral frame assembly. The door panel portion contained a 1.27 cm (0.5 in.) thick, 55.88 cm (22 in.) by 162.56 cm (64 in.) glass lite mounted in a polystyrene frame. At the request of the manufacturer a full inspection was not performed in order to preserve the condition of the test specimen. The test specimen weighed 42.6 kg (94 lbs) an average of 21.41 kg/m² (4.38 lbs/ft²). The panel portion weighed 29.5 kg (65 lbs). The transmission area used in the calculations was 1.99 m² (21.425 ft²). The specimen was opened and closed at least five times, and the test was conducted with no further adjustments. A manufacturer's verbal description was recorded and is maintained on file.

TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequencies. An explanation of the sound transmission class rating, a graphic presentation of the data, and additional information appear on the following page. The precision of the TL test data are within the limits set by the ASTM Standard E90-81.

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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ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.

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TEST RESULTS (con't)

<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	17	0.41	0	800	28	0.34	3
125	22	0.51	0	1000	31	0.28	1
160	24	0.36	0	1250	32	0.24	1
200	24	0.37	0	1600	26	0.21	7
250	25	0.38	0	2000	31	0.19	2
315	23	0.52	2	2500	36	0.15	0
400	23	0.39	5	3150	37	0.15	0
500	26	0.39	3	4000	35	0.13	0
630	28	0.32	2	5000	37	0.10	0

STC = 29

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)

T.L. = TRANSMISSION LOSS, dB

C.L. = % OF UNCERTAINTY WITH 95% CONFIDENCE LIMIT

DEF. = DEFICIENCIES, dB<STC CONTOUR

STC = SOUND TRANSMISSION CLASS

Reviewed by

L.D. Williams

L. D. Williams
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Submitted by

John W. Kopec

John W. Kopec
Chief - Acoustical Testing

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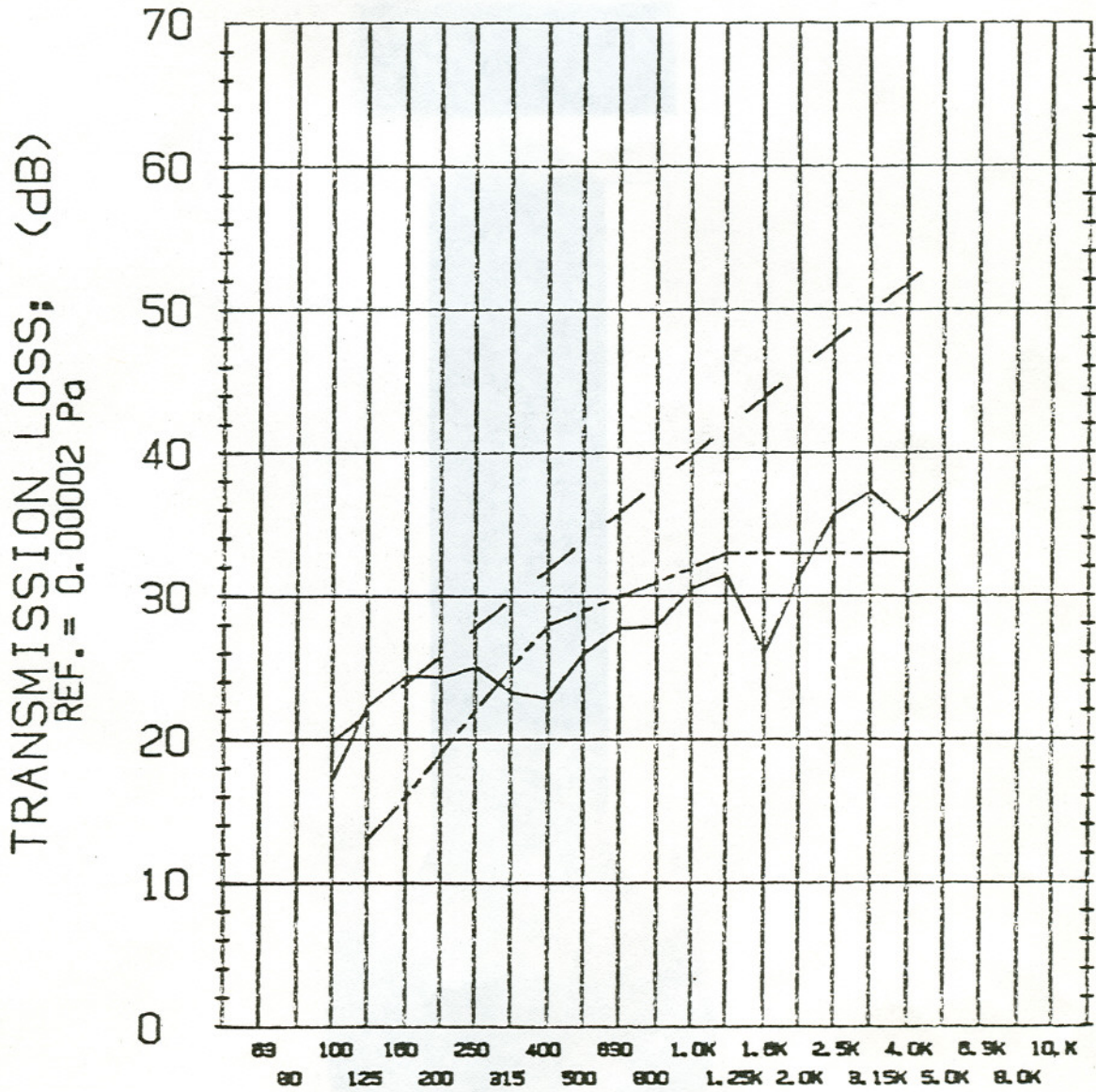


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REPORT

TRANSMISSION LOSS REPORT

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FREQUENCY (Hz)

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

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