RIVERBANK ACOUSTICAL LABORATORIES

OF

IIT RESEARCH INSTITUTE

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

708/232-0104

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Overly Manufacturing Company

Sound Transmission Loss
Test RAL™-TL95-75

ON: Fully Operable Swinging
Door Model STC509575

CONDUCTED: 21 March 1995

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 1440522.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a fully operable swinging door, Model STC509575. 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:

The bottom of the door had a fixed felt seal and an adjustable "Super H" closed cell neoprene seal. The 14 gauge metal frame was equipped with single "H" seals of felt/neoprene composition at the head and jambs. The frame also had 4.7 mm (0.187 in.) steel hinge reinforcements with mud boxes. The door was hung on two 127 mm (5.0 in.) full mortise cam-lift 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 82.6 kg (182 lbs) an average of 42.4 kg/m^2 (8.7 lbs/ft^2). The transmission area used in the calculations was 1.95 m^2 (21 ft^2). 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 19°C (67°±2F) and 61±2% 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.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	27	0.45	0	800	52	0.25	0
125	29	0.44	5	1000	52	0.20	1
160	36	0.32	1	1250	52	0.19	2
200	38	0.31	2	1600	55	0.18	0
250	41	0.34	2	2000	56	0.16	0
315	40	0.27	6	2500	56	0.12	0
400	44	0.34	5	3150	56	0.10	0
500	45	0.27	5	4000	57	0.08	0
630	51	0.27	0	5000	57	0.06	0

STC = 50

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 & Reviewed by: Peter E. Straus, Senior Experimentalist
Submitted by: John W. Kopec, Laboratory Manager

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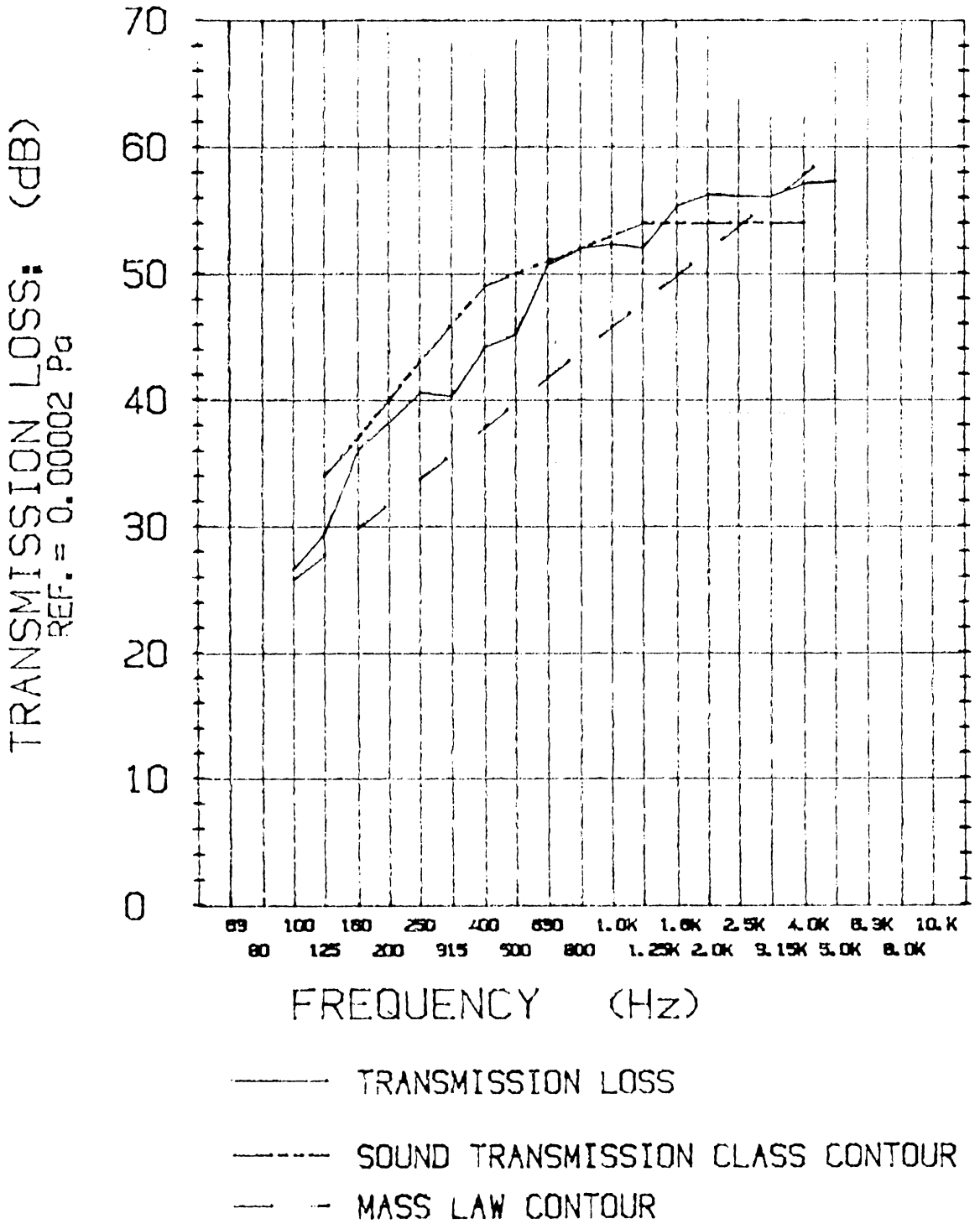
TRANSMISSION LOSS REPORT
RAL-TL95-75



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