RIVERBANK ACOUSTICAL LABORATORIES

OF

IIT RESEARCH INSTITUTE

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

312/232-0104

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Overly Manufacturing Company

Sound Transmission Loss
Test RAL™-TL89-108

ON: Fully Operable Swinging
Door Model STC5089108

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 STC5089108. 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, jambs, and sill. The frame also had 4.7 mm (0.187 in.) steel hinge reinforcements with mud boxes. The door was hung on three standard 12.7 cm (5.0 in.) full mortise hinges and was equipped with a functional heavy duty cylindrical lockset. A visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0293, page 3 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 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 130 kg (286 lbs) an average of 66.7 kg/m^2 (13.6 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 20°C (68±2°F) and 40±2% relative humidity.

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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 E90-87.

FREQ	T.L.	C.L.	DEF.	FREQ	T.L.	C.L.	DEF.
100	33	0.31	0	800	51	0.36	1
125	32	0.27	2	1000	50	0.26	3
160	34	0.19	3	1250	51	0.20	3
200	37	0.27	3	1600	55	0.19	0
250	41	0.38	2	2000	58	0.17	0
315	44	0.37	2	2500	61	0.12	0
400	46	0.34	3	3150	61	0.09	0
500	48	0.39	2	4000	58	0.09	0
630	50	0.38	1	5000	55	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

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