RIVERBANK ACOUSTICAL LABORATORIES

OF

IIT RESEARCH INSTITUTE

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

630/232-0104

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Overly Manufacturing Company

ON: A Fully Operable Swinging Door
Model STC419719

Sound Transmission Loss
Test RAL™-TL97-19

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 STC419719. 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:

This pan was then encased on its four (4) edges by bonding wood framing members around the perimeter, and faced on both sides with 1/8" thick laminated wood face sheets. The bottom of the door was equipped with a Zero #627A threshold. The door was equipped with a 15" x 20" (300 sq. in.) single glazed vision with 1/4" laminated glass centered in the thickness of the door. A 14 gauge metal frame was prepared with two (2) rows of "double bubble" seals at the head and jambs. 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. The weight of the door panel as measured was 84 kg (186 lbs) an average of 43.3 kg/m^2 (8.9 lbs/ft^2). The transmission area used in the calculations for transmission loss was 2.0 m^2 (21 ft^2). The source and receiving room temperatures at the time of the test were 19°C (67±2°F) and 56±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 E90-90.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	30	0.30	0	800	41	0.21	2
125	27	0.35	0	1000	40	0.19	4
160	31	0.39	0	1250	41	0.16	4
200	30	0.38	1	1600	43	0.17	2
250	31	0.32	3	2000	43	0.15	2
315	36	0.32	1	2500	42	0.13	3
400	40	0.27	0	3150	43	0.09	2
500	41	0.19	0	4000	47	0.09	0
630	41	0.24	1	5000	49	0.08	0

STC = 41

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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