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 STC499723

Sound Transmission Loss
Test RAL™-TL97-23

CONDUCTED: 30 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 STC499723. 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:

The bottom of the door was equipped with an adjustable Overly "Super H" closed cell neoprene door bottom. A 14 gauge metal frame was prepared with a single row of Overly "H" seals of felt/neoprene composition at the head and jambs. The door was hung on two 5" full mortised cam lift 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 88.5 kg (195 lbs) an average of 45.4 kg/m^2 (9.3 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 54±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	32	0.30	0	800	48	0.21	3
125	32	0.30	1	1000	51	0.20	1
160	38	0.30	0	1250	53	0.20	0
200	37	0.36	2	1600	55	0.16	0
250	41	0.34	1	2000	57	0.14	0
315	44	0.30	1	2500	57	0.13	0
400	42	0.27	6	3150	56	0.10	0
500	44	0.27	5	4000	56	0.09	0
630	46	0.23	4	5000	56	0.09	0

STC = 49

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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