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™-TL92-286

ON: Fully Operable Swinging
Door Model STC4992286

CONDUCTED: 16 September 1992

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 1330658.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a fully operable swinging door, Model STC4992286. The overall dimensions of the door panel were nominally 914 mm (36 in.) wide by 2.13 m (84 in.) high and 48 mm (1.875 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) with a dense mastic. The manufacturer's description of the specimen was as follows:

The bottom of the door was equipped with a zero 362 semi-mortised automatic door bottom. 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 hinges and was equipped with a functional heavy duty cylindrical lockset. A manufacturer's description and

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DESCRIPTION OF THE SPECIMEN (con't)

detailed drawing file number 0667, page 8 of 13 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. The weight of the door panel as determined was 104.8 kg (231 lbs) an average of 53.7 kg/m^2 (11.0 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 24°C (75±2°F) and 60±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	0.22	0	800	49	0.28	2
125	37	0.36	0	1000	49	0.24	3
160	40	0.39	0	1250	48	0.24	5
200	41	0.42	0	1600	47	0.22	6
250	43	0.40	0	2000	50	0.20	3
315	43	0.38	2	2500	55	0.19	0
400	47	0.36	1	3150	58	0.14	0
500	48	0.34	1	4000	59	0.09	0
630	49	0.33	1	5000	61	0.11	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

Submitted by: Peter E. Straus, Experimentalist
Reviewed by: John W. Kopec, Supervisor, Riverbank Acoustical Laboratories

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