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™-TL92-150

ON: Fully Operable Dual Glazed
Swinging Door Model STC4992150

CONDUCTED: 24 April 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 792729.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a fully operable dual glazed swinging door, Model STC4992150. 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 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

DESCRIPTION OF THE SPECIMEN (con't)

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 dual glazed portion of the door consisted of a nominal 0.19 m^2 (300 in^2) viewing area made up of a 19 mm (0.75 in.) thick piece of laminated glass followed by a 51 mm (2 in.) airspace and a 6.4 mm (0.25 in.) thick piece of wire glass. The lights were retained by 11 gauge formed stops and closed cell sponge neoprene gaskets. A visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0629, page 8 of 9 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 141 kg (310 lbs) an average of 72.3 kg/m^2 (14.8 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 22°C (70±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	31	0.38	0	800	51	0.29	0
125	28	0.30	5	1000	51	0.25	1
160	30	0.34	6	1250	53	0.25	0
200	31	0.51	8	1600	57	0.21	0
250	37	0.40	5	2000	58	0.17	0
315	40	0.29	5	2500	58	0.17	0
400	46	0.36	2	3150	56	0.13	0
500	49	0.37	0	4000	57	0.11	0
630	52	0.27	0	5000	58	0.12	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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