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™-TL92-149

ON: Fully Operable Swinging
Door Model STC5192149

CONDUCTED: 23 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 swinging door, Model STC5192149. 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 the periphery (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 visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0629, page 7 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 133.4 kg (294 lbs) an average of 68.4 kg/m^2 (14 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 (72±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	0.30	0	800	52	0.33	1
125	34	0.39	1	1000	53	0.26	1
160	34	0.40	4	1250	55	0.23	0
200	37	0.38	4	1600	58	0.23	0
250	41	0.37	3	2000	60	0.19	0
315	42	0.34	5	2500	61	0.16	0
400	48	0.37	2	3150	59	0.14	0
500	50	0.28	1	4000	60	0.12	0
630	52	0.27	0	5000	60	0.09	0

STC = 51

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

Tested and Reviewed by Diane C. Perrone
Diane C. Perrone
Experimentalist

Submitted by John W. Kopec
John W. Kopec
Supervisor, Riverbank
Acoustical Laboratories

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