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™-TL92-175

ON: Fully Operable Swinging
Door Model STC5592175

CONDUCTED: 18 May 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 assembly, Model STC5592175 which consisted of a metal frame and a reflective panel applied to the interior face of the door panel. The overall dimensions of the specimen as measured were 909 mm (35.81 in.) wide by 2.13 m (83.69 in.) high and 54.1 mm (2.13 in.) thick. The reflective panel measured 838 mm (33.0 in.) wide by 2.1 m (82.4 in.) high and 22.2 mm (0.875 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 14 gauge metal frame was equipped

DESCRIPTION OF THE SPECIMEN (con't)

with double "H" seals of felt/neoprene composition at the head and the jambs. The frame 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 0644, page 2 of 11 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 194.6 kg (429 lbs) an average of 99.8 kg/m^2 (20.4 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 (76±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	38	0.41	0	800	55	0.31	2
125	39	0.25	0	1000	55	0.29	3
160	39	0.37	3	1250	58	0.22	1
200	42	0.42	3	1600	61	0.21	0
250	44	0.41	4	2000	63	0.20	0
315	46	0.45	5	2500	64	0.15	0
400	51	0.41	3	3150	67	0.12	0
500	52	0.31	3	4000	69	0.10	0
630	53	0.35	3	5000	70	0.10	0

STC = 55

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
Assistant Engineer

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

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