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™-TL92-143

ON: Fully Operable Swinging
Door Model STC4292143

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 STC4292143. 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 14 gauge metal frame was equipped with single "H" seals of felt/neoprene composition at the

DESCRIPTION OF THE SPECIMEN (con't)

head and jambs of each door. The frame also had 4.7 mm (0.187 in.) steel hinge reinforcements with mud boxes. The door was hung on three 114 mm (4.5 in.) full mortise extra heavy hinges and was equipped with a functional heavy duty cylindrical lockset. The door was equipped with a Zero Model No. 362 semi-mortised door bottom. A visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0629, page 4 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 108.9 kg (240 lbs) an average of 55.9 kg/m^2 (11.4 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 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	30	0.26	0	800	42	0.28	2
125	31	0.31	0	1000	42	0.28	3
160	33	0.37	0	1250	42	0.24	4
200	37	0.41	0	1600	40	0.20	6
250	38	0.40	0	2000	40	0.19	6
315	37	0.38	1	2500	42	0.15	4
400	40	0.42	1	3150	45	0.12	1
500	42	0.37	0	4000	46	0.11	0
630	42	0.30	1	5000	48	0.10	0

STC = 42

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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