RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

FOR: Overly Door Co.
Greensburg, PA

Sound Transmission Loss Test
RAL™-TL04-062

ON: Full Operable Swinging Door, Model 490462

CONDUCTED: 11 March 2004

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-02 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.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a full operable swinging door, Model 490462. The unit consisted of a metal frame and a reflective panel applied to the push side of the main door. The overall nominal dimensions of the specimen as measured were 914 mm (36 in.) wide by 2.13 m (84 in.) high and 76 mm (3 in.) thick. The specimen was placed directly in the clients 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 dense mastic.

The manufacturers description of the specimen was as follows:

On both the lock and hinge edges of the door, the outer skin was isolated from the inner skin by a 9.5 mm (0.375 in.) x 12.7 mm (0.5 in.) rubber insert. The reflective panel constructed consisted of a 16 gauge formed skin which was lined with a layer of 19 mm (0.75 in.) thick, 9 pcf mineral wool. The bottom of the door was equipped with a fixed felt insert and an adjustable "Super H" closed cell sponge neoprene seal. The door was equipped with a dual glazed vision window, 15" x 20", or 300 square inches, glazed with one (1) piece of Globe Amerada ¼" thick Acousta-pane glass followed by a 1-7/8" airspace and one (1) piece of Globe Amerada 3/8" thick Acousta-pane glass. The glass was contained by an 11 gauge loose stop and neoprene gasket mounted to the exterior faces of the door/panel assembly.

TEST REPORT

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RAL™-TL04-062

11 March 2004

The 14 gauge metal frame was equipped with dual adjustable, double magnetic seals at the head and jambs. The frame had 4.7 mm (0.187 in.) thick steel hinge reinforcements with mud boxes. The door was hung on three (3) Overly MCL 500 full mortise cam lift hinges and was latched with a heavy duty cylindrical lockset. A pocket was provided in the 16 gauge reflective panel to accommodate the mounting of the lock to the main door leaf. 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 visual inspection verified the manufacturer's description of the specimen.

The weight of the specimen as measured was 128.8 kg (284 lbs.), an average of 72.2 kg/m^2 (14.8 lbs/ft^2). The transmission area used in the calculations was 1.95 m^2 (21 ft^2). The source and receiving room temperatures at the time of the test were 23°C (74±1°F) and 59±2% relative humidity. The source and receive reverberation room volumes were 178 m^3 (6,298 ft^3) and 134 m^3 (4,748 ft^3), respectively.

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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 is within the limits set by the ASTM Standard E90-02.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	32	0.51		800	49	0.21	2
125	26	0.52	7	1000	49	0.15	3
160	31	0.68	5	1250	51	0.14	2
200	37	0.58	2	1600	53	0.12	
250	40	0.32	2	2000	56	0.08	
315	44	0.46	1	2500	58	0.14	
400	45	0.32	3	3150	60	0.09	
500	46	0.29	3	4000	61	0.08	
630	48	0.25	2	5000	62	0.08	

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 (SUM OF DEF = 32)
STC = SOUND TRANSMISSION CLASS

Tested by _____ Approved by _____

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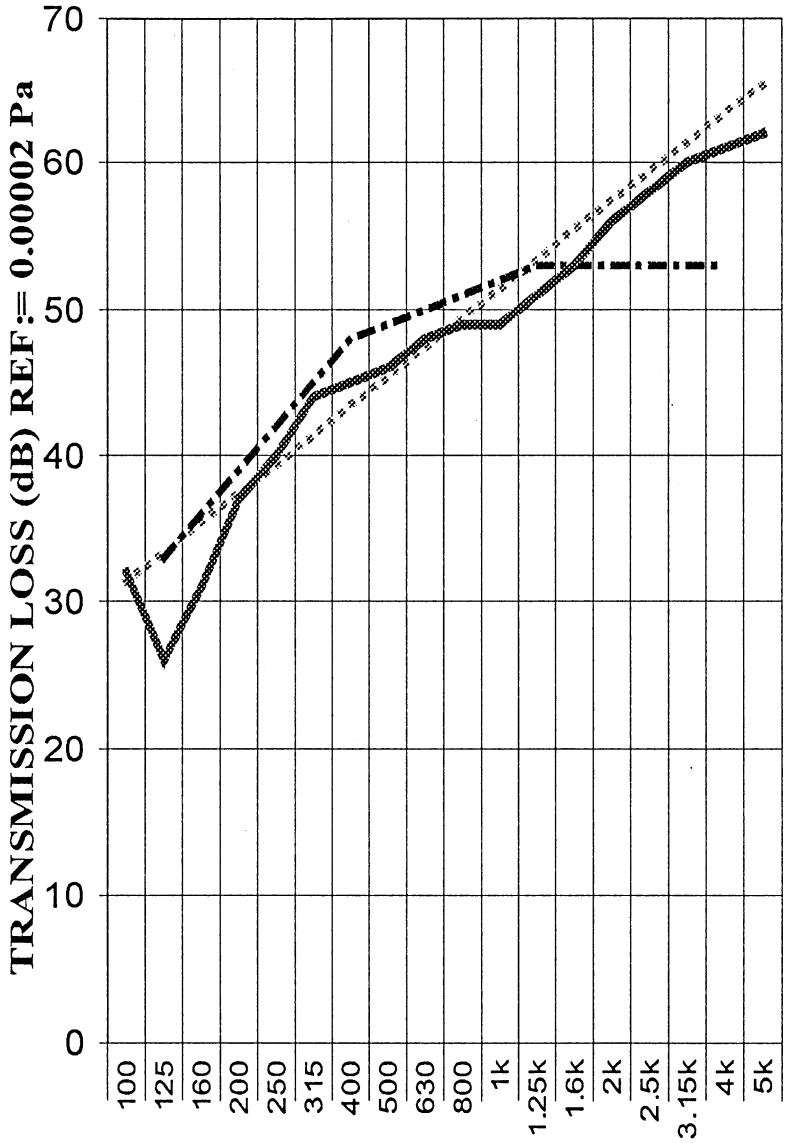

STC = 49

TRANSMISSION LOSS

SOUND TRANSMISSION LOSS CONTOUR

MASS LAW