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™-TL93-88

ON: Fully Operable Swinging
Door Model STC439388

CONDUCTED: 23 March 1993

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 1330658.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a fully operable swinging door, Model STC439388. The overall dimensions of the door panel were nominally 914 mm (36 in.) wide by 2.13 m (84 in.) high and 48 mm (1.875 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 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 magnetic seals at the head and jambs. The frame also had 4.7 mm (0.187 in.) steel hinge reinforcements with mud boxes. The door was

DESCRIPTION OF THE SPECIMEN (con't)

hung on two 127 mm (5.0 in.) full mortise cam-lift hinges and was equipped with a functional heavy duty cylindrical lockset. A manufacturer's description and detailed drawing file number 0699, page 3 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. The weight of the door panel as determined was 77.1 kg (170 lbs) an average of 39.5 kg/m^2 (8.1 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 19°C (67±2°F) and 60±2% relative humidity.

RIVERBANK ACOUSTICAL LABORATORIES
OF
IIT RESEARCH INSTITUTE
1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134
708/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

Overly Manufacturing Company — RAL™-TL93-88

23 March 1993 —

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	23	0.13	0	800	45	0.28	0
125	26	0.16	1	1000	45	0.27	1
160	29	0.24	1	1250	44	0.23	3
200	29	0.21	4	1600	47	0.18	0
250	29	0.31	7	2000	49	0.13	0
315	34	0.32	5	2500	52	0.10	0
400	36	0.30	6	3150	55	0.10	0
500	43	0.31	0	4000	55	0.10	0
630	45	0.32	0	5000	56	0.08	0

STC = 43

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

Submitted by: Peter E. Straus, Experimentalist

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

RIVERBANK ACOUSTICAL LABORATORIES

OF
IIT RESEARCH INSTITUTE

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

708/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

TRANSMISSION LOSS REPORT
RAL-TL93-88