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™-TL92-25

ON: Fully Operable Dual Glazed
Fire Door Model STC459225

CONDUCTED: 16 January 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 dual glazed fire door, Model STC459225. The overall dimensions of the door panel as measured 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 both sides with a dense mastic. The manufacturer's description of the specimen was as follows:

The door frame contained adjustable "H" seals on the jambs and head plus the door had a 44 mm (1.75 in.) thick adjustable "H" seal on the bottom. The door was hung on two improved cam-lift pivots and contained an operable cylindrical lockset with the existing lock cavity and cover plate packed

REPORT

Overly Manufacturing Company

RAL™-TL92-25

16 January 1992

DESCRIPTION OF THE SPECIMEN (con't)

with dense mastic. The dual glazed portion of the door consisted of a nominal 0.065 m^2 (100 in^2) view window. The view window had a 6.4 mm (0.25 in.) thick laminated glass light followed by a 29 mm (1.125 in.) airspace and then a 6.4 mm (0.25 in.) thick wire glass light. The lights were contained by a fabricated 11 gauge and 16 gauge steel frame with silicone compound seals. A visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0608, 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. The weight of the door panel as determined was 104 kg (230 lbs) an average of 53.3 kg/m^2 (11 lbs/ft^2). The transmission area used in the calculations was 1.95 m^2 (21 ft^2). The open area was 864 mm (34 in.) wide by 2.11 m (83 in.) high. 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 20°C (68±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™-TL92-25

16 January 1992

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	34	0.36	0	800	48	0.32	0
125	31	0.43	0	1000	48	0.26	0
160	32	0.44	0	1250	49	0.26	0
200	29	0.39	6	1600	52	0.22	0
250	31	0.39	7	2000	55	0.22	0
315	33	0.43	8	2500	58	0.15	0
400	39	0.41	5	3150	61	0.14	0
500	43	0.30	2	4000	57	0.12	0
630	47	0.35	0	5000	55	0.10	0

STC = 45

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

Reviewed by Diane C. Perrone
Diane C. Perrone
Experimentalist

Submitted by John W. Kopec
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-TL92-25