RIVERBANK ACOUSTICAL LABORATORIES

OF

IIT RESEARCH INSTITUTE

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

312/232-0104

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Overly Manufacturing Company

Sound Transmission Loss
Test RAL™-TL88-126

ON: Fully Operable Fire
Door Model STC4588126

CONDUCTED: 10 May 1988

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-85 and E413-73 (Reapproved 1980), as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Bureau of Standards under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. A description of the measuring technique is available separately. The serial number of the measuring microphone was 792729.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as Model STC4588126 which consisted of a metal frame and fully operable fire door. The overall dimensions of the door as measured were 91.1 cm (35.88 in.) wide by 2.12 m (83.63 in.) high and 4.4 cm (1.75 in.) thick. The specimen was placed directly in an 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 an adjustable magnetic seal arrangement at the jambs and head, and the door had a 4.4 cm (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 lock cavity and cover plate area packed with dense mastic. A visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0236, page 5 of 5 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 door weighed 96.2 kg (212 lbs) an average of 49.3 kg/m^2 (10.1 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 18°C (65°F) and 56% 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 E90-85.

FREQ	T.L.	C.L.	DEF.	FREQ	T.L.	C.L.	DEF.
100	27	0.40	0	800	49	0.31	0
125	24	0.31	5	1000	44	0.22	4
160	29	0.45	3	1250	42	0.24	7
200	32	0.48	3	1600	45	0.23	4
250	38	0.47	0	2000	49	0.21	0
315	42	0.38	0	2500	53	0.16	0
400	46	0.33	0	3150	57	0.13	0
500	51	0.32	0	4000	57	0.11	0
630	50	0.39	0	5000	54	0.08	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

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