

# RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE  
GENEVA, ILLINOIS 60134

OF  
IIT RESEARCH INSTITUTE

708/232-0104  
FOUNDED 1918 BY  
WALLACE CLEMENT SABINE

## REPORT

FOR: Overly Manufacturing Company

Sound Transmission Loss  
Test RAL™-TL95-72

ON: Fully Operable Swinging  
Door Model STC439572

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CONDUCTED: 21 March 1995

### 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 1440522.

### DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a fully operable swinging door, Model STC439572. 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 surface faces and periphery (both sides) with a dense mastic. The manufacturer's description of the specimen was as follows:

Both the lock and hinge edges of the door were continuously welded. The door was equipped with a Zero 362 semi-mortised automatic door bottom. The 14 gauge metal frame was equipped with single extruded neoprene 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 hung on three 127 mm (5.0 in.) full mortise butt hinges and was equipped with a functional heavy duty cylindrical lockset. A manufacturer's description is 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 64.4 kg (142 lbs) an average of 33.0 kg/m<sup>2</sup> (6.8 lbs/ft<sup>2</sup>). The transmission area used in the calculations was 1.95 m<sup>2</sup> (21 ft<sup>2</sup>). 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 61±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.

<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	25	0.23	0	800	44	0.21	1
125	29	0.35	0	1000	46	0.19	0
160	33	0.36	0	1250	42	0.17	5
200	34	0.33	0	1600	43	0.16	4
250	33	0.33	3	2000	46	0.15	1
315	40	0.33	0	2500	50	0.10	0
400	39	0.34	3	3150	52	0.11	0
500	39	0.27	4	4000	53	0.09	0
630	41	0.29	3	5000	53	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

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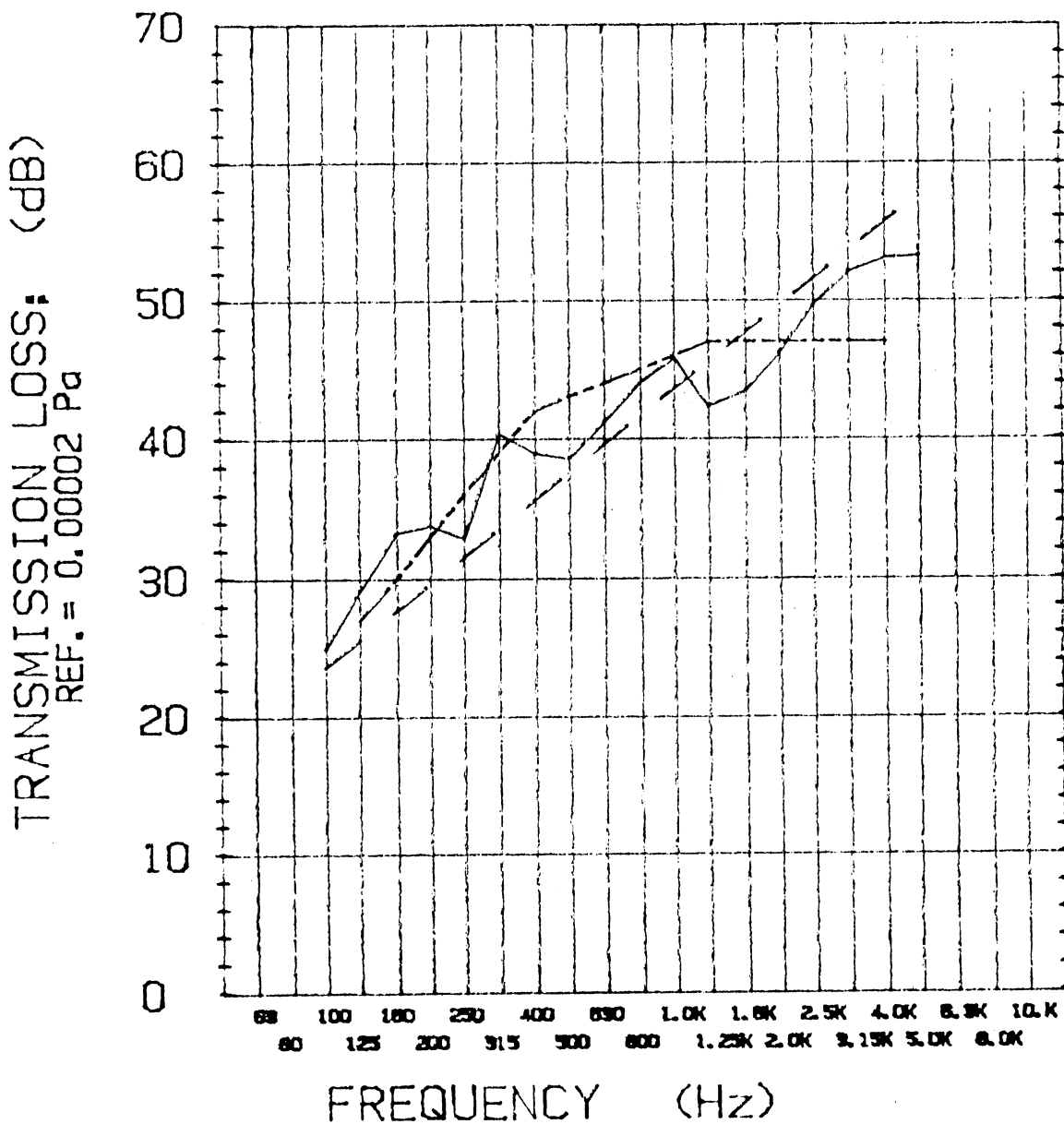
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### TRANSMISSION LOSS REPORT

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THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.  
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