

# 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™-TL92-190

ON: Fully Operable Swinging  
Door Model STC5792190

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CONDUCTED: 21 May 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 metal frame with two fully operable tandem swinging doors, Model STC5792190. The doors were installed in the frame with a 178 mm (7 in.) airspace between them. The overall dimensions of each door panel as measured were nominally 910 mm (35.81 in.) wide by 2.13 m (83.69 in.) high and 48 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 periphery (both sides) with a dense mastic. The manufacturer's description of the specimen was as follows:

The bottom of each door also had a fixed felt seal and an adjustable "Super H" closed cell neoprene seal. The 14 gauge metal frame was equipped with single "H" seals of felt/neoprene composition at the head and jambs for each door.

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### DESCRIPTION OF THE SPECIMEN (con't)

The frame also had 4.7 mm (0.187 in.) steel hinge reinforcements with mud boxes. Each door was hung on two 127 mm (5.0 in.) full mortise cam-lift hinges and was equipped with a functional heavy duty cylindrical lockset. A visual inspection verified the manufacturer's description of the specimen. A manufacturer's description and detailed drawing file number 0644, page 11 of 11 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. Each door panel weighed 128.8 kg (284 lbs) an average of 66.1 kg/m<sup>2</sup> (13.5 lbs/ft<sup>2</sup>). The transmission area used in the calculations was 1.95 m<sup>2</sup> (21 ft<sup>2</sup>). Each door 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 26°C (78±2°F) and 60±2% relative humidity.

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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### 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	41	0.29	0	800	56	0.32	3
125	45	0.34	0	1000	59	0.28	1
160	45	0.36	0	1250	61	0.21	0
200	45	0.37	2	1600	62	0.21	0
250	48	0.41	2	2000	64	0.16	0
315	49	0.40	4	2500	67	0.17	0
400	52	0.35	4	3150	68	0.12	0
500	53	0.35	4	4000	70	0.10	0
630	54	0.22	4	5000	71	0.12	0

STC = 57

### 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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NVLAP

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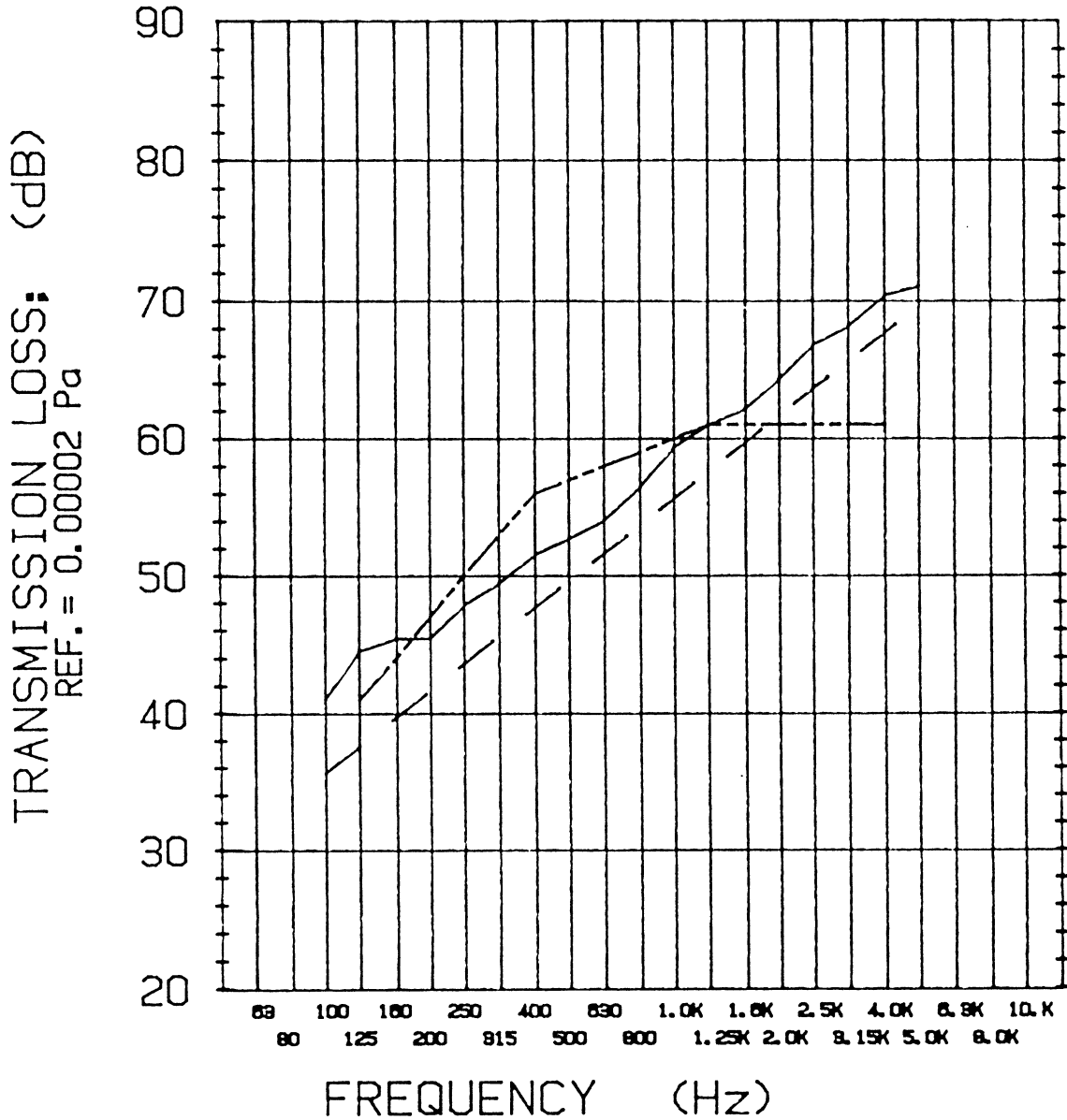
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- TRANSMISSION LOSS
- SOUND TRANSMISSION CLASS CONTOUR
- . - . MASS LAW CONTOUR

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