

# RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE  
GENEVA, ILLINOIS 60134

OF  
IIT RESEARCH INSTITUTE

312/232-0104  
FOUNDED 1918 BY  
WALLACE CLEMENT SABINE

## REPORT

FOR: Overly Manufacturing Company

Sound Transmission Loss  
Test RAL™-TL89-50

ON: Fully Operable Swinging Fire Door  
Model Number STC438950

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CONDUCTED: 25 January 1989

### TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-87 and E413-87, 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 1440522.

### DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as Model Number STC438950. The overall dimensions of the specimen (less adapter frame) as measured were 90.8 m (35.75 in.) wide by 2.13 m (83.69 in.) high and 4.4 cm (1.75 in.) deep. The specimen was placed directly into the 1.22 m (48 in.) wide by 2.44 m (96 in.) high test opening and was sealed on the periphery (both sides) with a dense mastic. The manufacturer's description of the specimen was as follows:

The door was hung by three BB1199-5 x 4-1/2 hinges and contained a fully operable cylindrical lockset. The door had a zero model no. 362 semi-mortised automatic door bottom with Overly composite "H" seal in place of zero gasketing. The head and jambs of the frame had Overly Type "H" seals. 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 specimen as calculated was 94.3 kg (208 lbs). The transmission area used in the calculations was 1.9 m<sup>2</sup> (20.7 ft<sup>2</sup>). The specimen was opened and closed at least five times, and the test was conducted with no further adjustments. A manufacturer's detailed drawing file number 0293 is maintained on file. The source and receiving room temperatures at the time of the test were 21°C (70±2°F) and 50% 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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ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.

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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 E90-87.

<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	31	0.44	0	800	40	0.27	5
125	30	0.42	0	1000	41	0.26	5
160	32	0.32	0	1250	43	0.23	4
200	32	0.34	1	1600	46	0.21	1
250	33	0.37	3	2000	48	0.18	0
315	38	0.45	1	2500	49	0.13	0
400	37	0.35	5	3150	52	0.12	0
500	39	0.35	4	4000	53	0.09	0
630	41	0.28	3	5000	51	0.08	0

STC = 43

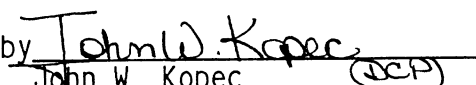
### ABBREVIATION INDEX

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

  
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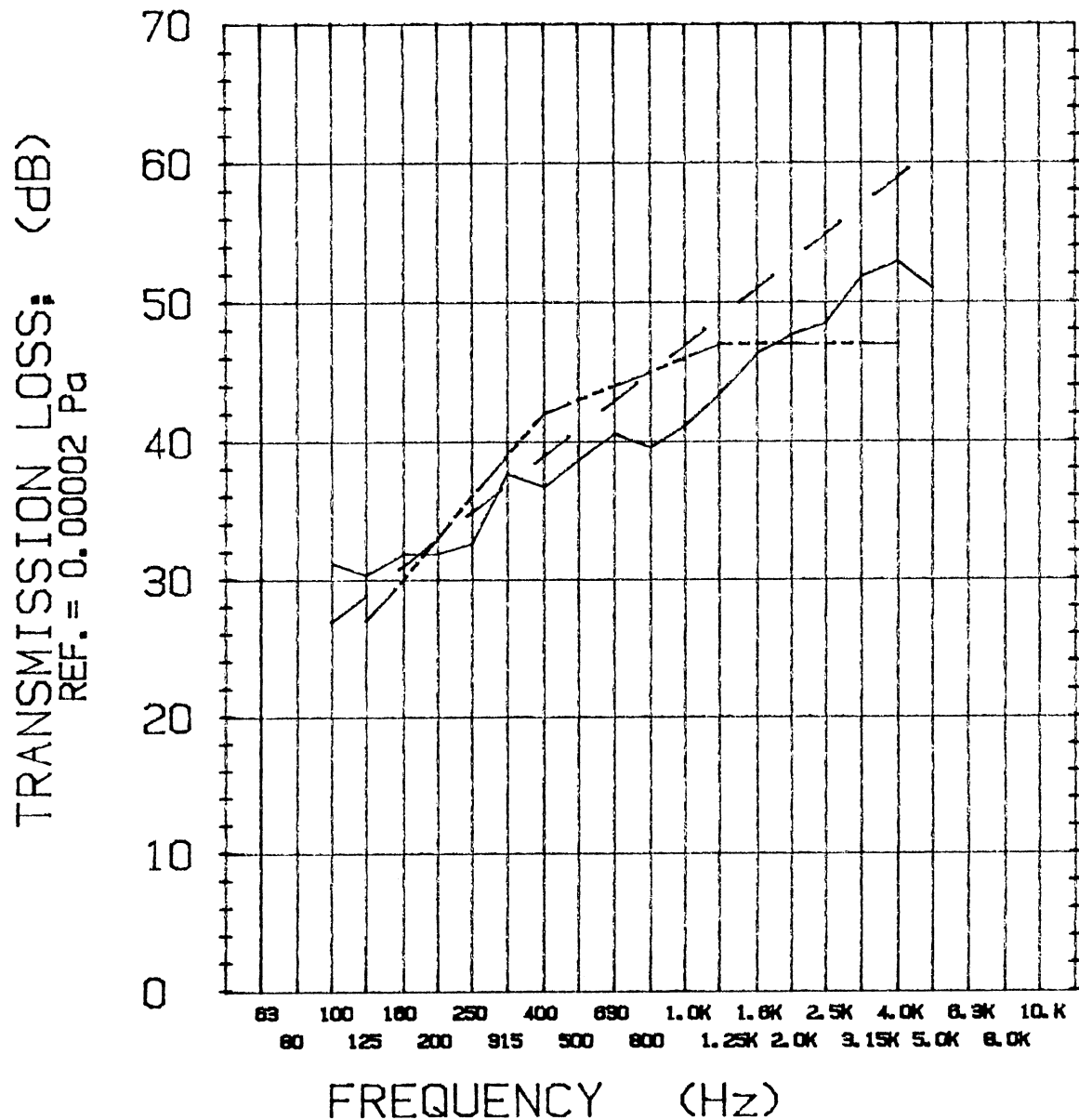
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## REPORT

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- SOUND TRANSMISSION CLASS CONTOUR
- - - - MASS LAW CONTOUR

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