Sound test

Riverbanks Institute, Geneva IL

Sauerland Spanplatte

RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

FOR: Sauerland Spanplatte
Arnsberg, Germany

Sound Transmission Loss Test
RAL™-TL08-328

ON: S3G Panel

CONDUCTED: 20 November 2008

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-04 and E413-04, 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 (NVLAP Lab Code: 100227-0). A description of the measuring technique is available separately.

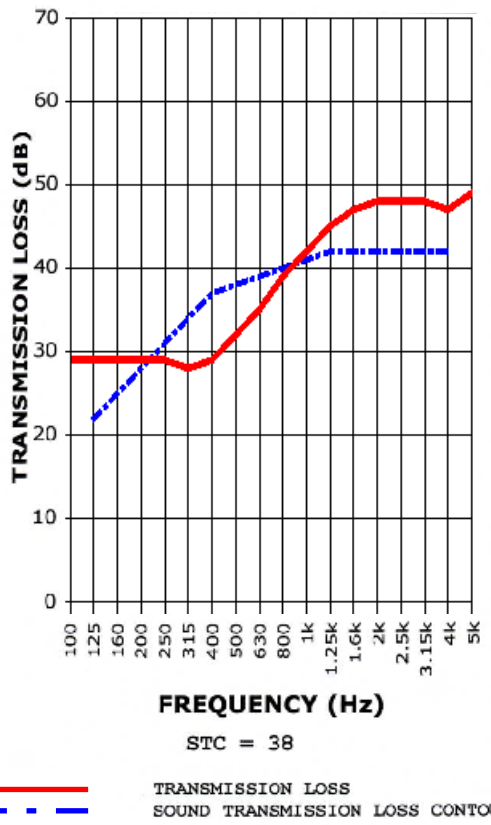
DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as S3G Panel. The overall dimensions of the specimen as measured were nominally 902 mm (35.5 in.) wide by 2 m (78.75 in.) high and 44.45 mm (1.75 in.) thick. The specimen was placed directly in the laboratory's 1.22 m (4 ft) by 2.44 m (8 ft) test opening. A substantial filler wall was used in the remaining open area. Both the filler wall and test specimen were sealed on the periphery (both sides) with dense mastic.

The manufacturer's description of the specimen was as follows: S3G Panel. Einlage: 3 38 S 3 G; Verbindung: K geklammert; Deckplatte: H Hartfaser 3 mm (Eucatex). Literature including a drawing is retained on file.

The weight of the specimen as measured was 55.3 kg (122 lbs.), an average of 30.7 kg/m^2 (6.3 lbs/ft^2). The transmission area used in the calculations was 1.8 m^2 (19.5 ft^2). The source and receiving room temperatures at the time of the test were 22±2°C (72±2°F) and 51±3% relative humidity. The source and receive reverberation room volumes were 178 m^3 (6,298 ft^3) and 140 m^3 (4,929 ft^3), respectively.

SOUND TRANSMISSION REPORT
RAL - TL08-328



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 is within the limits set by the ASTM Standard E90-04.

FREQ.	T.L.	C.I.	DEF.	FREQ.	T.L.	C.I.	DEF.
100	29	0.59		800	39	0.15	1
125	29	0.61		1000	42	0.13	
160	29	0.65		1250	45	0.10	
200	29	0.62		1600	47	0.08	
250	29	0.40	2	2000	48	0.08	
315	28	0.31	6	2500	48	0.08	
400	29	0.17	8	3150	48	0.06	
500	32	0.15	6	4000	47	0.10	
630	35	0.17	4	5000	49	0.05	

STC=38

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)
T.L. = TRANSMISSION LOSS, dB
C.I. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
DEF. = DEFICIENCIES, dB<STC CONTOUR (SUM OF DEF = 27)
STC = SOUND TRANSMISSION CLASS

Tested by Marc Sciaky
Experimentalist

Approved by David L. Moyer
Laboratory Manager

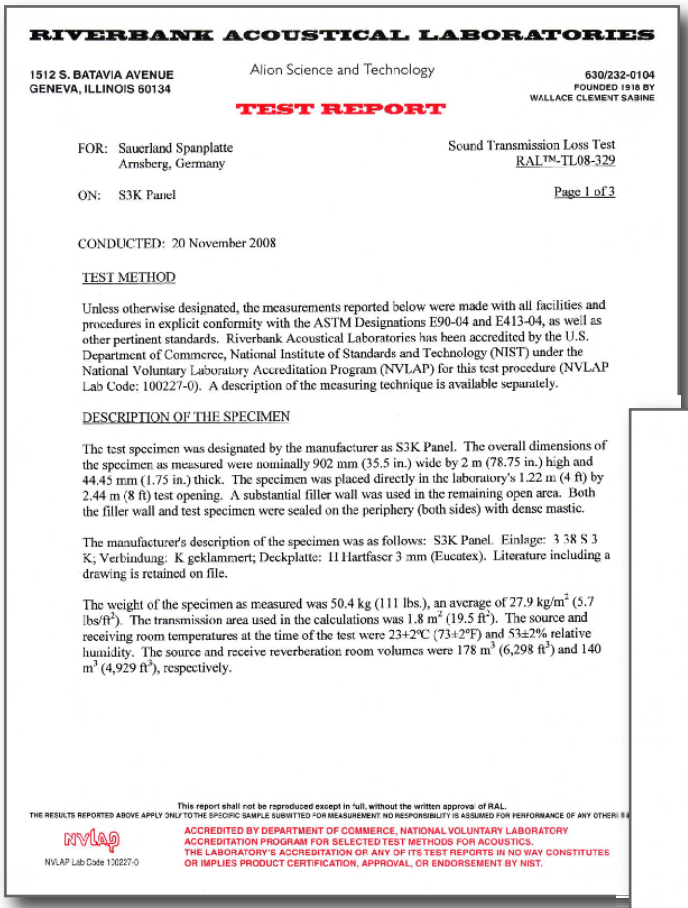
Test parameter

- Door core:	38 S3G
- Door size:	900 x 2000
- Door skin:	3 mm HDF
- Testing standard:	ASTM E 90-04 ASTM E413-04

Result:

Type: 38 S3G

Sound: 38 dB



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TEST REPORT

FOR: Sauerland Spanplatte
Arnsberg, Germany

Sound Transmission Loss Test
RAL™-TL08-329

ON: S3K Panel

Page 1 of 3

CONDUCTED: 20 November 2008

TEST METHOD

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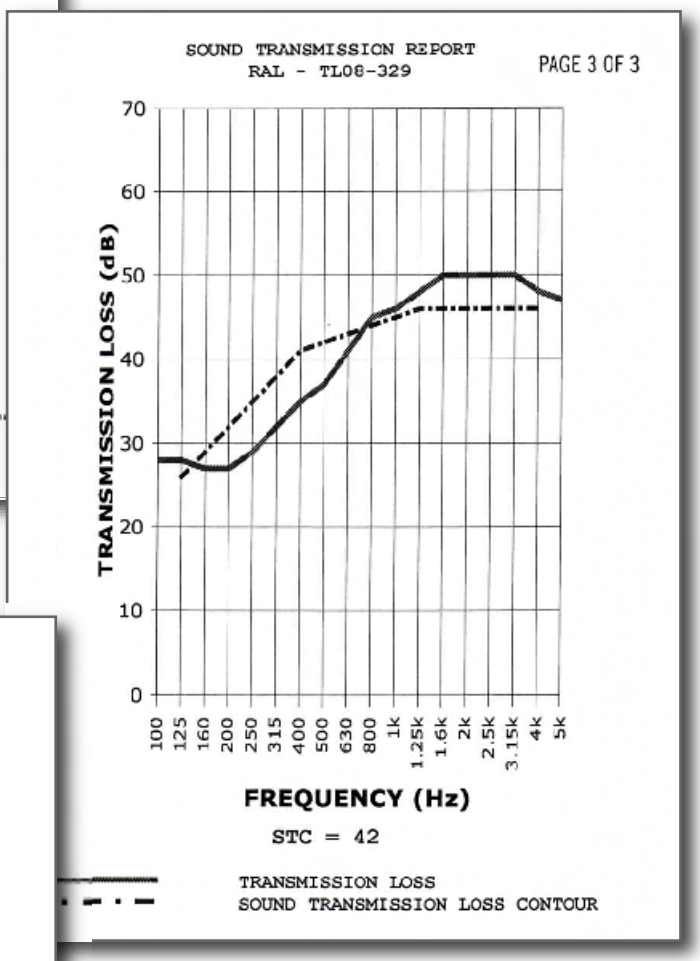
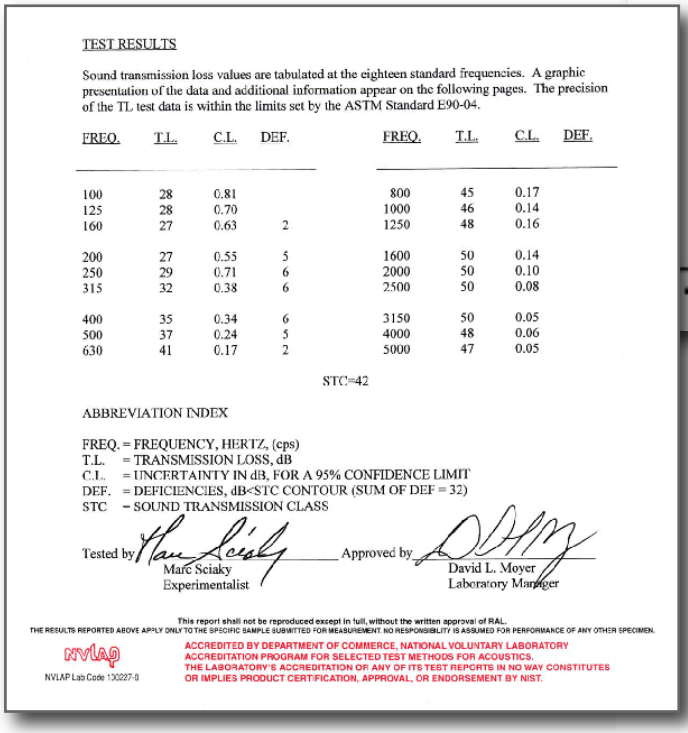
DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as S3K Panel. The overall dimensions of the specimen as measured were nominally 902 mm (35.5 in.) wide by 2 m (78.75 in.) high and 44.45 mm (1.75 in.) thick. The specimen was placed directly in the laboratory's 1.22 m (4 ft) by 2.44 m (8 ft) test opening. A substantial filler wall was used in the remaining open area. Both the filler wall and test specimen were sealed on the periphery (both sides) with dense mastic.

The manufacturer's description of the specimen was as follows: S3K Panel. Einlage: 3 38 S 3 K; Verbindung: K geklammert; Deckplatte: 11 Hartfaser 3 mm (Eucatex). Literature including a drawing is retained on file.

The weight of the specimen as measured was 50.4 kg (111 lbs.), an average of 27.9 kg/m^2 (5.7 lbs/ft^2). The transmission area used in the calculations was 1.8 m^2 (19.5 ft^2). The source and receiving room temperatures at the time of the test were 23±2°C (73±2°F) and 53±2% relative humidity. The source and receive reverberation room volumes were 178 m^3 (6,298 ft^3) and 140 m^3 (4,929 ft^3), respectively.





TEST RESULTS

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FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	28	0.81		800	45	0.17	
125	28	0.70		1000	46	0.14	
160	27	0.63	2	1250	48	0.16	
200	27	0.55	5	1600	50	0.14	
250	29	0.71	6	2000	50	0.10	
315	32	0.38	6	2500	50	0.08	
400	35	0.34	6	3150	50	0.05	
500	37	0.24	5	4000	48	0.06	
630	41	0.17	2	5000	47	0.05	

STC=42

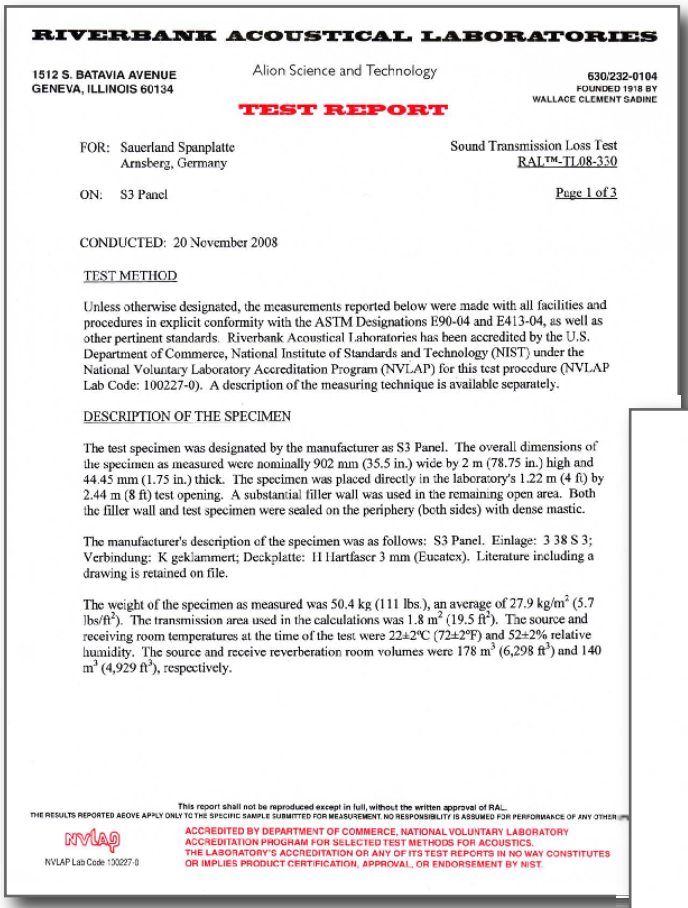
ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)
T.L. = TRANSMISSION LOSS, dB
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
DEF. = DEFICIENCIES, dB<STC CONTOUR (SUM OF DEF = 32)
STC = SOUND TRANSMISSION CLASS

Tested by Marc Sciaky, Experimentalist — Approved by David L. Moyer, Laboratory Manager

Test parameter

- Door core: 38 S3K
  Door size: 900 x 2000
- Testing standard: ASTM E 90-04
  ASTM E413-04



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TEST REPORT

FOR: Sauerland Spanplatte
Arnsberg, Germany

Sound Transmission Loss Test
RAL™-TL08-330

ON: S3 Panel

Page 1 of 3

CONDUCTED: 20 November 2008

TEST METHOD

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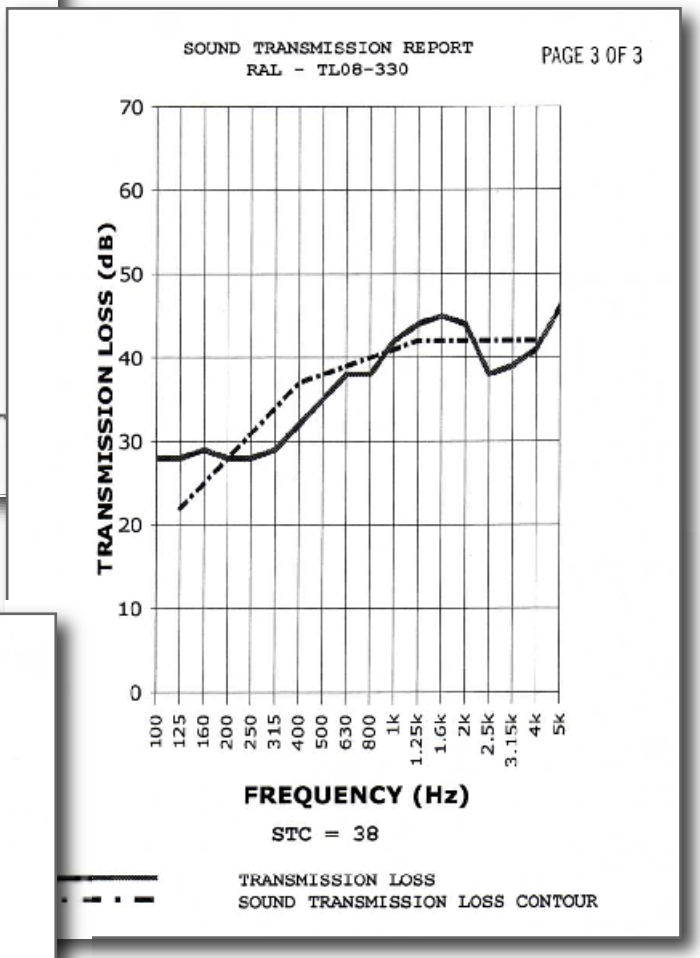

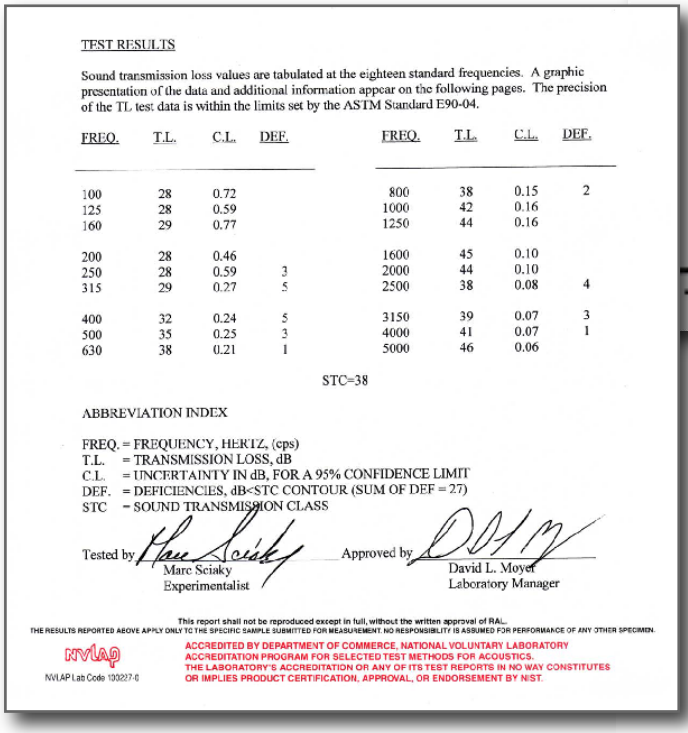

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100	28	0.72		800	38	0.15	2
125	28	0.59		1000	42	0.16	
160	29	0.77		1250	44	0.16	
200	28	0.46		1600	45	0.10	
250	28	0.59	3	2000	44	0.10	
315	29	0.27	5	2500	38	0.08	4
400	32	0.24	5	3150	39	0.07	3
500	35	0.25	3	4000	41	0.07	1
630	38	0.21	1	5000	46	0.06	

STC=38

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STC = SOUND TRANSMISSION CLASS

Tested by Marc Sciaky, Experimentalist

Approved by David L. Moyer, Laboratory Manager

Test parameter

- Door core: 38 S3
  Door size: 900 x 2000
- Testing standard: ASTM E 90-04
  ASTM E413-04