



FOR THE SCOPE OF
ACCREDITATION UNDER NVLAP
LAB CODE 100402-0.

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 100653963

Date: February 28, 2012

REPORT NO. 100653963CRT-001

SOUND TRANSMISSION LOSS TEST AND CLASSIFICATION OF A WALL SECTION

RENDERED TO

AIR KRETE, INC.
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WEEDSPORT, NY 13166

INTRODUCTION

This report gives the results of a Sound Transmission Loss test and the determination of the Sound Transmission Class on a wall section. The sample was selected and supplied by the client and was received at the laboratories on February 16, 2012. The sample appeared to be in new, unused condition upon arrival.

AUTHORIZATION

Signed Intertek Quotation No. 500356386

TEST METHOD

The specimen was tested in accordance with the American Society for Testing and Materials designation ASTM E90-2009, "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions", and classified in accordance with the American Society for Testing and Materials designation ASTM E413-2010, "Classification for Rating Sound Insulation" and ASTM Standard E1332-10a entitled, "Standard Classification for Rating Outdoor-Indoor Sound Attenuation".

GENERAL

The sound-insulating property of a partition element is expressed in terms of the sound transmission loss. The procedure for determining this quantity is to mount (and perimeter seal) the test specimen as a partition between two reverberation rooms. Sound is introduced in one of the rooms (the source room) and measurements are made of the noise reduction between source room (10,000 cu. ft.) and receiving room (16,640 cu. ft.). The rooms are so arranged and constructed that the only significant sound transmission between them is through the test specimen.

The test opening is constructed such that it is approximately one inch larger in size than the test specimen. The specimen is placed in the test opening and a half-inch bead of "DUX-SEAL", a dense, non-hardening, clay-like material, to isolate it from the supporting base. The space between the test specimen and the wall opening is sealed on both sides employing the same sealing material.

The purpose of the Sound Transmission Class (STC) is to provide a single figure rating that can be used for comparing the sound-insulating properties of partition elements used for general building design purposes. The higher the rating (STC) the greater the sound insulating properties of the partition.

The purpose of the Outdoor-Indoor Transmission (OITC) is to provide a single number rating that can be used for comparing building façade designs, including walls, doors, windows and combinations thereof. This rating is designed to correlate with subjective impressions of the ability of building elements to reduce the overall loudness of ground and air transportation noise. It is intended to be used as a rank ordering device.

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of a wall section. The wall was constructed from a single layer of 5/8" gypsum board directly connected to 2x6 metal studs with insulation in the cavity and a single layer of 5/8" gypsum board on the opposite side. The wall weighed 268 lbs and measured 45 inches wide by 8 feet tall.

RESULTS OF TEST

1/3 Octave Band Center Frequency Hz Test Number	<u>Sound Transmission Loss in dB</u> 1
50	21
63	19
80	21
100	19
125	20
160	27
200	32
250	40
315	43
400	46
500	48
630	50
800	52
1000	53
1250	54
1600	55
2000	53
2500	55
3150	58
4000	61
5000	63
STC	44
OITC	31

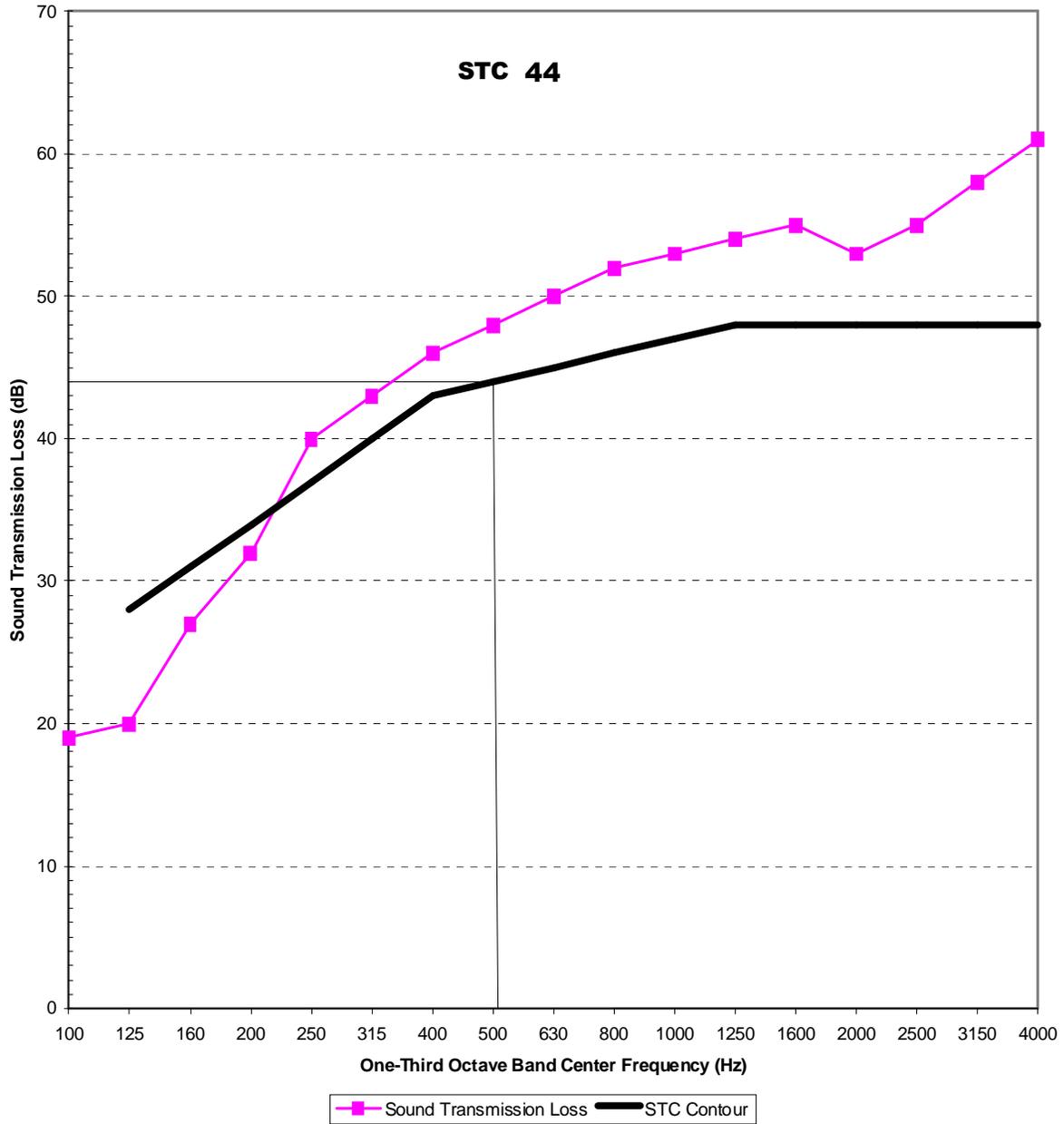
PRECISION

For any pair of rooms and microphone system, the 95% confidence interval ΔTL , for transmission loss must be less than the following.

<u>Range of One-Third Octave Bands</u>	<u>Transmission Loss Uncertainty, dB</u>	
	<u>Required</u>	<u>Actual</u>
125 and 160	3	<1.5
200 and 250	2	<1.5
315 - 4000	1	<1

TEST NUMBER 1

Sound Transmission Loss



AIR KRETE, INC.

REMARKS

1. Ambient Temperature: 69°F
2. Relative Humidity: 24%

CONCLUSION

The test method employed for this test has no pass-fail criteria; therefore, the evaluation of the test results is left to the discretion of the client.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test: February 27, 2012

Report Approved by:



Brian Cyr
Engineer
Acoustical Testing

Report Reviewed By:



James R. Kline
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Attachments: None