FOR THE SCOPE OF
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LAB CODE 100402-0.

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 3193327 Date: October 29, 2009

REPORT NO. 3193327CRT-001c

SOUND TRANSMISSION LOSS TEST AND CLASSIFICATION OF A ROLLING GARAGE DOOR WITH A SINGLE FIREMISER CURTAIN

RENDERED TO

CORNELL IRON WORKS, INC.
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MOUNTAIN TOP, PA 18707

INTRODUCTION

This report gives the results of a Sound Transmission Loss test and the determination of the Sound Transmission Class on a rolling garage door model with a single Firemiser curtain. The sample was selected, supplied, and installed by the client and was received at the laboratories on October 27, 2009. The panel appeared to be in new, unused condition upon arrival.

AUTHORIZATION - Signed Intertek Quotation No. 500186693.

TEST METHOD

The specimen was tested in accordance with the American Society for Testing and Materials designation ASTM E90-2004, "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 E413-2004, "Classification for Rating Sound Insulation" and ASTM Standard E1332-90 (Re-Approved 2003) entitled, "Standard Classification for Determination of Outdoor-Indoor Transmission Class".

The test specimen was also tested in accordance with BS EN ISO 140-3: 1995 Part 3: “Laboratory measurement of airborne sound insulation of building elements” and classified in accordance with BS EN ISO 717-1: 2006 “Acoustics - rating of sound insulation in buildings and of building elements - part 1: airborne sound insulation”.

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 an 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 rolling garage door system with a single Firemiser curtain. The door measured 12 feet wide by 10 feet tall. The system was installed in the receiving reverberation room. The test specimen was a complete operating door that included the curtain, tracks, counterbalance shaft, end brackets and sheet metal hood.

Single Firemiser Curtain

Single Firemiser Curtain

RESULTS OF TEST

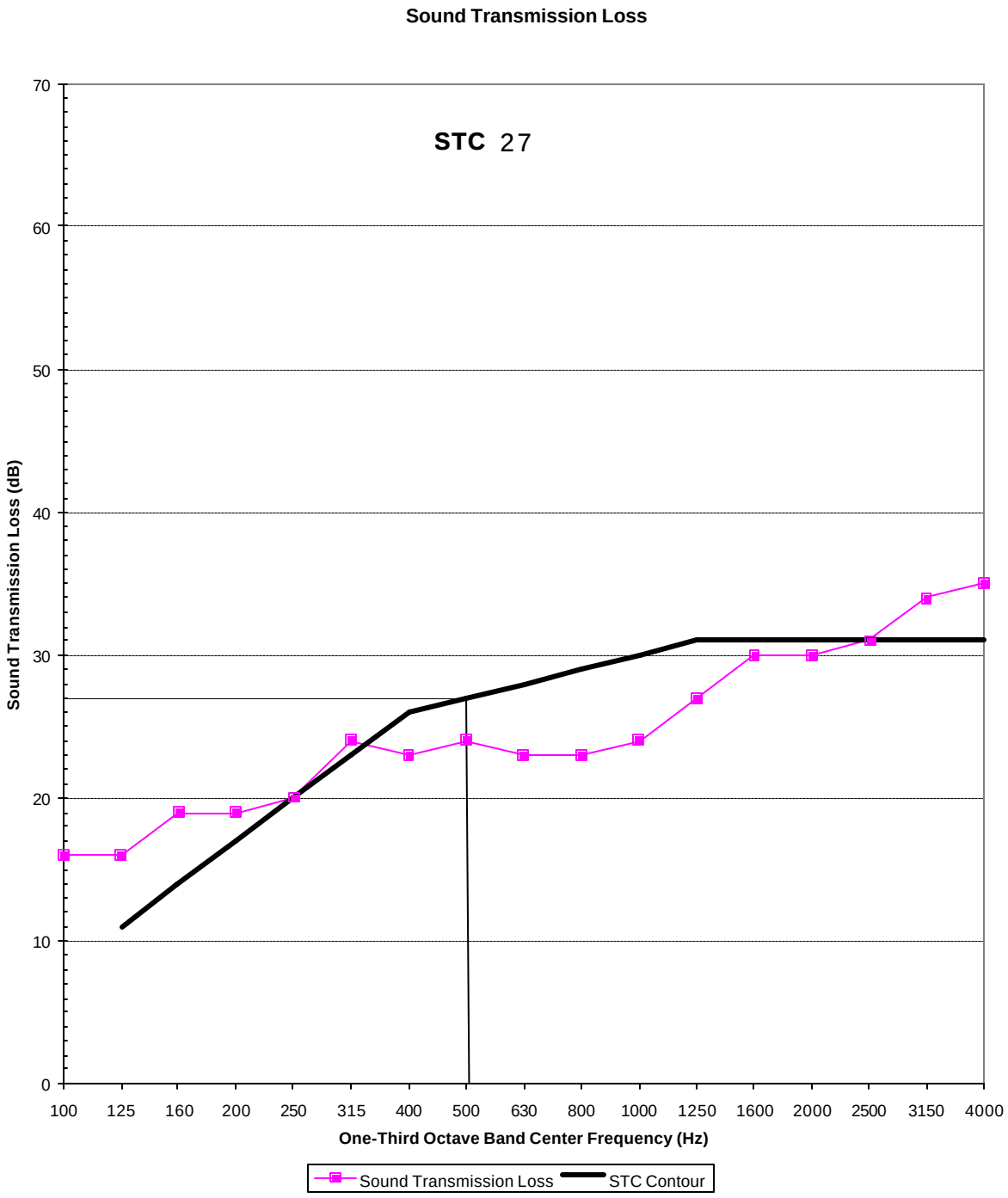
1/3 Octave Band Center Frequency Hz	Sound Transmission Loss in dB
80	17
100	16
125	16
160	19
200	19
250	20
315	24
400	23
500	24
630	23
800	23
1000	24
1250	27
1600	30
2000	30
2500	31
3150	34
4000	35
5000	35
Sound Transmission Class	27
Outdoor-Indoor Transmission Class	23
Rw	27

PRECISION

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

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

ROLLING GARAGE DOOR WITH A SINGLE FIREMISER CURTAIN



CORNELL IRON WORKS, INC.

REMARKS

1. Ambient Temperature: 70°F
2. Relative Humidity: 50%

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: October 28, 2009

Report Approved by:

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Attachments: None