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REPORT

Intertek ETL SEMKO

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Order No. 3120428 Date: April 13, 2007

REPORT NO. 3120428CRT-004

SOUND TRANSMISSION LOSS TEST AND CLASSIFICATION OF A CORNELL IRON WORKS TRANZFORM FIRE DOOR

RENDERED TO

CORNELL IRON WORKS, INC.
CRESTWOOD INDUSTRIAL PARK
24 ELMWOOD AVE.
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 Cornell Iron Works Tranzform Fire Door. The test sample was selected and supplied by the client and received at the laboratories on April 12, 2007. It appeared to be in a new, unused condition upon arrival.

AUTHORIZATION

Signed quote number 500027047.

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 E413-04, "Classification for Rating Sound Insulation."

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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 on 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.

DESCRIPTION OF TEST SPECIMEN

The Tranzform accordion fire door measured 45½ inches wide by 72 inches high and was pre-installed in a heavy wood construction frame. The section was fastened and sealed around the perimeter and tested as an inoperable panel.

RESULTS OF TEST

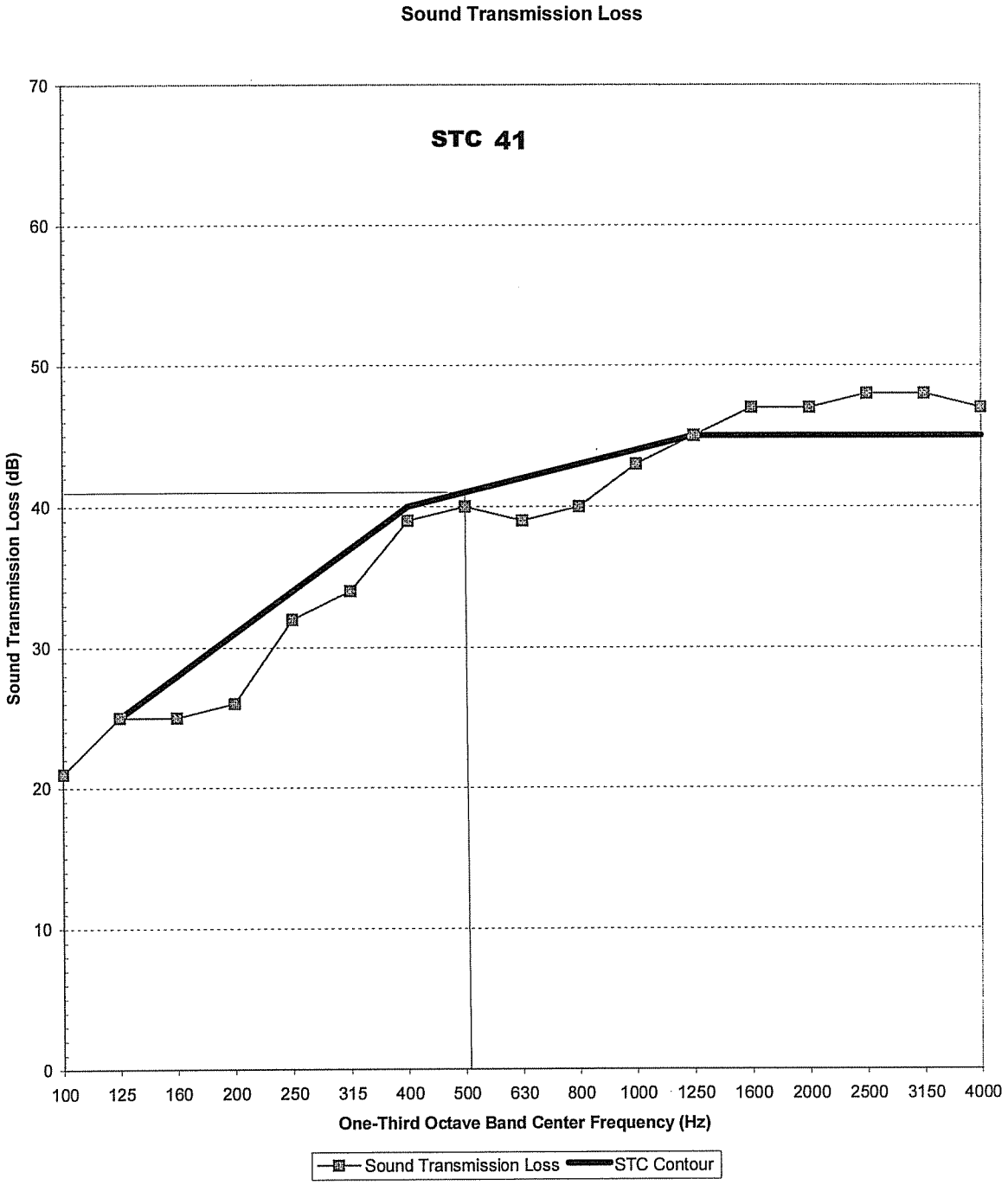
1/3 Octave Band Center Frequency Hz	Sound Transmission Loss in dB
80	21
100	21
125	25
160	25
200	26
250	32
315	34
400	39
500	40
630	39
800	40
1000	43
1250	45
1600	47
2000	47
2500	48
3150	48
4000	47
5000	45
Sound Transmission Class	41

PRECISION

For any pair of rooms and microphone system, the 95% confidence interval ΔTL, 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

RESULTS OF TEST – cont'd.



CORNELL IRON WORKS

REMARKS

1. Aging Period: None
2. Ambient Temperature: 71°F
3. Relative Humidity: 41%

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: April 12, 2007

Report Approved by:

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Attachments: None