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Job No. 3040533

April 11, 2003

**REPORT NO. 3040533-001**

**SOUND TRANSMISSION LOSS TEST  
AND CLASSIFICATION OF A SERIES 1250 44 INCH BY 60 INCH  
SINGLE HUNG WINDOW**

**RENDERED TO**

**SUPERSEAL MANUFACTURING COMPANY, INC.  
125 HELEN STREET  
SOUTH PLAINFIELD, NEW JERSEY 07080-0795**

**INTRODUCTION**

This report gives the results of a Sound Transmission Loss test and the determination of the Sound Transmission Class on a SuperSeal Manufacturing Series 1250 Single Hung Window. The test sample was selected and supplied by the client and received at the laboratories on April 2, 2003. It appeared to be in a new, unused condition.

**AUTHORIZATION**

Purchase Order No. 23634 from SuperSeal Manufacturing Company, Inc. dated March 20, 2003.

**TEST METHOD**

The specimen was tested in accordance with the American Society for Testing and Materials designation ASTM E90-2002, "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 E413-87 Re-approved 1999, "Classification for Rating Sound Insulation" and ASTM Standard E1332-90 Re-approved 1998 entitled, "Standard Classification for Determination of Outdoor-Indoor Transmission Class".

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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.

The purpose of the Outdoor-Indoor Transmission (OITC) is to provide a single number rating that can be used for comparing building facade 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 44 inch wide by 60 inch high Series 1250 single hung window with a vinyl frame. The window was glazed with insulating glass consisting of ¼ inch laminated glass, an 11/32 inch air space and 1/8 inch clear annealed glass. The specimen weighed 88 pounds.

The glazing dimensions of the window were provided by the client.

**RESULTS OF TEST**

1/3 Octave Band Center Frequency <u>Hz</u>	<u>Sound Transmission Loss in dB</u>
80	12
100	17
125	20
160	22
200	22
250	20
315	24
400	26
500	30
630	32
800	34
1000	36
1250	37
1600	35
2000	37
2500	37
3150	38
4000	39
5000	40
Sound Transmission Class	33
Outdoor-Indoor Transmission Class	25

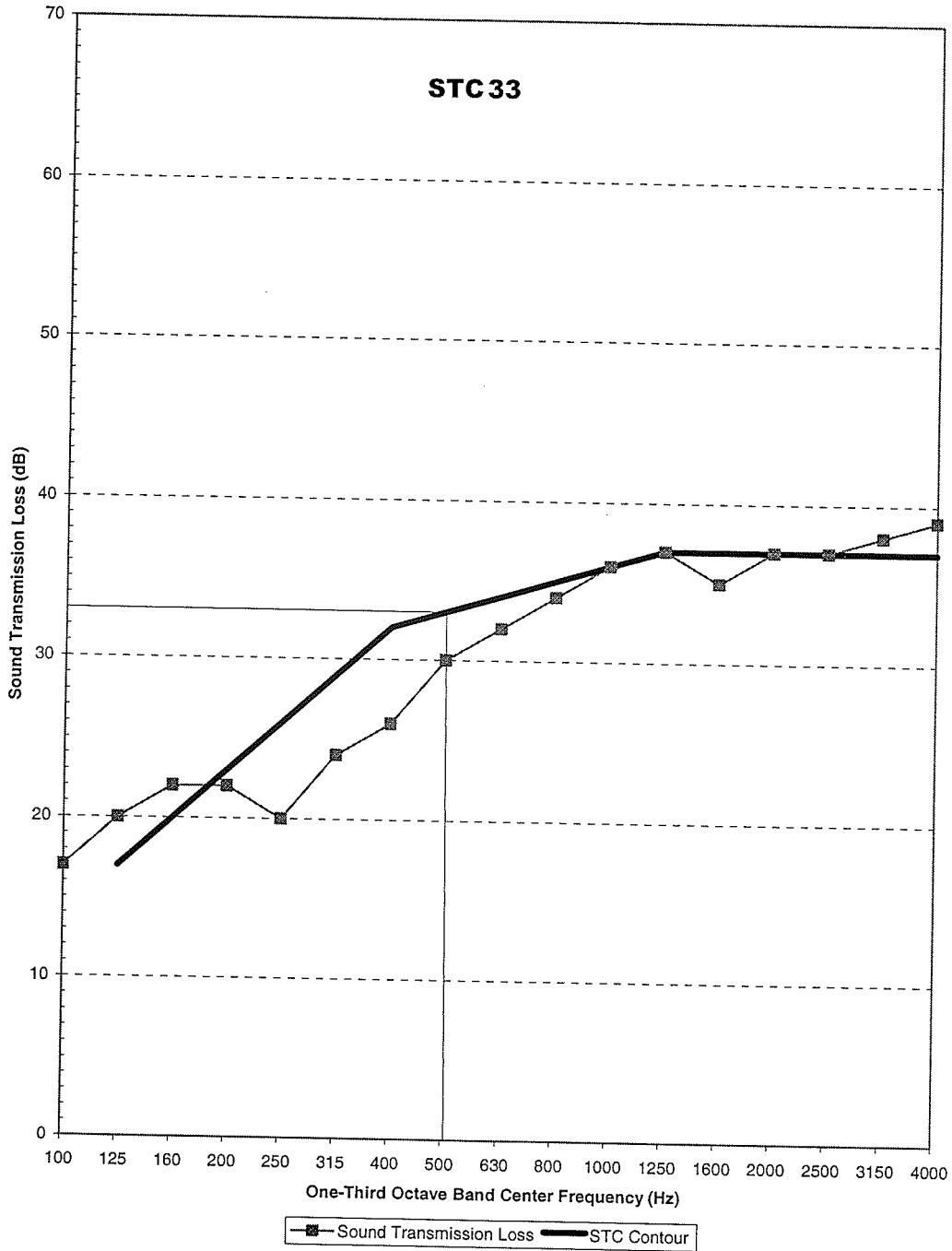
**PRECISION**

For any pair of rooms and microphone system, the 95% confidence interval  $\Delta TL$ , 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

Series 1250 Single Hung Window

Sound Transmission Loss



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**REMARKS**

1. Aging Period: None
2. Ambient Temperature: 70°F
3. Relative Humidity: 39%

**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.

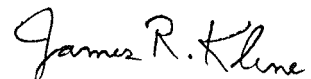
Date of Test: April 7, 2003

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