REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 3191934 Date: October 29, 2009

REPORT NO. 3191934CRT-002a

SOUND TRANSMISSION LOSS TEST AND CLASSIFICATION OF A WOOD JOIST FLOOR/CEILING ASSEMBLY

RENDERED TO

PLITEQ, INC.
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INTRODUCTION

This report gives the results of a Sound Transmission Loss Test and Classification of a wood joist floor/ceiling assembly. The floor/ceiling assembly construction and testing were performed by Intertek at the direction of and witnessed by John LoVerde, representing Veneklasen Associates. The sample appeared to be in a new, unused condition.

AUTHORIZATION

Intertek Quote No. 500182506.

TEST METHOD

The specimen was tested in general accordance with the American Society for Testing and Materials designation ASTM E90-04, "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements", and classified in accordance with the American Society for Testing and Materials designation ASTM E413-04, “Classification for Rating Sound Insulation". The size of the source room for the measurements is smaller than the minimum recommended of 125m^3. This leads to slightly elevated uncertainties in the measurement data at low frequencies and does not allow microphones to be placed in full accordance with section A.2.

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 and receiving room. The rooms are so arranged and constructed that the only significant sound transmission between them is through the test specimen.

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 THE FLOOR/CEILING ASSEMBLY

The test floor is a 100 sq. ft. opening that forms the horizontal separation of the two rooms, one directly above the other. The materials used in the assembly from top to bottom were:

- Two layers 19/32" T&G OSB sheathing subfloor fastened with 6d ring shank nails spaced 6" at joints and perimeter and 12" in the field and glued to the joists with OSI PL-400 Construction Adhesive – Total Weight 422 pounds
- Weyerhaeuser Type TJI 230 Series Joists, 12" high, 12' 2" long, spaced 24" on center fastened to bearing plates using bearing clips – Total Weight (bearing plates, clips and joists) 231 pounds
- R-19 batt fiberglass insulation wire hung in the top of the cavities – Total Weight 20 pounds
- Pliteq GenieClips RST attached to the trusses 24" on center using 2 ¼" coarse thread screws - Total Weight 4 pounds
- Hat Channels (7/8") 25 gauge connected to the clips – Total Weight 17 pounds
- Two layers 1/2" thick type "C" Gypsum Board attached to the hat channels using fine thread screws spaced 8 - 16" on center on the first layer and 16" on the second layer (taped & finished) – Total Weight 391 pounds

RESULTS OF TEST

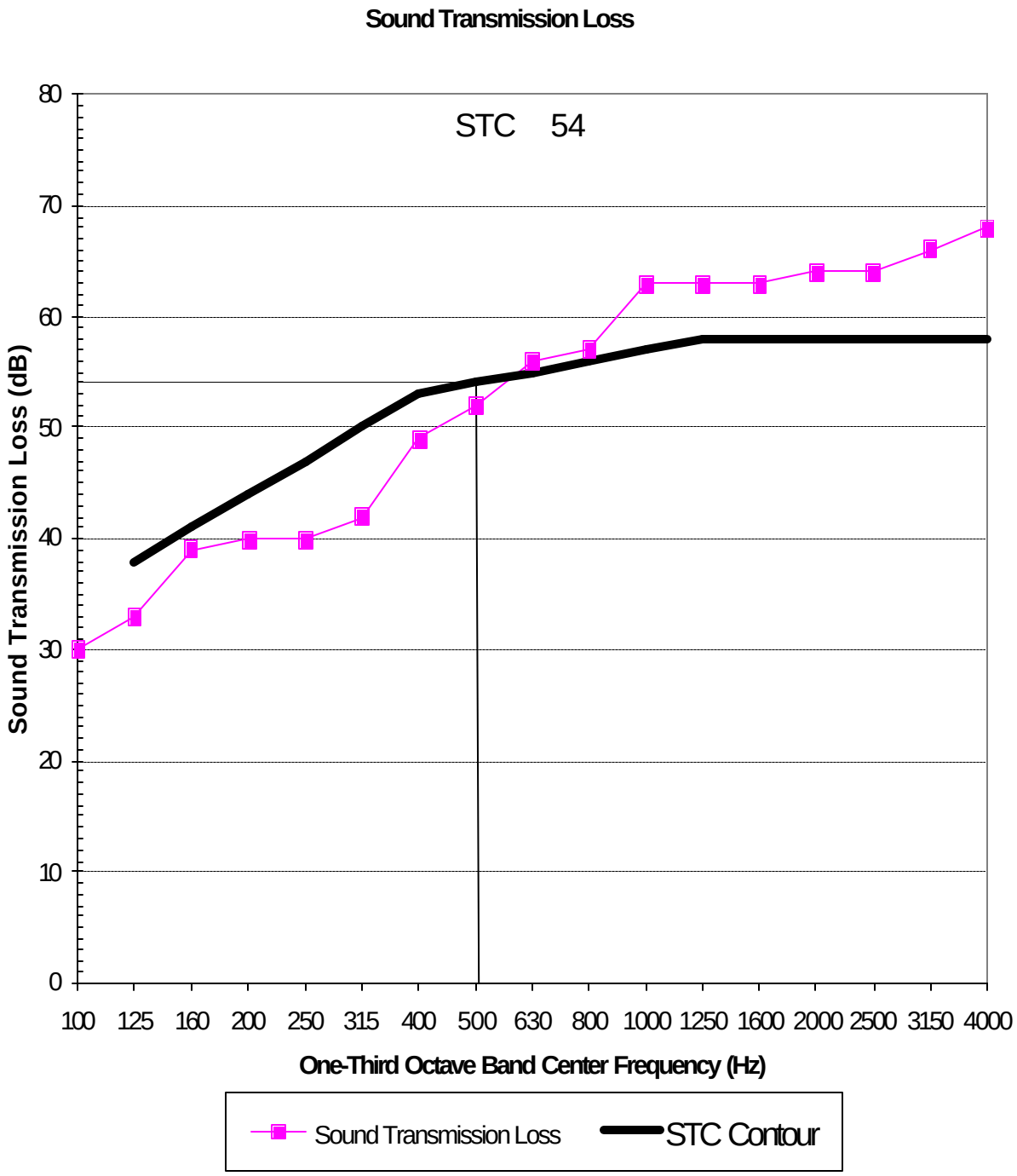
1/3 Octave Band Center Frequency Hertz	Sound Transmission Loss in dB No Flooring (Bare Decking)
50	21
63	23
80	25
100	30
125	33
160	39
200	40
250	40
315	42
400	49
500	52
630	56
800	57
1000	63
1250	63
1600	63
2000	64
2500	64
3150	66
4000	68
5000	71
Sound Transmission Class	54

PRECISION

For the Intertek flooring test facility, the 95% confidence interval △TL, is as follows:

Range of One-Third Octave Bands	Transmission Loss 95% Confidence Uncertainty, dB
125 and 200	<4.0
250 and 315	<2.0
400 - 4000	<1.5

NO FLOORING (BARE DECKING)



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REMARKS

1. Gypsum Concrete: N/A
2. Ambient Temperature: 70°F
3. Relative Humidity: 40%

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.

Date of Test: October 22, 2009

Report Approved by:

Brian Cyr
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Report Reviewed By:

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Attachments: None