REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 3151742 Date: May 24, 2008

REPORT NO 3151742CRT-001

IMPACT SOUND TRANSMISSION TEST AND CLASSIFICATION OF LM FLOORING ½ INCH ENGINEERED HARDWOOD OVER SOUND SHARK 3MM UNDERLAYMENT ON A CONCRETE FLOOR WITH A DROP CEILING

RENDERED TO

SOUND SEAL
50 H. P. ALMGREN DRIVE
AGAWAM, MA 01001

INTRODUCTION

This report gives the results of an Impact Sound Transmission test and the determination of the Impact Insulation Class of LM Flooring ½ inch Engineered Hardwood over Sound underlayment. The underlayment and engineered hardwood were selected and supplied by the client and received at the laboratories on April 10, 2008. The samples appeared to be in a new, unused condition

AUTHORIZATION

Signed Intertek Quotation No. 500084548.

TEST METHOD

The floor system was tested in general accordance with the American Society for Testing and Materials designation ASTM E492-04, "Standard Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-Ceiling Assemblies Using the Tapping Machine". It was classified in accordance with ASTM E989-89 (Re-approved 1999), entitled, "Standard Classification for Determination of Impact Insulation Class (IIC)".

GENERAL

The method is designed to measure the impact sound transmission performance of a floor-ceiling assembly, in a controlled laboratory environment. A standard tapping machine (Bruel & Kjaer Type 3207) was placed at four positions on a test floor that forms the horizontal separation between two rooms, one directly above the other. The data obtained was normalized to a reference room absorption of 10 square meters in accordance with the test method.

The standard also prescribes a single-figure classification rating called "Impact Insulation Class, IIC" which can be used by architects, builders and code authorities for acoustical design purposes in building construction.

The IIC is obtained by matching a standard reference contour to the plotted normalized one-third octave band sound pressure levels at each test frequency. The greater the IIC rating, the lower the impact sound transmission through the floor-ceiling assembly

DESCRIPTION OF THE FLOOR/CEILING ASSEMBLY

The floor/ceiling assembly system consisted of a 6 inch thick concrete floor with a drop ceiling below forming the horizontal separation between two rooms, one directly above the other. The drop ceiling consisted of 14 inch deep steel bar joists spaced 38 inches on center. The ceiling construction consisted of 2 x 4 inch wood bolted to the bar joists. The 2 x 4 inch wood was spaced 24 inches on center. Resilient channels (1/2 inch single leaf) were positioned on 16 inch centers between the furring strips and the 1/2 inch gypsum board. Sound attenuation batts (U.S.G. Thermofiber), four (4) inches in thickness were placed between the joists in the formed cavity. The receiving room below measured 1440 cubic feet.

TEST SPECIMEN

The test specimen from bottom to top consisted of a layer of Sika T-35 glue, 3 mm Soundshark rubber underlayment, another layer of Sika T-35 glue with LM Flooring 1/2 inch thick engineered hardwood (5 inches wide by 48 inches in length).

RESULTS OF TEST

LM Flooring ½ inch Engineered Hardwood over Sound Shark 3mm underlayment

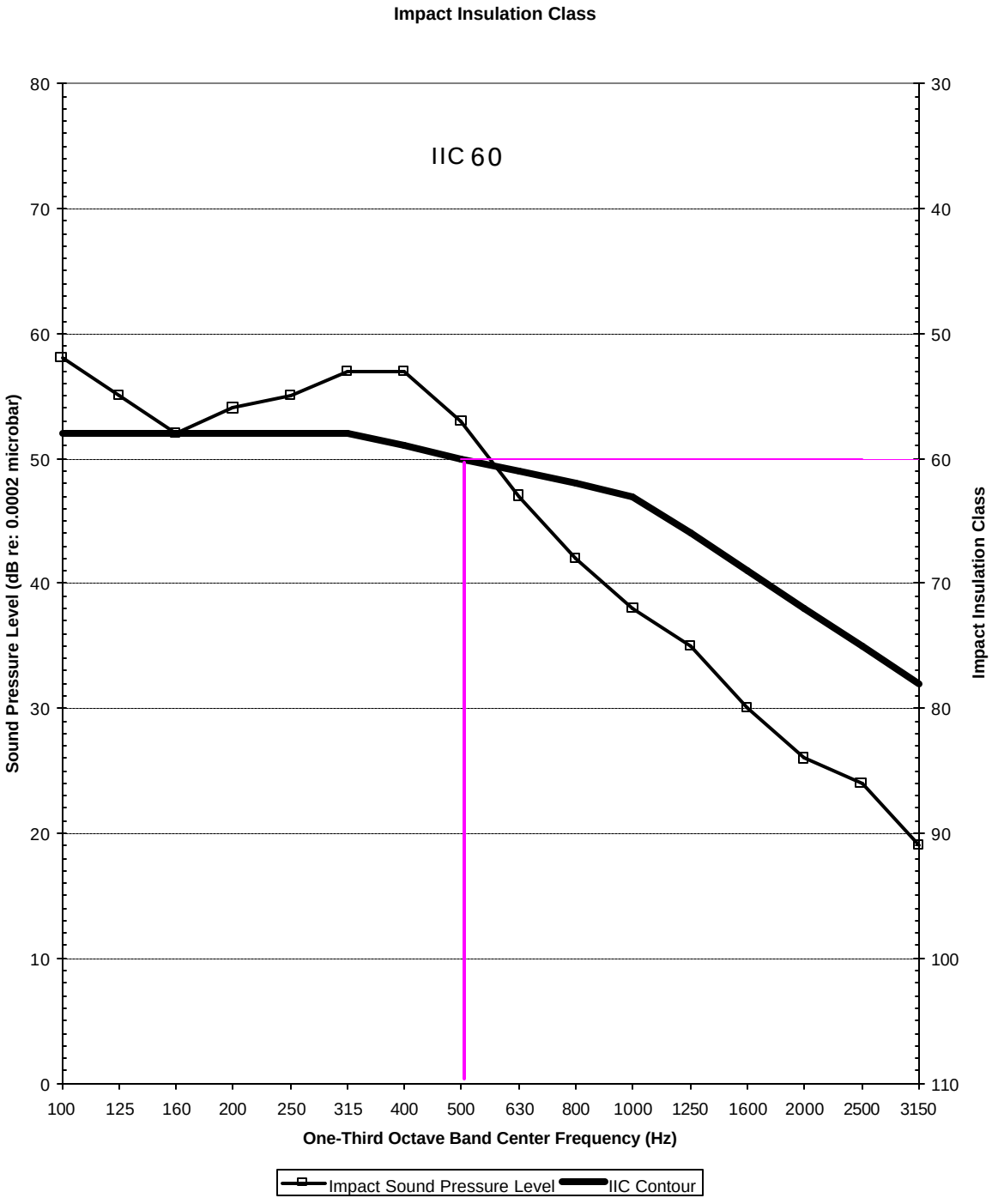
The data obtained in the room below the panel normalized to A_o = 10 square meters, is as follows:

1/3 Octave Band Center Frequency Hz	1/3 Octave Band Sound Pressure Level dB re 0.0002 Microbar
100	58
125	55
160	52
200	54
250	55
315	57
400	57
500	53
630	47
800	42
1000	38
1250	35
1600	30
2000	26
2500	24
3150	19
Impact Insulation Class (IIC)	60

The 95% uncertainty level for each tapping machine location is less than 3 dB for the 1/3 octave bands centered in the range from 100 to 400 Hz and less than 2.5 dB for the bands centered in the range from 500 to 3150 Hz.

For the floor/ceiling construction, the 95% uncertainty limits (?L_n) for the normalized sound pressure levels were determined to be less than 2 dB for the 1/3 octave bands centered in the range from 100 to 3500.

LM Flooring ½ inch Engineered Hardwood over Sound Shark 3mm underlayment



SOUND SEAL

REMARKS

1. Aging Period: 24 hours per glue layer making total aging period 48 hours
2. Ambient Temperature: 70°F
3. Relative Humidity: 32%

CONCLUSION

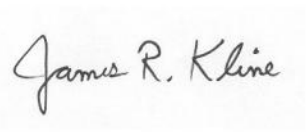
The test method employed for this test has no pass-fail criteria, therefore, the evaluation of the test results is left to the discretion of the client.

Date of Test: May 14, 2008

Report Approved by:

Earl Gardner Jr.
Technician Team Leader
Acoustical Testing

Report Reviewed By:



James R. Kline
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Attachments: None