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TEST REPORT

for

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Impact Sound Transmission Test
ASTM E 492 – 09 / ASTM E 989 – 06
On

6 Inch (152 mm) Concrete Slab Floor-Ceiling Assembly
Overlaid with;
Laminated Flooring on Kronoswiss ProVent Underlayment

Report Number: NGC 7012014

Assignment Number: G-775

Test Date: 02/29/2012

Report Date: 05/23/2012

Submitted by: _____
Andrew E. Heuer
Senior Test Engineer

Reviewed by: _____
Robert J. Menchetti
Director

1650 Military Road • Buffalo, NY 14217-1198
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Report Number: NGC 7012014

Test Method: This test method is in accordance with American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine - Designation: E 492– 09 / E 989-06.
The uncertainty limits of each tapping machine location met the precision requirements of section A1.4 of ASTM E 492-09.

Specimen Description: 6 inch (152.4mm) concrete slab floor-ceiling assembly overlaid with laminate wood flooring on, according to client, Kronoswiss ProVent underlayment.

The test specimen was a floor-ceiling assembly consisting of the following:

- 1 layer of laminate wood flooring, nominal plank size: 8mm (0.315 in.) thick, 199.6 mm (7.86 in.) wide, 1208.0 mm (47.56 in.) long. Sample weight was 7.08 kg/m^2 (1.45 PSF).
- 1 layer of, according to client, Kronoswiss ProVent underlayment.
  Observed to be:
  3.15mm (0.124 in.) thick, weighing 0.1 kg/m^2 (0.02 PSF). The seams were butted and taped together.
- 6 inch (152.4 mm) thick reinforced concrete slab 366.2 kg/m^2 (75.0 PSF).

The overall weight of the test assembly is 373.3 kg/m^2 (76.47 PSF).

The perimeter of the concrete slab was sealed with a rubber gasket and a sand filled trough. The test assembly is structurally isolated from the receiving room.

Specimen size: 3657.6 mm x 4876.8 mm (12 ft. x 16 ft.)

Conditioning: Concrete slab cured for a minimum of 28 days.

Test Results: The results of the tests are given on pages 3 and 4.

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Normalized impact sound pressure level

Test: ASTM E 492 - 09 / ASTM E 989 - 06

Test Report: NGC7012014 Date: 2/29/2012

Specimen Size [m²]: 17.8

Source room

Rm Temp [°C]: 17

Humidity [%]: 40

Receiving room

Volume [m³]: 63.9

Rm Temp [°C]: 16.5

Humidity [%]: 56

Impact Insulation Class IIC [dB]: 50

Sum of Unfavorable Deviations [dB]: 28

Max. Unfavorable Deviation [dB]: 6 at 400 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
50	54	60.5	12.28	-6.5		4.67
63	55	59.6	19.76	-4.6		2.48
80	54	60.8	12.26	-6.8		1.69
100	58	63.7	14.76	-5.7		3.14
125	65	70.5	3.67	-5.5	3	2.89
160	67	72.6	3.95	-5.6	5	2.11
200	66	71.6	3.94	-5.6	4	1.22
250	67	71.7	3.40	-4.7	5	1.06
315	65	70.3	3.27	-5.3	3	0.50
400	67	71.6	3.12	-4.6	6	0.32
500	62	66.2	3.01	-4.2	2	0.30
630	51	55.7	2.82	-4.7		0.23
800	45	49.3	2.76	-4.3		0.28
1000	41	44.7	2.54	-3.7		0.21
1250	37	40.5	2.27	-3.5		0.17
1600	33	36.5	2.16	-3.5		0.26
2000	30	33.1	1.97	-3.1		0.26
2500	31	33.7	1.80	-2.7		0.40
3150	29	31.1	1.61	-2.1		0.22
4000	25	25.8	1.38	-0.8		0.38
5000	18	19.6	1.18	-1.6		0.26

L_n = Normalized Sound Pressure Level, dB

L2 = Receiving Room Level, dB

d = Decay Time, dB/second

ΔL_n = Uncertainty for 95% Confidence Level

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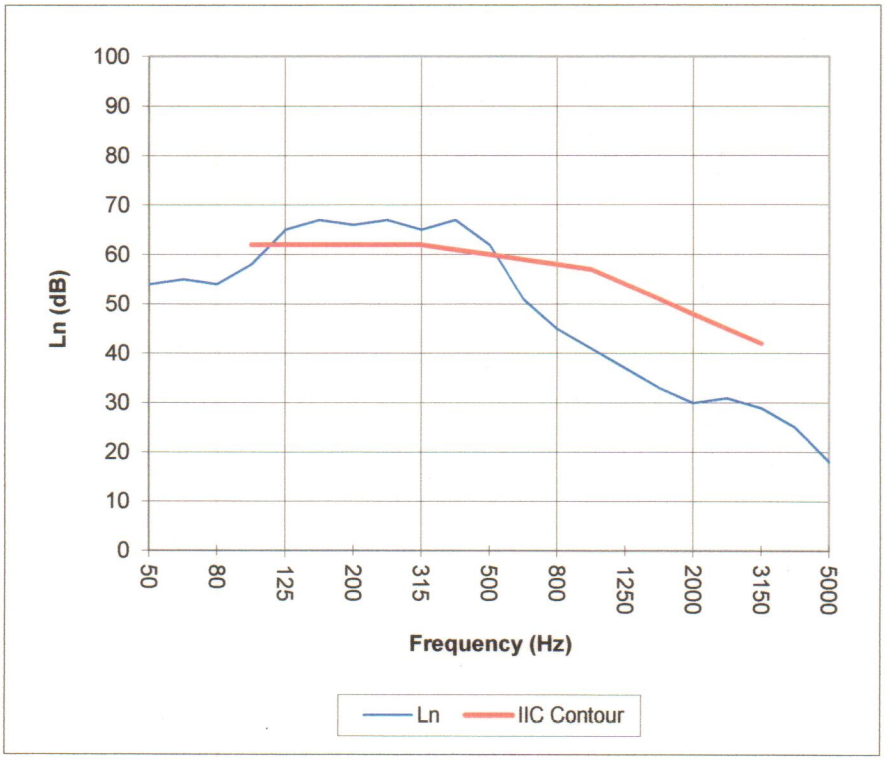
Normalized impact sound pressure level

Test: ASTM E 492 - 09 / ASTM E 989 - 06

Test Report: NGC7012014
Test Date: 2/29/2012
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 50

Frequency [Hz]	L_n [dB]
50	54
63	55
80	54
100	58
125	65
160	67
200	66
250	67
315	65
400	67
500	62
630	51
800	45
1000	41
1250	37
1600	33
2000	30
2500	31
3150	29
4000	25
5000	18



* Due to high insulating value of specimen, background levels limit results at these frequencies.

L_n = Normalized Sound Pressure Level, dB