TEST REPORT

for

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Impact Sound Transmission Test

ASTM E 492 – 09 / ASTM E 989 – 06

On

6 Inch Concrete Slab Floor – Ceiling Assembly
Overlaid with 2 layers of Regupol Vibration 300 (17 mm)
and a 4 Inch Concrete Slab

Report Number: NGC 7016084

Assignment Number: G-1296

Test Date: 05/11/2016

Report Approval Date: 05/19/2016

Submitted by: _____
Anthony J. Rivers
Test Technician

Reviewed by: _____
Robert J. Menchetti
Director

Revision Summary:

Date	SUMMARY
Approval Date: 05/19/2016	Original issue date: 05/19/2016 Original NGCTS report #: NGC 7016084

Report Number: NGC 7016084

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 concrete slab floor-ceiling assembly, overlaid with according to client, 2 layers of Regupol Vibration 300 (17 mm) and a 4 inch concrete slab.

The test specimen was a floor-ceiling assembly and was observed to consist of the following:
All weights and dimension are averaged:

- 101.6 mm (4 in.) thick reinforced concrete slab, weighing: 223.30 kg/m^2 (45.74 PSF)
- 2 layers of, according to the client, Regupol Vibration 300 (17 mm). The Regupol Vibration 300 (17 mm) was floating on the 6 inch concrete slab. Measured thickness: 36.07 mm (1.42 in.). Measured weight: 14.45 kg/m^2 (2.96 PSF)
- 152.4 mm (6 in.) thick reinforced concrete slab, weighing: 366.15 kg/m^2 (75.0 PSF)

The overall weight of the test assembly is: 603.90 kg/m^2 (123.70 PSF)

The perimeter of the test frame was sealed with a rubber gasket and a sand filled trough.

The test frame was 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 4 and 5 of the report.

Normalized impact sound pressure level

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

Test Report: NGC7016084 Date: 5/11/2016
Specimen Size [m²]: 17.8

Source room

Rm Temp [°C]: 20
Humidity [%]: 60

Receiving room

Volume [m³]: 128
Rm Temp [°C]: 20
Humidity [%]: 60

Impact Insulation Class IIC [dB]: 65

Sum of Unfavorable Deviations [dB]: 30
Max. Unfavorable Deviation [dB]: 8 at 160 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
80	54	54.3	29.71	-0.3		1.30
100	50	51.5	21.79	-1.5	3	2.61
125	54	56.0	17.31	-2.0	7	1.59
160	55	58.1	15.77	-3.1	8	1.26
200	50	52.5	14.93	-2.5	3	0.80
250	51	53.5	15.48	-2.5	4	0.58
315	49	52.3	14.43	-3.3	2	0.68
400	49	51.5	15.97	-2.5	3	0.38
500	44	46.3	17.29	-2.3		0.21
630	39	41.0	16.91	-2.0		0.42
800	33	35.6	17.14	-2.6		0.47
1000	31	34.3	16.62	-3.3		0.29
1250	34	35.6	17.96	-1.6		0.65
1600	36	37.9	19.57	-1.9		0.79
2000	30	31.2	21.87	-1.2		0.59
2500	26	27.0	24.03	-1.0		0.78
3150	21	22.0	25.93	-1.0		0.84
4000	18	18.9	30.08	-0.9		1.02
5000	13	14.6	34.21	-1.6		1.13

L_n = Normalized Sound Pressure Level, dB
L2 = Receiving Room Level, dB
d = Decay Rate, dB/second
ΔL_n = Uncertainty for 95% Confidence Level

Normalized impact sound pressure level

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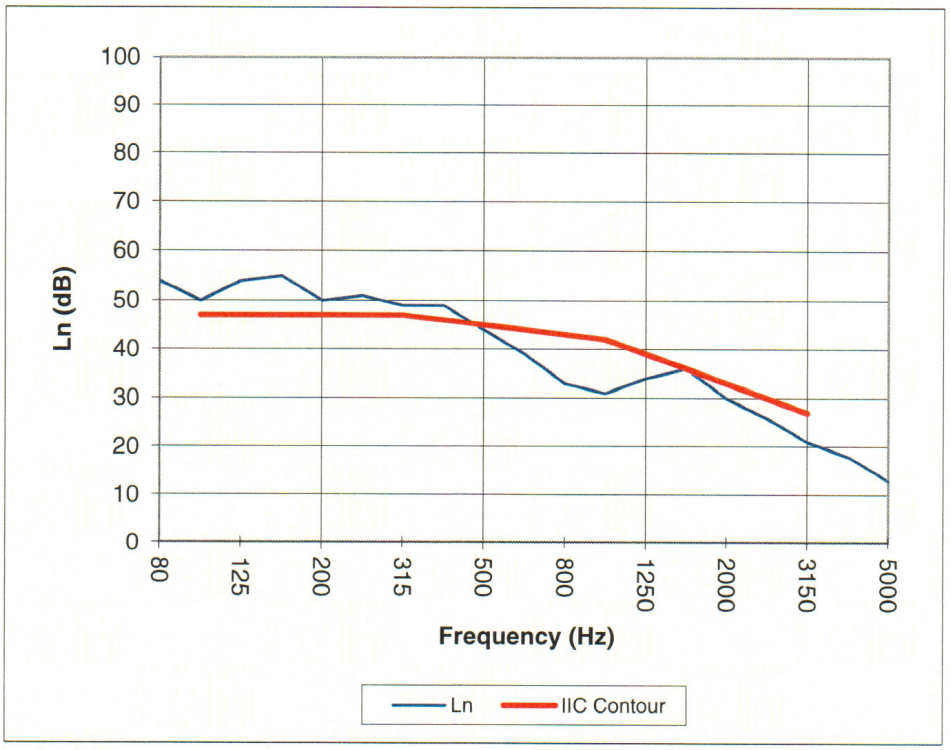
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 65

Frequency [Hz]	L_n [dB]
80	54
100	50
125	54
160	55
200	50
250	51
315	49
400	49
500	44
630	39
800	33
1000	31
1250	34
1600	36
2000	30
2500	26
3150	21
4000	18
5000	13 *



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

L_n = Normalized Sound Pressure Level, dB