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 1 layer of Regupol Vibration 300 (25 mm)
and a 4 Inch Concrete Slab

Report Number: NGC 7016088

Assignment Number: G-1296

Test Date: 05/12/2016

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 7016088

Report Number: NGC 7016088

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, 1 layer of Regupol Vibration 300 (25 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)
- 1 layer of, according to the client, Regupol Vibration 300 (25 mm). The Regupol Vibration 300 (25 mm) was floating on the 6 inch concrete slab. Measured thickness: 22.10 mm (0.87 in.). Measured weight: 8.59kg/m^2 (1.76 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: 598.05 kg/m^2 (122.5 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: NGC7016088 Date: 5/13/2016
Specimen Size [m²]: 17.8

Source room

Rm Temp [°C]: 19
Humidity [%]: 61

Receiving room

Volume [m³]: 128
Rm Temp [°C]: 19
Humidity [%]: 61

Impact Insulation Class IIC [dB]: 61

Sum of Unfavorable Deviations [dB]: 24
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	59	58.9	28.98	0.1		2.37
100	54	55.4	21.30	-1.4	3	2.73
125	58	60.4	17.10	-2.4	7	1.43
160	59	61.8	16.48	-2.8	8	0.81
200	54	57.5	14.36	-3.5	3	0.56
250	53	55.9	15.34	-2.9	2	0.58
315	52	55.3	14.92	-3.3	1	0.31
400	50	52.3	16.33	-2.3		0.56
500	45	47.1	17.02	-2.1		0.35
630	43	45.3	16.98	-2.3		0.38
800	41	43.4	17.33	-2.4		0.36
1000	39	41.7	16.88	-2.7		0.25
1250	37	39.1	18.07	-2.1		0.50
1600	35	37.2	19.67	-2.2		0.53
2000	30	31.7	21.82	-1.7		0.49
2500	25	26.5	24.23	-1.5		0.79
3150	20	22.2	25.99	-2.2		0.95
4000	20	20.6	29.23	-0.6		1.22
5000	18	18.8	33.26	-0.8		1.56

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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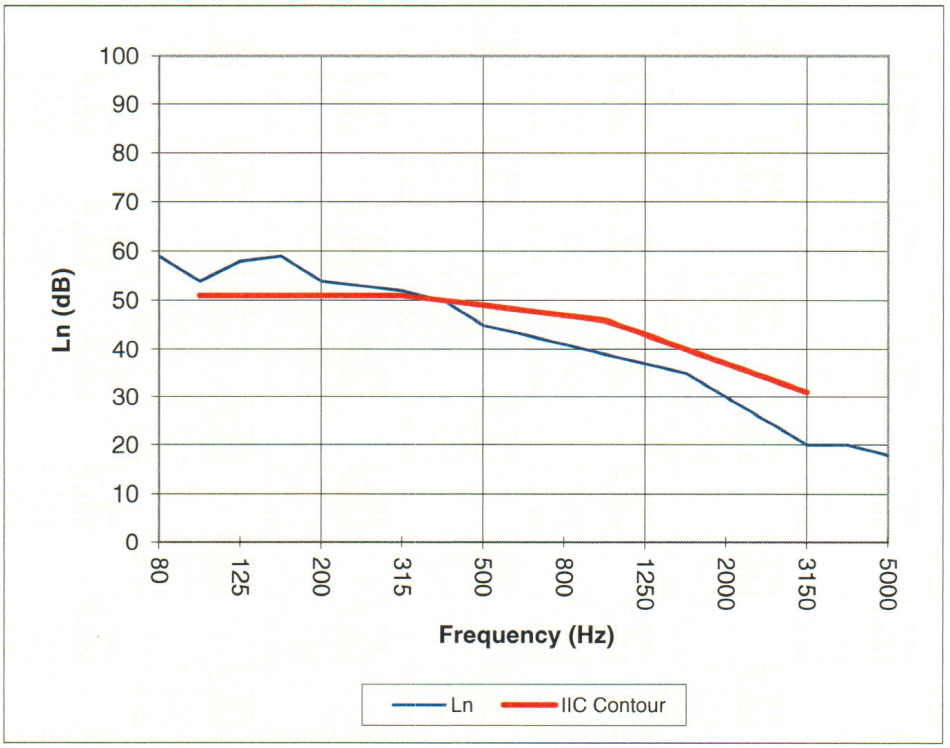
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 61

Frequency [Hz]	L_n [dB]
80	59
100	54
125	58
160	59
200	54
250	53
315	52
400	50
500	45
630	43
800	41
1000	39
1250	37
1600	35
2000	30
2500	25
3150	20
4000	20
5000	18



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

L_n = Normalized Sound Pressure Level, dB