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 3 layers of Regupol Vibration 200 (17 mm)
and a 4 Inch Concrete Slab

Report Number: NGC 7016080

Assignment Number: G-1296

Test Date: 05/09/2016

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 7016080

Report Number: NGC 7016080

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, 3 layers of Regupol Vibration 200 (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)
- 3 layers of, according to the client, Regupol Vibration 200 (17 mm). The Regupol Vibration 200 (17 mm) was floating on the 6 inch concrete slab. Measured thickness: 54.86 mm (2.16 in.). Measured weight: 15.52 kg/m^2 (3.18 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: 604.98 kg/m^2 (123.92 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: NGC7016080 Date: 5/9/2016
Specimen Size [m²]: 17.8

Source room

Rm Temp [°C]: 19
Humidity [%]: 63

Receiving room

Volume [m³]: 128
Rm Temp [°C]: 19
Humidity [%]: 63

Impact Insulation Class IIC [dB]: 70

Sum of Unfavorable Deviations [dB]: 29
Max. Unfavorable Deviation [dB]: 7 at 160 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
80	54	54.3	28.63	-0.3		0.83
100	46	47.4	20.12	-1.4	4	1.93
125	48	50.6	16.95	-2.6	6	1.35
160	49	51.1	16.01	-2.1	7	1.01
200	47	50.5	14.44	-3.5	5	0.46
250	45	47.4	15.16	-2.4	3	1.08
315	40	43.3	14.67	-3.3		0.63
400	39	41.4	15.91	-2.4		0.48
500	37	39.4	16.85	-2.4		0.36
630	36	38.7	16.99	-2.7		0.48
800	35	37.6	16.92	-2.6		0.81
1000	31	33.6	16.96	-2.6		0.67
1250	30	32.1	18.21	-2.1		0.55
1600	34	36.1	19.81	-2.1	3	0.57
2000	28	29.6	22.09	-1.6		0.74
2500	26	26.4	24.36	-0.4	1	0.66
3150	22	22.8	26.01	-0.8		0.77
4000	13	15.3	29.68	-2.3		1.02
5000	11	12.4	34.12	-1.4		1.05

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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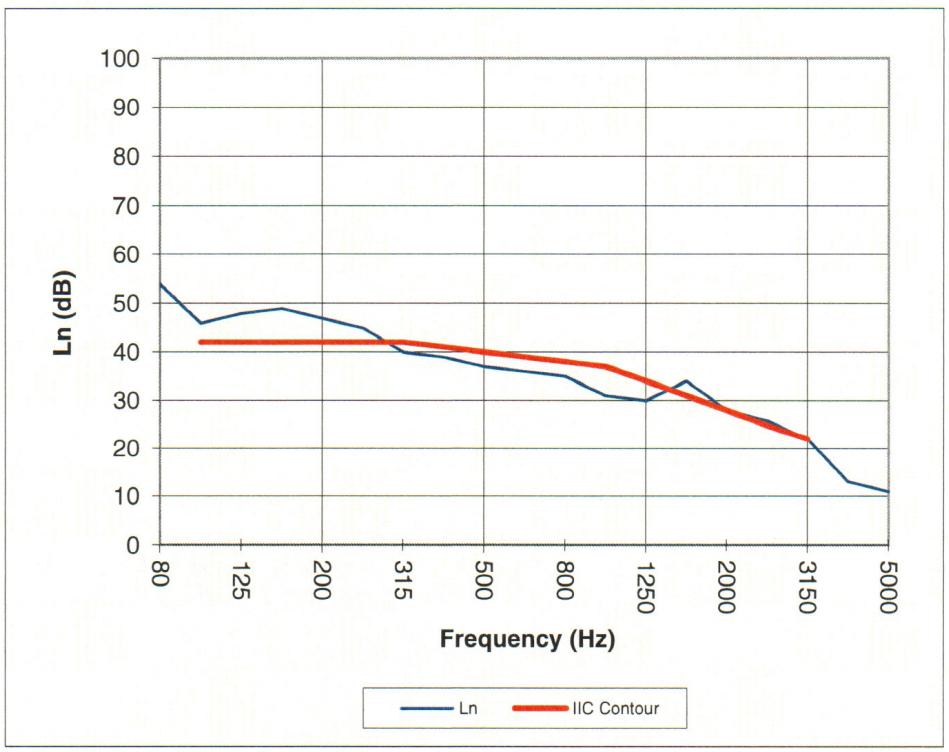
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 70

Frequency [Hz]	L_n [dB]	
80	54	
100	46	
125	48	
160	49	
200	47	
250	45	
315	40	
400	39	
500	37	
630	36	
800	35	
1000	31	
1250	30	
1600	34	
2000	28	
2500	26	
3150	22	
4000	13	*
5000	11	*

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



L_n = Normalized Sound Pressure Level, dB