सी एस आई आर – राष्ट्रीय भौतिक प्रयोगशाला
CSIR–NATIONAL PHYSICAL LABORATORY
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)
(Council of Scientific and Industrial Research)
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परीक्षण रिपोर्ट
TEST REPORT

Sound Transmission Loss

दिनांक/Date	परीक्षण रिपोर्ट संख्या/Test Report No.	पृष्ठ / Page	पृष्ठों की संख्या / No. of Pages
30-05-2016	16050143/D5.07/A/T-009	1	2

1. Tested for : M/s. Ecotone Systems Pvt. Ltd.,
A-612/613, Shyam Colony,
Budh Vihar, Phase-II,
New Delhi – 110 086 (India)
Customer Ref. No.: ESPL/SS/5011
dated 11/05/2016

2. Description and Identification of Items : 100 mm thick Steel Acoustic Panel consisting of 16 Swg CRCA sheet on Front face and other side face laminated with GI perforated sheet, Acoustic insulation material (sound dampening & absorbing) filled in between.
(Sample size - 93 cm x 63 cm)

3. Environmental Conditions : Room Temperature: 28.5 ^{0}C
Relative Humidity: 50.6 %RH

4. Standards used and Associated Uncertainty : Working Standard Microphone, ± 0.2 dB

5. Traceability of Standard Used : The standards used for testing are traceable to National Standards

6. Principle/Methodology of Testing and Test Procedure No. : IS:9901 (Part III)-1981, DIN:52210 Part VI-1989
IS0: 140 (Part III) – 1995,
"Measurement of Sound Insulation in Building and of Building Elements"
Part III: Laboratory Measurements of Airborne Sound Insulation in Building and of Building Elements
Sub-Div # 5.07/A/Doc. 3/ TP # 15

7. Results:

As requested by the party, the acoustical material was tested for its airborne sound insulation by using two reverberation chambers under existing environmental conditions. The sample was fixed in the common opening between the two chambers. The volume of the source room was 257 m^3 and that of the receiver room was 271 m^3. Adequate diffusion excited in both the chambers.

परीक्षणकर्ता: Tested by: (Dr. Kirti Soni)
जाँचकर्ता: Cheked by: (Dr. Mahavir Singh)
प्रभारी वैज्ञानिक: Scientist-in-charge: (Dr. Mahavir Singh)
जारीकर्ता: Issued by: Dr. V. K. Gumber

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Using filtered noise in 1/3-octave band, the airborne sound insulation index was evaluated by measuring the average sound pressure levels generated in the source room and the receiver room and by measuring the equivalent absorption in the receiver room. The results are given below:

1/3-Octave Band Center Frequency (Hz)	Airborne Sound Insulation Index (dB)
100	38
125	36
160	34
200	34
250	37
315	39
400	43
500	48
630	49
800	53
1000	53
1250	55
1600	57
2000	60
2500	59
3150	60
4000	61

Using the standard reference curve, the sound transmission class (STC) was found to be 50.

The evaluated uncertainty in measurement is ± 1.0 dB which is at a coverage factor k = 2 and which corresponds to a coverage probability of approximately 95% for normal distribution.

8. Date of Testing : 23-05-2016

9. Remarks : Nil

परीक्षणकर्ता: Tested by: (Dr. Kirti Soni)
जाँचकर्ता: Cheked by: (Dr. Mahavir Singh)
प्रभारी वैज्ञानिक: Scientist-in-charge: (Dr. Mahavir Singh)
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