

CONFIDENTIAL**TEST REPORT ON
DETERMINATION OF SOUND TRANSMISSION LOSS OF
INSONORIZZANTE ANTIVIBRAZIONE SOUND DAMPING COMPOUND**

No. NVH/2573/2013-14/27 (V-13)

25th July 2013

- 1.0 **CUSTOMER NAME** : M/s IMPA S.p.A.,
via Crevada, 9/E - 31020
S. Pietro di Feletto (TV), Italy
- 2.0 **LETTER REF.** : E-mail dated 12th July 2013
- 3.0 **TEST COMPONENT** : Please refer details as given below
- Product Name : Insonorizzante antivibrazione sound damping
compound applied on metal plate – total 3.4 mm
thick (Product code – PR000325)
- Thickness of Insonorizzante : 2.4 mm
Thickness of metal plate : 1 mm
Density of Insonorizzante : 1.28 kg/l
Density of metal plate : 7.8 kg/l
- 4.0 **TEST REQUIREMENTS** :
- Measurement of air-borne sound transmission loss of above mentioned insonorizzante antivibrazione sound damping compound of 3.4 mm thickness as per ISO 10140-2 / ASTM E-90 and determination of sound transmission class (STC) as per ASTM E- 413.
- 5.0 **TEST PROCEDURE** :
- The above mentioned insonorizzante antivibrazione sound damping compound of 3.4 mm thickness mounted between two reverberation chambers. All the edges were sealed with glass putty and acoustic sealant. Please refer figure 1 for test set up. The test was carried out in a reverberation chambers as per ISO 10140-2 / ASTM E-90 standard at temperature 27°C and humidity 54%.

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6.0 DATE OF EVALUATION :

Test was carried out on insonorizzante antivibrazione sound damping compound of 3.4 mm thickness on 24th July 2013 at NVH laboratory, ARAI-Pune.

7.0 INSTRUMENTATION :

- 7.1 Multi-channel Data Acquisition System 3560D, B & K Denmark Make
- 7.2 Power Amplifier, Type 2716, B&K Denmark Make
- 7.3 ½" Random Incidence Microphone, Model 378B20, PCB Make
- 7.4 Reverberation Chambers meeting the requirement of ISO 140-1
- 7.5 Omni directionnel source - Omni power 4296, B&K Denmark Make

8.0 TEST RESULTS :

- 8.1 Table-I shows the values of air-borne sound transmission loss of insonorizzante antivibrazione sound damping compound in the one-third octave frequency bands of 125 Hz to 8000 Hz and STC (sound transmission class).
- 8.2 Figure 2 shows the plot of values of air-borne sound transmission loss of insonorizzante antivibrazione sound damping compound in one-third octave frequency bands of 125 Hz to 8000 Hz.

9.0 CONCLUSIONS :

The sound transmission class STC of above mentioned insonorizzante antivibrazione sound damping compound along with metal plate is 35 dB.

Report Prepared By:

Reviewed By:

Department Head:



M. P. Joshi
Dy Manager



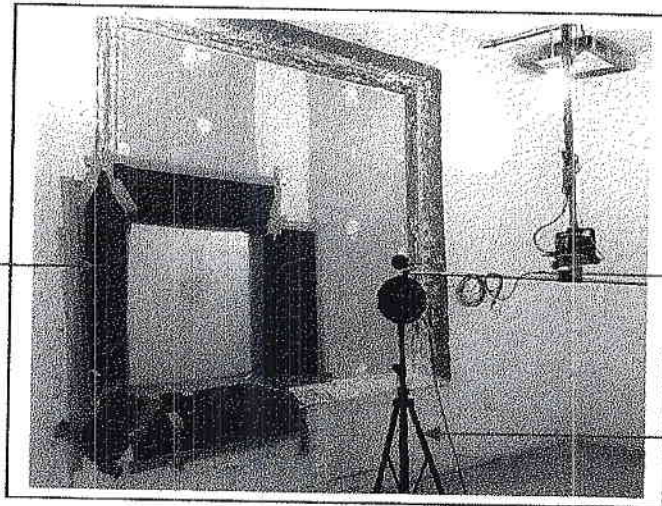
S. K. Jain
Manager



N. V. Karanth
Deputy Director & HoD

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Insonorizzante
antivibrazione sound
damping compound

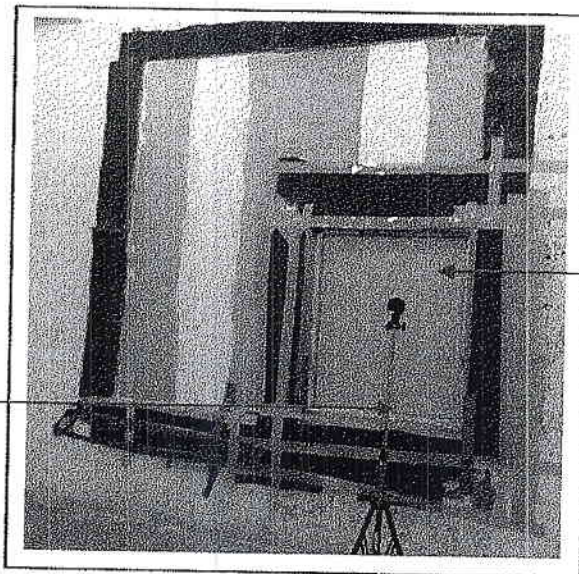


Rotating boom
along with
microphone

Omnidirectional
source

Source Room

Microphone



Receiver Room

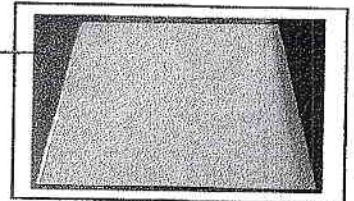


Figure 1: The test set up for mounting the Insonorizzante antivibrazione sound damping compound between two reverberation chambers

Table I: Values of air-borne sound transmission loss of insonorizzante antivibrazione sound damping compound along with metal plate at one third octave frequencies

One Third Octave Frequency, Hz	Sound Transmission Loss, dB
125	26.0
160	25.8
200	26.0
250	25.9
315	26.5
400	29.3
500	30.8
630	31.8
800	33.3
1000	35.3
1250	37.0
1600	38.8
2000	40.5
2500	42.2
3150	44.2
4000	46.1
5000	47.3
6300	48.0
8000	48.5
STC	35

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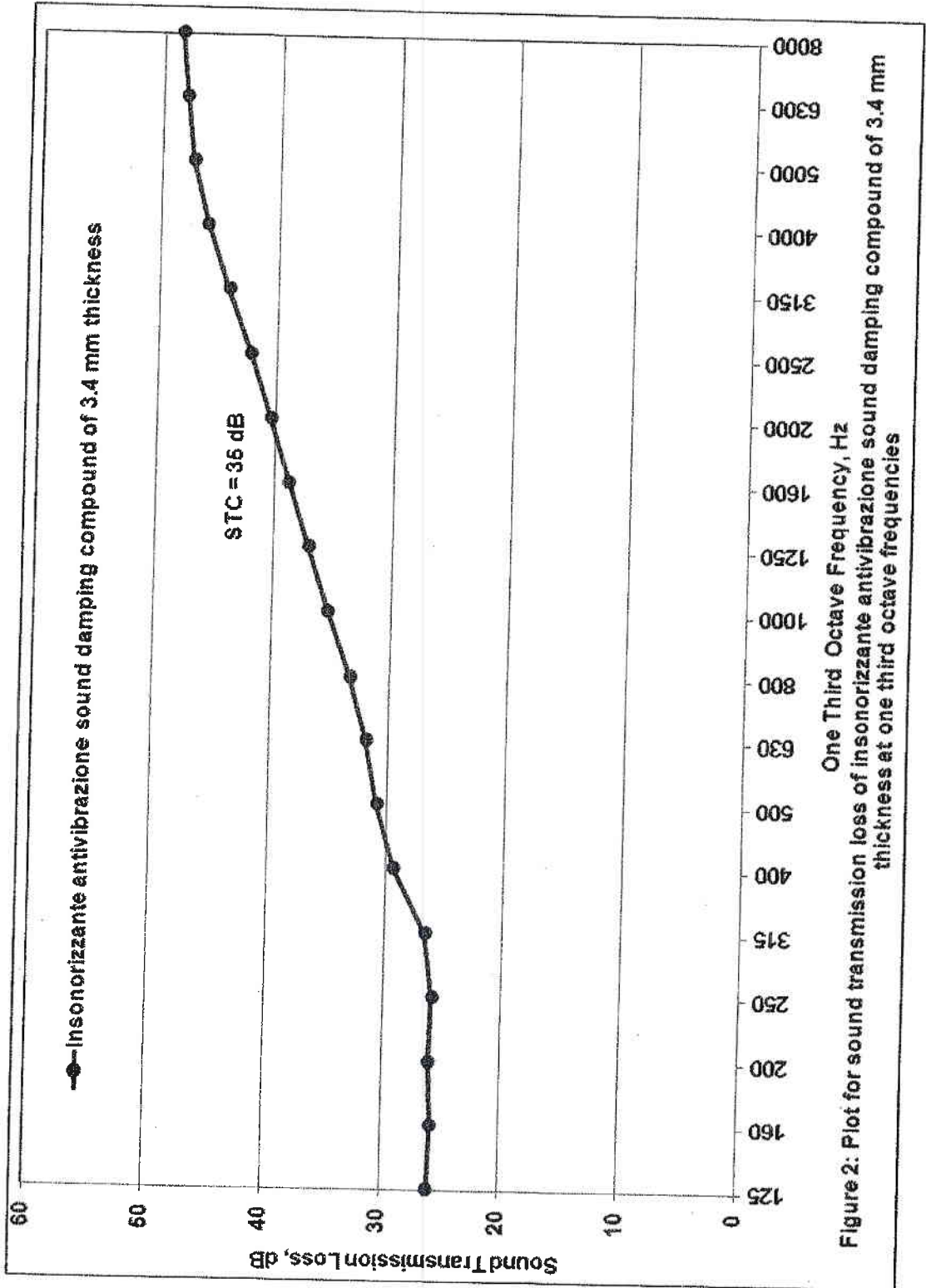


Figure 2: Plot for sound transmission loss of insonorizzante antivibratore sound damping compound of 3.4 mm thickness at one third octave frequencies

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Customer / Manufacturer Name	M/s IMPA S.p.A.
Test Sample Mounted By	ARAI
Product Identification	Insonorizzante antivibrazione sound damping Compound along with metal plate
Date of Test	24-July-2013
Tested At	NVH-Lab, ARAI, Pune
Test Facility Details	Reverberation Chambers: Source Room (80 m ³) and Receiver Room (110 m ³)
Area of sample	1 m x 1.18 m
Temperature	27°C
Humidity	54%

One Third Octave Frequency Band, Hz	Sound Transmission Loss, dB
125	26.0
160	25.8
200	26.0
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315	26.5
400	29.3
500	30.8
630	31.8
800	33.3
1000	35.3
1250	37.0
1600	38.8
2000	40.5
2500	42.2
3150	44.2
4000	46.1
5000	47.3
6300	48.0
8000	48.5
STC	35

