

INSTITUTE OF ACOUSTICS

TONGJI UNIVERSITY

LABORATORY REPORT

TEST ITEM: Ghost Acoustics 'Block' (2'x2') Trap (Acoustic Absorption capability)

TEST CONTENT: test the sound absorption coefficient in reverberation chamber

COMMISSION UNIT: Ghost Acoustics.

TESTED BY: Mo fangshuo

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SEAL:



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DATE: 27 th, April. 2006

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Test report of sound absorption coefficient in reverberation chamber

- 1_ Testing according standards.
ISO 354:2003(E), Acoustic-Measurement of sound absorption in a reverberation chamber
- 2_ Reverberation chamber:
 - a) Volume: 268 m³
 - b) Floor area: 54 m²
- 3_ Measuring Apparatus
Audio Signal Testing and Analyzing System(Including EgoSystem U2A professional audio card), Microphone of type ACO4012 and Match Pre- Amplifier, USA ENG Power Amplifier, Dodecahedron Non-Direction Loudspeaker.
- 4_ Area of Object: 0.616m_0.616m_24=9.11 m²
- 5_ Frequency Range
1/3 frequency interval Center Frequency (Hz)
100, 125, 160, 200, 250, 315, 400, 500, 630, 800,
1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000
- 6_ Formulation:

$$A = \frac{55.3V}{CN} \left(\frac{1}{T_m} - \frac{1}{T_0} \right)$$

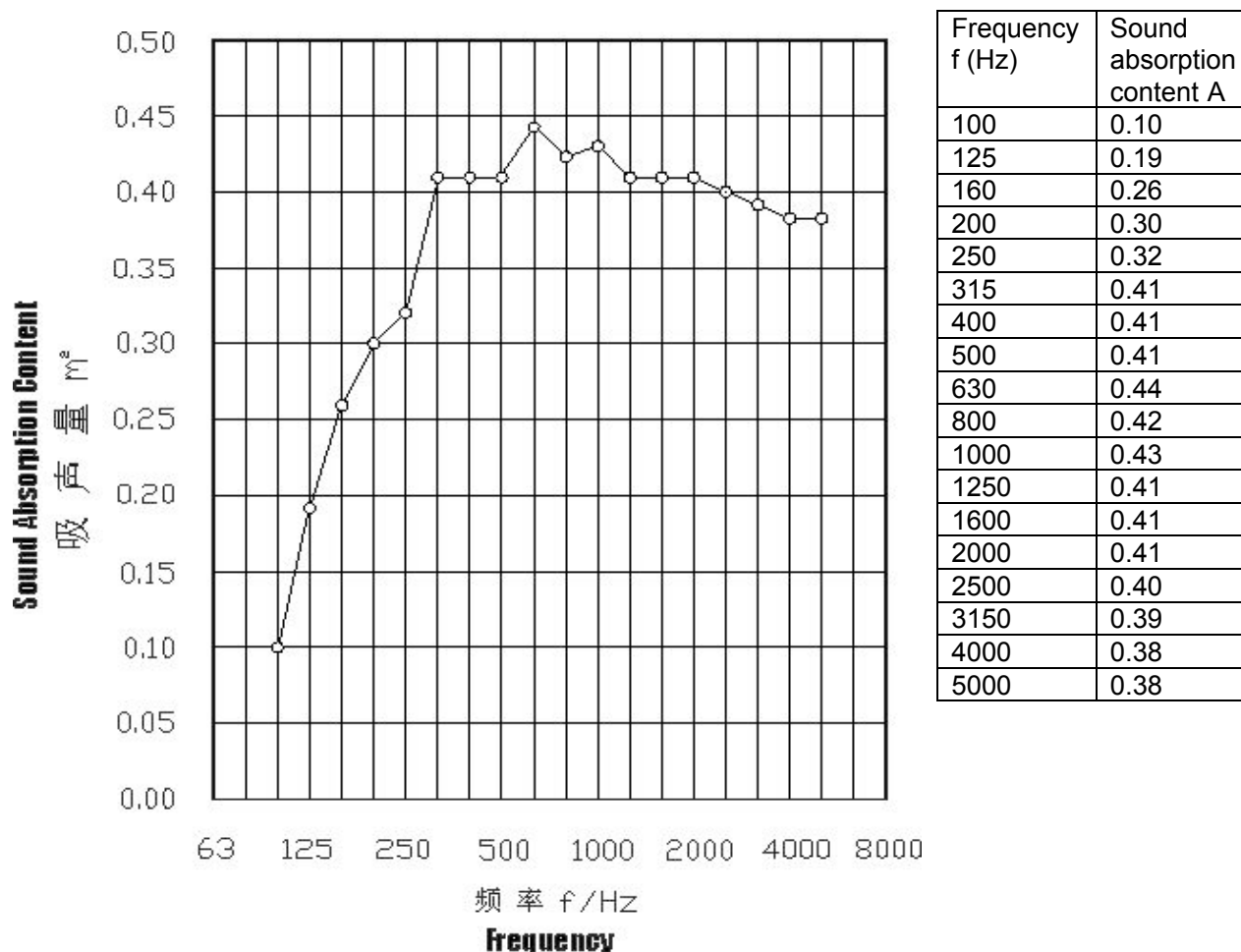
- A----- sound absorption content of one block
V----- volume of Chamber m³
N----- Quantity of the test sample
T_m----- reverberation time (the object is not put in yet), seconds.
T₀----- reverberation time (the object is put in), seconds.
C----- sound velocity in the air. Metres per Second
C= 331+ 0.6 t (t – atmosphere temperature)



Test report of sound absorption coefficient in reverberation chamber

| | | | | | |
|---|---|-------------|-----|----------|-----|
| Company | Ghost Acoustics | | | | |
| Object | 'Block' Trap | | | | |
| Test Date | 2006-4-22 | temperature | 18_ | humidity | 70% |
| The specification And the installation of test object | Size of one block : 615 mm _615 mm_85 mm Quantity: 24 Condition for installing: tiled on floor in reverberation chamber | | | | |

Note: Test report is valid only for the test sample.



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