



**KOREA INSTITUTE OF  
CONSTRUCTION TECHNOLOGY**

2311, Daehwa-dong, Ilsanseo-gu,  
Koyang-shi, Kyunggi-do 411-712, Korea  
Tel:82-31-9100-356 Fax:82-31-9100-361

Certificate No.:

0601-0073

Page( 1 )/( 4 )Pages



## Test Certificate

### 1. Client

- Name : RPG KOREA DIFFUSOR SYSTEMS CO., LTD
- Address : Hyundai Venture Ville #1919 713 Suseo-dong, Kangnam-gu, Seoul, Korea, 135-220
- Date of Receipt : 4th, Jan., 2006. (Number of Receipt : 0010)

### 2. Use of Report : Performance test of sound absorption

### 3. Test Sample : AMBIENT ACOUSTIC SYSTEM-Board Finish

(Gypsum board 12.5 mm + Glass wool 125 kg/m<sup>3</sup>, 30 mm + Finish coat 2 mm, Detail: see 2page)

### 4. Date of Test : 16th, Jan., 2006.

### 5. Test method used :

KS F 2805:2004(Measurement of sound absorption in a reverberation room)

### 6. Testing Environment

- Temperature : 17.8 °C, ◦ Relative Humidity : 41.3 % R.H. ◦ Location : Acoustic laboratory

### 7. Test Results

Freq. [Hz]	Sound absorption coefficient	Freq. [Hz]	Sound absorption coefficient
100	0.06	800	0.66
125	0.13	1000	0.63
160	0.19	1250	0.56
200	0.49	1600	0.50
250	0.76	2000	0.47
315	0.81	2500	0.40
400	0.77	3150	0.31
500	0.75	4000	0.24
630	0.73	5000	0.12

Tested by : Kyoung-Woo Kim

Technical Manager : Kwan-Seop Yang

The above test certificate is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

24th Jan. 2006

The President of Korea Institute of Construction Technology

Accredited by KOLAS, Republic of Korea



■Annex : Test condition

1. Test method :

KS F 2805:2004(Measurement of sound absorption in a reverberation room)

2. Test sample

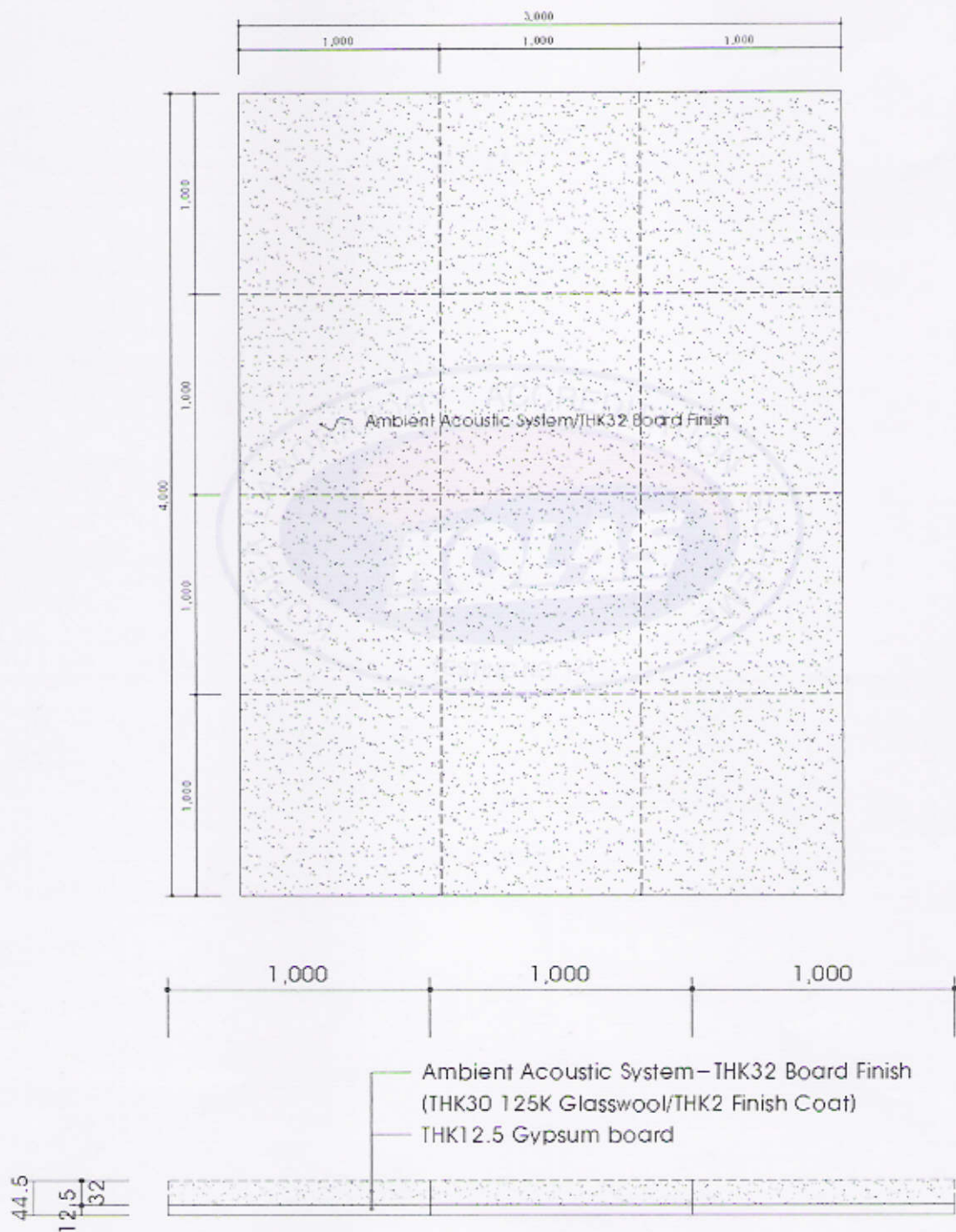


Fig. 1 Drawing of sample

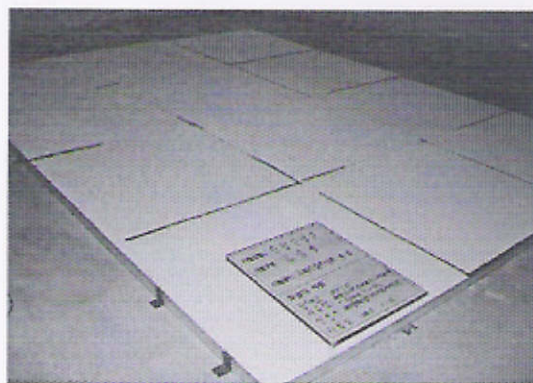
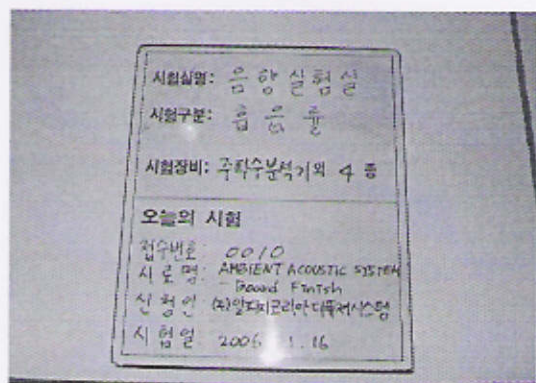


Fig.2 View of test sample

### 1) Test sample installation

The test sample is placed directly on the floor of the reverberation room (Test sample Area : 12.1 m<sup>2</sup>). The perimeter edge of the test sample is covered with 12 mm thick ACRYLIC, an acoustically reflective material.

### 3. Measurement conditions

1) Volume of reverberation room : 260 m<sup>3</sup>

2) Environmental conditions during the measurement

•Without test sample in reverberation room :

-Temperature : 17.8 °C, -Relative humidity : 41.3 % R.H.

•With test sample in reverberation room :

-Temperature : 17.8 °C, -Relative humidity : 41.3 % R.H.

3) Test equipment

•Frequency analyzer : Symphonie, 01dB    •Microphone : G.R.A.S. (Type 40AE)

•Microphone Preamplifier : G.R.A.S. (Type 26CA)

•Omnidirectional sound source : DO12, AVM    •Amplifier : M700, INTER M

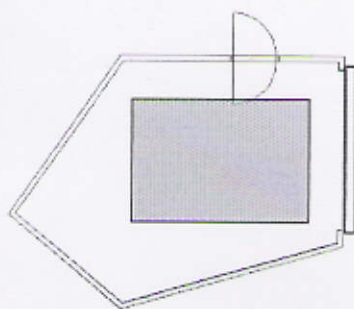


Fig.3 The plan of the reverberation room

4. Graph of test results

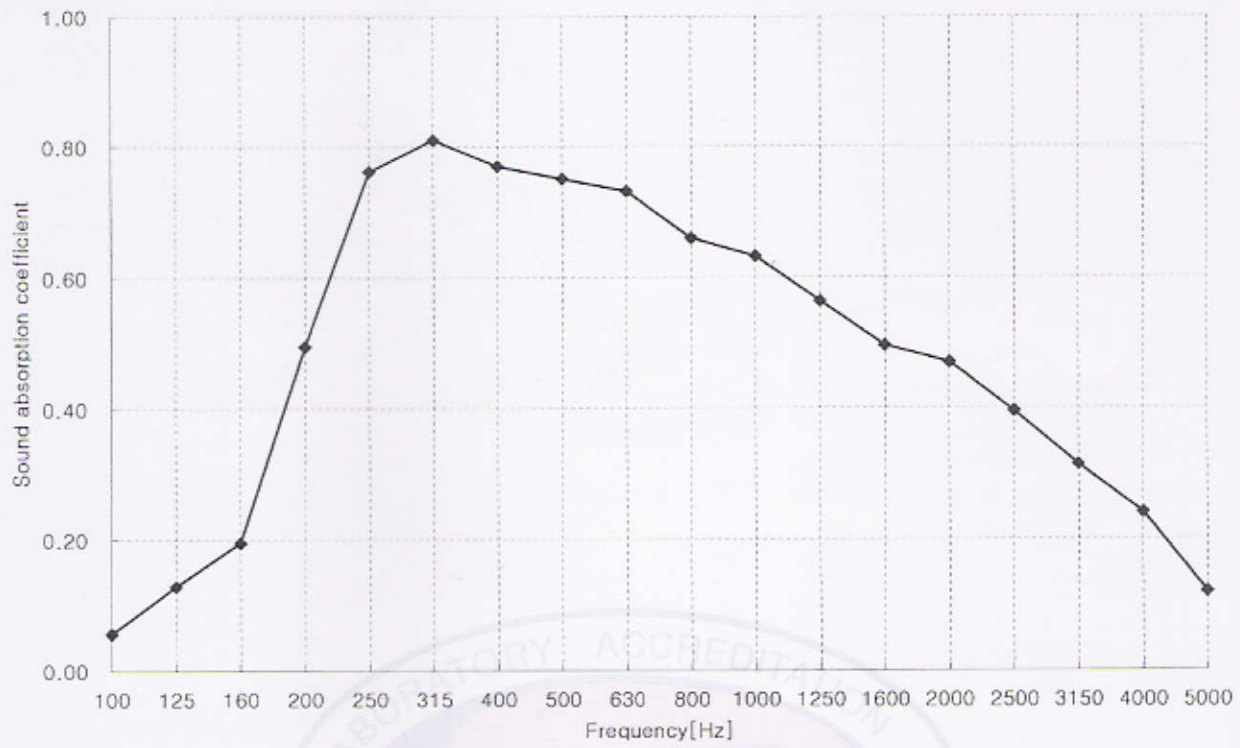


Fig.4 Sound Absorption Coefficient