



Professional Environmental Engineering and Remote Monitoring Including :-

Acoustical - Noise Control & Sound Proofing

Atmospherical - Air Pollution Control and Filtering

Hydrological - Water Quality Control and Cleaning

## **REPORT IL.08.1068**

July 1<sup>st</sup> 2008

**SOUND TRANSMISSION LOSS  
RHINO CALCIUM SULPHATE PANEL**

### **CLIENT**

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### **CONSULTANT**

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## 1 Introduction

1.1. Geonoise Thailand Co. Ltd. (Geonoise) were engaged by Asia Net Building Services Bangkok (ANBS), to undertake measurements on a specific floor panel to establish its Airborne Sound Insulation.

1.2. The sample supplied for testing can be described as follows:

- Rhino Calcium Sulphate Panel
- Both sides faced with galvanized steel
- Total thickness of panel 30 mm
- Weight of panel approx. 60 kg/m<sup>2</sup>

1.3. The Transmission Loss or Sound Reduction Index relates the incident Sound Power to the transmitted Sound Power through the sample.

1.4. The Transmission Loss measurements were performed in a impedance tube located in our laboratory in Udon Thani Thailand. The tests were carried out on 25th June 2008.

1.5. The Transmission Loss test was carried out according to ISO 10534-2 (1998) "Determination of sound absorption coefficient and impedance in impedance tubes -- Part 2: Transfer-function method".

1.6. The BS EN ISO 717-1: 1997, "Acoustics - Rating of sound insulation in buildings and of building elements" was also used for the interpretation and calculation of the results.

### 3 RESULTS

3.1 The results are presented as Table 1.

3.2 The Transmission Loss is determined by the sound levels on both sides of the sample and analyzing the data in accordance with the standard ISO 10534-2 (1998)

3.3 The calculated weighted Noise reduction as described in ISO 717-1 is **41 dB**.

**Table 1:** Sound Transmission Loss in dB

Hz	Diff/dB
100	18.2
125	20.1
160	23.7
200	24.6
250	31.0
315	34.3
400	33.5
500	36.1
630	37.6
800	35.8
1000	36.8
1250	37.2
1600	38.9
2000	39.0
2500	40.9
3150	42.7
4000	46.3

Figure 1: Sound Transmission Loss in dB

