

아스팔트 표면의 흡음률 측정방법

The Absorption Measurement Method of Asphalt Surface Using Impedance Tube

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1.

ISO 10844 , ISO 13472 , ISO 10844 315Hz 1600Hz 1/3 . ISO ISO 13472 가 가 2. 2.1

Reflection Factor :

$$R = \frac{H_1 - H_i}{H_r - H_1} e^{j2k(l+s)} \quad [-], \text{ where}$$

H1 : Frequency Response Function (FRF)
 Hi: FRF associated with the incident component
 Hr:FRF associated with the reflected component
 k:Wave number
 l:Microphone distance to sample [mm]
 s : Spacing between the microphones [mm]

Absorption Coefficient :

$$\alpha = 1 - |R|^2 \quad [-]$$

Normalized Impedance Ratio :

$$\frac{z}{\rho c} = \frac{1 + R}{1 - R} \quad []$$

ρc :Impedance of the Air []

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2.2 1/3 250Hz 1600Hz 100 , 620

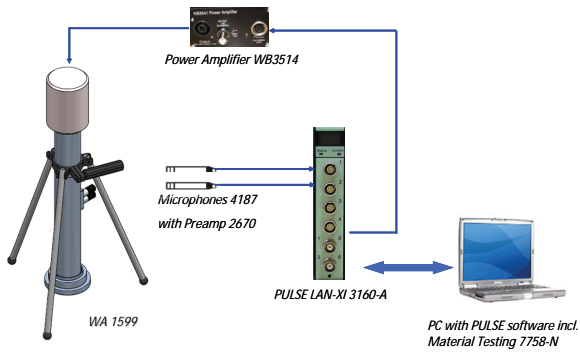


Fig. 1 System Configuration of Measurement

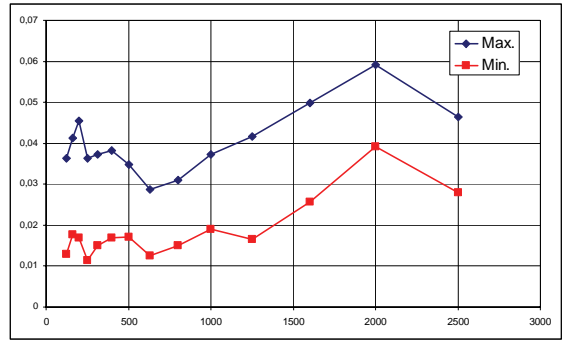


Fig. 3 Tolerance Curve

가

2

Fig. 2

, Fig. 3

가

(Fig. 1)

3.

ISO 10844

ISO

ISO 13472

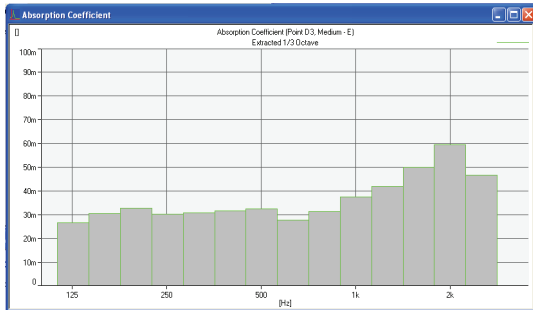


Fig. 2 Acoustic Absorption