

# Identification result of material property and analysis model: Hardness (65), Damping (Large)

Marc

Prony series

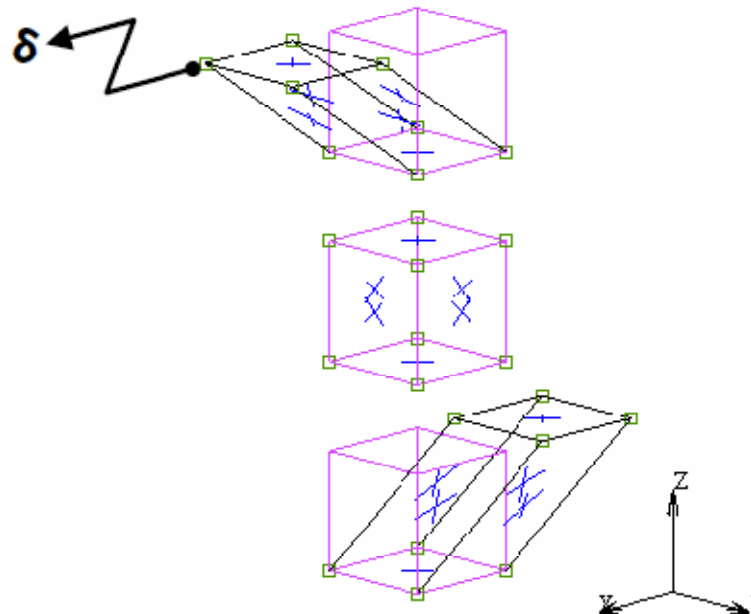
$$G(t) = G^{\infty} + \sum_{n=1}^N G_n \exp\left(-t/\lambda_n\right)$$

Parameter

Young's Modules $E$ (MPa)	2. 0768e+01
Poisson's ratio $\nu$	4. 9999e-08

$G_n$ (MPa)		$\lambda_n$	
$G_1$	4. 8250e+00	$\lambda_1$	1. 0000e-03
$G_2$	1. 8317e-08	$\lambda_2$	1. 0000e-02
$G_3$	4. 7917e-01	$\lambda_3$	1. 0000e-01
$G_4$	4. 2211e-01	$\lambda_4$	1. 0000e+00

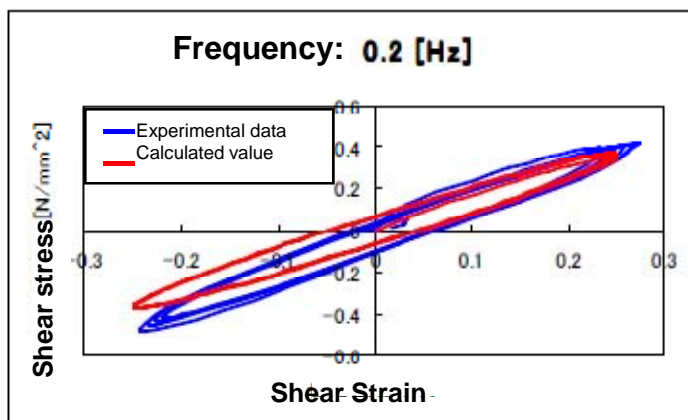
Amplitude:  **$A = 1$  mm ( $A^* = 0.25$ )**  
 Frequency:  **$f = 0.2 \sim 15$  Hz**  
 Displacement:  **$\delta = A^* \sin 2\pi f$**



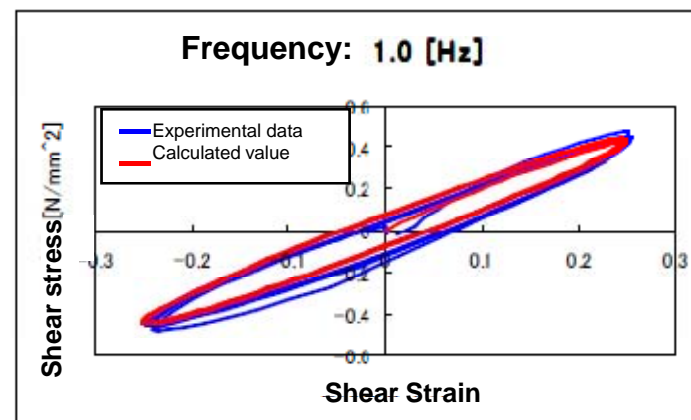
Analysis model

# Analytical result of shear test (Constant amplitude): Hardness (65), Damping (Large)

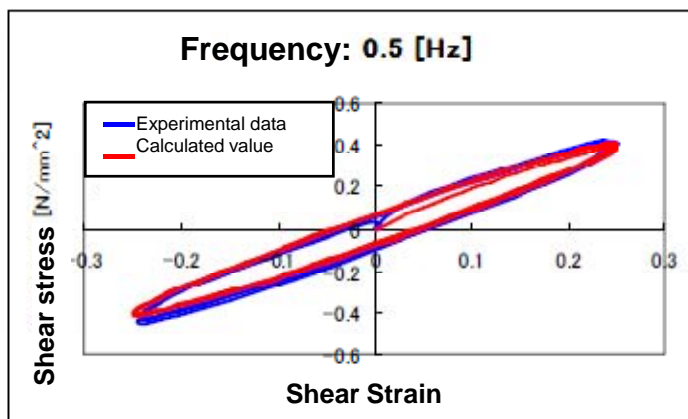
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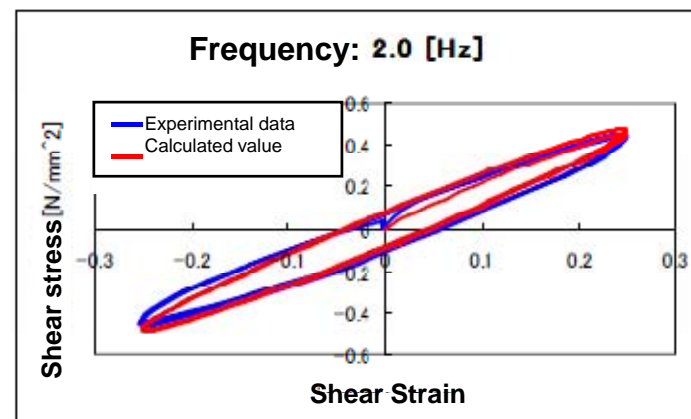
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Input File: nll\_t23\_sin\_a1\_f1\_Marc.dat



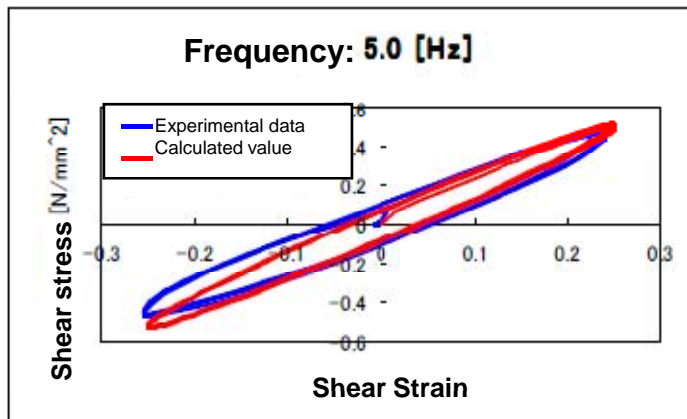
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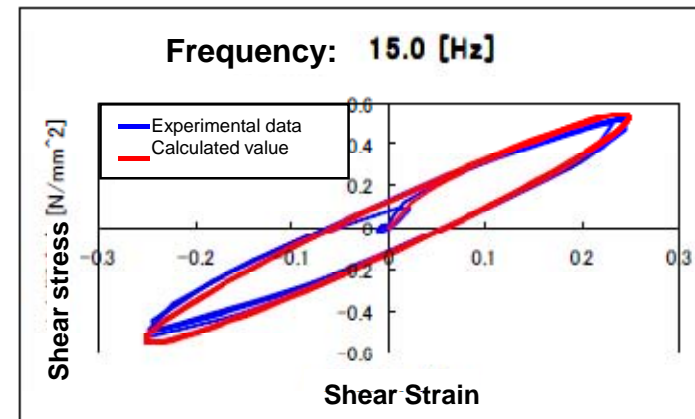
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# Analytical result of shear test (Constant amplitude): Hardness (65), Damping (Large)

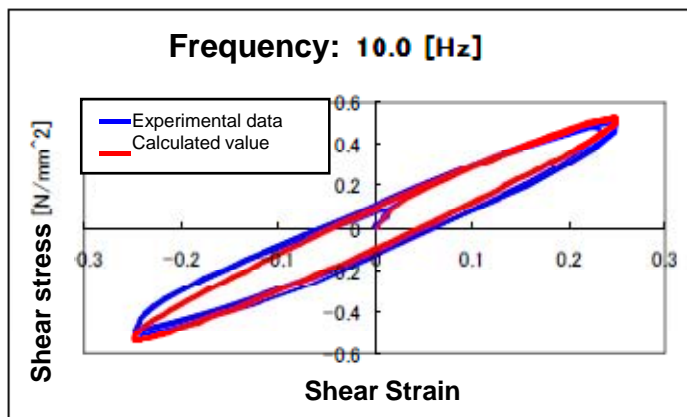
Marc



Input File: nll\_t23\_sin\_a1\_f5\_Marc.dat



Input File: nll\_t23\_sin\_a1\_f15\_Marc.dat



Input File: nll\_t23\_sin\_a1\_f10\_Marc.dat