

# Identification of material property 1hs50 Hardness (50), Damping (Small)

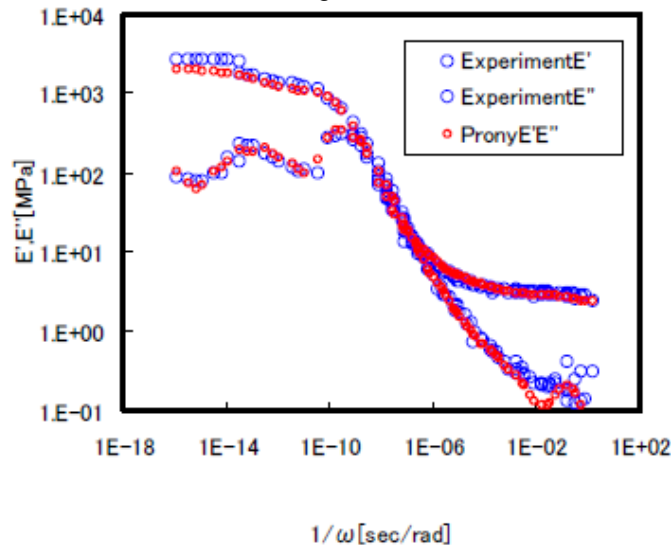
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	G[Mpa]	$\beta$ [1/sec]
$\infty$	8.23E-01	
1	6.41E+01	9.43E+15
2	4.58E+01	3.14E+14
3	9.53E+01	3.14E+13
4	1.08E+02	3.14E+12
5	5.61E+01	3.14E+11
6	1.23E-09	3.14E+10
7	2.07E+02	6.28E+09
8	1.23E+02	6.28E+08
9	1.77E+01	6.28E+07
10	3.31E+00	6.28E+06
11	1.36E+00	6.28E+05
12	4.04E-01	6.28E+04
13	2.54E-01	6.28E+03
14	1.15E-01	6.28E+02
15	2.25E-02	6.28E+01
16	1.36E-01	6.28E+00
	K[Mpa]	
$\infty$	3.61E+05	

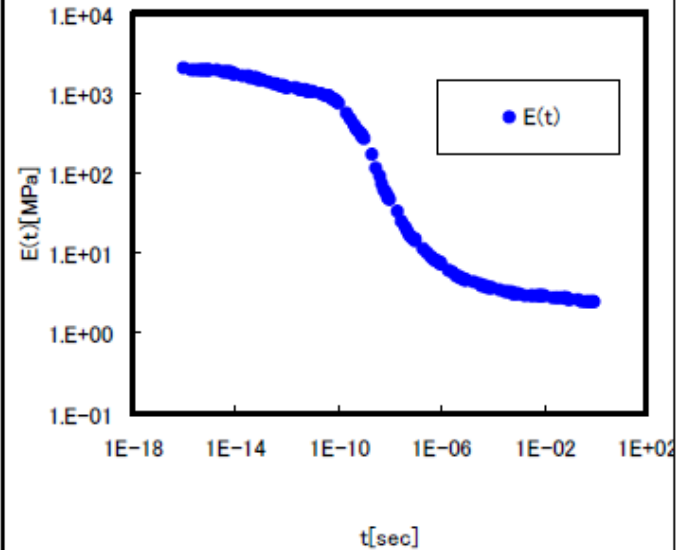
Prony series

$$G(t) = G_{\infty} + \sum_{i=1}^N G_i e^{-\beta_i t}, \quad K(t) = K_{\infty}$$

Actual measurement along with fitted curve

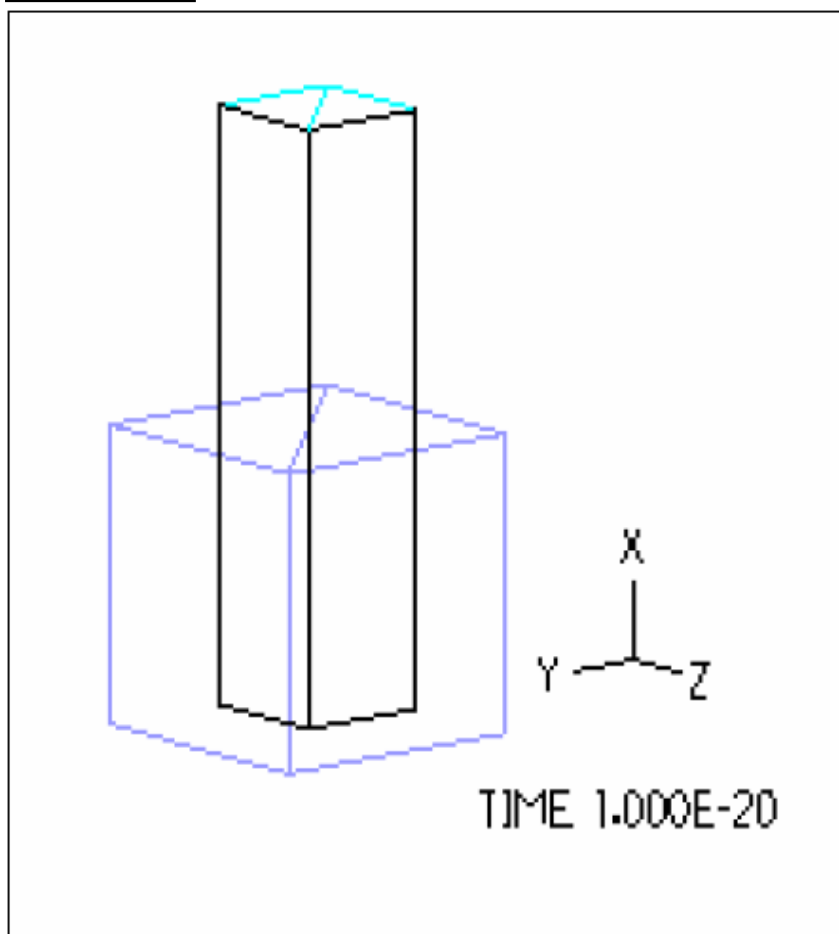


Stress-relaxation curve with identified parameters

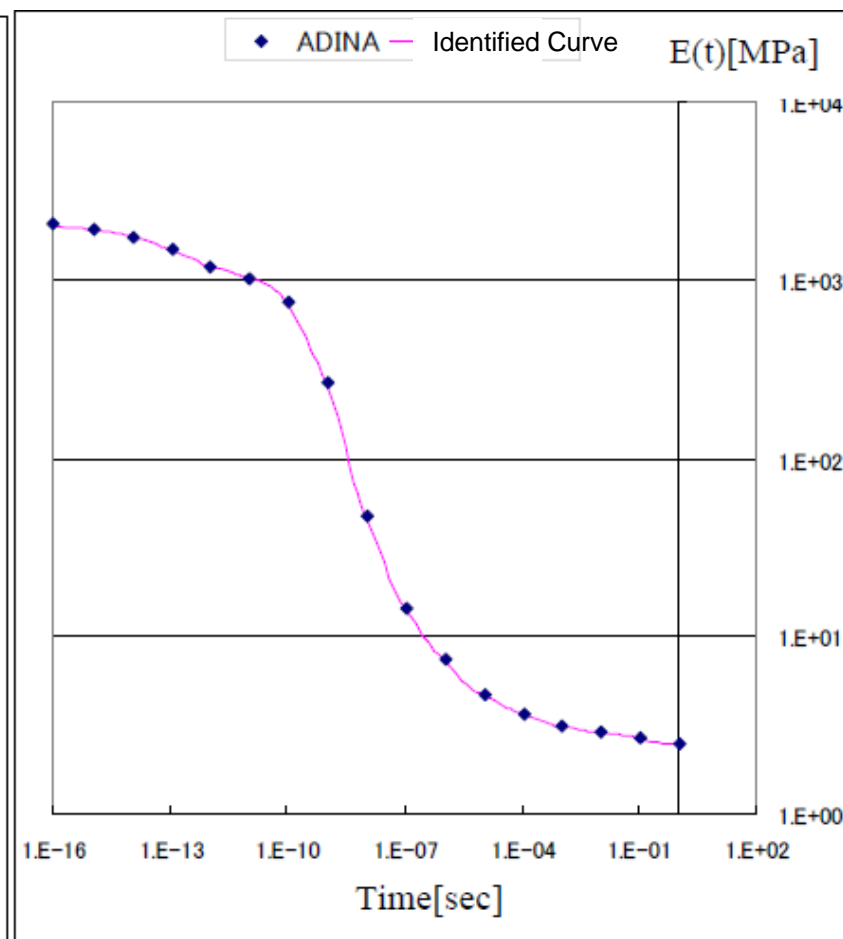


# Stress-relaxation analysis (relax\_1hs50.in) Hardness (50), Damping (Small)

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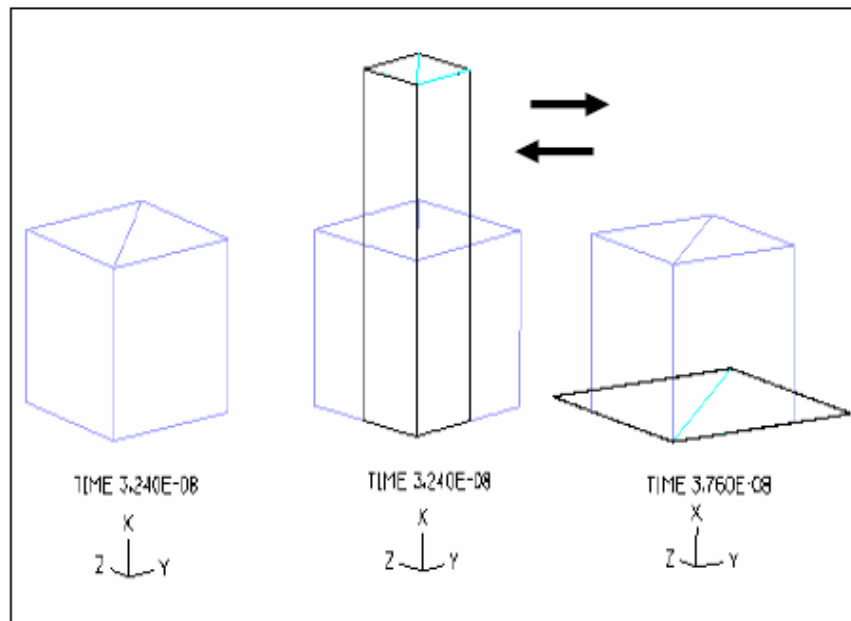
Analysis model



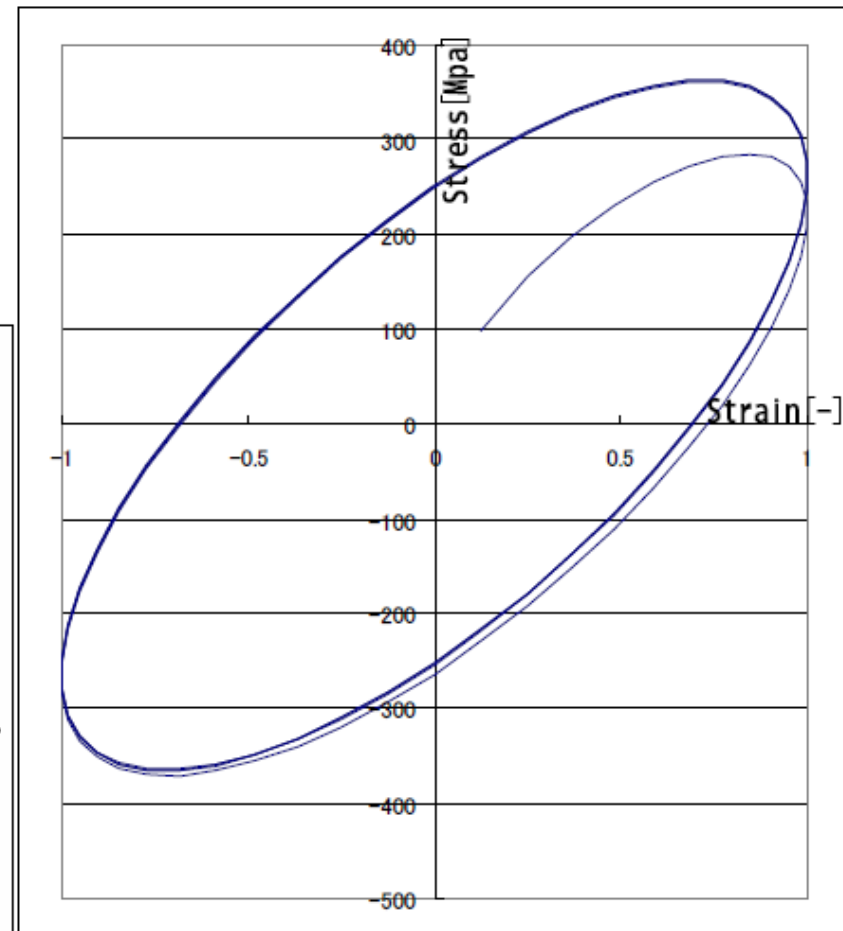
Stress-relaxation curve

# Harmonic vibration analysis (freq\_1hs50.in) Hardness (50), Damping (Small)

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Analysis model



10<sup>8</sup> Hz hysteresis curve