Identification of material property: Hardness (50), Damping (Large)

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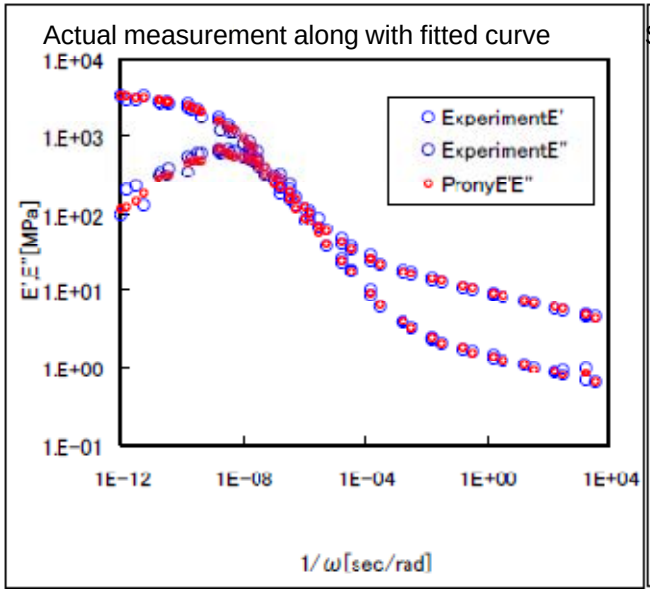
Young's Modulus[MPa]	Poisson's Ratio[-]
3.36101E+03	4.99000E-01

$\bar{g}_i^P$ [MPa]	τ_i^G [sec]
5.05514E-02	1.06103E-12
1.17999E-01	1.59155E-11
1.85315E-01	1.59155E-10
3.10060E-01	1.59155E-09
2.26954E-01	1.59155E-08
6.67971E-02	1.59155E-07
2.59849E-02	1.59155E-06
7.31704E-03	1.59155E-05
2.93189E-03	1.59155E-04
1.39904E-03	1.59155E-03
9.13070E-04	1.59155E-02
7.39379E-04	1.59155E-01
5.79082E-04	1.591549407
4.55188E-04	15.91549431
3.47859E-04	159.1549431
4.21064E-04	1591.549407

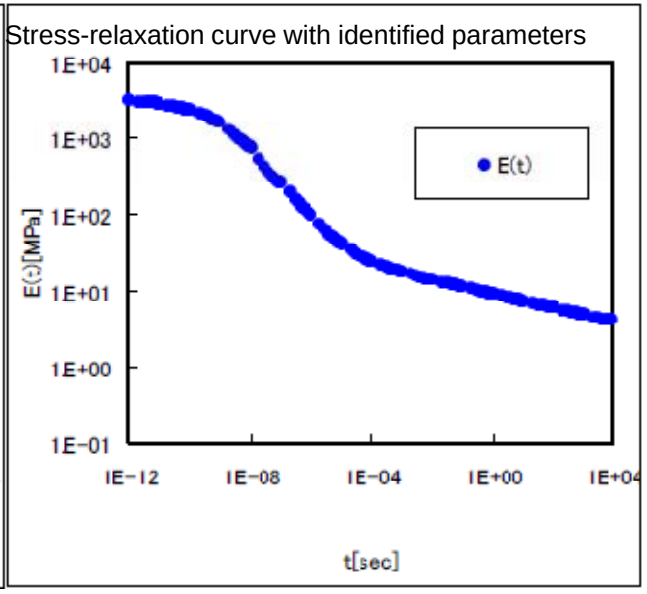
Prony series

$$G(\tau) = G_0\left\{1-\sum_{i=1}^{N}\bar{g}_i^P\left(1-e^{-\tau/\tau_i^G}\right)\right\},\quad K(\tau)=\infty$$

Actual measurement along with fitted curve



Stress-relaxation curve with identified parameters



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Stress-relaxation analysis : mat2_hs50_relax.inp
Hardness (50), Damping (Large)

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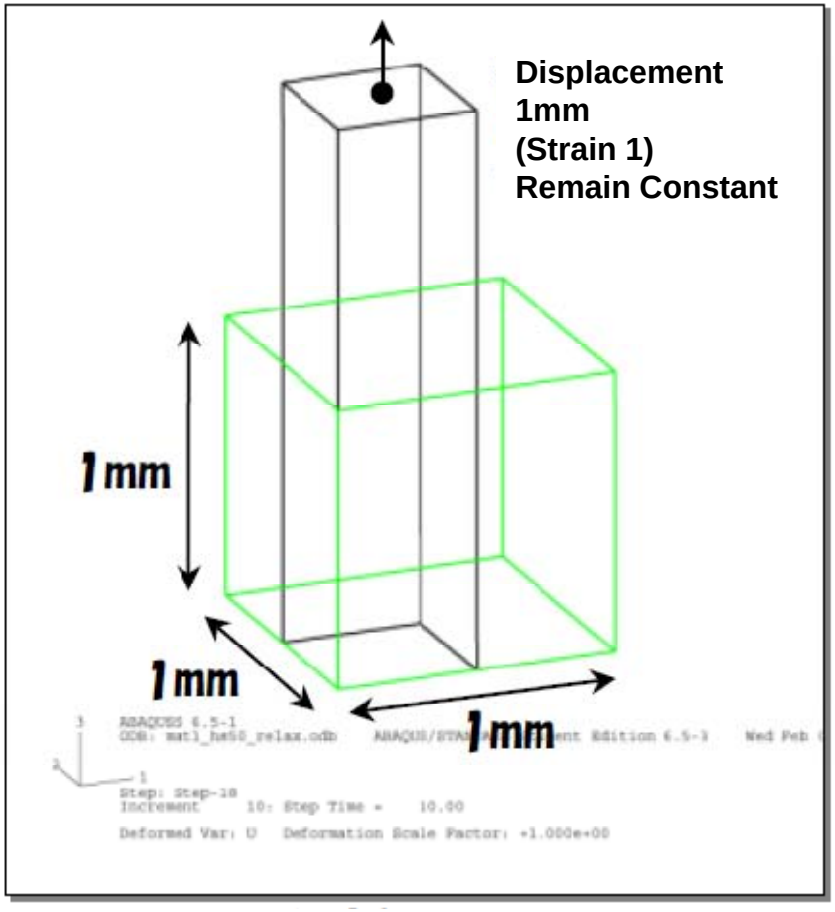
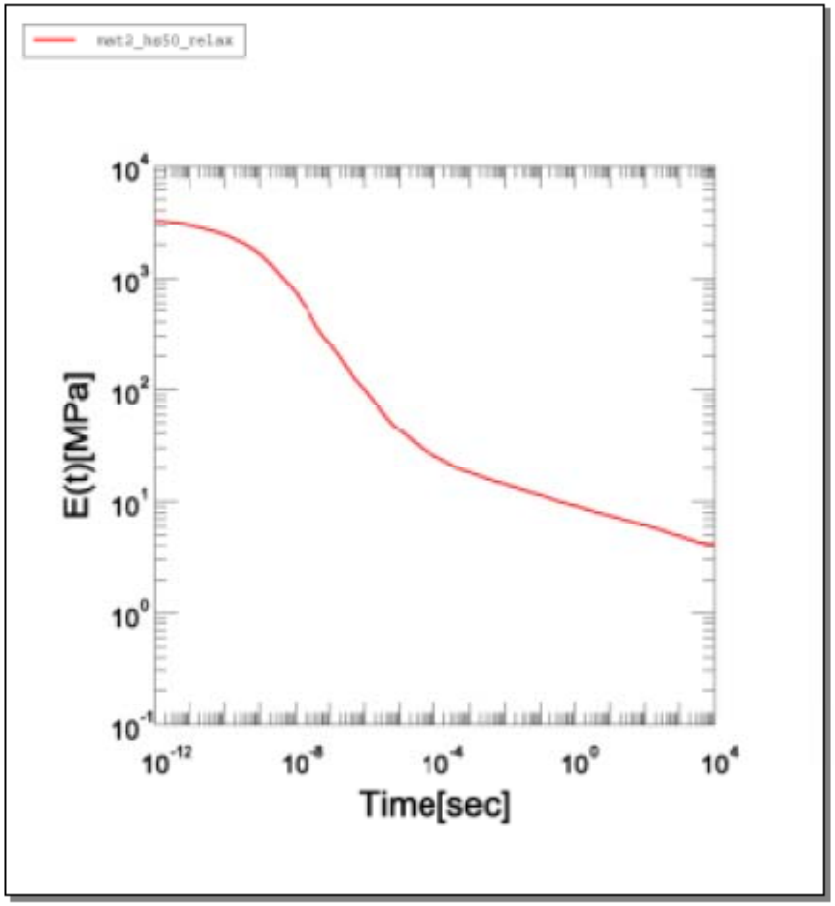


Analysis model



Stress-relaxation curve

Frequency response analysis : mat2_hs50_frequency.inp
Hardness (50), Damping (Large)

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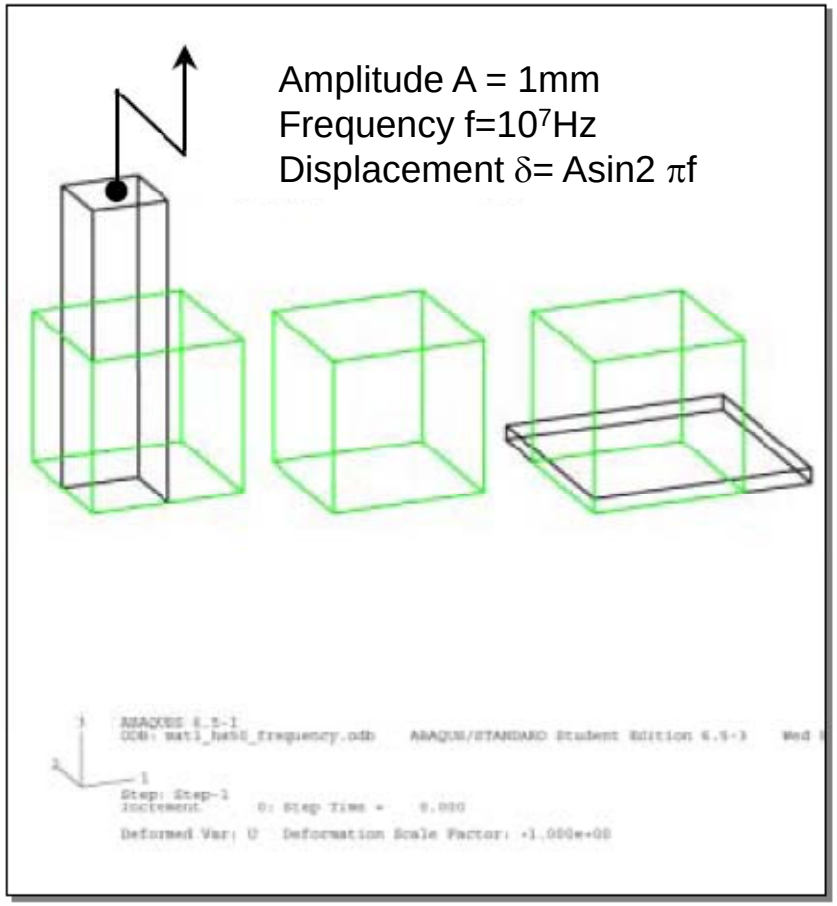
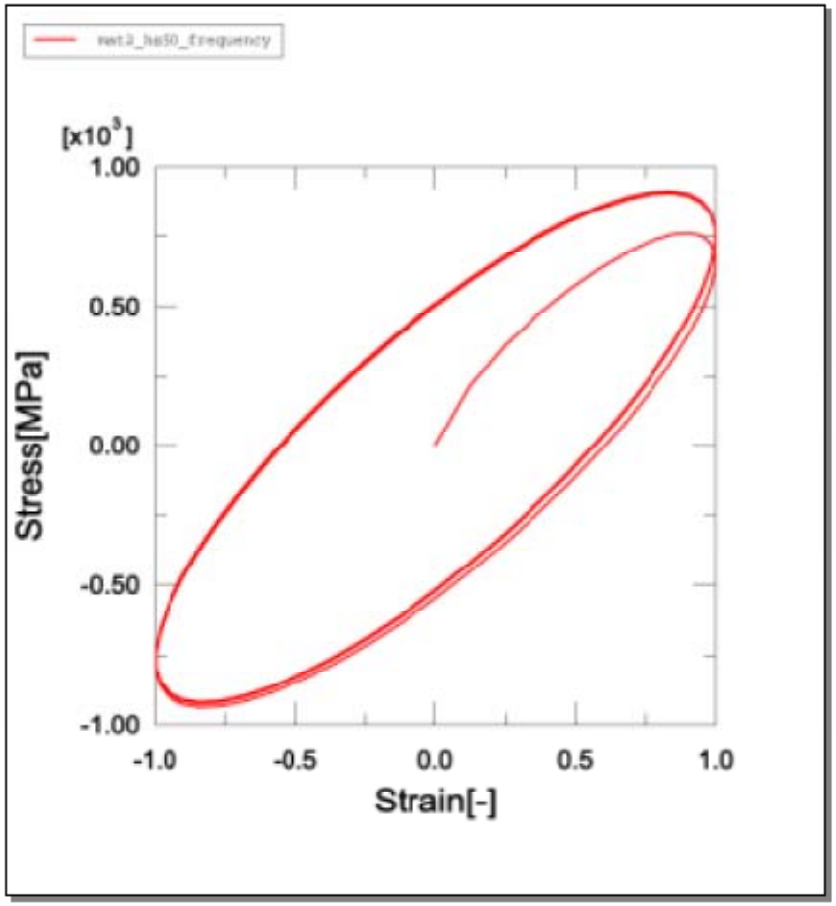


Analysis model



Hysteresis curve