

Identification of material property: Hardness (65), Damping (Small)

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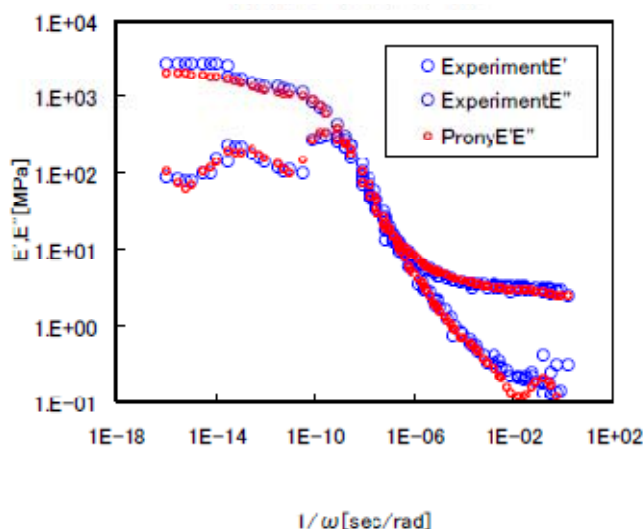
Young's Modulus[MPa]	Poisson's Ratio[-]
2.42684E+03	4.99000E-01

\bar{g}_i^P [MPa]	τ_i^G [sec]
1.94209E-01	1.59155E-12
1.43905E-01	1.59155E-11
1.94232E-01	3.97887E-10
1.66321E-01	3.97887E-09
2.09840E-01	1.59155E-08
6.78500E-02	1.59155E-07
1.37918E-02	1.59155E-06
4.20637E-03	1.59155E-05
1.57138E-03	1.59155E-04
5.16226E-04	1.59155E-03
3.28406E-04	1.59155E-02
2.57402E-04	1.59155E-01
2.12828E-04	1.591549431
1.73326E-04	15.91549431
1.54568E-04	159.1549431
2.04466E-04	1591.549431

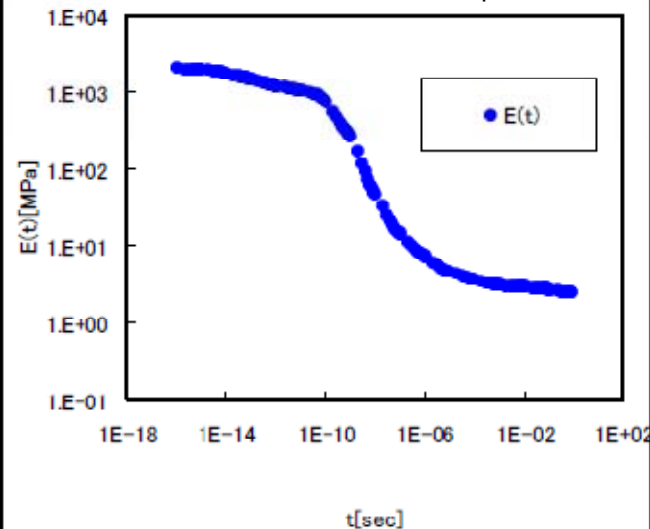
Prony series

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

Actual measurement along with fitted curve

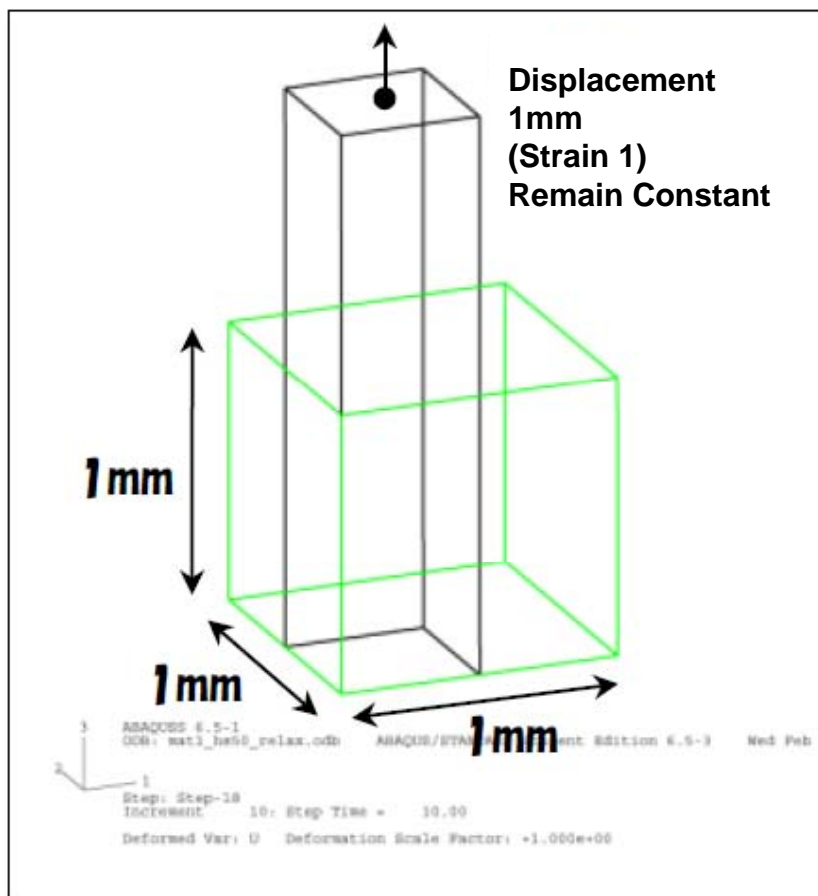


Stress-relaxation curve with identified parameters

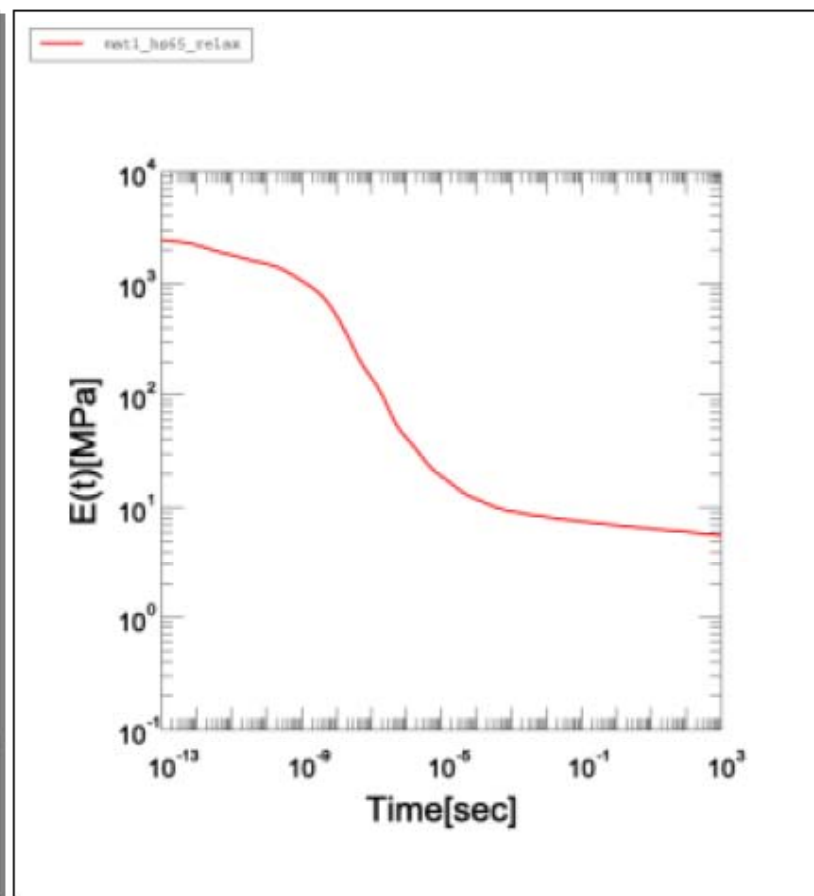


Stress-relaxation analysis : mat1_hs65_relax.inp Hardness (65), Damping (Small)

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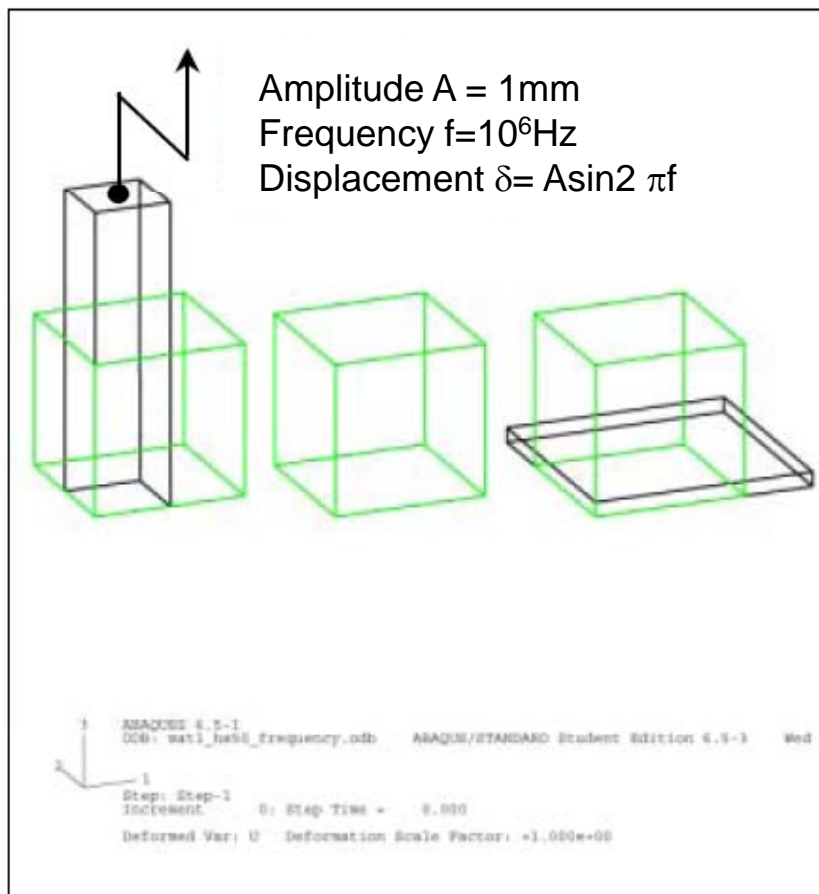
Analysis model



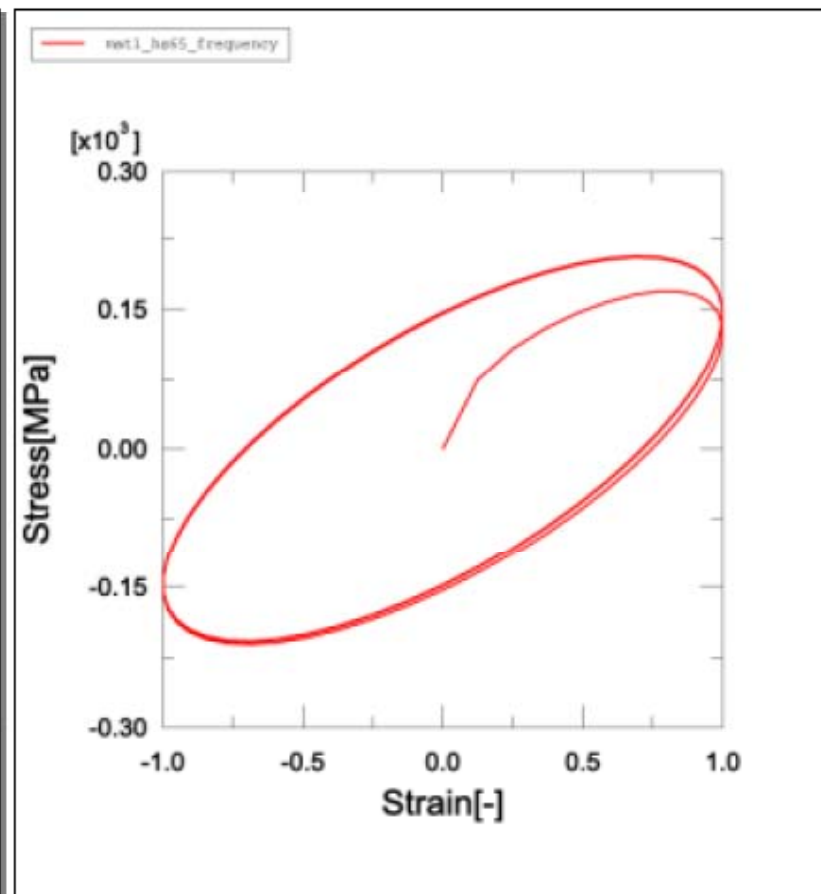
Stress-relaxation curve

Frequency response Analysis : mat1_hs65_frequency.inp Hardness (65), Damping (Small)

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Analysis model



Hysteresis curve