θ-8 Identification of material property

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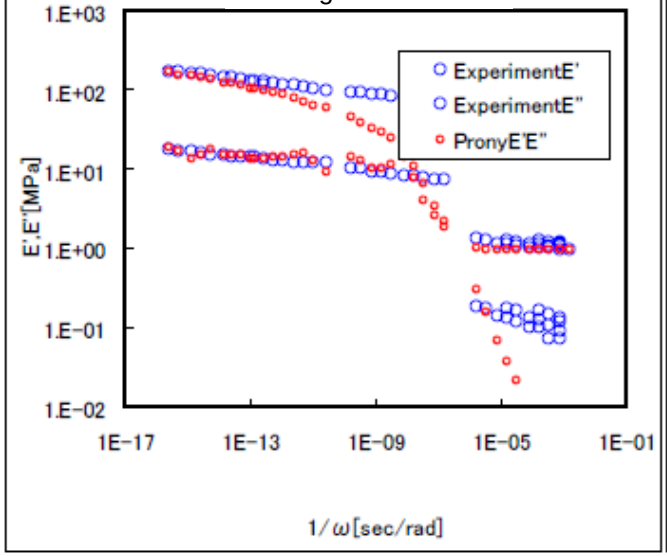
Young's Modulus[MPa]	Poisson's Ratio[-]
1.85935E+02	4.99000E-01

$\bar{g}_i^P$ [MPa]	τ_i^G [sec]
1.88935E-01	2.65258E-16
1.44650E-01	5.30516E-15
1.11418E-01	5.30516E-14
1.04720E-01	5.30516E-13
1.36631E-01	5.30516E-12
1.22598E-01	1.59155E-10
3.71703E-02	7.95775E-10
1.39394E-01	7.95775E-09
9.22053E-03	1.59155E-07
4.90074E-07	1.59155E-06
8.32058E-05	1.59155E-05
1.79160E-12	1.59155E-04

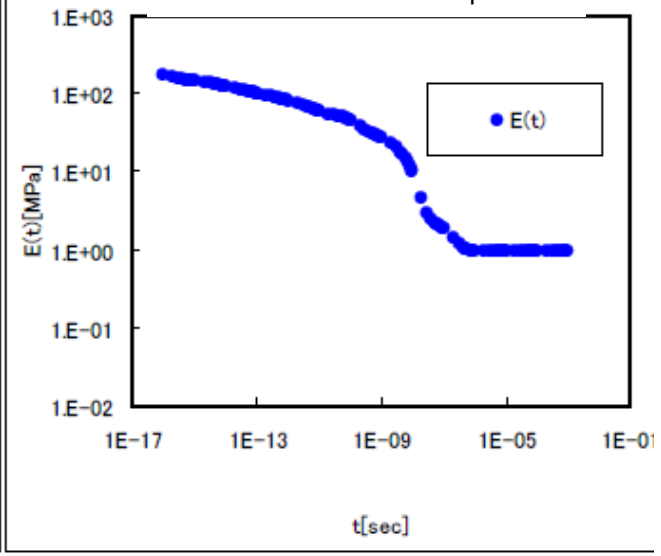
Prony series

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

Actual measurement along with fitted curve



Stress-relaxation curve with identified parameters



θ-8 Stress-relaxation analysis : theta8_relax.inp

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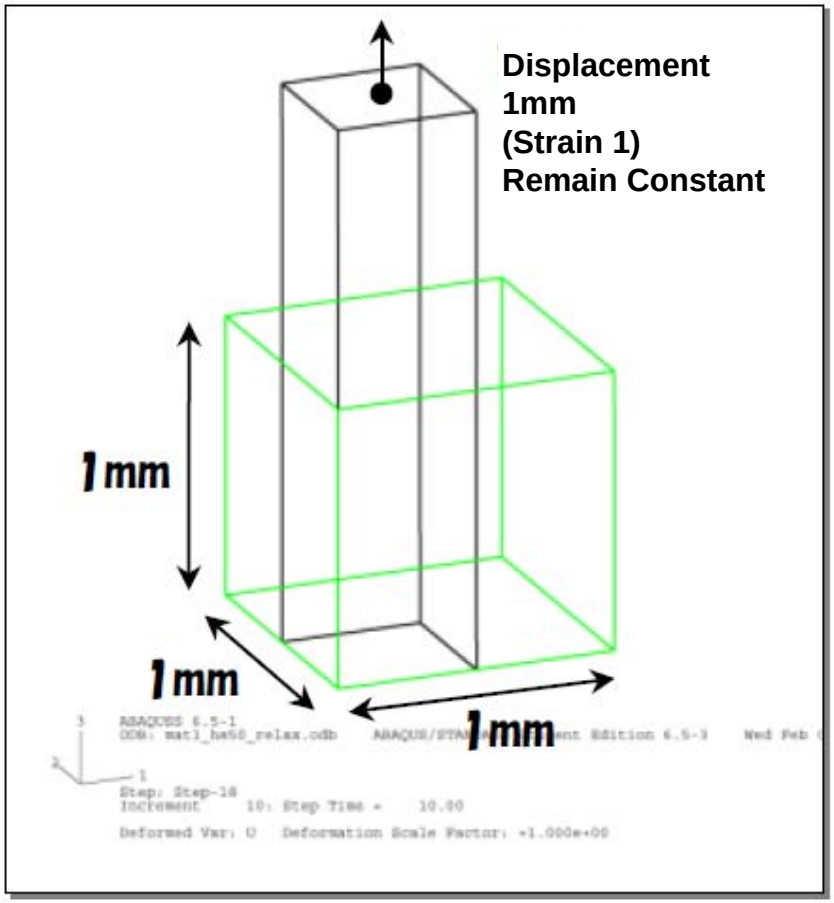
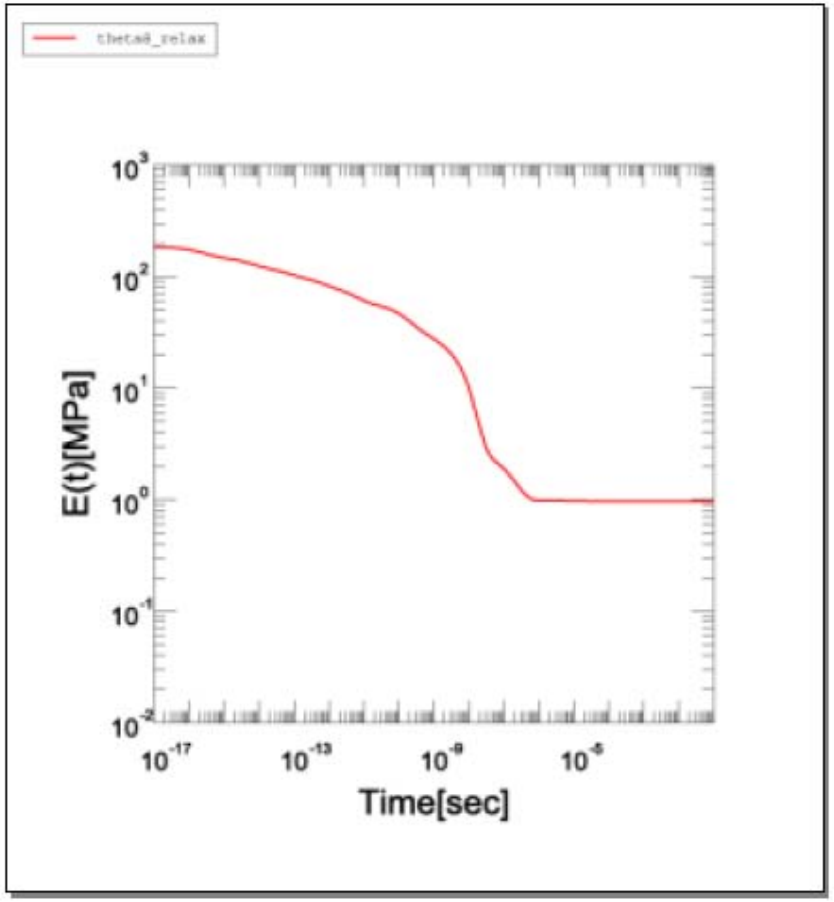


Analysis model



Stress-relaxation curve

θ-8 Frequency response analysis: theta8_frequency.inp

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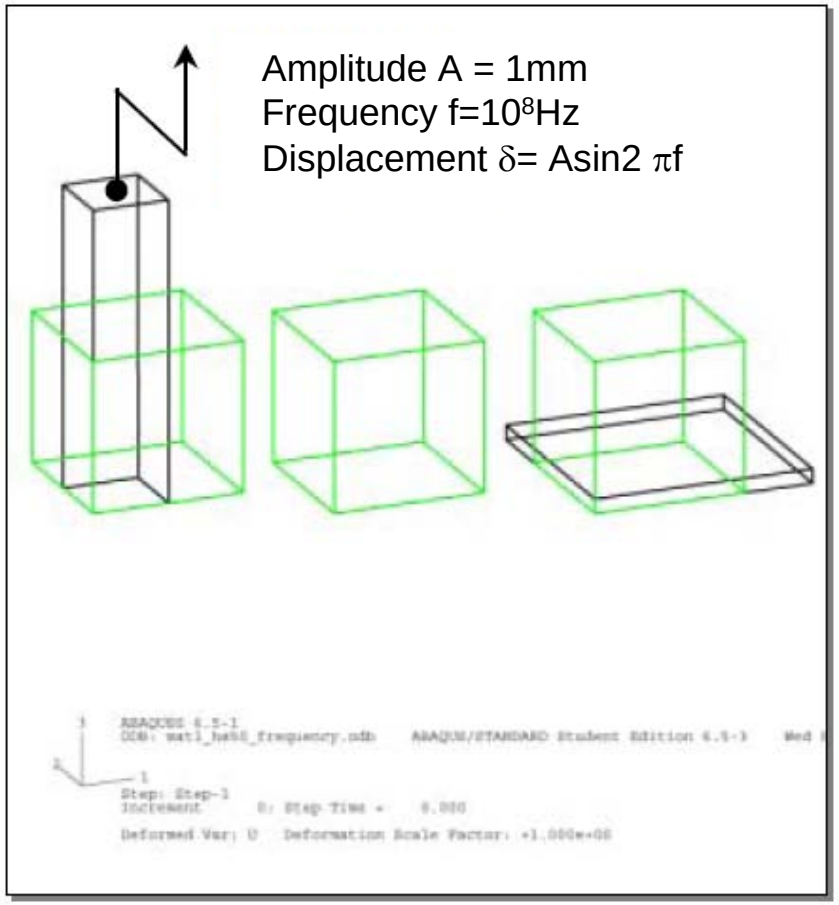
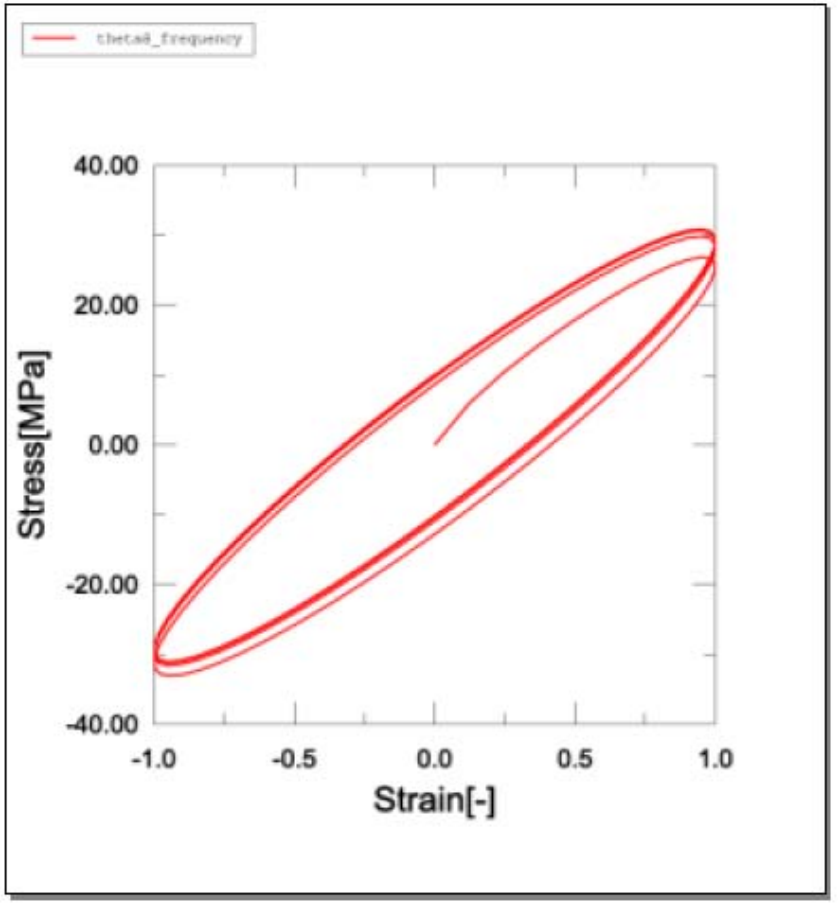


Analysis model



Hysteresis curve