Data Flowchart for CFD/CAE/CAD Simulations
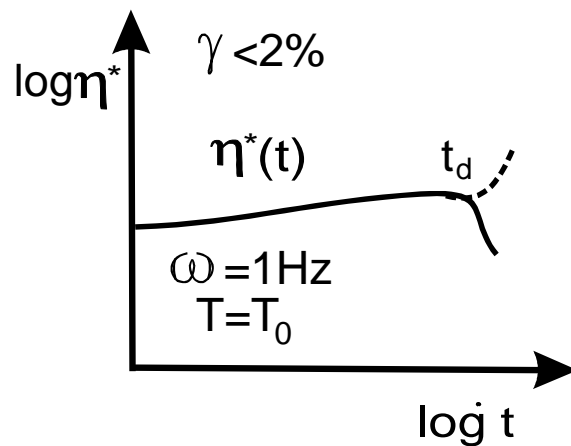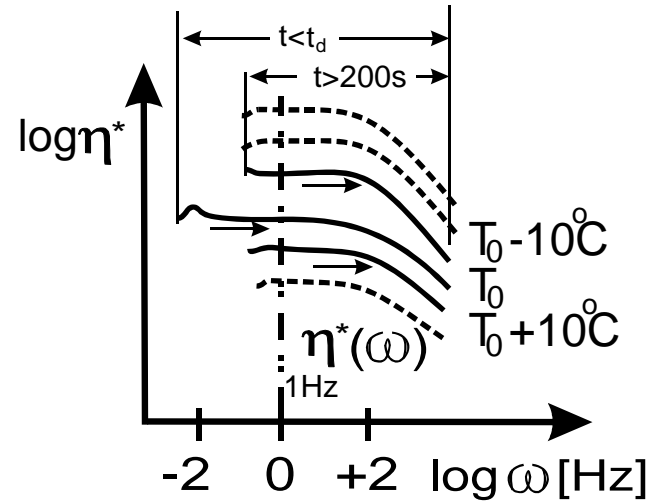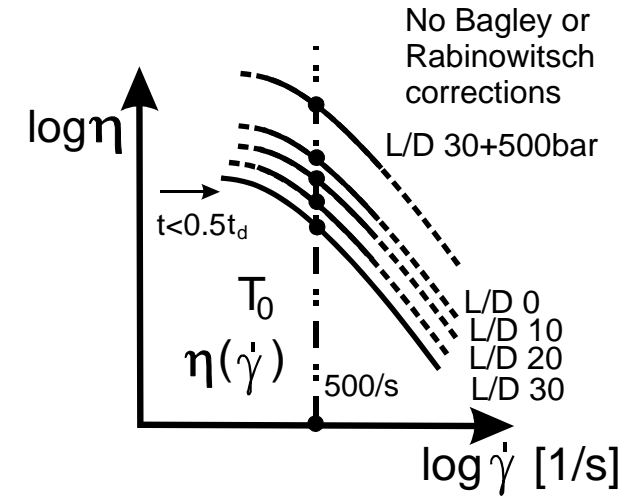
Degradation and Relaxation Point
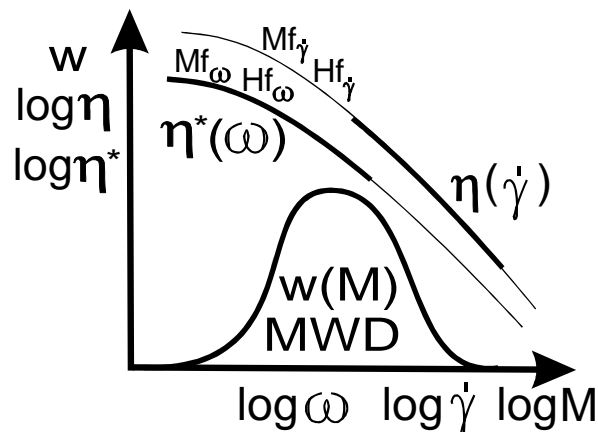
$\log\eta^*$

$\gamma < 2\%$

$\eta^*(t)$

t_d

$\omega = 1\,Hz$
$T = T_0$

$\log t$

Dynamic Measurements

$\log\eta^*$

$t < t_d$

$t > 200s$

$T_0 - 10\,^\circ C$
T_0
$T_0 + 10\,^\circ C$

$\eta^*(\omega)$

$1Hz$

$-2 \quad 0 \quad +2 \quad \log\omega\,[Hz]$

Capillary Measurements

$\log\eta$

No Bagley or Rabinowitsch corrections

L/D 30+500bar

$t < 0.5t_d$

T_0

$\eta(\dot\gamma)$

$500/s$

L/D 0
L/D 10
L/D 20
L/D 30

$\log\dot\gamma\,[1/s]$

RheoPower for DataPower

w
$\log\eta$
$\log\eta^*$

$Mf_\omega\,Hf_\omega$ $Mf_{\dot\gamma}\,Hf_{\dot\gamma}$

$\eta^*(\omega)$

$\eta(\dot\gamma)$

$w(M)$
MWD

$\log\omega \quad \log\dot\gamma \quad \log M$

DataPower

$P\%$
$\log\eta$

$\eta(\dot\gamma, t, T, P, P\%)$

$P\%(\dot\gamma, t)$

$\eta(t)$

$\log\dot\gamma \quad \log t$

P Pressure

P% Orientation degree

$Mf_\omega, Mf_{\dot\gamma}$ Structure value

$Hf_\omega, Hf_{\dot\gamma}$ Conversion factor

RheoPower   DataPower