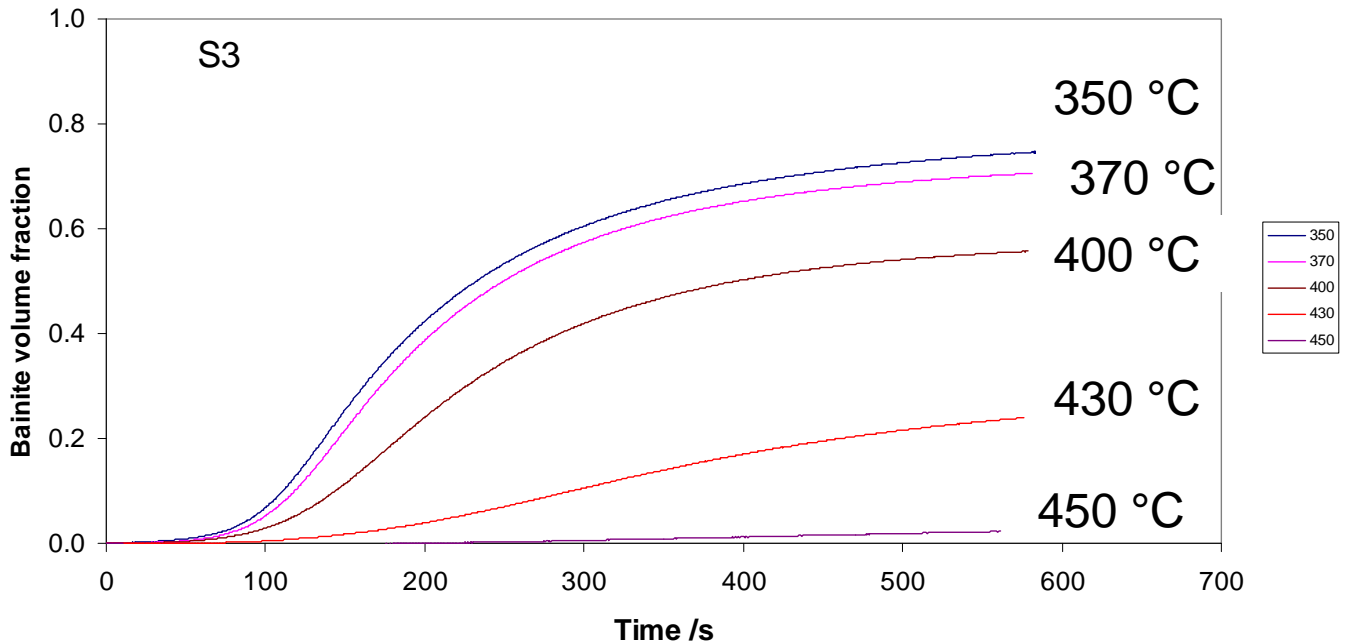


S3

## Bainite volume fraction as a function of time.



*Bainite volume fraction is calculated from the formula in paper, Mater. Sc & Tech.23, p556 (2007)*

$$(1+e)^3 = a_{\gamma}^{-3} [2V a_{\alpha}^3 + (1-V) a_{\gamma}^3]$$

*where*

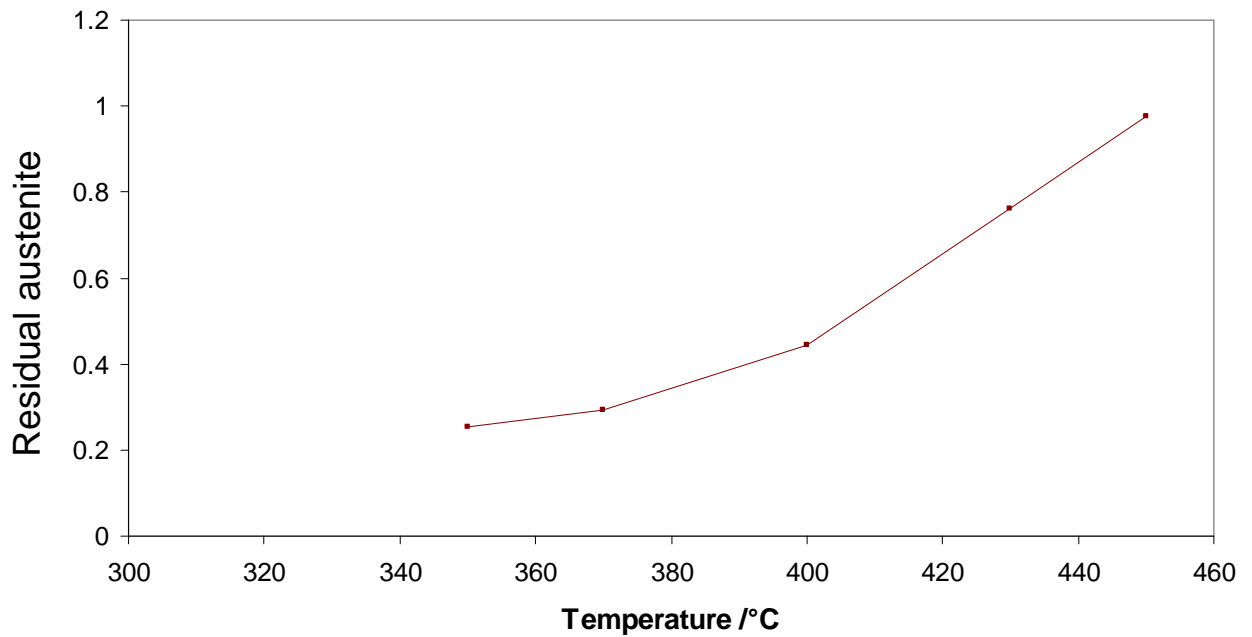
*e : measured from dilatometric data*

*$a_{\alpha}$  &  $a_{\gamma}$  lattice constants are calculated at temperature  $T$  from lattice expansion coefficient.*

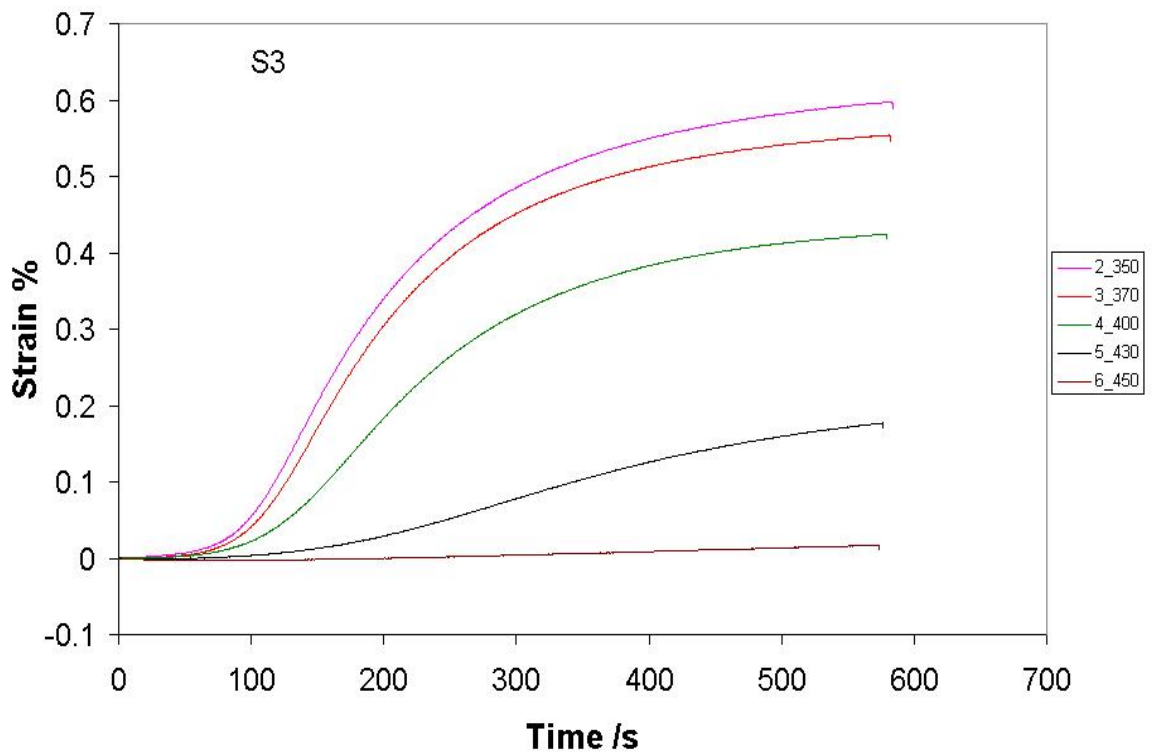
*$V$  : volume fraction of bainitic ferrite.*

# S3

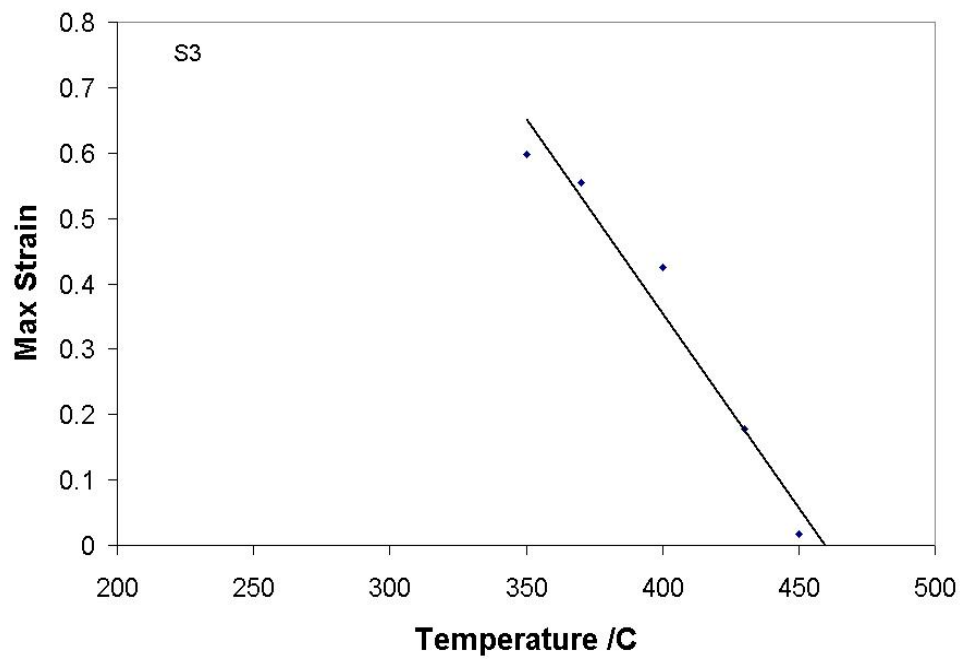
Residual austenite as a function of isothermal transformation temperature



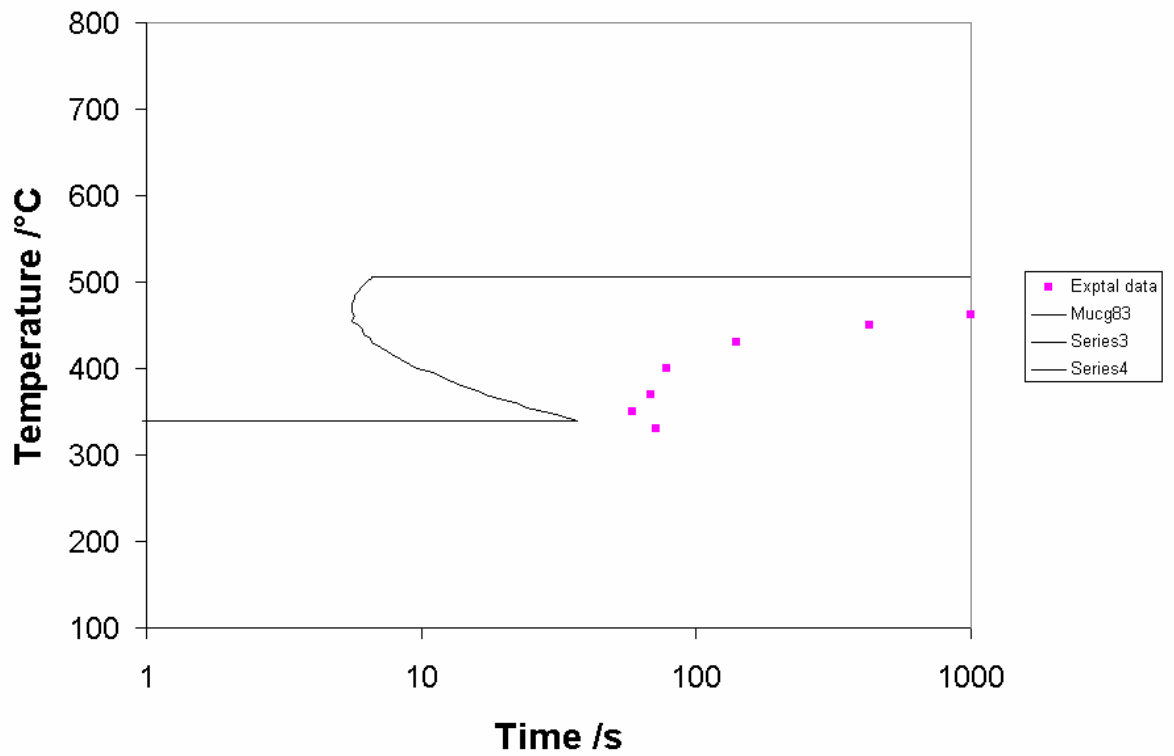
*Residual austenite volume fraction=1-V*



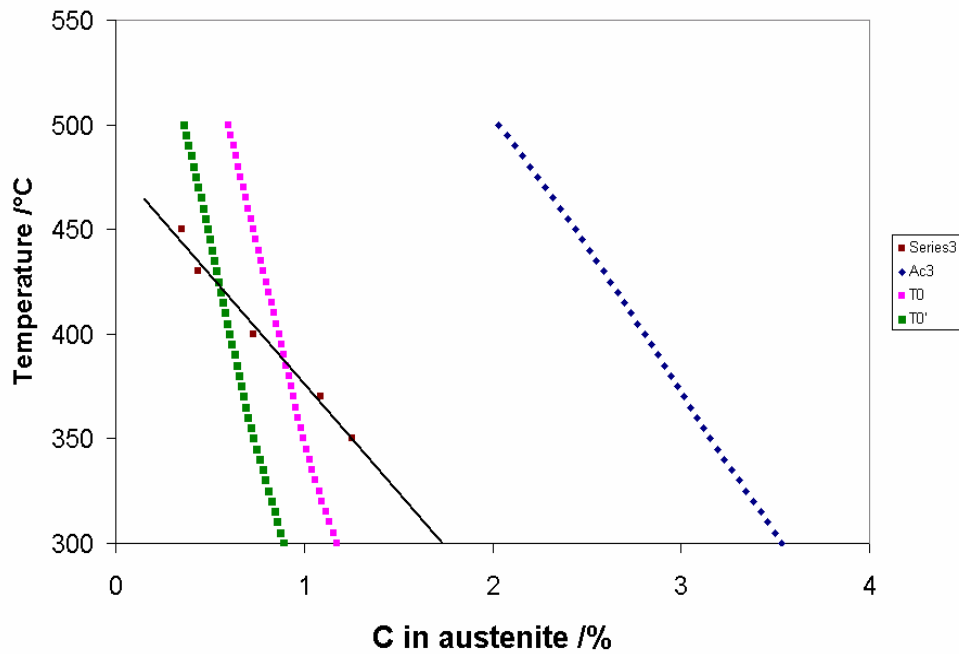
Isothermal transformation to bainite



Maximum strain at isothermal transformation of bainite



Lower C curve from calculation and experimental data



Carbon in austenite as T0' (experimental data) and T0, T0' and Ae3 (calculated)