$$t_i := t_i(t) = \begin{bmatrix} 0.042 \\ 1 \\ 3 \\ 7 \\ 30 \\ 90 \\ 365 \\ 1825 \end{bmatrix} \text{day} \qquad t_j := t_j(t) = \begin{bmatrix} 1 \\ 3 \\ 7 \\ 30 \\ 90 \\ 365 \\ 1825 \\ 18250 \end{bmatrix} \text{day}$$

$f_{pi} := 213 \text{ ksi}$ $\qquad$ $f_{py} := 230 \text{ ksi}$

AMS 6257, 300M steel

$K := 10$

ORIGIN $\equiv 1$

$$ti := \begin{bmatrix} 0.042 \\ 1 \\ 3 \\ 7 \\ 30 \\ 90 \\ 365 \\ 365 \cdot 5 \end{bmatrix} \cdot \text{day} \qquad tj := \begin{bmatrix} 1 \\ 3 \\ 7 \\ 30 \\ 90 \\ 365 \\ 365 \cdot 5 \\ 365 \cdot 50 \end{bmatrix} \cdot \text{day}$$

$f_{pii_1} := f_{pi}$

$$\Delta f_{R_1} := \frac{f_{pii_1}}{K} \cdot \left(\frac{f_{pii_1}}{f_{py}} - 0.55 \right) \cdot \log\left(\frac{tj_1}{ti_1} \right) = 11.029 \text{ ksi}$$

$i := 2 .. \text{rows}(ti)$

$$\begin{bmatrix} \Delta f_{R_i} \\ f_{pii_i} \end{bmatrix} := \begin{bmatrix} \frac{\left(f_{pii_{i-1}} - \Delta f_{R_{i-1}}\right)}{K} \cdot \left(\frac{\left(f_{pii_{i-1}} - \Delta f_{R_{i-1}}\right)}{f_{py}} - 0.55 \right) \cdot \log\left(\frac{tj_i}{ti_i} \right) \\ f_{pii_{i-1}} - \Delta f_{R_{i-1}} \end{bmatrix}$$

$$\Delta f_R = \begin{bmatrix} 11.029 \\ 3.162 \\ 2.3 \\ 3.78 \\ 2.648 \\ 3.195 \\ 3.43 \\ 4.543 \end{bmatrix} \text{ksi} \qquad f_{pii} = \begin{bmatrix} 213 \\ 201.971 \\ 198.809 \\ 196.509 \\ 192.729 \\ 190.081 \\ 186.886 \\ 183.456 \end{bmatrix} \text{ksi}$$