$\Delta\sigma_c := [160]\ \frac{N}{mm^2}$

Eurocode 3
Design of steel structures
EN 1993-1-9 Fatigue

$N_R := 1000, 10000 .. 1 \cdot 10^8$

$$\Delta\sigma_R(\Delta\sigma_c, N_R) := \text{if}\left(N_R \le 5 \cdot 10^6, \sqrt[3]{\frac{\Delta\sigma_c^{\,3} \cdot 2 \cdot 10^6}{N_R}}, \sqrt[5]{\frac{\left(\left(\frac{2}{5}\right)^{\frac{1}{3}} \Delta\sigma_c\right)^5 \cdot 5 \cdot 10^6}{N_R}}\right)$$

$N_{Rm} := 1500000$ $\quad \Delta\sigma_{Rm}(N_{Rm}) := 150\ \frac{N}{mm^2}$ measurements

$N := \log(N_{Rm}) = 6.176$

$\Delta\sigma_R(\Delta\sigma_{c_0}, N_R)\ (MPa)$

$\Delta\sigma_{Rm}(N_{Rm})\ (MPa)$