RMS value of current from the curves
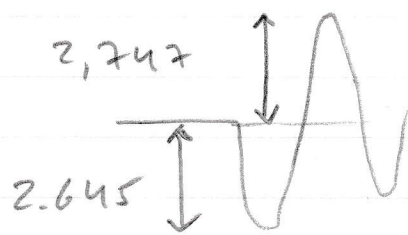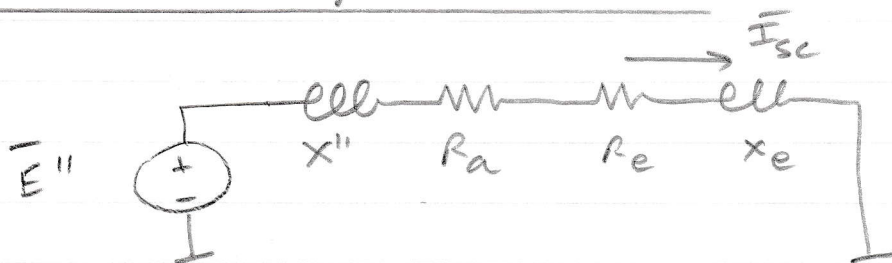

average peak-to-peak value: $\dfrac{2,747 + 2,645}{2}$

$$= 2,696 \text{ pu}$$

RMS value: $\dfrac{2,696}{\sqrt{2}} = 1,906 \text{ pu}$

Situation during short-circuit

$$\bar{I}_{sc} = \dfrac{\bar{E}''}{(R_a + R_e) + j(x'' + x_e)}$$

which value for x'' ?

See slide 25 of the lecture !

$$L_q'' = L_{qq} - \dfrac{L_{qq_1}^2}{L_{q_1 q_1}} = 2,4 - \dfrac{3,2^2}{2,2512} = 0,25 \text{ pu}$$

$$L_d' = L_{dd} - \dfrac{L_{df}^2}{L_{ff}} = 2,4 - \dfrac{2,2^2}{2,42} = 0,40 \text{ pu}$$

with L_q'' $I_{sc} = 2,299$ pu

      L_d' $I_{sc} = 1,769$

    $(L_q'' + L_d')/2$ $I_{sc} = 1,995$ ← best