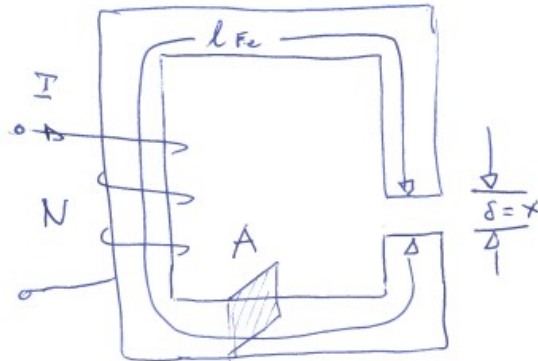


Magnetic Flux by Varying the Air Gap

17.12.19 Timmerberg



$$\mu_r := 200$$

$$l_{Fe} := 0.4$$

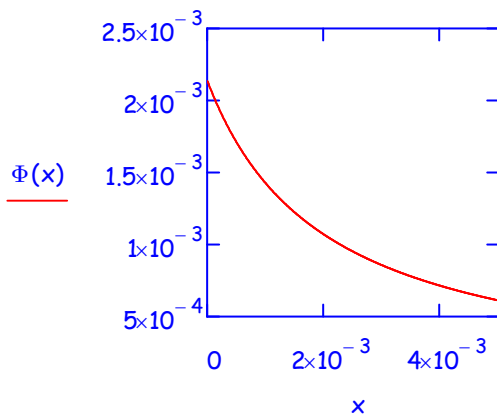
$$N := 500$$

$$I := 17$$

$$\mu_0 := 4 \cdot \pi \cdot 10^{-7}$$

$$A := 4 \cdot 10^{-4}$$

$$\Phi(\delta) := \mu_0 \cdot \frac{N \cdot I \cdot A}{\frac{l_{Fe}}{\mu_r} + \delta}$$



$$\Phi(0.005) = 6.104 \times 10^{-4}$$

$$\frac{\Phi(0)}{\Phi(0.001)} = 1.5$$

$$\frac{\Phi(0)}{\Phi(0.005)} = 3.5$$

$$\Phi(0) = 2.136 \times 10^{-3}$$