

$$\begin{aligned}
 \varepsilon(t=100) & \quad \varepsilon_i = \frac{d(B_0 \cos(\omega t) \cdot S \cdot \cos(\omega t))}{dt} = \cancel{SB_0 \frac{d(\cos^2)}{dt}} \\
 & = -SB_0 \frac{d(\cos(\omega t) \cdot \cos(\omega t))}{dt} = -SB_0 \left(\frac{d\cos(\omega t)}{dt} + \frac{d\cos(\omega t)}{dt} \right) \\
 & = -SB_0 (-\omega \sin \omega t - \omega \sin \omega t) = \\
 & = -0,01 \cdot 0,1 (-3,14 \cdot \sin 3,14 \cdot 10 - 6,28 \sin 6,28 \cdot 10) = \\
 & = 0,00713
 \end{aligned}$$