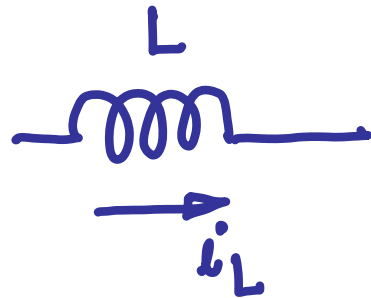
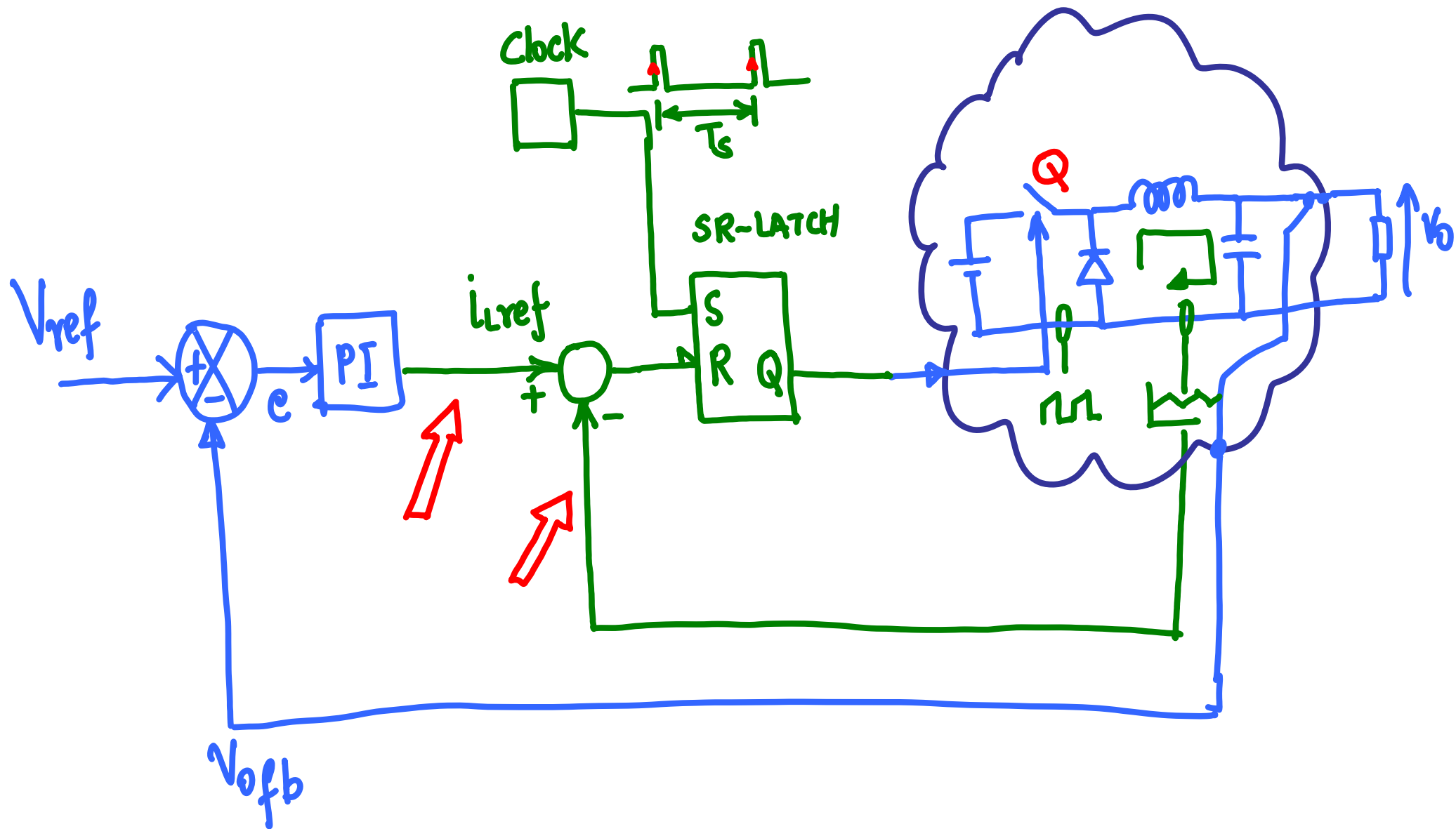
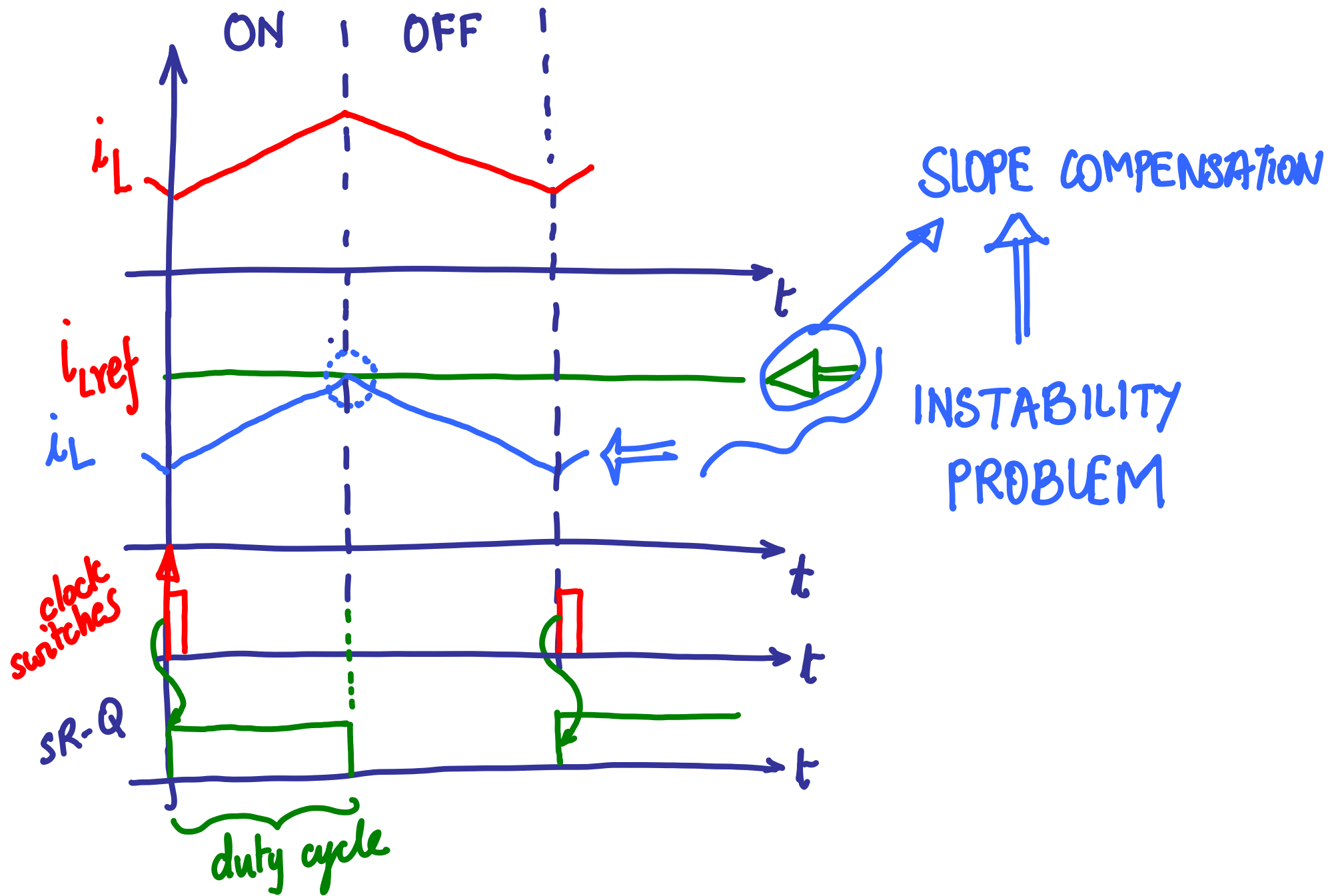


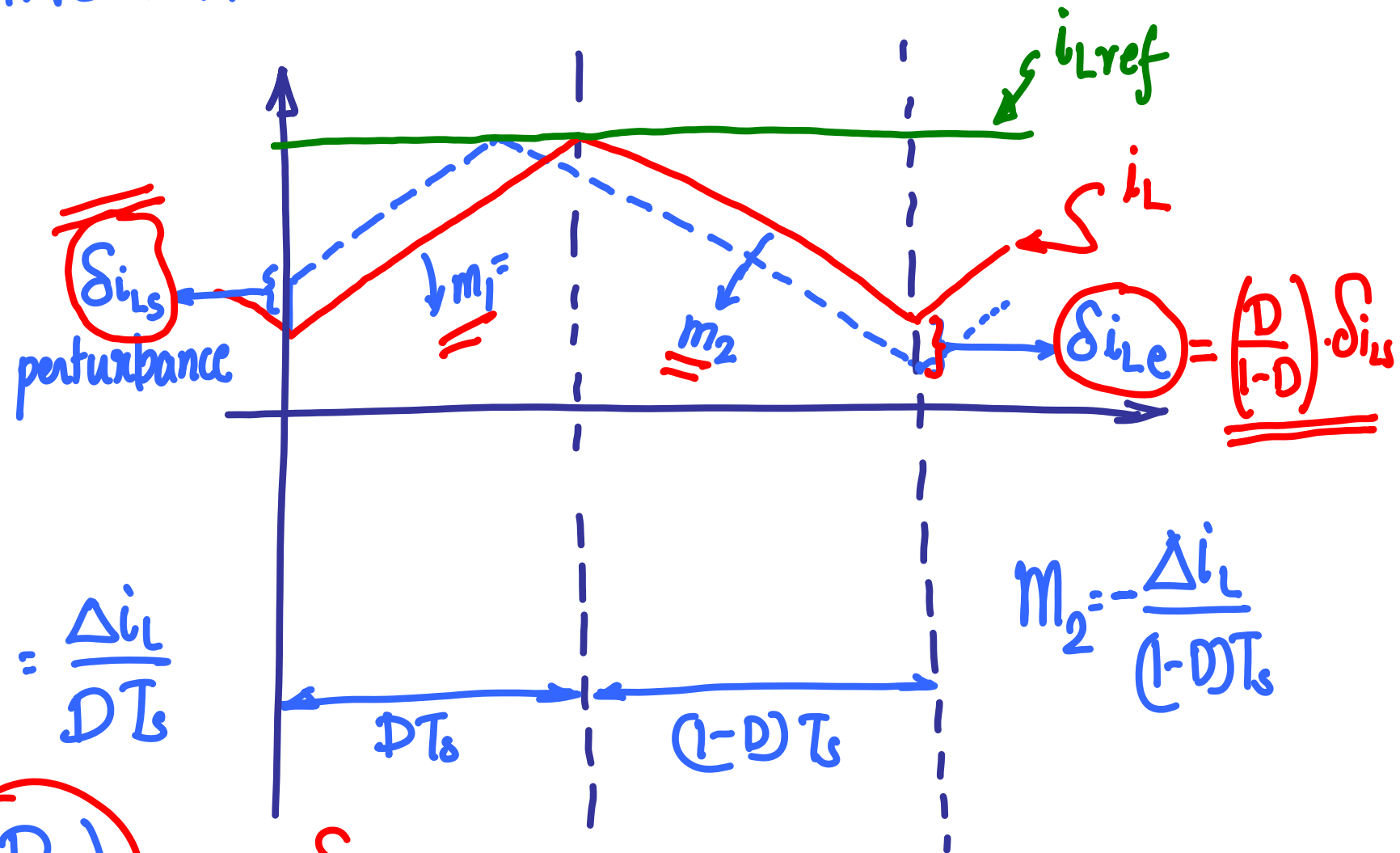
# Current Control in DC-DC converters.







# INSTABILITY in current control



$$m_1 = \frac{\Delta i_L}{\Delta T} = \frac{\Delta i_L}{DT_s}$$

$$m_2 = -\frac{\Delta i_L}{(1-D)T_s}$$

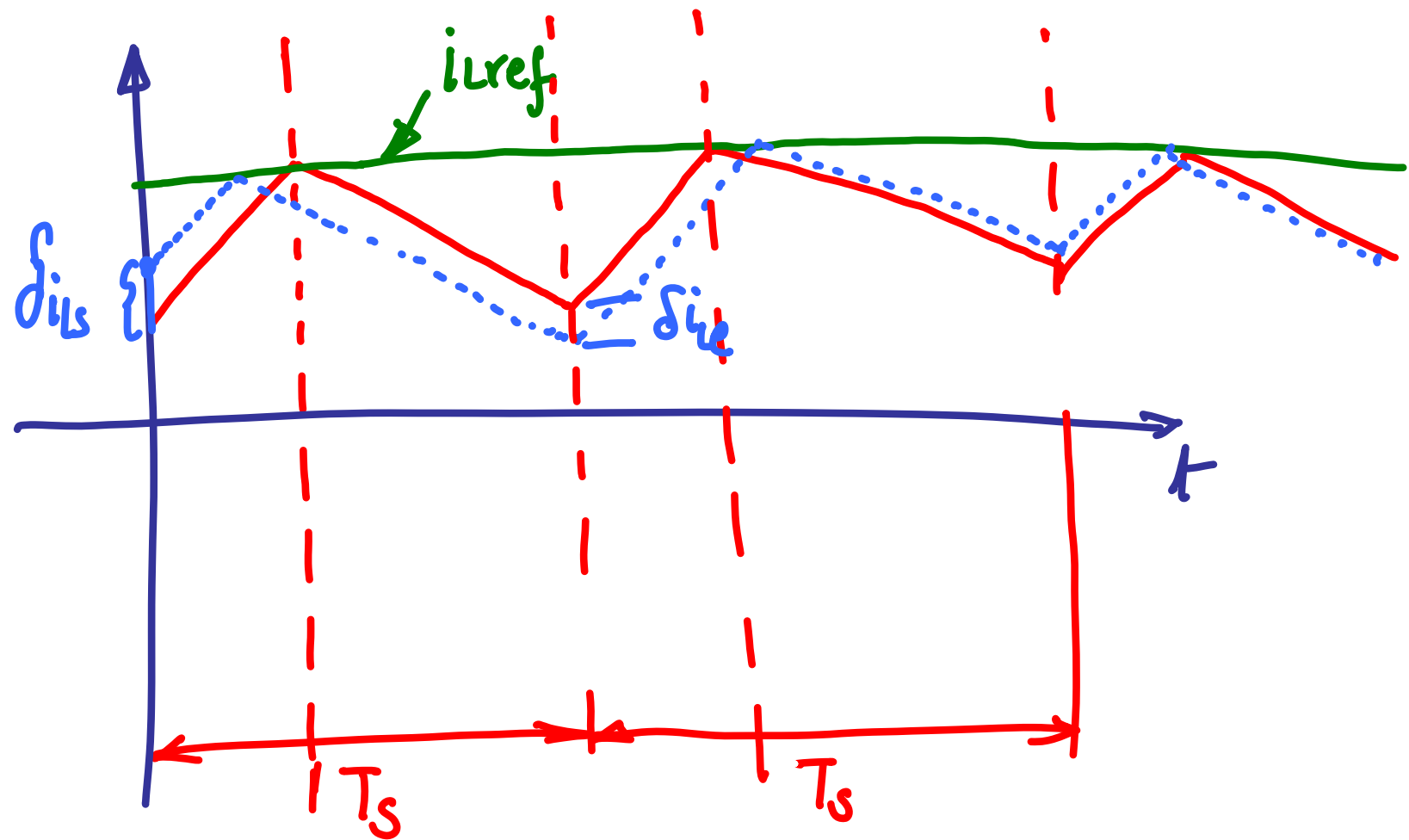
$$\left| \frac{m_2}{m_1} \right| = \left( \frac{D}{1-D} \right)$$

$\delta i_{Ls}$

$$\underline{\underline{\delta_{ile}}} = \left( \frac{D}{1-D} \right) \underline{\underline{\delta_{is}}}$$

reduced if  $D < 0.5$

SYSTEM IS STABLE



$$\delta_{ie} = \underbrace{\left( \frac{D}{1-D} \right)}_{>1} \cdot \delta_{is}$$

grow

if  $D > 0.5$

