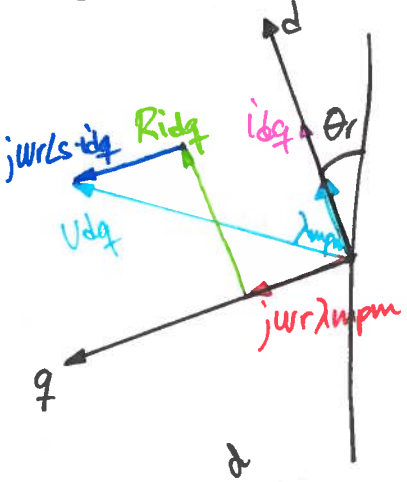
Scalar Control PM workshop

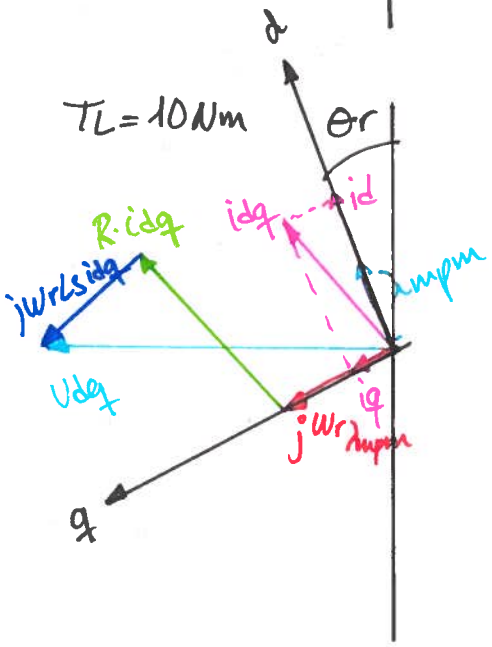
simulink finished → models ACABATS

Task 2 → Draw phasor diagram

Case 1. $T_L = 0 Nm$



$T_L = 10 Nm$



① λmpm – always

② idq → only d component

$$Udq = \underbrace{Ridq}_{②} + \underbrace{jwr \cdot Ls \cdot idq}_{③} + \underbrace{jwr \cdot \lambda mpm}_{①}$$

④

λmpm → Real → d

id & iq → in the simulink → $\bar{idq}$

idq · R

wr · λmpm (j) → 90°

jwr·Ls·idq → 90° respect idq

Udq → sum 1,2 & 3