EE 462

Project-0

DC motor simulation

Student

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Instructor

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1. **Motor**

Parameters of the selected motor are given below

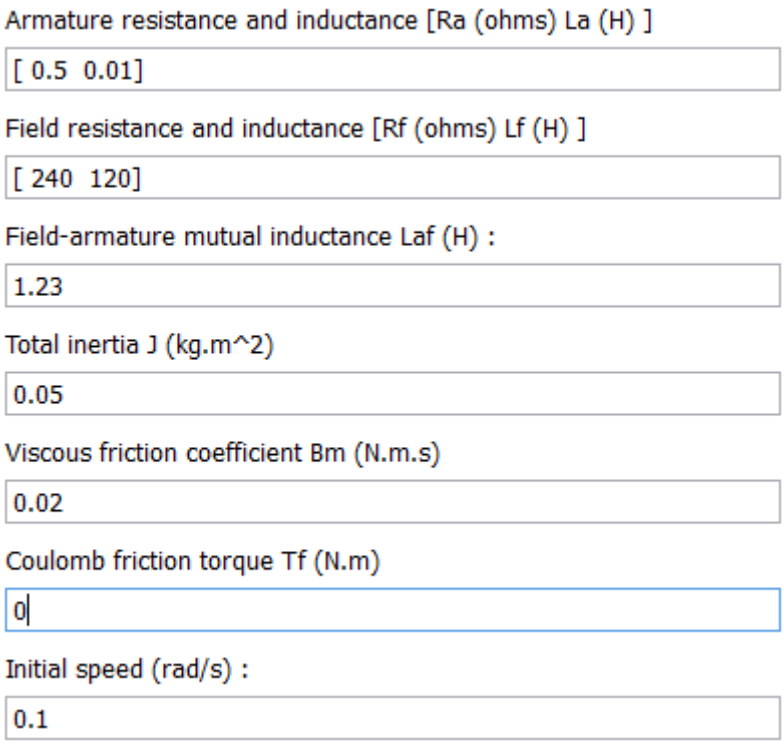

Figure 1. Parameters of the selected motor

2. **Power source and control system**

There are two power sources in thin configuration.

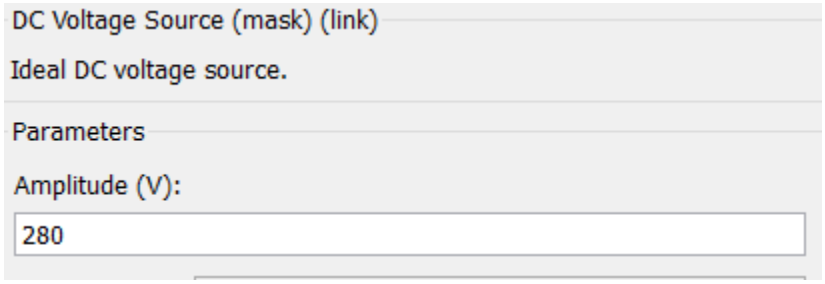

Figure 2. DC source for armature of the motor

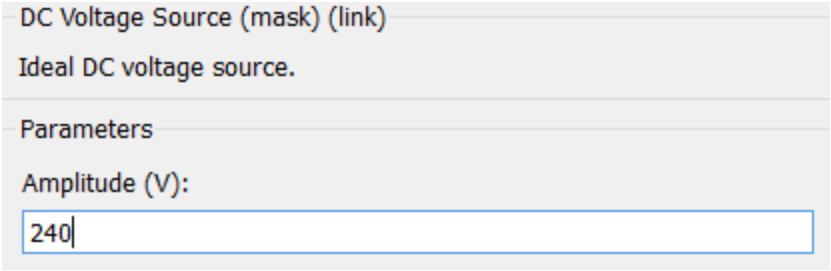

Figure 3. DC source for field winding of the motor

There is a PID control to adjust the speed of the motor.

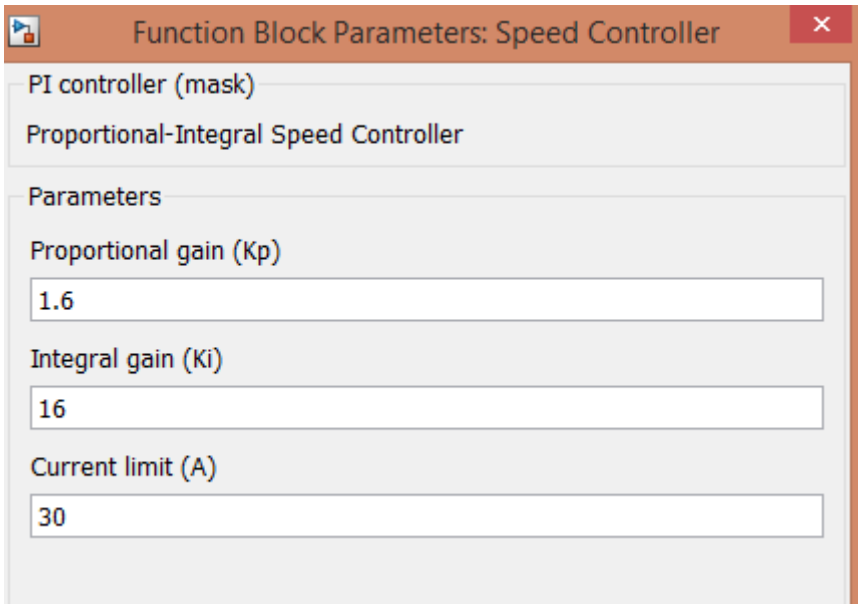

Figure 4. Parameters of the controller

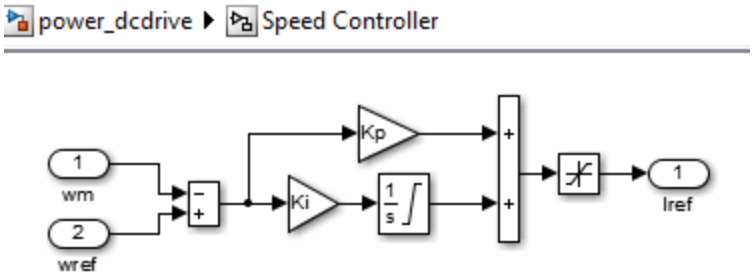

Figure 5. Configuration of the speed controller

3. Simulink model

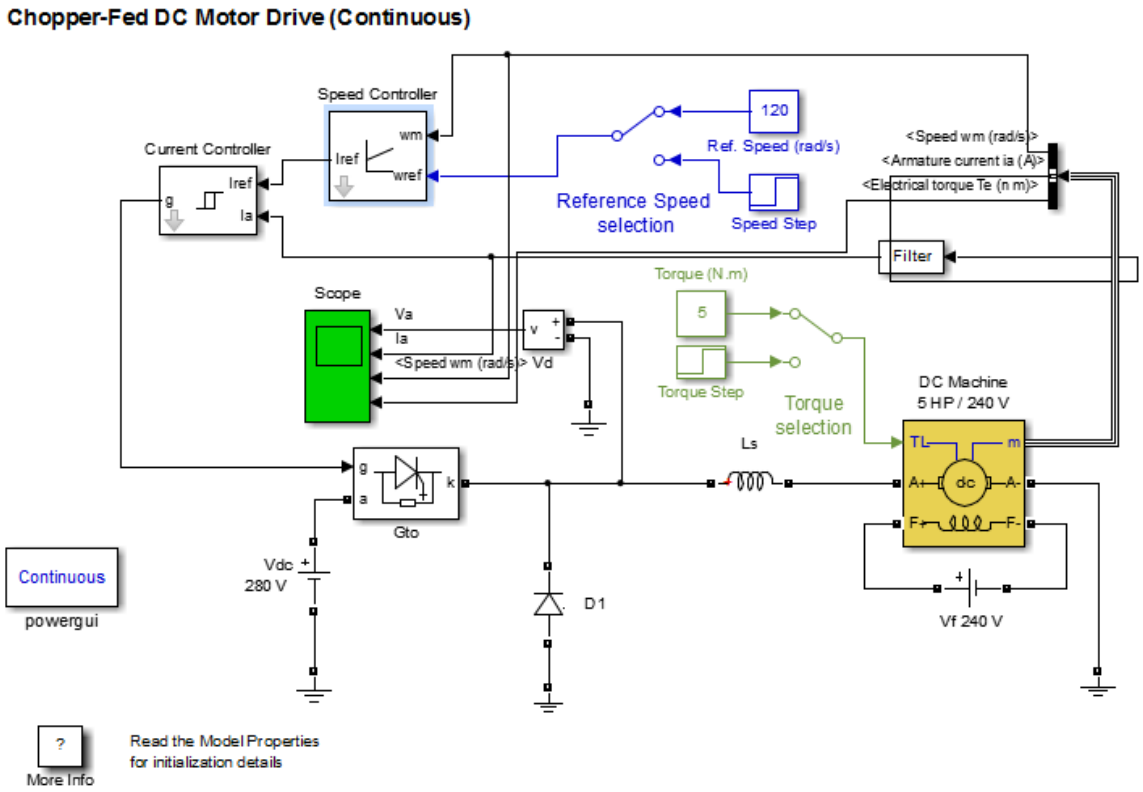

Figure 6. DC Motor Drive [1]

4. Graphs

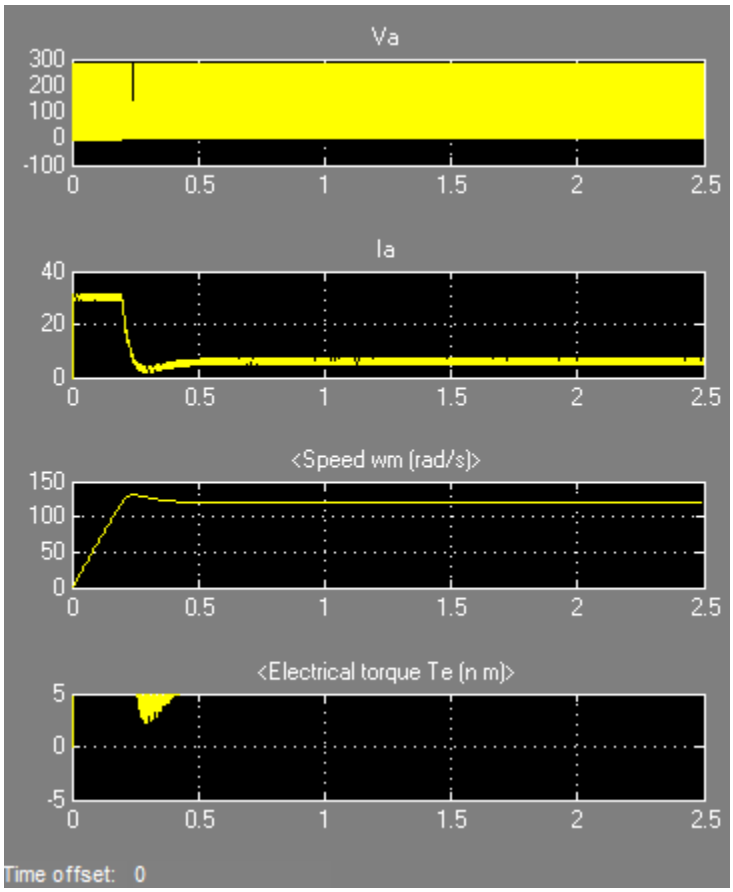

Figure 7. Armature voltage and current, speed and electrical torque of the motor

5. Bibliography

[1] https://www.mathworks.com/help/physmod/sps/examples/chopper-fed-dc-motor-drive-continuous.html