Appendix 1.3

In Imperial units, the conversion factor between the motor voltage constant and the motor torque constant is 141.6:

Appendix 1.4

From figure 5, at stall torque, the situation is equivalent to when the disturbance torque equals the generated torque from given input voltage:

As a result, the input into the 1/(Js + B) block would be zero, resulting in a zero angular velocity output. At zero angular velocity and maximum torque, the motor is said to be outputting the stall torque.

From the block diagram, the following relationship can be written, assuming the inductance is negligibly small compared to the resistance:

With , , and .