METR3100 Sensors and Actuators

Actuators Practical Aligned Assignment

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Executive Summary

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2.1 Equipment

2.1.1 Practical Equipment

The equipment used in the practical were:

- AC motor
- Brake
- Cooling fan
- ABB drives
- PC with *drivewindows*; and
- DSP7000

2.1.2 Safety Equipment

The safety equipment used in the practical were:

- Enclosed shoes; and
- Hearing protection

2.2 Procedure

The procedure followed for this practical was:

1. The ABB motor drives were turned on.
2. *Drivewindows* was started on the PC connected to the ABB motor drive.
3. Remote control was taken over the motor.
4. The control mode of the motor was switched to scalar.
5. The frequency of the motor was set to 50 Hz.
6. The cooling fan was started for the brake.

7. The DSP7000 was started and set to open loop mode.
8. The brake was turned on.
9. The torque and speed displayed on the DSP7000 and the torque, speed, and motor current on *drivewindows* and the information panel on the ABB drive were noted.
10. The brake percentage was increased incrementally and the torque, speed, and motor current were noted for all brake percentages examined.

3. Results

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