What gain parameters did you end up using for your PI controller?
I did a gain of 3 for my proportional gain and 2 for my proportional gain.
Ki = 2
Kp = 3

The system will take time to respond. The main delay is due to the motor spinning up as the PWM signal increases much more rapidly compared to the motor. This is why PID is good as it can smooth out the transition so you don't overshoot your target.

Images of the PID response curves are on my github.