PID Controller Charts

Friday, February 14, 2025   2:14 PM

Motor 1:
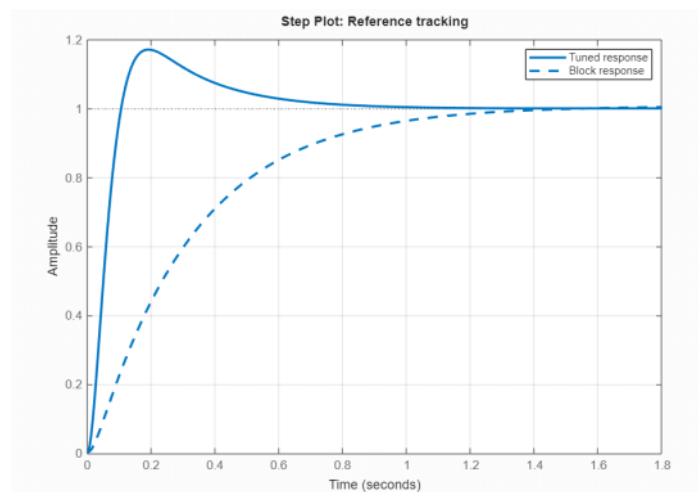

Motor 2:
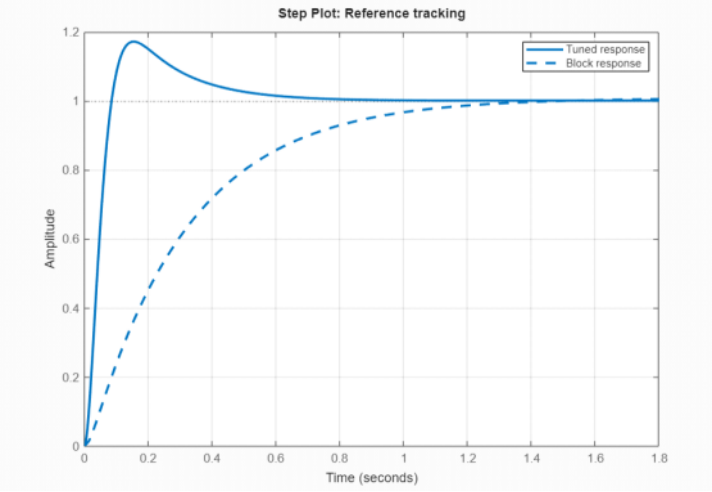
Motor 1:

Controller Parameters

	Tuned	Block
P	23.3174	4.2
I	81.8636	0.1
D	n/a	n/a
N	n/a	n/a

Performance and Robustness

	Tuned	Block
Rise time	0.0728 seconds	0.663 seconds
Settling time	0.679 seconds	1.14 seconds
Overshoot	17.1 %	0.687 %
Peak	1.17	1.01
Gain margin	-Inf dB @ 0 rad/s	-Inf dB @ 0 rad/s
Phase margin	60 deg @ 16.4 rad/s	86.1 deg @ 3.04 rad/s
Closed-loop stability	Stable	Stable

Motor 2:

Controller Parameters

	Tuned	Block
P	26.9495	4
I	117.4534	0.1
D	n/a	n/a
N	n/a	n/a

Performance and Robustness

	Tuned	Block
Rise time	0.0587 seconds	0.655 seconds
Settling time	0.547 seconds	1.12 seconds
Overshoot	17.1 %	0.707 %
Peak	1.17	1.01
Gain margin	-Inf dB @ 0 rad/s	-Inf dB @ 0 rad/s
Phase margin	60 deg @ 20.4 rad/s	86.7 deg @ 3.11 rad/s
Closed-loop stability	Stable	Stable