Control Engineering

Handout – Online Laboratory 5

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For the process described by



and the performance indicators

a)  respectively b) 

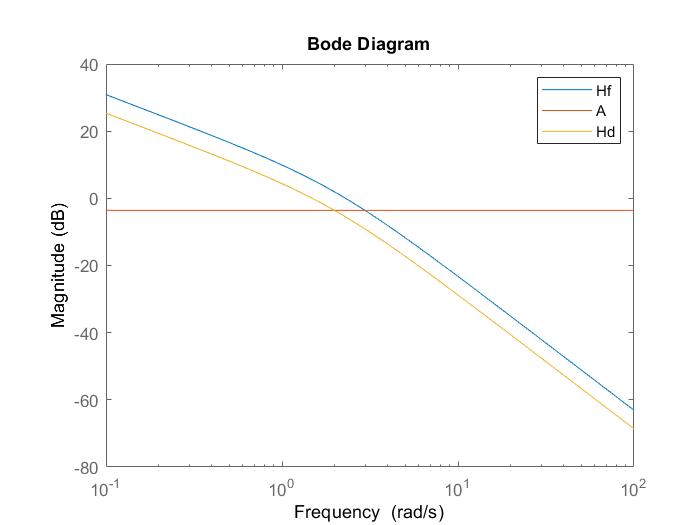
following the above described steps, design a P and a PI controller. Simulate the step and ramp output of the closed loop to highlight the performance indicators.

a) 

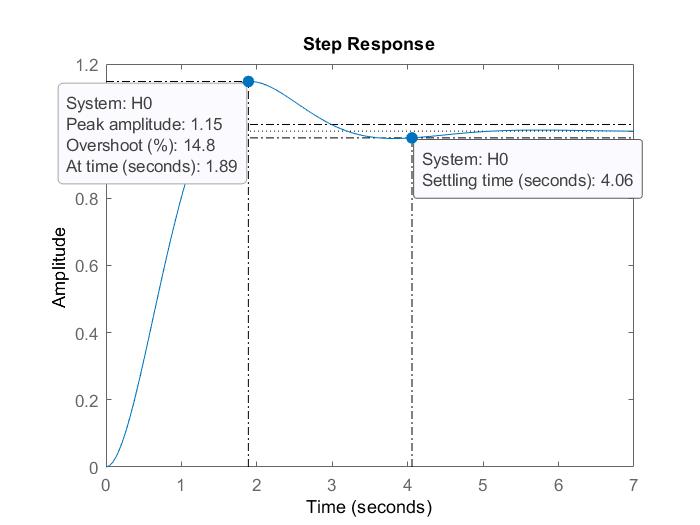
*1.852*

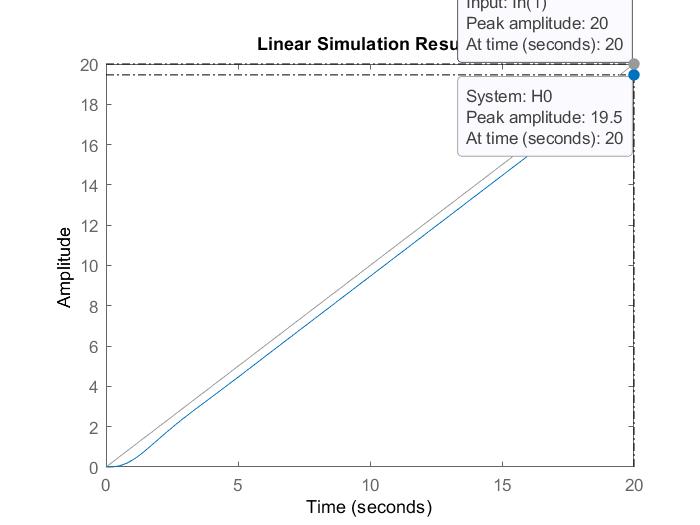
*Hd = ----------- open loop tf HP(s) = Vr = 0.5291*

*0.5 s^2 + s*

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*Add graphical proofs of performance, step and ramp responses.*

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b) 

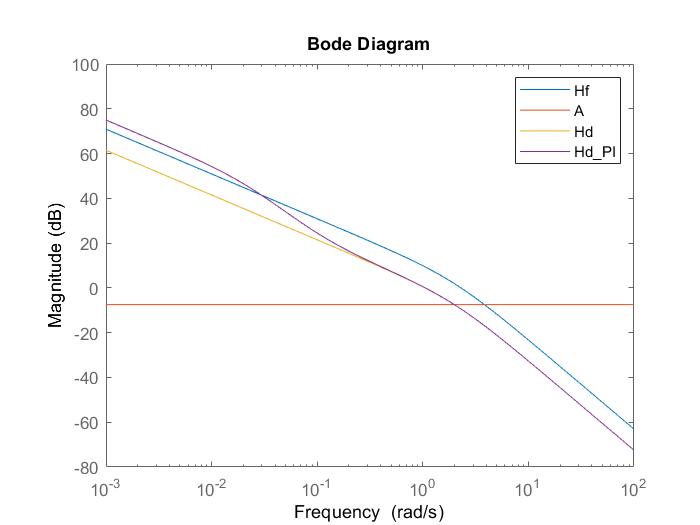
*Add the obtained P controller here Vr = 0.3387*

*Add the obtained PI controller here 83.35 s + 8.752*

*HPI = ------------------------*

*22.5 s^3 + 45.51 s^2 + s*

*Add Bode diagrams for both Hf and the open loop system with the PI controller (on the same plot).*

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*Add graphical proofs of performance, step and ramp responses.*

O imagine care conține masă

Descriere generată automat

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Descriere generată automat