

$\omega_c = 0.35 \text{ rad/sec}$

$\omega_c = 2 \text{ rad/sec}$

0.35 sec

Transport Delay

feel system

$$\frac{\text{num}(s)}{s^2 + 2 \cdot 0.7 \cdot 25s + 25^2}$$

q_c

G_c_q

$$\frac{\text{num}(s)}{\text{den}(s)}$$

de_c

actuator

$$\frac{\text{num}(s)}{s^2 + 2 \cdot 0.7 \cdot 30s + 30^2}$$

de

$$\frac{\text{num}(s)}{\text{den}(s)}$$

$$\frac{1}{s+1}$$

engine model

G_c_u

u_g

$$\begin{aligned} \dot{x}' &= Ax + Bu \\ y &= Cx + Du \end{aligned}$$

A-7E

dt

u

h

θ

$$\frac{s}{.01s+1}$$

approximate derivative

\dot{q}

slope = 1, start time = 0

slope = -1, start time = 10

Sine Wave

Switch

set "threshold" = 10

Clock

t

$$\frac{\text{num}(s)}{.01s+1}$$

$\dot{q}_g = (-1/U_0) \cdot (\dot{w}_g) - \dot{\theta}$

\dot{q}_g

w_g

t

θ

h