//Nichols chart

--> s=poly(0,'s');

-->Plant=syslin('c',0.00492\*(s + 754)^2 / s\*(0.000266\*s^2 + 0.02305\*s +1)\*(s + 6283.19) + 0.00492\*(s + 754)^2 );

--> kp= 45;kd=45;

--> PD = kp + kd\*s ;

--> clf();

--> black([Plant;PD],0.01,1000,["Plant";"Plant and PD corrector"]);

--> ax=gca();Leg=ax.children(1);

--> Leg.legend\_location="in\_lower\_right";

--> nicholschart(colors=color('light gray')\*[1 1]);