
620 HW 3

Problem 3.6 Consider the compression of air by means of a) shock compression b) isentropic compression Start from same (pressure)₁ and (dynamic viscosity)₁

```
gamma = 1.4;

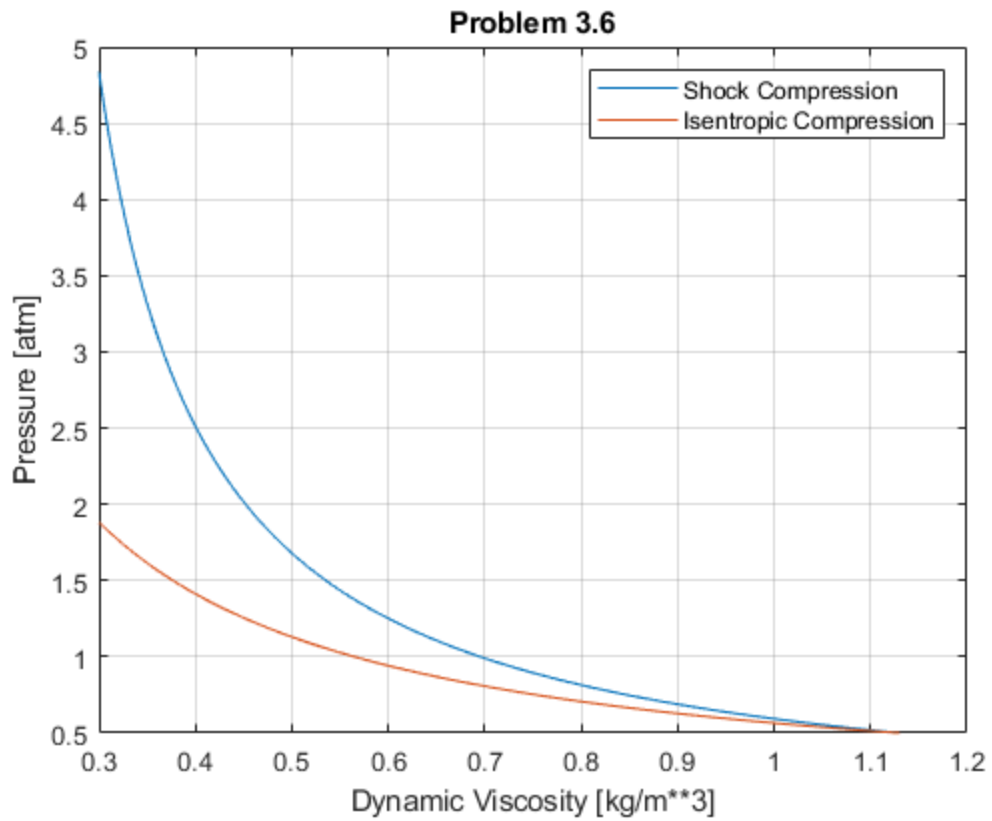
% choosing my own P1
P1 = 0.5; % atm
% have nu be a vector
nu = linspace(1.13, 0.3, 1000);

P2_sh(1) = P1;
P2_isen(1) = P1;

for i=2:length(nu)
    % For shock compression
    P2_sh(i) = P1*((2.4/0.4)*nu(1)/nu(i) - 1) / ((2.4/0.4) - nu(1)/nu(i));

    % For an isentropic compression, P*nu is constant
    P2_isen(i) = P1*nu(1)/nu(i);
end

plot(nu, P2_sh)
hold on
plot(nu, P2_isen)
legend('Shock Compression','Isentropic Compression')
grid on
ylabel('Pressure [atm]')
xlabel('Dynamic Viscosity [kg/m**3]')
title('Problem 3.6')
```



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