Quick test Reynolds number in OsCaR

A = 0.03\*0.21; % cross sectional area in m^2

P = (2\*0.03)+(2\*0.21); % wetted perimeter in m

Dh = (4\*A)/P; % hydraulic diamter (m)

u = 0:0.01:1; % flow rate in m/s

v = 1e-6; % fluid viscosity (m^2/s)

Re = (u.\*Dh)./v;

figure;

plot(u,Re,'-k')

hold on

plot([0 1],[4000 4000],'--k')

text(0.5,5500,'onset of turbulence')

xlabel('u (m s^{-1})')

ylabel('Re (-)')