# Okwong David Victor (17/EnG06/063)

Assignment

1. Given µ= 0.9, , , ,
   1. From continuity equation

q = A.u

where

Because Re < 2000, the flow is laminar

1. Given p=0.8Ns/m^2, G = 0.85, ,

, D = 65mm = 0.065m , L = 95m

Rate of flow, Q = A.u

Where

* 1. Centre line velocity =

But,

.474=6.948m/s

* 1. nal drag, fD

Where

* 1. Power required to maintain flow

3kW

* 1. ocity gradient at the pipe wall
  2. Velocity and shear stress 60mm from wall

ut y=R-r and y=60mm=0.06m

628m/s

ear stress can be found as;