Chapter6_example5

The volume flow rate of water (at 20°C) is 1.97e-05 cu.m/s

mass flow rate through the tube is 0.0197 kg/s

The power required in 2.076e+04 W/sq.m = 4945 W

The average velocity at 50°C is 3.97e-02 m/s

The Reynolds Number for the flow is 1711

The inverse Graetz number at tube end, based on 50°C conditions is 0.0188

The local convection coefficient is 174.7 W/(sq.m.K)

The outlet wall temperature is 198 °C