

Chapter2_example11

Solution to part (a)

The value of R_{2c}/R_1 is 1.31

The value of $L_c^{3/2}(hc/kA_p)^{1/2}$ is 0.26

The efficiency of the fin from figure 2.38 is 0.93

The heat transferred by the nine fins is 951.8 w

The heat transferred by exposed surface of the cylinder is 211 W

The total heat transferred from the cylinder is 1163 W

Solution to part (b)

The Heat transferred without fins is 262 W

Solution to part (c)

The fin effectiveness is 4.44