Technical environmental system – Weekly submission I
Nicholas Beloso – 10673057

A short summary about the conductive heat transfer and solving the same exercise with L= 0.4 m, A= 20 m2, DeltaT= 25, and k=0.78 W/m K using both simple method and using the resistance concept

- **Conductive heat transfer:**

The conductive hear transfer is the capacity of transfer internal energy from one body to another. This energy is generated by the microscopically atomic collisions and is transferred from the hotter to a colder body. There are different criteria that may influence the conductive heat transfer such as type of material, thickness, area and conduciveness, for example.

I) Simple method

L=0,4m
A= 20m^2
ΔT= 25
k= 0,78W/mK (= 0,78W/mC)

Q = k.A. ΔT/L
Q = 0,78.20. 25 / 0,4
Q = 975 W

II) Resistance concept

Rwall= L/Ka
Rwall= 0,4/0,78.20
Rwall= 0,02564 C/W

Q= ΔT/Rwall
Q= 25/0,02564
Q= 975W