(ii) $h_5 = h_4 = 84.9\ KJ/kg$ Dryness Fraction

$h_5 = h_f + x_5 (h_g - h_f)$

$84.9 = 45.4 + x_5 (191.7 - 45.4)$

$x_5 = \frac{84.9 - 45.4}{191.7 - 45.4} = \frac{39.5}{146.3} = 0.27$

dry Fraction $(x) = \underline{0.27}$

(iii) The Power

Energy Out Put $= h_2 - h_1$

$= 210.544 - 191.7$

$= 18.854\ KJ/kg$

$Power = \frac{955.034\ kg/hr \times 18.854\ KJ/kg}{0.74}$

$Power = \frac{955.034\ kg/(3600s) \times 18.854\ KJ/kg}{0.74}$

$Power = 6.759\ KJ/s$ $Power = \underline{6.76\ KW}$

(iv) Ratio

Heat transferred from condenser : Power $\Rightarrow$ $120\ MJ/hr : 6.76\ KW$

$\Rightarrow \frac{120 \times 10^6\ J}{3600\ s} : 6.76 \times 10^3 \Rightarrow 33\,333.33 : 6760$

$4.93 : 1 \Rightarrow 5 : 1$