Condenser extraction

A condenser has a mass flow of 5 kg/s. It cools an saturated vapor at a pressure of 20 kPa. What is the rate of heat extraction from the condenser?

Answer: 11788 kW.

Explanation: @P = 20 kPa $\rightarrow \mathrm{h}_{fg} = 2357.7 \frac{kJ}{kg}$

$$\dot{Q}_{out} = h_{fg} \cdot \dot{m} = 2357.7 \cdot 5 = 11788 \frac{kJ}{s}$$