and from same table the internal energies are $\left(\frac{kJ}{kg}\right)$

$$u_1 = 235.09 \frac{kJ}{kg} \qquad u_2 = 252.4 \frac{kJ}{kg}$$

$$\Delta u_{12} = u_2 - u_1 = (252.4 - 235.09)\frac{kJ}{kg} = 17.31 \frac{kJ}{kg}$$

therefore

$$\Delta q_{12} = \Delta u_{12} + \Delta w_{12}$$

$$= \left(17.31 \frac{kJ}{kg}\right) + \left(2.24 \frac{kJ}{kg}\right)$$

$$= 19.55 \frac{kJ}{kg}$$

$$w_{12} = 2.24 \frac{kJ}{kg}$$

$$q_{12} = 19.6 \frac{kJ}{kg}$$