

$$\Delta u = {}_1q_2 - {}_1w_2$$

$$m(u_2 - u_1) = {}_1q_2 - w_{pw}$$

$$\Rightarrow {}_1q_2 = m(u_2 - u_1) + w_{pw}$$

$$= 6.04 (216.32 - 273.54) + (-10)$$

$$\underline{\underline{{}_1q_2 = -355.6 \text{ kJ}}}$$

