Chapter 6 Question #3

In a quasi-static steady flow process (neglecting kinetic and potential energy), the magnitude of the total work done by the system is equal to:

1) the change in enthalpy

2) the change in internal energy

3) none of the above

4) I don't know

LO#4

Chapter 6 Question 3 Answer:

(3) None of the above

For a quasi-static, steady flow process (neglecting changes in kinetic and potential energy) the work is equal to $q + u_1 - u_2$, which you arrive at by crossing off the appropriate terms in the equation shown below. This was not one of the choices, so the answer is "none of the above".

$$q_{1-2} - w_{1-2} = u_2 - u_1 + \frac{c_2^2}{2} - \frac{c_1^2}{2}$$