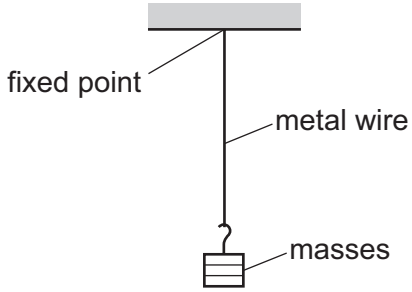
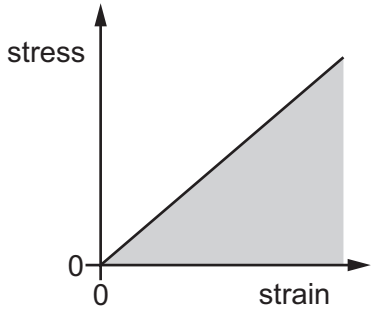
22 A length of metal wire is attached to a fixed point and hangs vertically. Masses are then suspended from the wire. Assume that the cross-sectional area of the wire remains constant.



A stress–strain graph for the wire is plotted, as shown.



What is represented by the shaded area under the graph?

A strain energy in the wire

B $\dfrac{\text{strain energy in the wire}}{\text{cross-sectional area of the wire}}$

C $\dfrac{\text{strain energy in the wire}}{\text{original length of the wire}}$

D $\dfrac{\text{strain energy in the wire}}{\text{original volume of the wire}}$