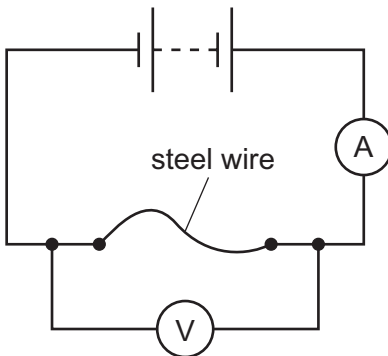**34** A steel wire with a length of 2.20 m is connected to a battery as shown.

The reading on the voltmeter is 1.50 V and the reading on the ammeter is 4.90 A.

The resistivity of steel is $6.90 \times 10^{-7}\,\Omega\,\text{m}$.

What is the diameter of the steel wire?

A $1.76 \times 10^{-4}\,\text{m}$ **B** $3.52 \times 10^{-4}\,\text{m}$ **C** $1.26 \times 10^{-3}\,\text{m}$ **D** $2.51 \times 10^{-3}\,\text{m}$