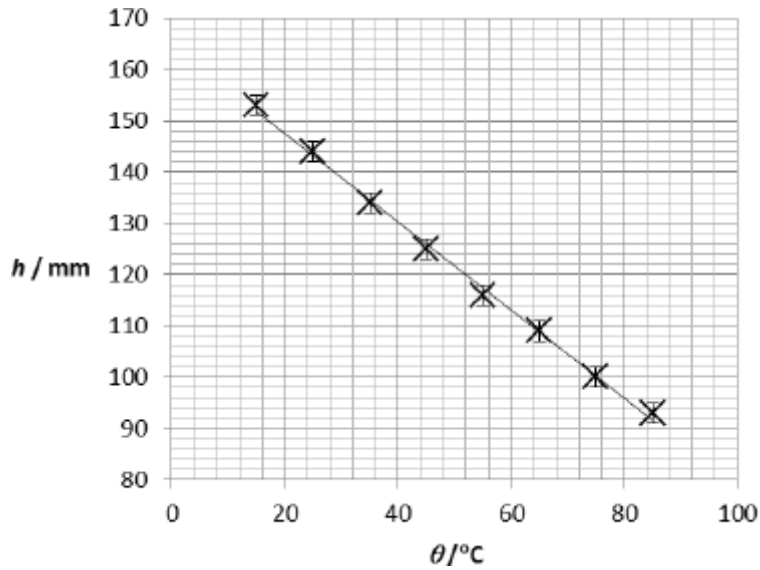


Q2.

- (a) Straight line of best fit passing through all error bars ✓



Look for reasonable distribution of points on either side

- (b) $h_0 = 165 \pm 2 \text{ mm}$ ✓

- (c) Clear attempt to determine gradient ✓

Correct readoffs (within $\frac{1}{2}$ square) for points **on line** more than 6 cm apart and correct substitution into gradient equation ✓

$h_0 k$ gradient = (-) 0.862 mm K^{-1} and negative sign quoted ✓

*Condone negative sign
Accept range -0.95 to -0.85*

- (d) $k = \frac{\text{candidate value for } h_0 k}{\text{candidate value for } h_0}$

$= 5.2 \times 10^{-3}$ ✓

Allow ecf from candidate values

K^{-1} ✓

Accept range 0.0055 to 0.0049

- (e) for $h = 8000 \text{ mm}$, $d^1 = \frac{8000}{14.5}$ ✓

$d = 1.8 \times 10^{-3} \text{ mm}$ ✓

(f) Little confidence in this answer because

One of

It is too far to take extrapolation ✓

OR

This is a very small diameter ✓

1

[10]