



北京航空航天大学 实验报告

实验名称: experimental data

学号:
姓名:
日期:
评分:

W. Data collection.

object Time 1 2 3 4 5 Average.

$m_p(g)$ 1141.14 1141.15 1141.16 1141.16 1141.16 1141.15

$d_p(mm)$ 130.00 129.98 129.97 129.90 130.00 129.97

$h_p(mm)$ 9.98 9.97 9.98 9.96 9.98 9.98

$d_3(mm)$ 129.82 129.82 129.84 129.88 129.90 129.73

$h_3(mm)$ 8.24 8.20 8.24 8.24 8.24 8.24

pin 12-5 pin

$\Delta t/min$

$\theta_1/^\circ C$ 75.0 74.9 75.0 74.9 75.0 75.1 75.0 74.9 75.0

$\theta_2/^\circ C$ 46.4 46.6 46.8 46.9 47.0 47.1 47.3 47.3 47.5

$\theta_3/^\circ C$ 75.0 75.0 75.0 75.1 75.1 75.1 75.3 75.2 75.0

$\theta_4/^\circ C$ 47.5 47.5 47.6 47.6 47.7 47.8 47.9 48.0 48.0

$\theta_5/^\circ C$ 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9

$\theta_6/^\circ C$ 48.0 48.1 48.1 48.1 48.1 48.1 48.1 48.2 48.2

$\theta_7/^\circ C$ 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9

$\theta_8/^\circ C$ 48.2 48.3 48.3 48.3 48.3 48.3 48.3 48.3 48.3

$\theta_1/^\circ\text{C}$	$\Delta t = 15\text{s}$								
$\theta_2/^\circ\text{C}$	¹⁵ 63.3	³⁰ 62.8	⁴⁵ 62.2	⁶⁰ 61.2	⁷⁵ 60.3	⁹⁰ 59.5	¹⁰⁵ 58.7	¹²⁰ 57.9	
$\theta_2/^\circ\text{C}$	¹³⁵ 57.1	¹⁵⁰ 56.3	¹⁶⁵ 55.5	¹⁸⁰ 54.8	¹⁹⁵ 54.1	²¹⁰ 53.3	²²⁵ 52.7	²⁴⁰ 52.1	
$\theta_2/^\circ\text{C}$	²⁵⁵ 51.5	²⁷⁰ 50.8	²⁸⁵ 50.2	³⁰⁰ 49.6	³¹⁵ 49.0	³³⁰ 48.4	³⁴⁵ 47.9	³⁶⁰ 47.3	
$\theta_2/^\circ\text{C}$	³⁷⁵ 46.8	³⁹⁰ 46.3	⁴⁰⁵ 45.8						

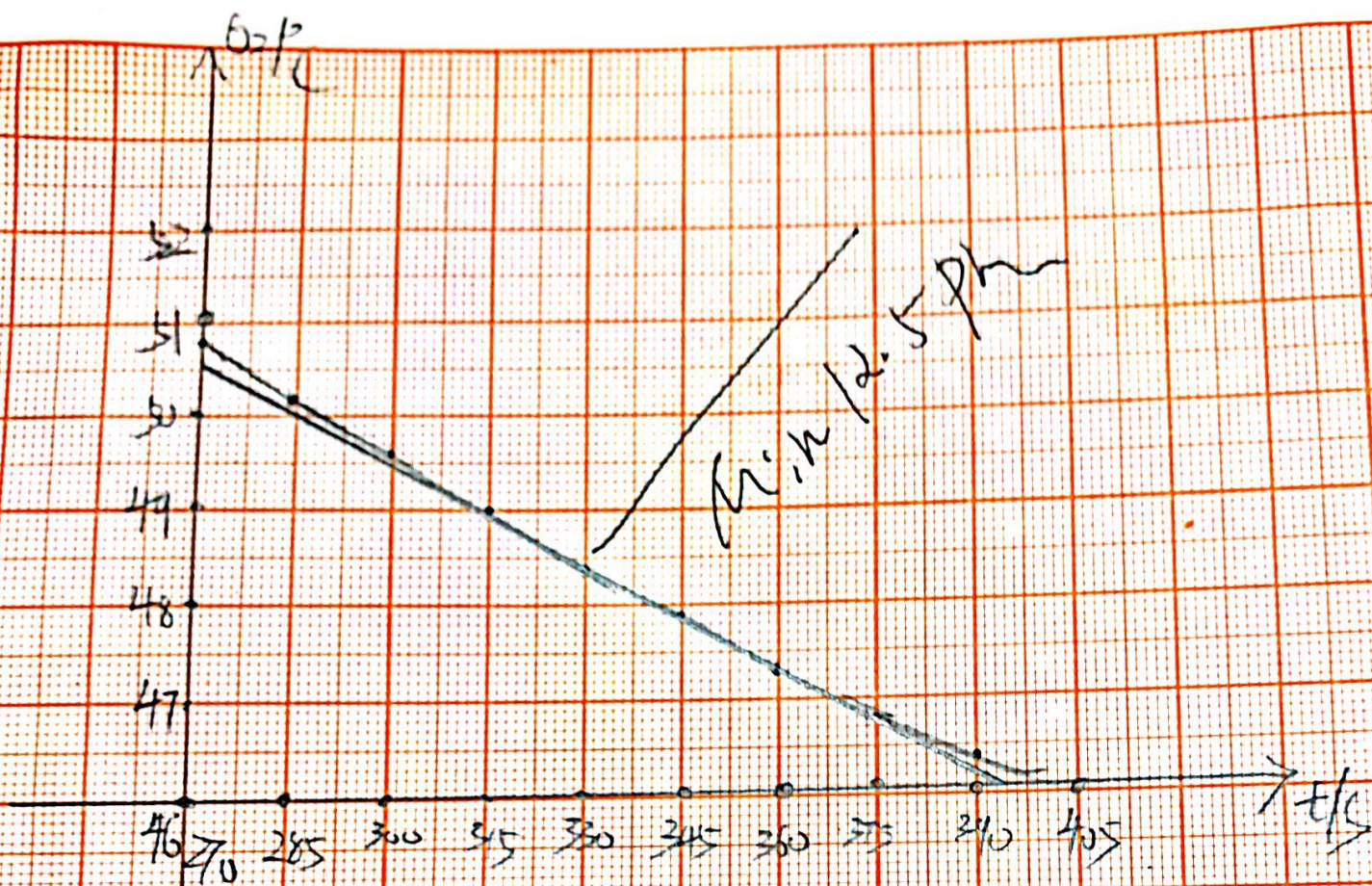
$$c = 0.389 \times 10^3 \text{ J/(kg} \cdot ^\circ\text{C)} \quad \frac{d\theta_2}{dt} = 0.0038095 \text{ } ^\circ\text{C/s}$$

$$k = m_p c \frac{\delta_0}{\delta t} \frac{d\theta_1 + h_p}{d\theta_2 + h_p} \frac{h_0}{\theta_1 - \theta_2} \frac{z}{\pi d_0^2} = (-0.22369 \text{ W/(m} \cdot \text{K)})$$

$$\left| \frac{d\theta_2}{dt} \right| = 0.0038095 \text{ } ^\circ\text{C/s}$$

$$k = m_p c \frac{\delta_0}{\delta t} \frac{d\theta_1 + h_p}{d\theta_2 + h_p} \frac{h_0}{\theta_1 - \theta_2} \frac{z}{\pi d_0^2} = 0.22369 \text{ W/(m} \cdot \text{K)}$$

Min 12.5 pm



$(375, 46.8)$
 $(270, 50.8)$