作业十四

Noflowerzzk

20205.6.1

9 - 2

$$\Delta\overline{\varepsilon_k} = \frac{W}{(\gamma-1)N_A}$$

9 - 3

(1) 氦气 2.4g，氢气 2.8g

(2) 吸热 1600J

9 - 4

(1) 250J

(2) 放热 292J

9 - 5

做功 $a^2\left(\frac{1}{V_1}-\frac{1}{v_2}\right)$, $T_1 - T_2 = \frac{a^2}{\nu R}$

9 - 6

(1) 先等容，后等压过程。

(2) 总吸热 4970J

9 - 7

吸热 1.5×10^6J

9 - 8

$$\Delta T = \frac{mu^2}{3k_B}$$

9 - 9

做功为 $\frac{1}{2}(p_1+p_2)(V_2-V_1)$, 吸热为 $\frac{1}{2}(p_1V_1-p_2V_1+6p_2V_2-6p_1V_1)$

9 - 12

(1) $T = \frac{A_2}{A_1}(T_1-T_2)-T_2$

(2) 效率为 $1-\frac{A_1T_2}{A_2(T_1-T_2)-T_2}$

9 - 13

(1) $n=\log_3^2$, $C_{n,m}=51.6$

(2) $\eta = 6.98$

9 - 15

ab：5 kJ, bc：3 kJ, ca：$2\ln 2$kJ，$\eta = 12.3\%$

9 - 17

吸热 140J