$$p = \frac{F_\perp}{S}$$

$$dp_\uparrow = -\rho \cdot g \cdot dz$$

$$p_\uparrow(z) = p_0 - \rho g z$$

$$p_\downarrow(z) = \rho \cdot g \cdot h$$

$$\frac{\rho}{\rho_0} = \frac{p}{p_0}$$

$$p(z) = p_0 \cdot e^{-\frac{\rho_0 \cdot g}{p_0} \cdot z}$$

$$\frac{\rho_0 \cdot g}{p_0} = \frac{1}{\lambda}$$

$$\frac{F_2}{F_1} = \frac{S_2}{S_1}$$

$$F_V = \rho_{tekočine} \cdot g \cdot V$$

$$F_{POV} = 2a\gamma$$

$$\frac{dW_{POV}}{dS} = \gamma + \frac{dQ}{dS}$$

$$W_{POV} = \gamma \cdot S$$

$$\Delta p_{kapljica} = \frac{2\gamma}{r}$$

$$\Delta p_{mehurček} = \frac{4\gamma}{r}$$

$$h_{v\,kapilari}(\alpha = 0^\circ) = \frac{2\gamma}{\rho_{tek} g r_{kap}}$$

$$\Phi_m = \frac{dm}{dt} = \rho \cdot S \cdot v = \rho \cdot \Phi_V$$

$$\rho_1 \cdot S_1 \cdot v_1 = \rho_2 \cdot S_2 \cdot v_2$$

$$\Phi_V = \frac{dV}{dt} = S \cdot v$$

$$\Phi_{V1} = \Phi_{V2}$$

$$\frac{1}{2}\rho v_1^2 + \rho g z_1 + p_1 = \frac{1}{2}\rho v_2^2 + \rho g z_2 + p_2 = konst$$

$$\frac{F}{S} = \frac{v}{d} \cdot \eta$$

$$Re = \frac{r_{kroglice} \cdot \rho_{tek.} \cdot v_{kroglice}}{\eta_{tek.}}$$

$$F_u = \frac{1}{2} C_u \rho S v^2 \quad (Re > 10^3)$$

$$F_u = 6\pi r_{kroglice} \eta v \quad (Re < 1)$$

$$pV = \frac{m}{M} RT$$

$$\frac{pV}{T} = N \cdot k_B$$

$$k_B = 1{,}38 \cdot 10^{-23} \frac{J}{K}$$

$$R = N_A \cdot k_B = 8{,}314 \frac{J}{K}$$

$$N_A = 6{,}023 \cdot 10^{26}$$

$$\bar{F}_{1\,mol.} = \frac{2 m_0 v_x}{\Delta t}$$

$$p = \rho \langle v_x^2 \rangle = \frac{1}{3} \rho \langle v^2 \rangle$$

$$\frac{1}{2} m_0 \langle v^2 \rangle = \frac{3}{2} k_B T$$

$$\frac{1}{2} m_0 \langle v_x^2 \rangle = \frac{1}{2} k_B T$$

$$\langle W_k \rangle_{TRANS\,1\text{-at.mol.}} = \frac{3}{2} k_B T$$

$$\langle W_k \rangle_{ROT:\,1\text{-at.mol.}} = 0$$

$$\langle W_k \rangle_{ROT:\,2\text{-at.mol.}} = \frac{2}{2} k_B T$$

$$\langle W_k \rangle_{ROT:\,3\text{-at.mol.}} = \frac{3}{2} k_B T$$

$$W_n = \langle W_k \rangle_{1\text{-at.plin}} = \frac{3}{2} \frac{m}{M} RT$$

$$c_c(1\text{-at.plin}) = \frac{3}{2} \frac{R}{M}$$

$$c_c(2\text{-at.plin}) = \frac{5}{2} \frac{R}{M}$$

$$c_c(več\text{-at.plin}) = \frac{6}{2} \frac{R}{M}$$

$$\Delta W_n = A + Q$$

$$A = -\int_{V'}^{V} p\,dV$$

$$A_{KR} = -\oint p\,dV \quad (\circlearrowleft \Rightarrow A < 0)$$

$$\Delta W_n = Q = c_p m \cdot \Delta T = c_v m \cdot \Delta T$$

$$c_p = c_v + \frac{R}{M} \quad c_p > c_v$$

$$c_v = \frac{1}{\kappa - 1} \frac{R}{M}$$

$$c_p = \frac{\kappa}{\kappa - 1} \frac{R}{M}$$

$$\frac{p_1 V_1}{T_1} = \frac{p_2 V_2}{T_2}$$

IZOTERMNA

$T = konst$

$\Delta W_n = 0$

$$A = -p_1 V_1 \cdot \ln \frac{V_2}{V_1}$$

$Q = -A$

IZOBARNA

$p = konst$

$\Delta W_n = c_v m \cdot \Delta T$

$A = -p \cdot \Delta V$

$Q = c_p m \cdot \Delta T$

IZOHORNA

$V = konst$

$\Delta W_n = c_v m \cdot \Delta T$

$A = 0$

$Q = c_v m \cdot \Delta T$

ADIABATNA (IZENTROPNA)

$Q = 0$

$$\Delta W_n = A = -\int_{V'}^{V} p \, dV$$

$p V^{\kappa} = p_1 V_1^{\kappa}$

$T V^{\kappa - 1} = T_1 V_1^{\kappa - 1}$

$$\frac{T^{\kappa}}{p^{\kappa - 1}} = \frac{T_1^{\kappa}}{p_1^{\kappa - 1}}$$

$$P = \frac{Q}{t} = \frac{dQ(t)}{dt}$$

$$P = -\lambda S \frac{\Delta T}{\Delta x}$$

$$j = \frac{P}{S} = -\lambda \frac{\Delta T}{\Delta x}$$

$$\eta = \frac{|A_{ODV}|}{Q_{DOV}} = 1 - \frac{|Q_{ODV}|}{Q_{DOV}}$$

$$\eta_{Carnotov KS} = 1 - \frac{T_{NIZ}}{T_{VIS}}$$

$Q_t = m \cdot q_t$

$Q_i = m \cdot q_i$

$$Q_s = m \cdot q_s = \lambda S \frac{\Delta T}{\Delta x} t$$

$U = K \cdot \Delta T \quad K = 41 \mu V/K$

$$\frac{V_{voda}}{V_{led}} = \frac{\rho_{voda}}{\rho_{led}}$$