

$$a) E_x = \frac{g \cdot l \cdot I}{\pi \frac{d^2}{4}} = \frac{1,05 \Omega \cdot 0,83 \text{ kVA} \cdot 10^3}{\pi \cdot \frac{(0,32)^2}{4}} = 1'040 \text{ V } \frac{1}{2}$$

$$I = 0 \text{ A } \frac{1}{2}$$

$$E_x - E'_x = I \cdot R_n = \frac{E_x \cdot R_n}{R_n + R_z} = \frac{1'040 \text{ V} \cdot 5'5 \text{ k}\Omega}{28 \text{ k}\Omega} = 0'204 \text{ V } \frac{1}{2}$$

$$I' = \frac{E_x}{R_n + R_z} = \frac{1'040 \text{ V}}{28 \text{ k}\Omega} = 37 \mu\text{A } \frac{1}{2}$$

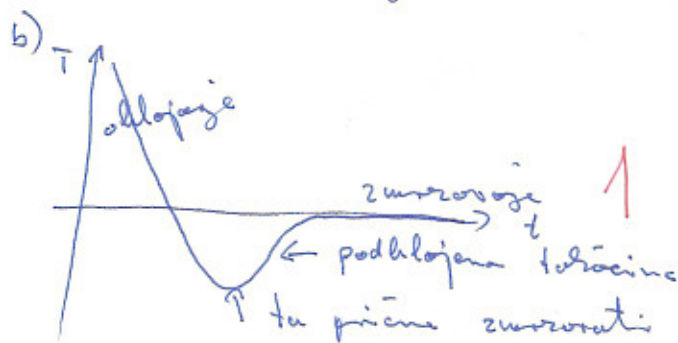
b) 2 raztopini ionov
elektrolitski celice
2 elektodi (2 k. an.
kavnina) $\frac{1}{2}$

$$a) \eta = \eta_0 \cdot \frac{g t}{\rho_0 t_0} = 1'002 \text{ cP} \cdot \frac{1'113 \text{ g cm}^{-3} \cdot 186'6}{0'998 \text{ g cm}^{-3} \cdot 123'8} = 1'684 \text{ cP } \frac{1}{2}$$

$$\frac{d\eta}{\eta} = \frac{d\eta_0}{\eta_0} + \frac{d\rho}{\rho} + \frac{d\rho_0}{\rho_0} + \frac{dt}{t} + \frac{dt_0}{t_0} = 0'001 + 0'002 + 0'002 + 0'01 + \frac{1'2}{186'6} = 0'02 \frac{1}{2}$$

$$\Delta\eta = 0'04$$

$$\eta = (1'68 \pm 0'03) \text{ cP} = 1'68 (1 \pm 0'02) \text{ cP } \frac{1}{2}$$



$$a) K = \frac{C_{\text{H}_2\text{O}}}{C_{\text{org}}} = 0'02$$

$$\frac{n_{\text{H}_2\text{O}} \cdot V_{\text{org}}}{n_{\text{H}_2\text{O}} \cdot V_{\text{org}}} = 0'02$$

$$n_{\text{H}_2\text{O}} = x$$

$$n_{\text{org}} = 0'2 \cdot 0'25 \text{ mol} - x = 0'05 - x$$

$$\frac{x \cdot 250 \text{ g}}{1000 \text{ g} (0'05 - x)} = 0'02$$

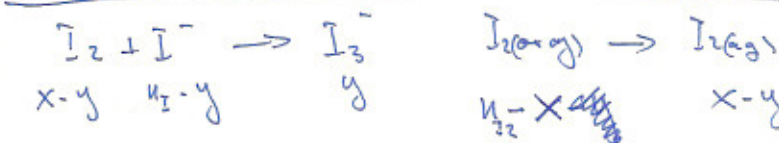
$$\frac{x}{0'05 - x} = 0'08$$

$$x = 0'004 - 0'08x$$

$$1'08x = 0'004$$

$$x = 0'0037$$

$$\eta = \frac{0'0037}{0'05} = 7'4 \frac{1}{2}$$



$$x - y \quad \frac{1}{2} \cdot y \quad y$$

$$n_{\text{I}_2} - x \quad x - y$$

$$\frac{y}{(x-y)(\frac{1}{2}y)} = 700 \frac{1}{4}$$

$$\frac{x-y}{n_{\text{I}_2} - x} = 0'02 \frac{1}{4}$$

$$x - y = 0'02(0'05 - x)$$

$$-y = 0'001 - 0'02x - x$$

$$y = 1'02x - 0'001$$

$$\frac{1'02x - 0'001}{(0'001 - 0'02x)(0'025 - 1'02x)} = 700$$

$$1'02x - 0'001 = 14,28x^2 - 1'078x + 0'0182$$

$$-14,28x^2 + 2'078x - 0'0192 = 0 \frac{1}{4}$$

$$x = 0'00981$$

$$y = 0'00900 \frac{1}{4}$$

$$x = 0'13711$$

$$y = 0'13886$$

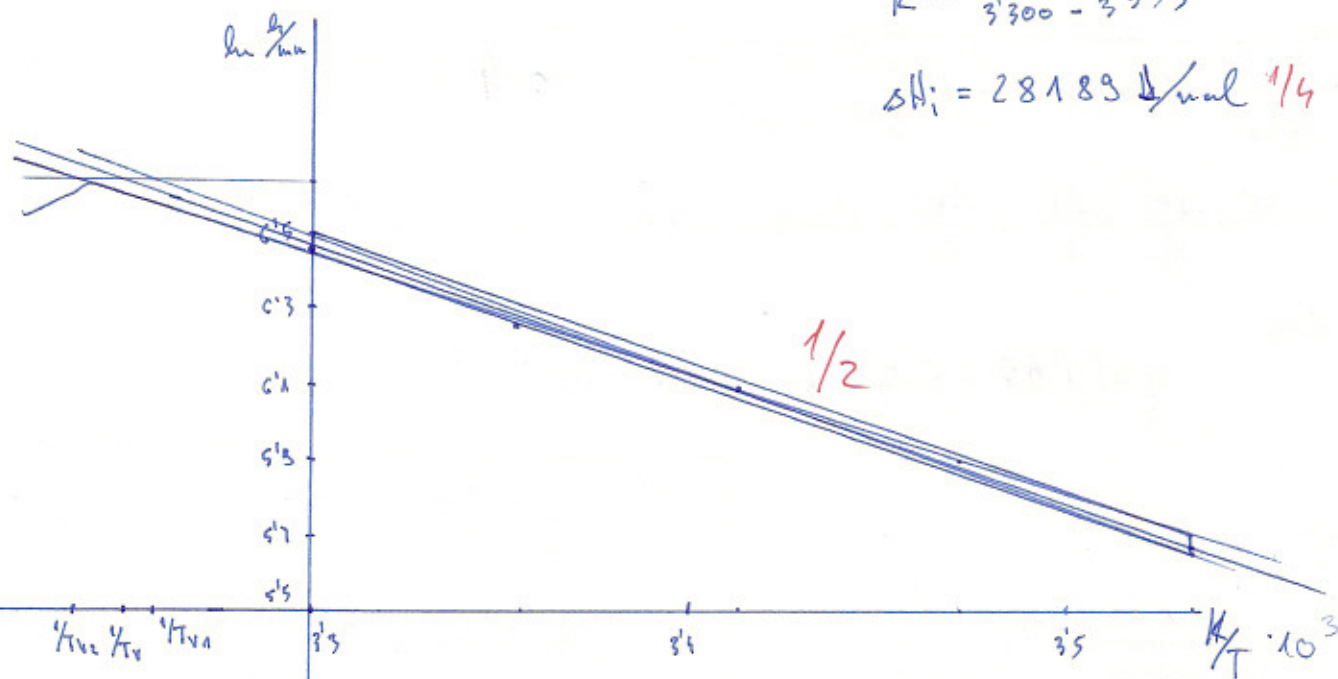
$$\eta = \frac{x}{n_{\text{I}_2}} = \frac{0'00981}{0'05} = 19'6\% \frac{1}{2}$$

b) ocetna kislina v kantarilu je v ravnovesju
iz ocetne kislina v vodi fazi, ki vsledenje
kvaru, kar ta kislina reagira z kvaru in
nastane ocetati, mora nova ocetna kislina
priti iz kantarila v vodno fazo, da je zopet
v ravnovesju, z dodatkom novokvar lahko
vse ocetne kislino spravimo iz kantarila
ker v vodni fazi vsa zreagira $\frac{1}{2}$

② $\ln \frac{h_i}{h_o}$	5'67	5'89	6'09	6'25	6'46
$\frac{h_i}{T} \cdot 10^3$	3'533	3'472	3'413	3'356	3'300

$$k = \frac{(6'46 - 5'67) \cdot 10^3}{3'300 - 3'533} = 3390 \text{ K}$$

$$\Delta H_i = 28189 \frac{\text{J}}{\text{mol}} \quad 1/4$$



$$\ln p_o = 6'63$$

$$\frac{1}{T_v} = 3'25 \cdot 10^{-3} \text{ K}^{-1}$$

$$T_v = 308 \text{ K} = 35^\circ \text{C} \quad 1/4$$

$$\frac{1}{T_{v1}} = 3'259 \cdot 10^{-3} \text{ K}^{-1}$$

$$T_{v1} = 306'8 \text{ K}$$

$$\frac{1}{T_{v2}} = 3'237 \cdot 10^{-3} \text{ K}^{-1}$$

$$T_{v2} = 308'3 \text{ K}$$

$$\Delta T_v = 1$$

$$T_v = (35 \pm 1)^\circ \text{C} \quad 1/4$$

$$k_1 = \frac{(6'45 - 5'65) \cdot 10^3}{3'3 - 3'533} = 3605 \text{ K}$$

$$k_2 = \frac{(6'44 - 5'7) \cdot 10^3}{3'3 - 3'533} = 3175 \text{ K}$$

$$\Delta H_{i1} = 29972 \frac{\text{J}}{\text{mol}}$$

$$\Delta H_{i2} = 26397 \frac{\text{J}}{\text{mol}}$$

$$\Delta(\Delta H_i) = 2 \frac{\text{J}}{\text{mol}} \quad 1/4$$

$$\Delta H_i = (28 \pm 2) \frac{\text{J}}{\text{mol}} = 28(1 \pm 0'06) \frac{\text{J}}{\text{mol}} \quad 1/2$$

b) temperature in narrow error
1/2