NO.
DATE

$\boxed{U4-3}$ Dopočítaná úloha

10 rámů $700 \times 700 \times 25$ mm konst. rychlost

$\varphi_s = 0.075$ $\tau_F = 3$ hod $+ 20$ min $q_F^2 + q_D q_F - K_F \tau_F = 0$

$\tau_p = 54$ min

$K_F = 8.125 \cdot 10^{-7}$ m²/s

$q_D = 3.125 \cdot 10^{-5}$ m.

Kalolis

$V_F = ?$ $V_s = ?$, $V_p = ?$, $\varphi_k = ?$

Filtrace: $q_F^2 + 3.125 \cdot 10^{-5} \cdot q_F - 8.125 \cdot 10^{-7} \cdot (12600) = 0$

$D = b^2 - 4ac = \cancel{1.6748}$ 0.19748

$q_F = \dfrac{-3.125 \cdot 10^{-5} + \cancel{4.97748}\ 0.19748}{2} = \cancel{0.9874}\ 0.09872$ m

Promývání: $4 q_p \cdot (q_F + q_D) - k_p \cdot \tau_p = 0$ $k_p = k_F$

$q_p = \dfrac{8.125 \cdot 10^{-7} \cdot 3240}{4 \cdot (0.9874 + 3.125 \cdot 10^{-5})} = 0.006663$ m.

$S_f = 2 \cdot 10 \cdot 0.7 \cdot 0.7 = 9.8$ m²

$V_f = 9.8 \cdot 0.09872 = \underline{\underline{0.967}}$ m³ filtrát

$V_p = 9.8 \cdot 0.006663 = \underline{\underline{0.065}}$ m³ promývací voda

$V_s = V_f + V_k$ $V_k = 10 \cdot 0.7 \cdot 0.7 \cdot 0.025 = 0.1225$ m³

$\varphi_s V_s = 0 \cdot V_f + \varphi_k V_k$

$V_s = 0.967 + 0.1225 = \underline{\underline{1.0895}}$ m³ suspenze.

$\varphi_k = \dfrac{1.0895 \cdot 0.075}{0.1225} = 0.667 \Rightarrow \varphi_k = 66.7\%$ obj. $\Rightarrow$ vlhkost koláče $1 - \varphi_k = 33,3\%$