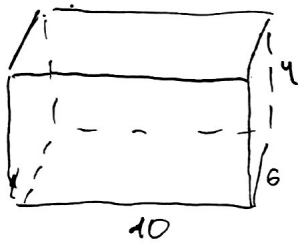
Барсуков Н.М
Вариант 1
ИУ7-71Б

БЖД РК2

№1



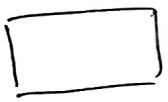
$N = \frac{V}{W}$ $\quad B = 22{,}6 \cdot 15$

$V = \frac{B}{\rho_B - \rho_0}$ $\quad \rho_0 = 0{,}25$ л/м3

$V = \frac{339}{1-0{,}35} = \frac{339}{0{,}65} \approx 521$

$N = \frac{521}{10 \cdot 6 \cdot 4} \approx$ (2,17 раза в час)

№2



$q_{пдк} = 200$ мг/м3 $\quad q_{пр} = 0$ (воздух при входе чистый)

$v_в = 0{,}2$ м/с

$m_{вр} - ?$

$L_{уд} = S \cdot v = 0{,}5 \cdot 0{,}2 = 0{,}1$ м3/с

$L = m_{вр} / (q_{пдк} - q_{пр}) \Rightarrow L = m_{вр} / q_{пдк} \Rightarrow$

$m_{вр} = L \cdot q_{пдк} =$ (20 мг/с)

№3 $S_{сум} = 1000$ м2

$\alpha_0 = 0{,}1 \quad \alpha_1 = 0{,}5$

$\ell_{99} = 0{,}95$

$B = \frac{S_{сум} \cdot \alpha_{ср}}{1 - \alpha_{ср}}$

$d_B = \frac{B_1}{B_0} \cdot \ell_{99}$

$B_0 = \frac{S_{сум} \cdot \alpha_0}{1 - \alpha_0} = \frac{1000 \cdot 0{,}1}{0{,}9} \approx 111{,}1$

$B_1 = \frac{S_{сум} \cdot \alpha_1}{1 - \alpha_1}$ $\quad \frac{1000 \cdot 0{,}5}{0{,}5} = 1000$

$\Delta B = \frac{1000}{111} \cdot 0{,}95 \approx 8{,}55$

№4w = 3Н рад/с

$P = 10^3 Н$ $\quad P = m \cdot g$

$q = 10^6 Н/м$

$$КП = \frac{1}{(f/f_0)^2 - 1} \qquad \omega = 2\pi f$$

$$f = \frac{\omega}{2\pi} \approx 50$$

$$f_0 = \frac{1}{2\pi}\sqrt{\frac{q}{m}} = \frac{1}{2\pi}\sqrt{\frac{q}{x_{ст}}} \qquad x_{ст} = \frac{mg}{q} = \frac{1}{10^3}$$

$$f_0 \approx 15{,}76$$

$$КП = \frac{1}{(50/15{,}76)^2 - 1} \approx 0{,}11$$