Formule pri predmetu Gradbena fizika

Te bodo napisane ob nalogah pri preverjanju znanja:

Vse snovne konstante (razen gostote vode) in naravne konstante bodo napisane.

$\chi \equiv \frac{\lambda}{\rho\, c_p}$

$j = \frac{\sigma\,(T_1^4 - T_2^4)}{\frac{1}{e_1} + \frac{1}{e_2} - 1}$

$p\,V = \frac{m}{M}\,R\,T,\ R = 8300\,\mathrm{J\,K^{-1}\,kmol^{-1}}$

$j = A \cdot \frac{\Delta p_v}{\mu\, L},\ A = 0{,}622\ \frac{\gamma}{\mathrm{kPa\,m\,h}}$

Ne bo napisano, potrebno si je zapomniti:

Prenos toplote

$Q = P\,t$

$q = P/S$

$q = \frac{\lambda\,\Delta T}{d} = \frac{\Delta T}{R}$

$R = \sum R_i$

$q = h\,\Delta T_{\mathrm{m.p.}})$

$q = U\,\Delta T$

$\tau = \frac{L^2}{\chi}$ (ni težko ugotoviti, ko premislimo o enotah)

$Q = m\,c\,\Delta T$

Sevanje

$P = e\,S\,\sigma\,T^4$

Vlažnost

Definicija relativne in absolutne vlažnosti.

Osvetljenost (fotometrija):

$j = \frac{P}{4\,\pi\,r^2} = \frac{I}{r^2}$

$E = j' = j_0\,\cos\varphi = \frac{I}{r^2}\,\cos\varphi$

Zvok:

$L = 10\,\mathrm{dB}\,\log\left(\frac{I}{I_{min}}\right)$ ($I_{\min} = 10^{12}\,\mathrm{W\,m^{-2}}$, bo napisan)