Str. 65/úloha 322

$h = ?\ [m]$

$p = p_h = ?\ [Pa]$

$m = 85\,t = 85\,000\ kg$

$x = 8\ kol$

$S_1 = 2\ cm^2 = 0{,}0002\ m^2$

$g \doteq 10\ \frac{N}{kg}$

$\rho = 1000\ \frac{kg}{m^3}$

$$p_h = h \cdot \rho \cdot g$$

$$h = \frac{p_h}{\rho \cdot g}$$

$$h = \frac{531\,250\,000}{1000 \cdot 10}$$

$$h = 53\,125\ m$$

$$h \doteq 53\ km$$

$$p_h = \frac{F_g}{S}$$

$$p_h = \frac{850\,000}{0{,}0016}$$

$$p_h = 531\,250\,000\ Pa$$

$$F_g = m \cdot g$$

$$F_g = 85\,000 \cdot 10$$

$$F_g = 850\,000\ N$$

$$S = x \cdot S_1$$

$$S = 8 \cdot 0{,}0002$$

$$S = 0{,}0016\ m^2$$

V hloubce 53 km je stejný hydrostatický tlak.