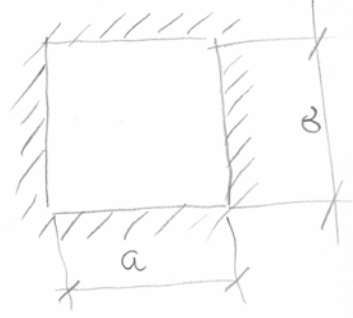


multiplikator	l _x /l _y											
	0,50	0,60	0,70	0,80	0,90	1,00	1,09	1,09	1,09	1,09	1,09	1,09
10 ⁻³ $\frac{1}{K} p l_{min}^4$	2,51	2,34	2,08	1,82	1,54	1,28	1,54	1,82	2,08	2,34	2,51	
10 ⁻³ $\frac{1}{K} p l_{min}^4$	-6,18	-7,82	-7,23	-6,52	-5,80	-5,06	-5,32	-5,51	-5,61	-5,62	-5,59	
10 ⁻³ $\frac{1}{K} p l_{min}^4$	-5,59	-5,62	-5,61	-5,51	-5,32	-5,06	-5,80	-6,52	-7,23	-7,82	-8,18	

Strana 86.

HODIN - PLOŠE



$h = 0.01 \text{ m}$
 $p = 100 \frac{\text{N}}{\text{m}^2}$
 $a = 2 \text{ m}$
 $E = 1.7472 \cdot 10^7 \frac{\text{N}}{\text{m}^2}$
 $\nu = 0.3$
 $a = l_{min} = l_{max}$

Príklad 1. p

$$K = \frac{Eh^3}{12(1-\nu^2)}$$

$$K = \frac{1.7472 \cdot 10^7 \cdot (10^{-2})^3}{12(1-0.3^2)} = \frac{17.472}{10.92} = 1.6$$

$$m = 10^{-3} \frac{1}{K} p l_{min}^4 = 10^{-3} \frac{1}{1.6} \cdot 100 \cdot 2^4 = 1$$

$$\frac{l_x}{l_y} = 1 \Rightarrow 1.28$$

$$l_0 = 1.28 \cdot 2 \text{ m} = 1.28 \cdot 2 = 1.28 \text{ m}$$

It should be noted that the state-of-the-art analytical plate theory solution for the maximal deflection at the plate centre C is $u_z = 1.265319087$ [1].

[1] Robert L. Taylor, Sanjay Govindjee (2004) Solution of clamped rectangular plate problems. Communications in Numerical Methods in Engineering. **20(10):757-765**