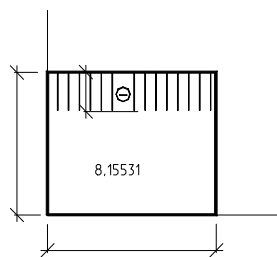


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, 1984. 679 .

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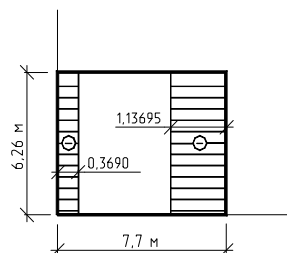
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[1].

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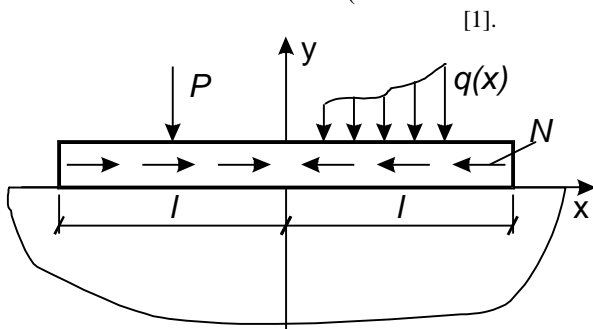
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(.), , . , . , 65

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1.

2.

$$\frac{d^4 y}{dx^4} + \frac{N}{B'} \frac{d^2 y}{dx^2} = \frac{p(x) - q(x)}{B'} \quad (1)$$

; N ó ; θ ó

$$[6]; q(x) \text{ ó} \quad (1)$$

$$\begin{aligned} \pm 1: M(\pm l) &= -B' \frac{d^2 y}{dx^2} = 0 \\ Q(\pm l) &= -B' \frac{d^3 y}{dx^3} = 0 \end{aligned} \quad (2)$$

$$(1) \quad y_i = \frac{2(1 - \nu_0^2)}{\pi \cdot E_0} \sum_{k=1}^m F_{ik} \cdot \rho_k \quad (3)$$

; θ, ν_0 ó

; F_{ik} ó $\delta i \ddot{o}$

$\delta k \ddot{o}$

[3],

$$F_{ik} = F_{ik}^0 + F_{ik}^1 \quad (4)$$

; F_{ik}^0 ó

; F_{ik}^1 ó F_{ik}^0

(3).

(1)

: N ó

3.

$\delta \sigma \acute{o} \epsilon \ddot{o}$

[4].

Mathematica ó 3

$$M\left(\frac{l}{r}\right) = a + b\left(\frac{l}{r}\right) + c\left(\frac{l}{r}\right)^2 \exp\left(\frac{d}{r^\mu}\right) \quad (5)$$

: l/r ó ; a, b, c, d, μ ó

1.

$$B\theta = E J, \quad E J \text{ ó} \quad (1) \quad (3),$$

2.

1,

$\delta i \ddot{o}$

$$\left(\frac{l}{r}\right)_i = \frac{y_{i-1} - 2y_i + y_{i+1}}{c^2} \quad (6)$$

$$M_i, \quad (5)$$

[2]:

$$B'_i = \frac{M_i}{\left(\frac{l}{r}\right)_i} \quad (7)$$

3.

$B\theta_i$

(1)

4.

2,

$$\left| \frac{M_i^N - M_i^{N-1}}{M_i^N} \right| \leq 0.001 \quad (8)$$

(8)

4.

2.0 , 1.0 , 0.1 -

20) (21) $\delta k \ddot{o}$

$B\theta_k$, h ,

$$F_{ik} = \frac{h}{c_k} \left[F\left(\frac{x_i - a_k}{h}\right) - F\left(\frac{x_i - b_k}{h}\right) \right];$$

$$F(z) = \frac{z}{2} \ln \frac{z^4 + 4}{z^2} + \frac{1}{2} \arctg \frac{z}{z^2 + 4} - \frac{z}{z^2 + 4} - \frac{4z}{3(z^2 + 4)^2} + \dots;$$

$$c_k = b_k \text{ ó } a_k \text{ ó}$$

$1.5 / \text{m}^2$; $E_{cm} = 29 \cdot 10^3 / \text{m}^2$; $\nu = 0.2$, $f_{ck} = 20 / \text{m}^2$; $f_{ctk} =$

[6] Sp2/0.

$11 \text{ } \varnothing 400$ (100) $f_{yk} = 400 / \text{m}^2$;

$E_s = 20 \cdot 10^4 / \text{m}^2$.

$\rho = 0.18 / \text{m}^2$, $\nu = 0.33$.

$= 100$,

$50 / \text{m}^2$.

[6], $N = 25$.

(. . 2 ,)

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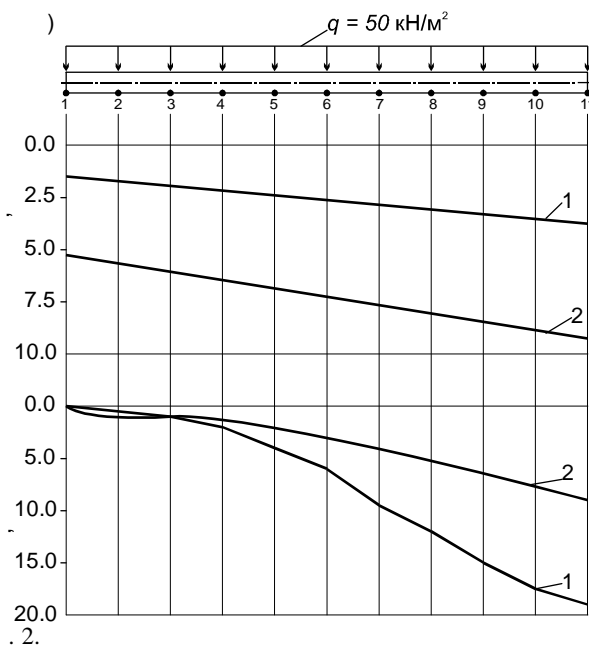
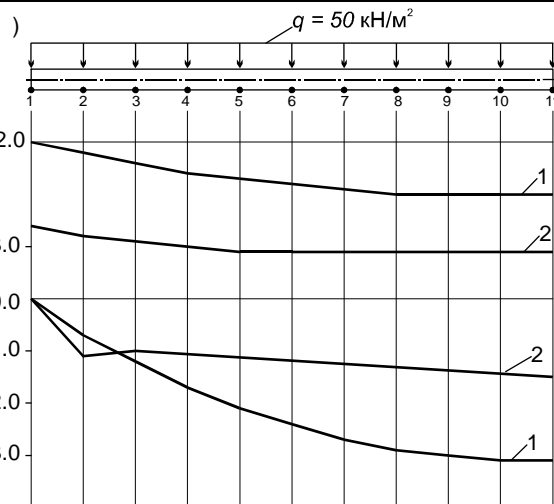
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$0.35 \div 0.39$,

$\eta =$

[5].



() ; ()

1 6
2 6

1.

[5]

