

$\mu = 120$

$$Q = \frac{1000 \cdot Q}{60 \cdot \sim \cdot x} = \frac{1000 \cdot 55}{60 \cdot 120 \cdot 1,2} = 6,4 \text{ } ^3 / = 0,1 \text{ } ^3 / , \quad (1)$$

$$x = 1,2 \text{ } / ^3$$

$$Q = 12,7 \text{ } ^3 / ,$$

$$Q = 0,012 \text{ } ^3 / . \quad . 163 [4]$$

$$V = 7 \text{ } / \div 10 \text{ } / . \quad d$$

$$3,2 \text{ } 15 \quad 10 \text{ } / \quad :$$

$$d = \sqrt{\frac{4 \cdot Q}{60 \cdot f \cdot V}} = \sqrt{\frac{6,4}{15 \cdot 3,14 \cdot 10}} = 0,117 \text{ } , \quad (2)$$

$$d = 0,164 \text{ } , \quad 0,4 \text{ } 1,35$$

$$2 \text{ } / d = 0,0113 \text{ } .$$

V_0

$$y = x \operatorname{tg} S_C - \frac{gx^2}{2V_0^2 \cos^2 S_C}. \quad (3)$$

V_0 S_C y -
 x , , .
 (3), -
 , :

$$H = \frac{V_0^2}{g} \sin^2 r; \quad (4)$$

$$x = \frac{1}{2} X = \frac{V_0^2}{g} \sin r \cdot \cos r, \quad (5)$$

X - , (3) $y = 0$.

, 4 13,5 $H = 1,4$, -
 $V_0 = 25^\circ$, $V_0 = 8,8$ / .
 :

$$X = \frac{V_0^2}{g} \sin 2r = 5,9. \quad (6)$$

$$V = 0,9 /$$

008.

, , Re , -

$$\operatorname{Re} = \frac{Vd}{\epsilon}, \quad (7)$$

ϵ - , d - , '

$$d = \frac{4S}{\dots}, \quad (8)$$

S – , 2, – -

S :

$$S = fR^2 - R^2(f - 2r + \frac{1}{2} \sin 4r + \frac{2}{3} \sin 2r) = R^2(2r - \frac{1}{2} \sin 4r - \frac{2}{3} \sin 2r),$$

$$= R(2f - 4r) + 0.5 \cos^3 r \left(3 \operatorname{tg} r \sqrt{1+9\operatorname{tg}^2 r} + \operatorname{tg} r \sqrt{1+\operatorname{tg}^2 r} + \ln \frac{3 \operatorname{tg} r + \sqrt{1+9\operatorname{tg}^2 r}}{\sqrt{1+\operatorname{tg}^2 r} - \operatorname{tg} r} \right)$$

R – , , –

d -

ζ, , -

, Re. -

ζ Re , .

$$\operatorname{Re}^{2'} = \frac{4d^3(\dots - \dots)g}{3v^2 \dots} \quad (9)$$

$$d = \sqrt[3]{\frac{3v^2 \dots \cdot \operatorname{Re}^{2'}}{4(\dots - \dots)g}} \quad (10)$$

g – , – ,

...%o – .

Re (500) ζ = 0,44. , ,

, 14 – 19 ° , -

14 – 19 ° , . -

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		f		
	x_j^0	0,8	0,45	0,3
	Δx_j	0,1	0,1	0,05
	+1	0,9	0,55	0,25
	-1	0,7	0,35	0,35
	+1.414	0,94	0,59	0,37
	-1.414	0,66	0,31	0,23

Mathcad

, ().

$$Y = 52.306 + (-5.792) x_1 + (-9.003) x_2 + (-3.401) x_3 + 2.222 x_1^2 + 2.726 x_2^2 + 0.886 x_3^2 + (-1.662) x_1 x_2 + (-1.487) x_2 x_3 + 0.837 x_3 x_1 + 0.487 x_1 x_2 x_3$$

