

:1. // II ,1984.
2. , 1987. **3.**
 - ,1970. **4.**
 - ,1975. **5.**
 - ,1975. **6.**
 40 , 1969. **7.**
 - , 1981.

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658.012

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 (.)

In this article design features of the hydroseparator of coal suspension are investigated. The mathematical description of the surface of rotor device for drawing up of its various constructive variants is given. The results are intended for mathematical modeling of hydroseparator action with usage of COMPUTER.

[1, 2].

, « » [3].

(,),

[4, 5].

, [6, 7].

(): MathCAD, MatLAB,

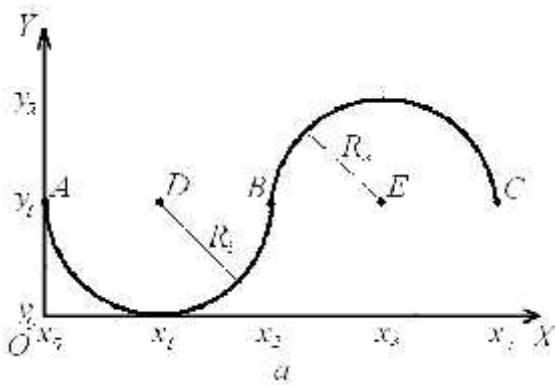
Maple . [8, 9].

« »

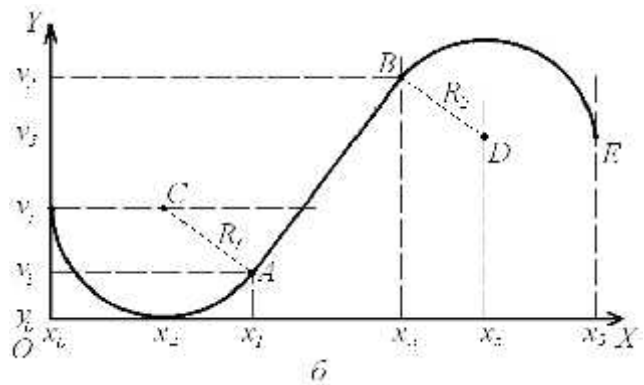
« » [3]

$A-B$); (. 1, , $A-B$).

: (. 1, , $B-C$); ()



. 1.



XOY, Y -

$A_0(, b)$

$R(. 2):$

$$(x-a)^2 + (y-b)^2 = R^2 \quad (1)$$

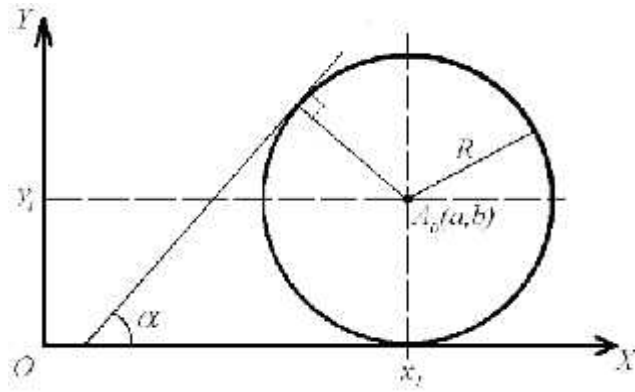
(1) y,

x:

$$y = b \pm \sqrt{R^2 - (x-a)^2} = b \pm \sqrt{R^2 - x^2 + 2ax - a^2}, \quad (2)$$

«+»

, «-»



. 2.

α ,

OX ,

(1):

$$r(x) = \pm \arctg(y'_x) = \pm \arctg\left(\frac{a-x}{\sqrt{R^2-x^2+2ax-a^2}}\right), \quad (3)$$

«+»

«-»

(1)

:

$$y''_x = -\frac{1}{4} \frac{(-2x+2a)^2}{(R^2-(x-a)^2)^{3/2}} - \frac{1}{\sqrt{R^2-(x-a)^2}}, \quad (4)$$

:

$$y''_x = \frac{1}{4} \frac{(-2x+2a)^2}{(R^2-(x-a)^2)^{3/2}} + \frac{1}{\sqrt{R^2-(x-a)^2}}. \quad (5)$$

$A-B$ (. 1,)

:

$$y = \frac{a}{b}x + \frac{c}{b}. \quad (6)$$

$$, b \quad (6)$$

$$(6) \quad A(x_1, y_1), B(x_2, y_2),$$

$$a = y_2 - y_1, \quad b = x_2 - x_1, \quad c = -ax_1 + by_1. \quad (7)$$

r () OX

$$y'_x = \frac{a}{b}, \quad r(x) = \arctg(y'_x) = \arctg\left(\frac{a}{b}\right), \quad (8)$$

$$(6) \quad y''_x = 0.$$

$$y = \begin{cases} y_1 - \sqrt{(x_2 - x_1)^2 - (x - x_1)^2}, & x_0 \leq x \leq x_2 \\ y_1 + \sqrt{(x_3 - x_2)^2 - (x - x_3)^2}, & x_2 < x \leq x_4 \end{cases}$$

$$y = \begin{cases} y_4 - \sqrt{(y_4 - y_0)^2 - (x - x_4)^2}, & x_0 \leq x \leq x_1 \\ \frac{(y_2 - y_1)(x - x_1)}{x_2 - x_1} + y_1, & x_1 \leq x \leq x_2 \\ \frac{x_2 - x_1}{x_5 - x_0} + y_0, & x_2 \leq x \leq x_3 \\ y_5 - \sqrt{(y_5 - y_0)^2 - (x - x_5)^2}, & x_3 \leq x \leq x_4 \end{cases}$$

1.

« ».

2.

3.

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 56. - . 100 - 103. 3. . . 13558 , 03 5/32.
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It is determined as separate parameters of quality of fruits of fresh pepper sweet, and a complex estimation of quality in general. The tree of properties of quality of fruits of pepper sweet is constructed. The best result of a complex parameter of quality among researched samples of fruits of fresh pepper is determined.