

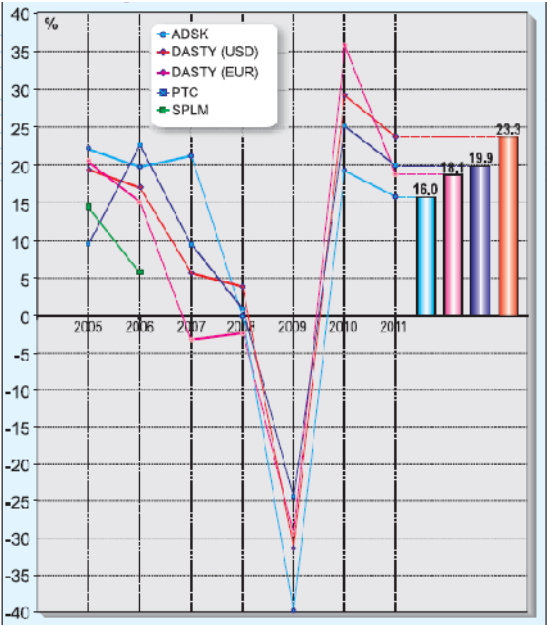
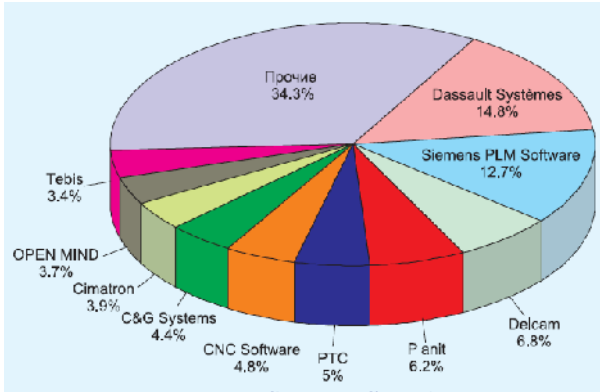
62-50:658.564:621.924

... , ... , ...
 « », . ,
 ./ : +38 (044) 4068106; E-mail: yp-86@yandex.ru

2,5D

CAD/CAM , .
 CAD ,
 , CA .
 , -
 ,
 50-70%
 CAD/CAM ,
 ,
 1. .
 ()
 CAD/CAM .
 CAM –
 , [1] ,
 –
 , [2],
 -
 ()
 « » .
 CAM [3],
 , 2008 (.1).
 « »
 [4].
 CAD/CAM ,
 ,
 CAD/CAM ,
 G-
 ,

() , CAD/CAM



1.

2.

(.2). CAD/CAM (CAD/CAM CAD/CAM CAD CAM CLDATA

(.4) . 1

(.4) x_A, y_A (α)

x_B, y_B .)

:

$$\alpha_i = \arctan \frac{(y_A)_i - (y_e)_i}{(x_A)_i - (x_e)_i} \pm \arctan \frac{(y_B)_i - (y_e)_i}{(x_B)_i - (x_e)_i}, \quad (1)$$

x_e, y_e - ; «+» $x_A < x_e$ $x_B > x_e$, «-»

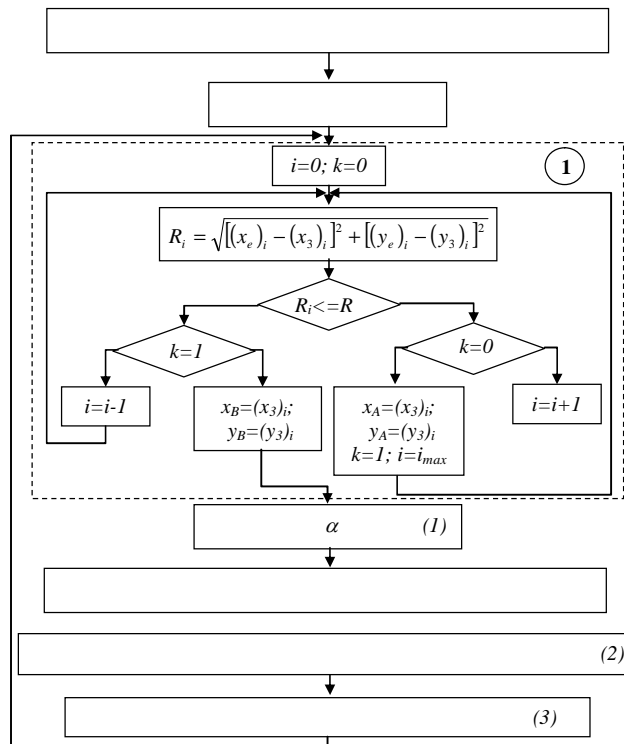
B , , β :

$$a_z = \int_0^B \int_0^\alpha S_z \sin\left(\frac{\delta \tan(\beta)}{R}\right) d\alpha d\delta, \quad (2)$$

S_z - , R - , δ -

(.) .

(2), (,) ,



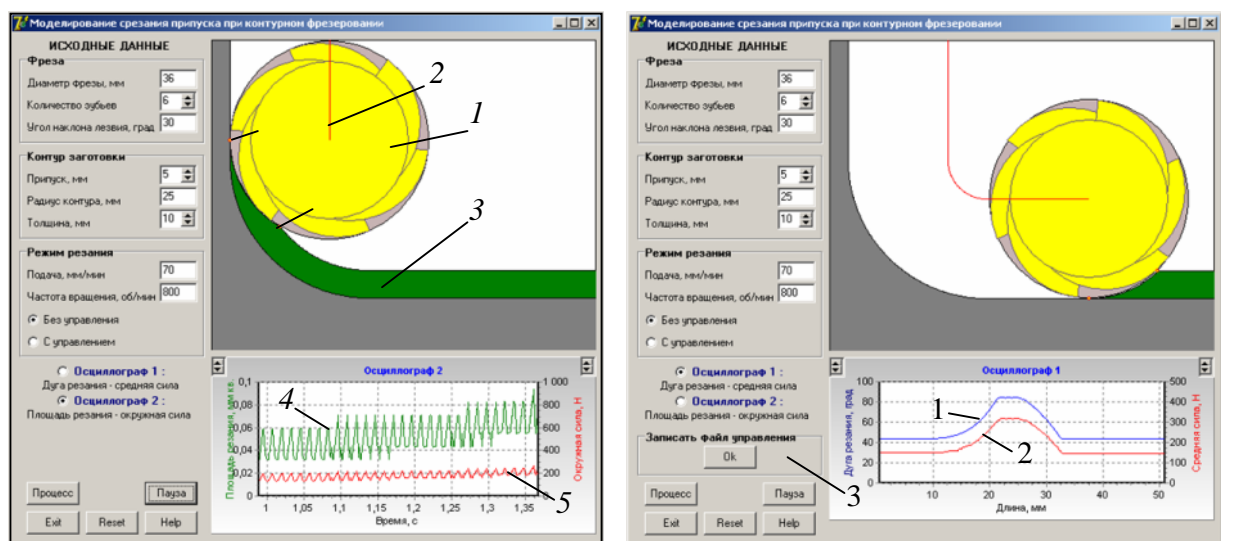
. 4.

, ()
 :

$$P_o = \frac{k \cdot MRR}{V}, \tag{3}$$

 MRR - (material removal rate)
 , V –
 , [5].

.5.
 2,5D
 « 1 »
 , 1 2
 , 3 ,
 :
 –
 (2) () 4 5 .5 ,
 () () 1 2 .5, .



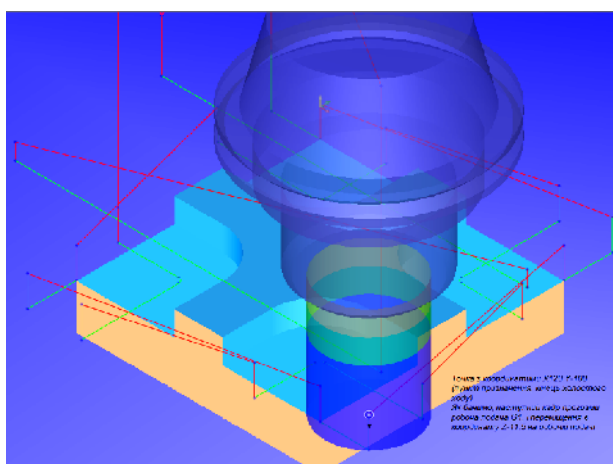
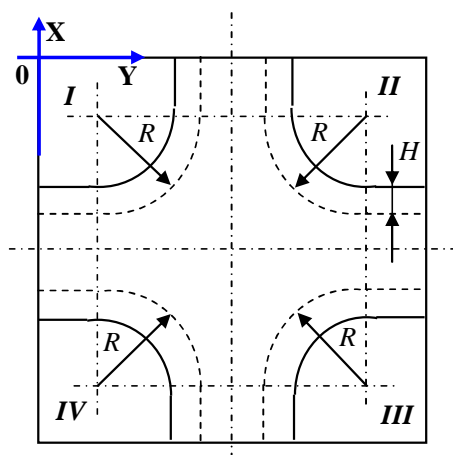
.5.
 ,
 .
 43° 84° (1 .5,), 150 320
 (2 .5).
 (.5).
 ,
 ,
 (.5,)

*.nc

3

 $(.5,)$

(.6)



. 6.

()

()

PowerMill

(Delcam)

$$\vdots$$

I, II III —
100

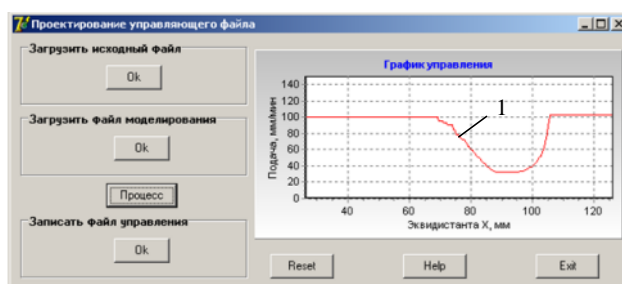
PowerMill
33 /

IV -

(.2).

.7.

PowerMill

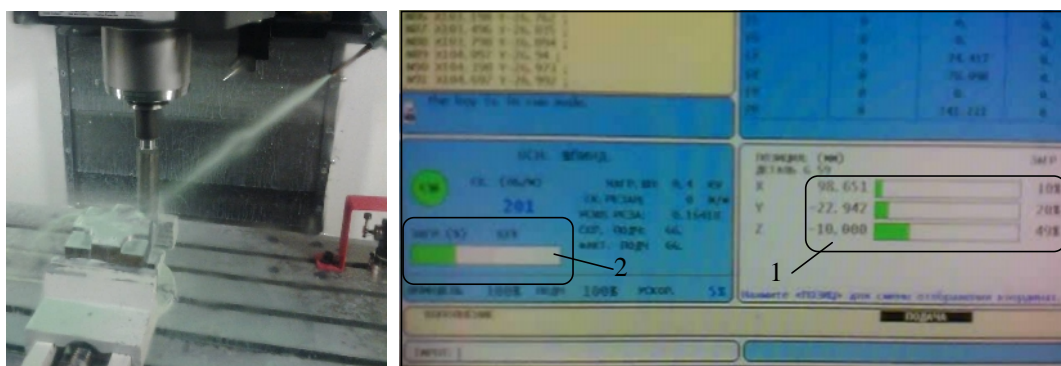


.7.

.7),

(1

VF-3 HAAS (.8,)
 (.8,)
 (1 .8,),
 (2 .8,).



8. VF-3 () ()

III, I, II, IV, X, Y, Ø2

1.

		%		,	(max),
		min	max		
I	PowerMill (F=100 /)	40	70	30	1,04
II	PowerMill (F=66 /)	30	50	45	0,73
III	PowerMill (F=33 /)	20	40	90	0,73
IV	PowerMill + (F=var)	40	40	40	0,65

2,5D

CAM

1. . . . - , 2011, 221c.
2. . . . CAD/CAM- /3, « », , 2009.- c.160-167.
3. . . . « » « » / CAM/CAD/CAE observer #7 (67), 2011.- c.28-36.
4. . . . / , . 42, -2011. - .238-245.
5. Jerard R., Fussel B., Ercan M. On-Line Optimization of Cutting Condition for NC Machining / 2001 NSF Design, Manufacturing & Industrial Innovation Conference, 2001, Florida, USA. – p.1-11.

12.06.2012 .

Y. Petrakov, A. Klavak, R. Simuta
CONTROL OF 2,5D MILLING ON MACHINE-TOOL WITH CNC THROUGH THE CAD/CAM SYSTEMS

The new going is presented near process of milling at the use of the computer-integrated CAD/CAM systems control, which consists of the parallel planning of management a serve with the purpose of stabilizing of cutting terms. At preparation of draft of detail and purveyance in CAD to the system, these information is utilized in the special module of design of process of cutting away of allowance after comport with control the program, projected in CA to the system. During the generation of control the program through a post-processor, it is offered to the technologist-programmer to substitute the code of serve by a code, projected parallel. As a result the increase of the productivity is arrived at on 50-70% at implementation of requirements in quality.

Keywords: computer-integrated CAD/CAM system, milling on a machine-tool with CNC, simulation, control the mode of cutting.

. . . . 2,5D , . . . , . . .
 CAD/CAM ,
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 CA .
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 50-70%
 : CAD/CAM ,
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