

05.07.05 – ,

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« . . . » : 152934,

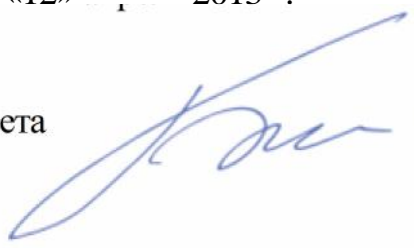
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«12» , 2013 .

Совета

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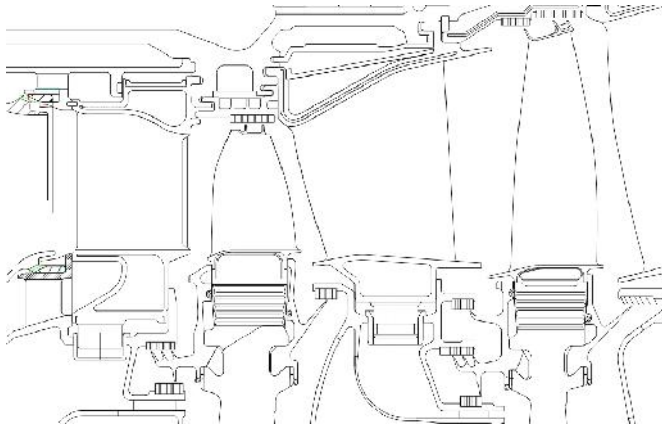
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$$b = 165,5 ; \quad = 28,5 ; \quad t = 102 ;$$

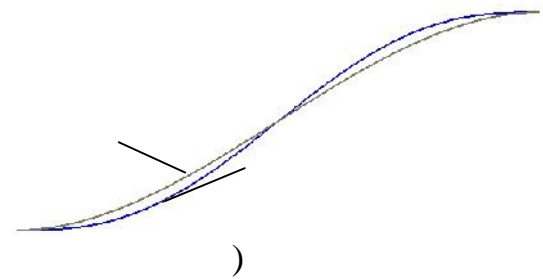
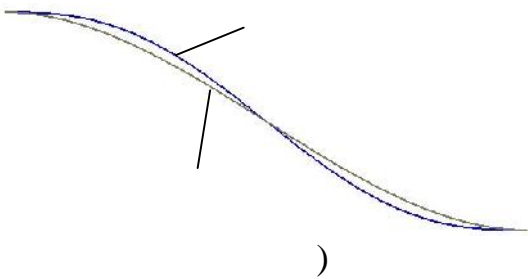
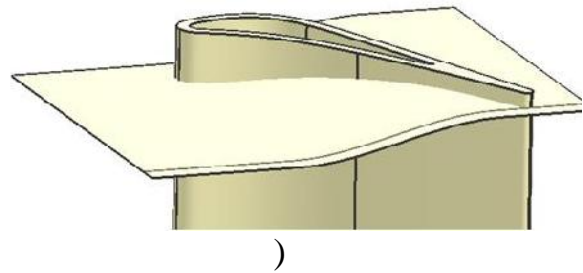
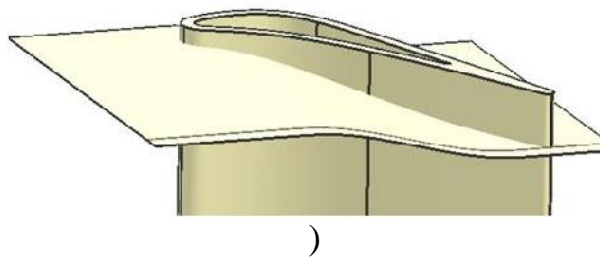
$$d_1 = 25 ; \quad = 40^\circ ; \quad h = 20 - 70 ;$$

$$\alpha_1 = 90^\circ ; \quad d_2 = 4,8 ;$$

$$\alpha_2 = 40^\circ ; \quad S_2 = \arcsin a / t = 16,4^\circ ;$$

$$\alpha_2 = 20^\circ .$$

2



2-

7

0...2500 -2500 , -0,25 , -
±250 .

0,5 %.

20

0,5 ,

$$g = 1 - \frac{W_2^2}{W_{2t}^2} = 1 - \frac{p_2^* - p_2}{p_1^* - p_2}, \quad (1)$$

W_2, W_{2t} -

; p_2^* -

; p_2 -

(

); p_1^* -

$1,5 \cdot 10^5$ $1,7 \cdot 10^5$.

(1) - ±6%.

ANSYS CFX-11,

ANSYS

ICEM CFD

$1 \cdot 10^{-6}$;

(

1,3;

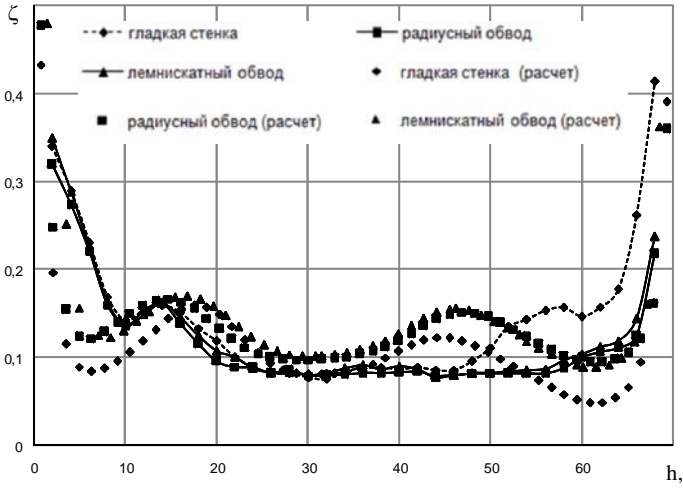
60°).

(SST).

($h/a = 0,7-2,46$).

$h = 70, 40, 20$ ($h/a = 2,46, 1,4, 0,7$),

3

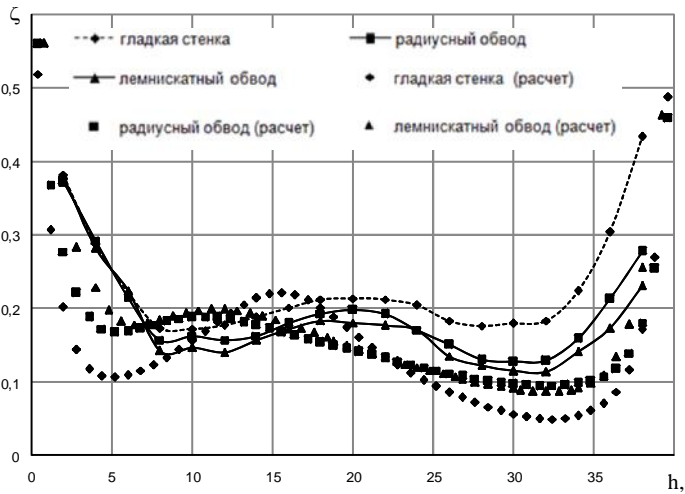
 $h = 70 \quad (h/a = 2,46).$


3 -

 $(h = 70 \quad , h/a = 2,46)$

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4 -

 $(h = 40 \quad , h/a = 1,4)$

(4 - h = 40 , h/a = 1,4)

($h = 50$)

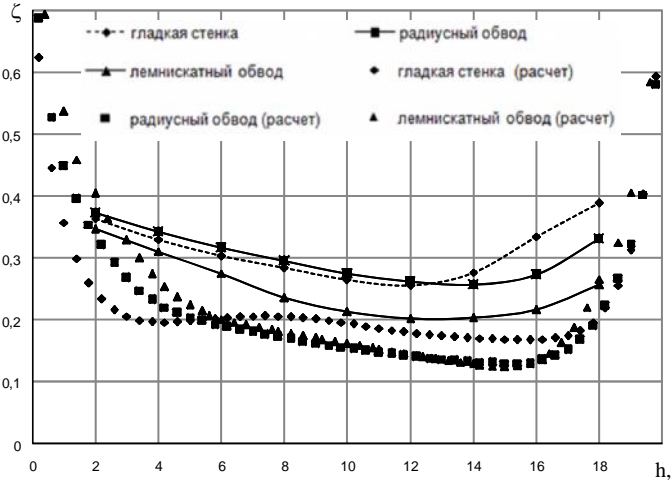
4

$h = 20$

($h/a = 0,7$)

40 , 20

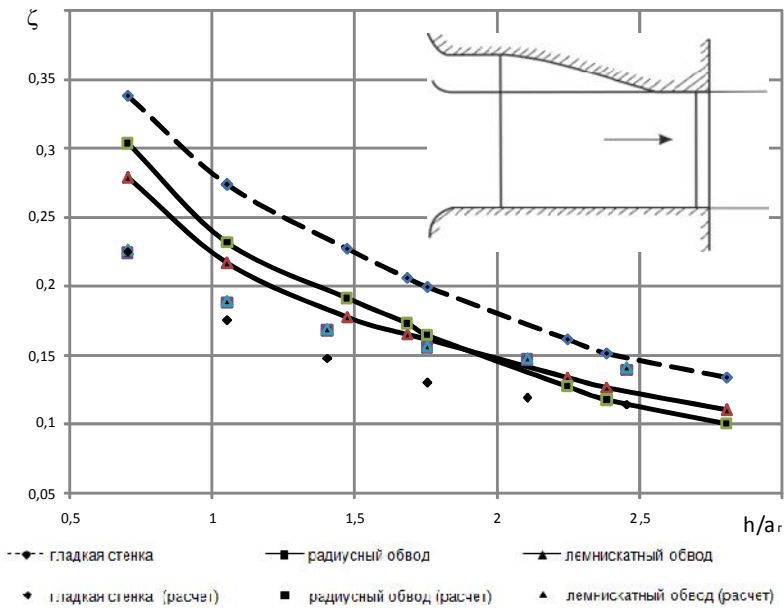
(5).



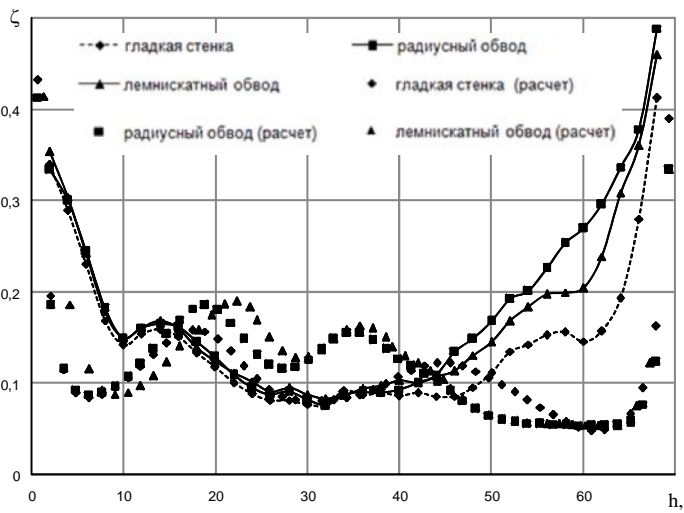
5 -

($h = 20$, $h/a = 0,7$)

$h/a < 1,5$ (6).



6 -



7 -

($h = 70$, $h/a = 2,46$)

8

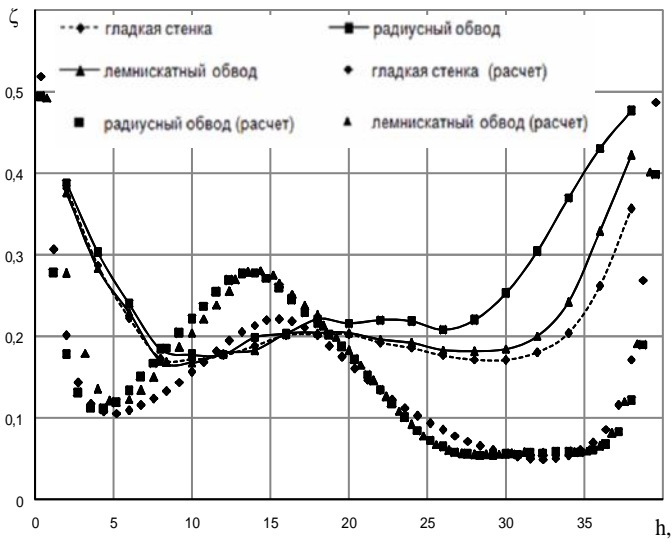
$h/a = 1.4$ ($h = 40$).

$h = 70$

7 ,

$h/a = 2,46$
($h = 70$).

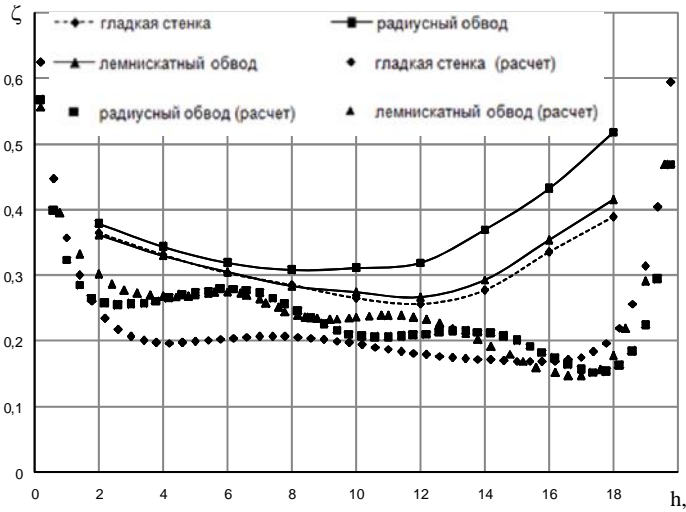
()



8 -

$h/a = 0,7$ ($h = 20$).

($h = 40$, $h/a = 1,4$)

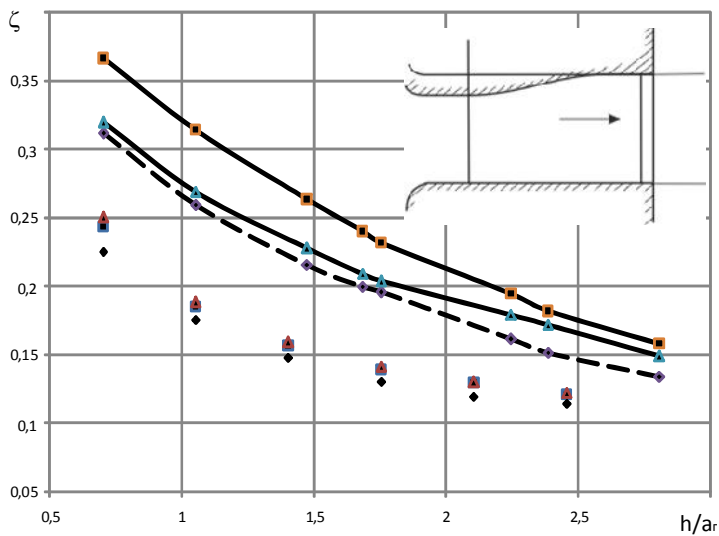


9 -

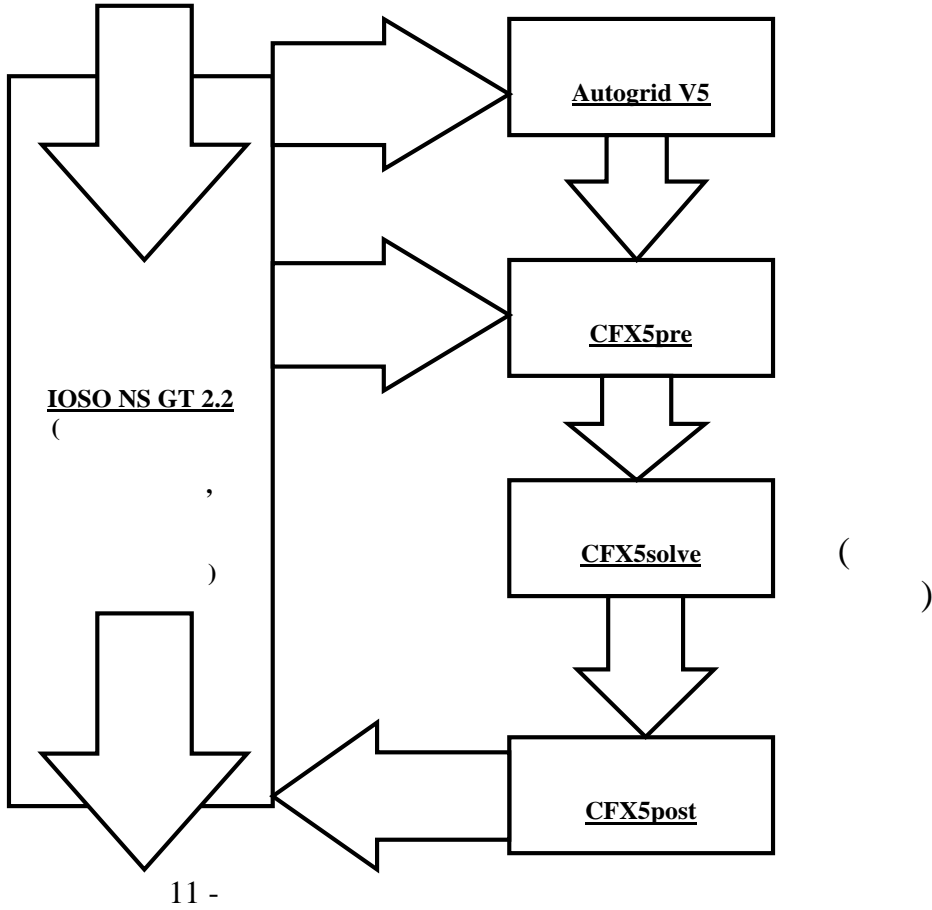
(10).

h/a

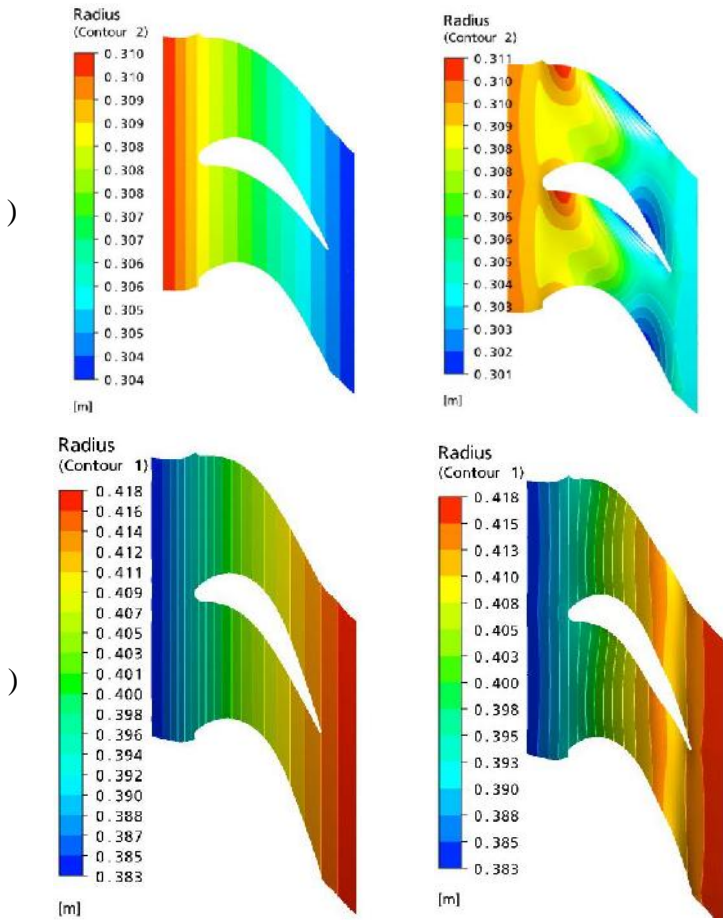
($h = 20$, $h/a = 0,7$)



10 -



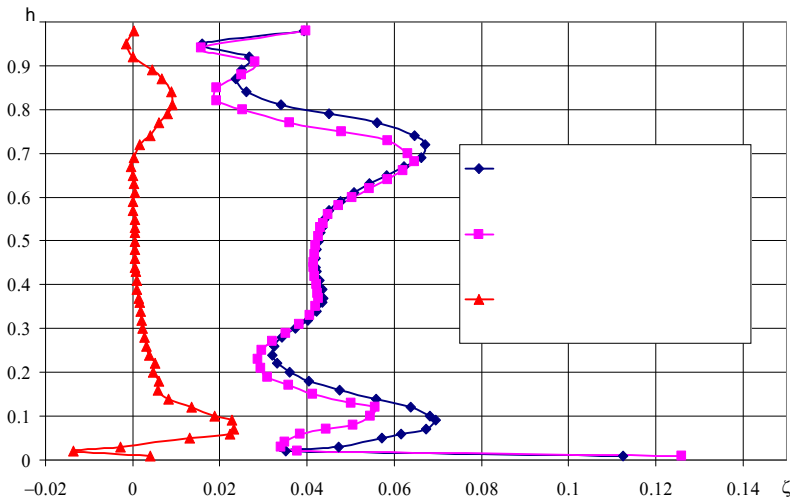
Ansys CFX.



12 -

$\Delta\eta = +0,4 \%$.

13



13 -

$\Delta\zeta = -0,4\%$

$\Delta\zeta = -0,15\%$,

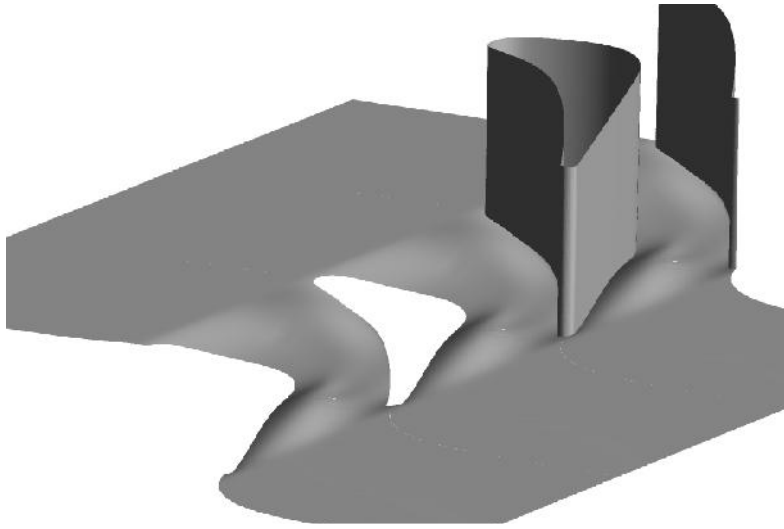
$\Delta C_R = -0,15 \%$.

70

$h/a = 2,46, \dots$

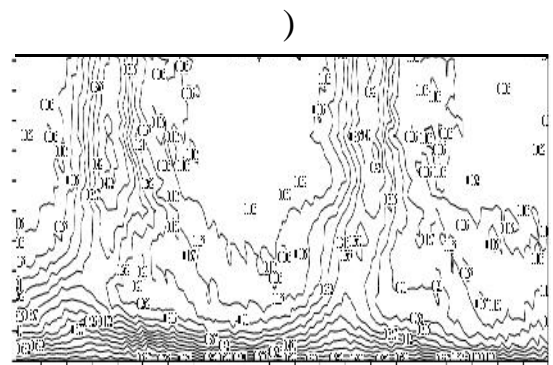
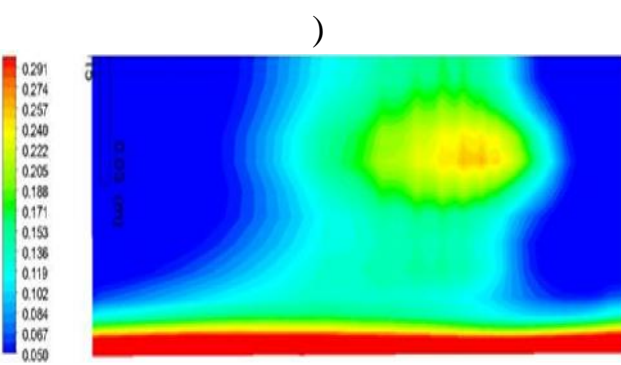
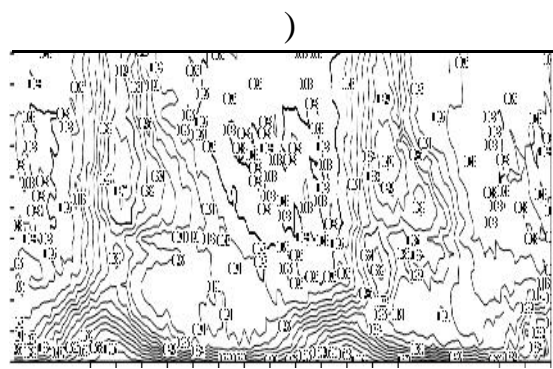
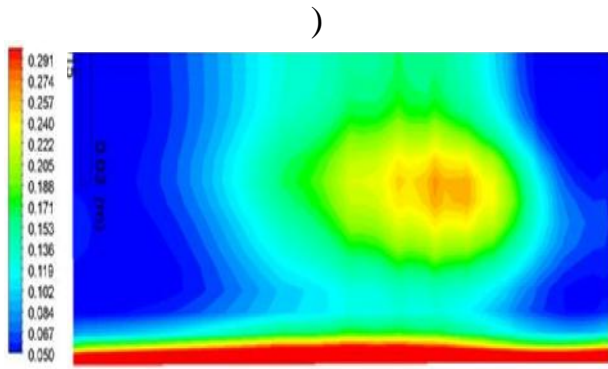
(14).

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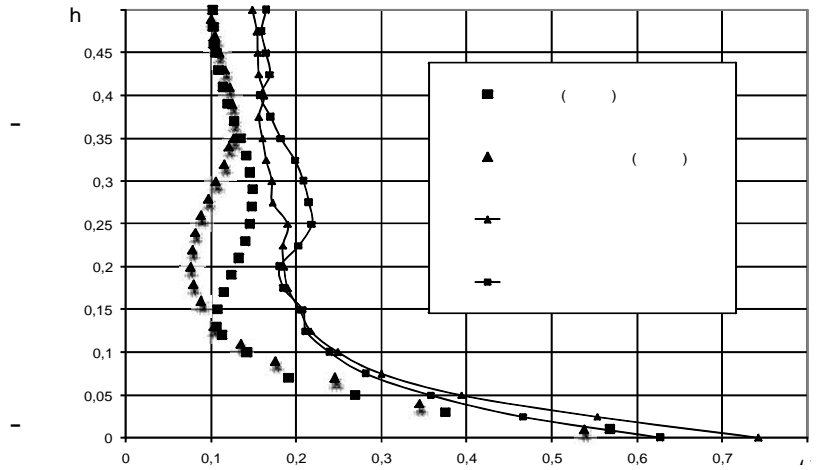
15

(16)



15 -

$$\Delta\zeta = -2\%$$



16 -

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($h/a < 1,5$)

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2%.

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7. . 101497 , ⁷ F01D5/20.

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60×84 1/16. .- . .1 100.

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