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It is shown that with the increase in the relative height of oversize relative thickness of the spall layer produced by the action of the rarefaction wave decreases and with the decrease of the relative height of oversize it increases.

Key words: explosion, oversized, rarefaction, spall.

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 - [1], [2, 3],
 - [4],
 [5].
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 • [4]
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$$z = r_0 \left(\frac{\sigma}{P_4} \right)^{-\frac{1}{v_p}}, \tag{1}$$

$r_0 = k_0 m_a^{\frac{1}{3}}, k_0 = (3/4\pi\rho)^{\frac{1}{3}}; \rho -$, / ³; $r_0 -$, / ²; $m_a -$ -
 , ; $\sigma_p -$, / ²; $m_a -$ -
 , ; $m_a = (0,1...0,15)m \approx 0,125m, m -$,
 ; $P_4 -$, ; $v_p -$ -

[6], $v_p = 2.$

[4],

$$\frac{P_4}{P_H} \cdot 10^5 = a_i \left(\frac{h}{r_0} \right)^{-v_i} - b_i, \tag{2}$$

a_i, v_i, b_i ; $h -$,
 ; $P_H = \frac{\rho_{BB} D^2}{n+1} -$, / ²; $D -$
 , / , $n -$

(2)

		$\bar{h} = \frac{h}{r_0}$	a_i	v_i	b_i
1. ()	1	$9,466 \leq \bar{h} \leq 37,864$	16737,165	1,56	14,210
	2	$37,864 \leq \bar{h} \leq 56,796$	6709,908	1,30	16,569
2. 6	1	$8,319 \leq \bar{h} \leq 33,257$	31906,591	1,632	30,366
	2	$33,257 \leq \bar{h} \leq 49,916$	15069,318	1,40	30,547
3. 79/21	1	$7,922 \leq \bar{h} \leq 31,691$	43394,406	1,694	32,589
	2	$31,691 \leq \bar{h} \leq 47,536$	17440,701	1,42	33,894
4. 1	1	$7,156 \leq \bar{h} \leq 28,624$	53699,528	1,70	52,479
	2	$28,624 \leq \bar{h} \leq 42,936$	39851,978	1,70	1,04
5. 2	1	$7,156 \leq \bar{h} \leq 28,624$	55748,9	1,70	64,703
	2	$28,624 \leq \bar{h} \leq 42,936$	45545,118	1,70	20,054
6. 3	1	$7,322 \leq \bar{h} \leq 29,288$	64012,29	1,763	43,908
	2	$29,288 \leq \bar{h} \leq 43,932$	53304,904	1,763	13,354

(2) (1), $r_0, k_0, m_a P,$

$$z = \left(\frac{0,029 \cdot m}{\rho_{BB}} \right)^{\frac{1}{3}} \left\{ \frac{(n+1)\sigma}{\rho_{BB} D^2 \cdot 10^{-5} \left[a_i \left(\frac{h}{r_0} \right)^{-v_i} - b_i \right]} \right\}^{-\frac{1}{v_p}} \quad (3)$$

[5]. , 1, 2, ..., 20 (. 1) (. 1, 2 . 6 ,
 $\rho_{BB} = 950 \text{ / }^3$, $D = 4420 \text{ / }^3$,
 $n = 1,9$ [7]. 1,
 $\sigma_p = 0,208 \cdot 10^8 \text{ / }^2$.
 2, ..., 20
 a_i, v_i, b_i . (3)
 r_0 ,

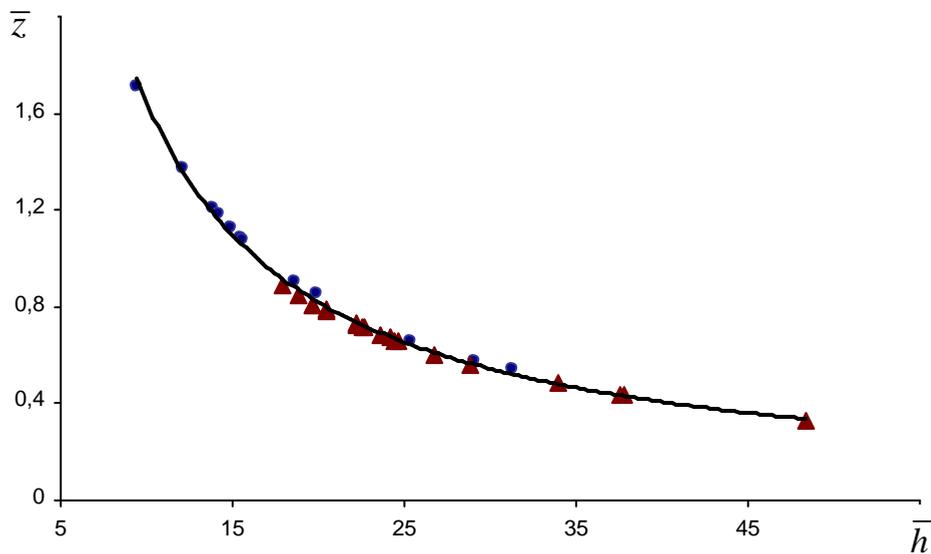
$$r_0 = \left(\frac{0,029m}{\rho_{BB}} \right)^{\frac{1}{3}}, \quad m \quad h \quad 1, 2, \dots, 20$$

$$\bar{h} = h / r_0 .$$

, () a_i, v_i, b_i .
 $\bar{z} = z / r_0$
 $\bar{h} = h / r_0$ 1, 2, ..., 20 [5].

13 , 1 (. 2 [5]). 1
 $\rho_{BB} = 709 \text{ / }^3$, $D = 2555 \text{ / }^3$,
 $n = 1,99$.
 $\sigma_p = 0,06 \cdot 10^8 \text{ / }^2$.
 $m \quad h$ 1,2,...,13 . 2 [5]
 $r_0 \quad \bar{h} = h / r_0$.
 1
 a_i, v_i, b_i .

()
 $\bar{z} = z / r_0$
 $\bar{h} = h / r_0$ 1,2,...,13 [5].



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$$\bar{z} = 16,57 \left(\frac{h}{r_0} \right)^{-1,004}, \quad 9 \leq h/r_0 \leq 50 \quad (4)$$

$$i_R^2 = 0,996.$$

(3), 2 % . (4),

(4)

1 h/r_0 $9 \leq h/r_0 \leq 50$.
 $h = 1,5$, $m = 4$, $\rho_{BB} = 950$ / 3

z.

$$r_0 = \left(\frac{0,029}{\rho_{BB}} \right)^{\frac{1}{3}} = \left(\frac{0,029 \cdot 4}{950} \right)^{\frac{1}{3}} = 0,0495 .$$

$$z/r_0 = 0,540. \quad h/r_0 = 30,24. \quad h/r_0 \quad (4),$$

$$, \quad z = 0,540 \quad r_0 = 0,026 \quad ,$$

$$9 \leq h/r_0 \leq 50 \quad m = 4 \quad 6 \quad , \quad r_0 = 0,0495 \quad h/r_0 = 9$$

$$(4) \quad \bar{z} = 1,825 \quad z = 0,09 \quad , \quad h/r_0 = 50 \quad (4)$$

$$\bar{z} = 0,326 \quad z = 0,016 \quad .$$

(4) . (3) 6 1 -
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 1,6 50r_0 9 9 r_0.

1. . , - //
2. « » « » - 2007. - . 15. - . 2-10.
3. // « » « » - . 16. - . 25-31.
4. // « » « » - 2008. - . 17. - . 52-59.
5. « » « » - 2009. - . 18. - . 35-42.
6. // « » « » - 2011. - . 20. - . 27-31.
7. , 1980. - 154 . - ∴
- ∴ , 1988. - 358 .

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