

622.235.535.2

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14-440

14-440

Capabilities of various apparatus complexes to record the parameters of seismic waves during large-scale blast are investigated. Applications of analog-digital converter E14-440 to obtain amplitude-frequency characteristics of the seismic oscillations are shown.

Key words: blast, analog-digital transformer, seismic receiver, seismic vibrations recording.

() [1].
• • () • • [2-6],
[7]

BlastMate-HI (

Instantel,)

TDS-2014

[8,9]

-

() 14-440 [10].

-3 14-440

.1.

.1.

	TDS-2014	14-440	Vibracord Plus	
	4	16/32	7(4)**	4
	10^{-2} 10^9	2 $2,5 \cdot 10^6$	1024	1024
,	8	8-12	12	16
,	2,5		32	
0,001 , -	2,5	*	16	32
	-		4×20 - + 4	4×20 - +
,	~220,		=12,	
,		+5 ... +40 °	0 ... +50 °	
-				

*
**

. 1

TDS-2014

(),
 2,5 0,001 (1000
 1),
 () - 4.
 14-440
 (16/32),
 (1 0,001), USB-
 4 (10 , 2,5 , 0,625 , 0,15625),
 (+5 ° +40 °).
 . 1 Vibracord Plus (Basic
 Advanced)
 Vibracord Plus (Pro Expert)
 (16 32
),
 (10-20),
 X, Y, Z,
 () X, Y, Z.
 () . 2.
 ()
 “ -3 14-440 ”,
 Vibracord Plus,
 (X,
 Y, Z),
 -3, X, Y, Z,
 14-440 . 3.

2.

-3	.-	1	15 B· /	2...50	.	-10... +40	7,4
-3	.-	1	135 B· /	2...50	.	-10... +40	7,4
1	.	3	1 /g	0,2...500	12	-30... +50	4,0
S1073	.	3	0.4 · ² /	0,2...1000	15	-20... +40	2,2
S2123	.	3	1500 · /	0,5...70	12	-20... +40	2,5
1	.	3	100 /g	0,15...400	15	-40... +65	0,3
GS20DX	.-	3	*	2 ... 250	****	0... +50	***
GS11D	.-	3	**	2 ...250	****	0... +50	***

: * ± 20 /c.
 ** ± 18 /c.
 *** Vibracord Plus 4 .
 **** Vibracord Plus ().

3. (/c)

	-3 14-440	Vibracord Plus
X	1,1 (0,178)*	1,33
Y	1,04(0,163)*	0,93
Z	1,6(0,154)*	1,2

* _

.3 ,

$$[u] = \sqrt{(u^x)^2 + (u^y)^2 + (u^z)^2} , \tag{1}$$

[11] 90°, (. 1), (X, Y,

Z)

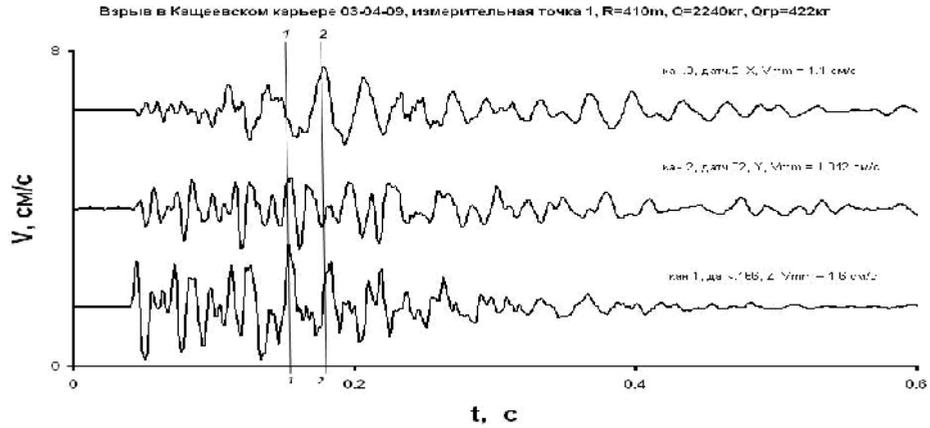
. 3 . 1 ,
 (= 0,029), 360°, (1).

[8, 9, 12],

1-1 (. 1),
0,153 ,
2-2 (0,178).

(1)

1,9 /с 1,66 /с



. 1.

03-04-09 .

440

18 2008

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2.

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4 ,

1 2.

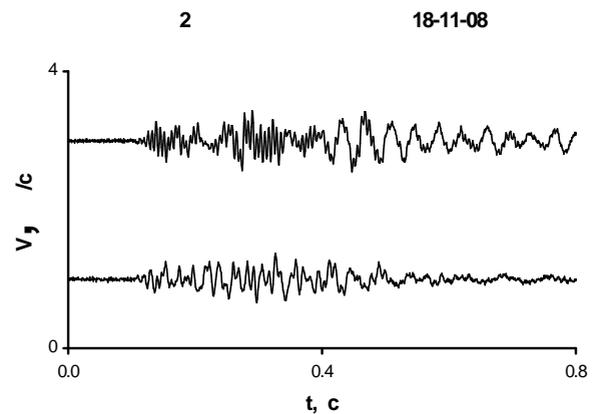
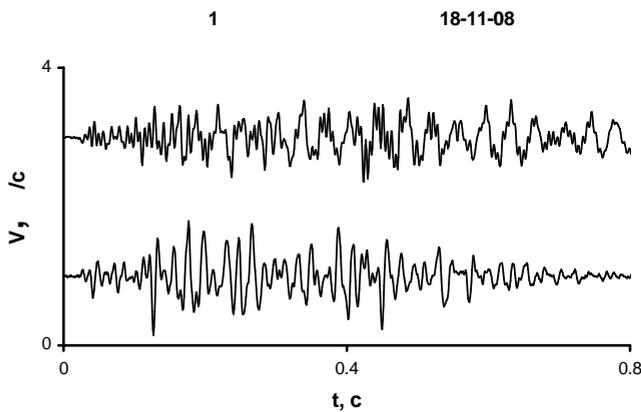
. 2 (,)

1

2

,

. 4



. 2.

5 (

)

11 (

)

()

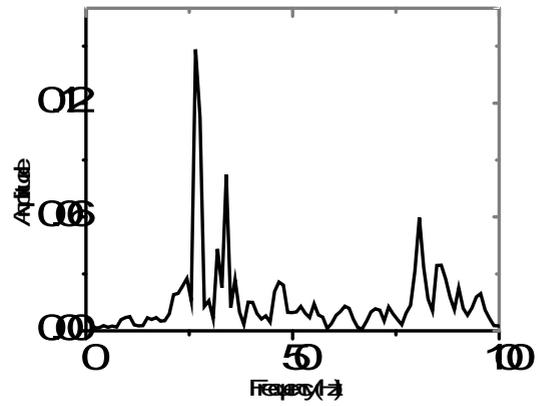
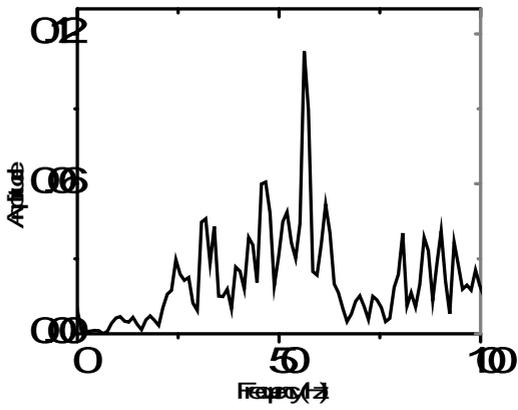
()

4.

(/c)

	1	2
	0,64 /c	0,45 /c
	0,85 /c	0,37 /c

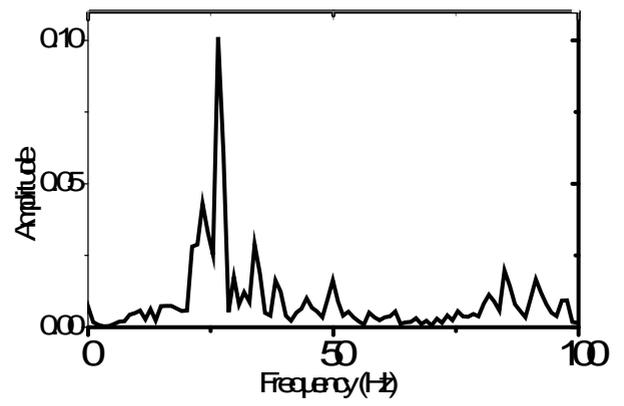
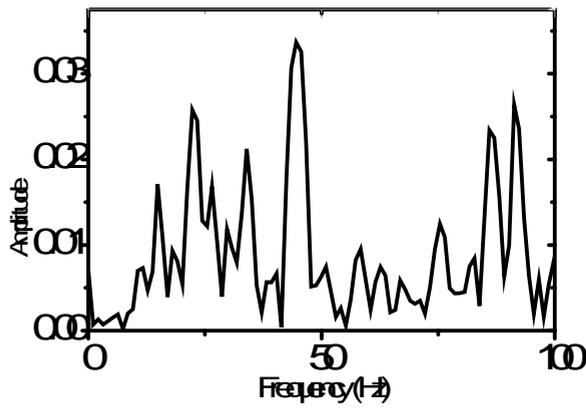
1, 2 - , . 4, , -
 () , -
 .3 4, .
 .3, 4, ,
 1 2
 26,5 , -
 ()
 , 26,5
 1, (.3,).



. 3. () 1 ()

2 X ,
 (. 4,),
 (22,5),

1,22 .



. 4. () 2 ()

1.

2.

3.

4.

(X, Y, Z)

1.

... // « » « »: ...
 . - : « » - 2008. - . 17. - . 25-34.

2.

... //
 . - 2005. - 12. - . 45-52.

3.

... // " " " " - 2008. - 16. - . 3-13.

4.

... , 1990 - 173 .

5.

... : 4704:2008. -

: , 2009, 11 . - ().

6.

: 7116:2009. - : , 2010, 6 . - ().

7.

... / . . . - :
 . - 1963.

