

• • , • • ,
 • • , • • , • • ,
 • • , • • ,
 • • , • • , « » , • •

-

Sh-2

Perspective views of dry concrete mixes in the structural material authority and in the technology of unshaped refractories are considered. Determining function of compatibility of cement with superplastic addition and dry concrete mixes in guaranteed maintainability was marked. Differences of polycarboxilate additions from traditional superplastificates are pointed. Experimental data about physical and mechanical forms characteristics of the cement rock with additions of superplastificates are reduced and parsed. The advantages of the developed addition Sh-2 in comparison with imported polycarboxilate addition are showed up.

()

[1 – 3].

- . [3, 4].
 - [1, 2, 4],
 - ,
 - . ()
 - ,
 - ,
 - , . . .
 - ,
 - [5 - 9].
 - ,
 - « » [5, 10], . . .
 - .
 - , [1, 5 - 7].
 - , , -
 - , -
 - .
 - ,
 - ,
 - .

(. %): SiO₂ – 4,06; Al₂O₃ – 58,35; CaO – 27,19; – 10,40.

FS-20, «SKW Polymers GmbH» Castament

Sh-2

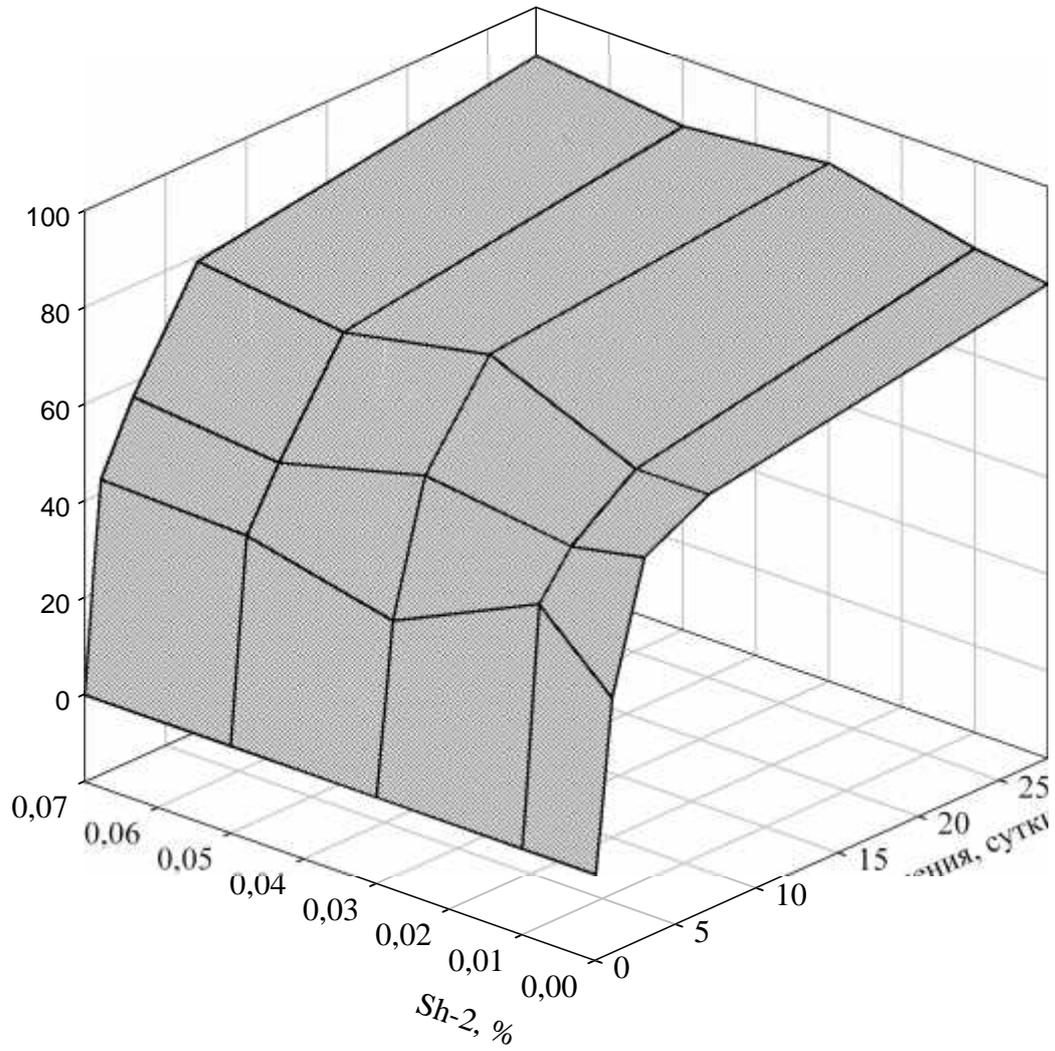
[4].

(310-3-92), – 10180-90.

ASTM 28
(-3 , – , – 35 , –20).

()

.1 .2.



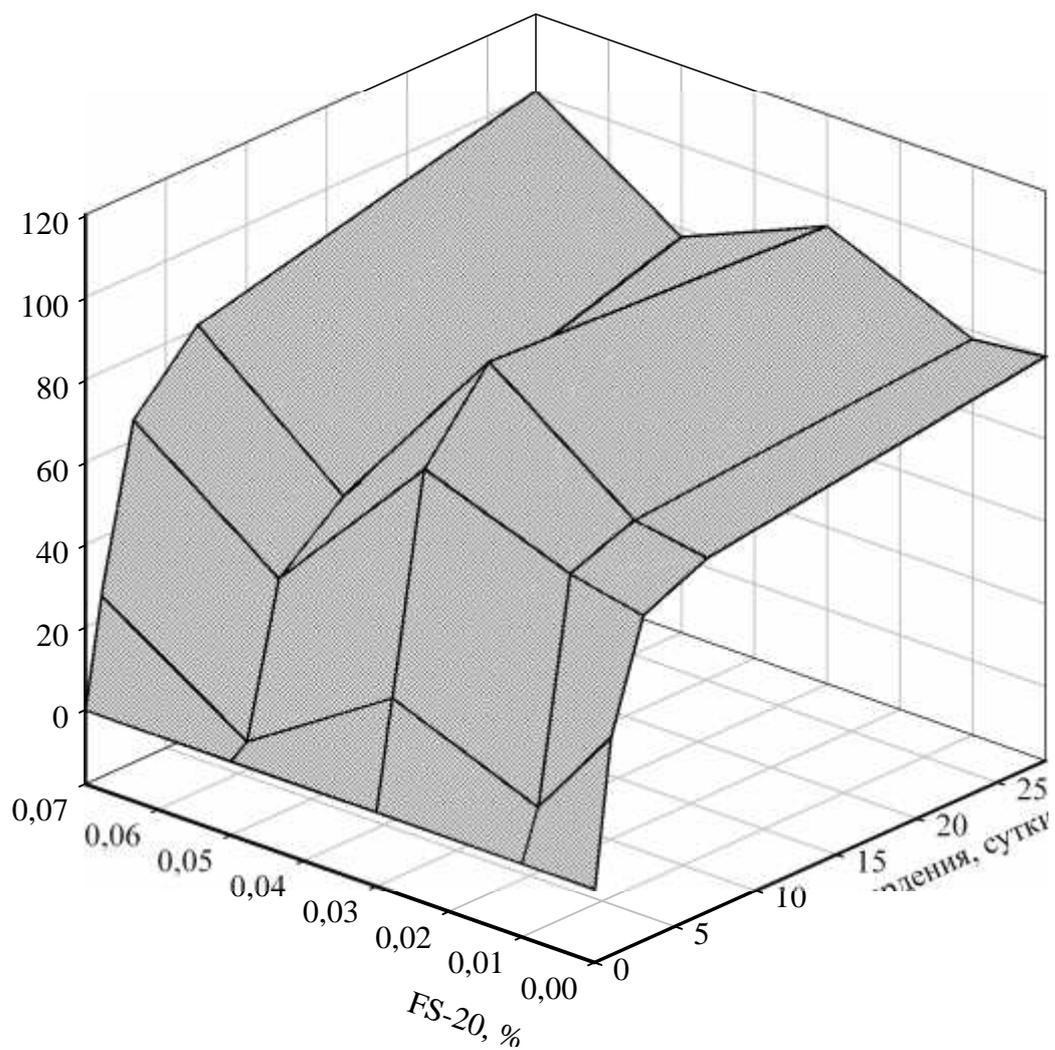
.1.

Sh-2

Sh-2

28

().



. 2.

FS-20

FS-20, %	Sh-2, %	FS-20, %		Time, days			
		0,01	0,03	1	3	7	28
0,01	28,00	1.35	2.50	35	61	68	80
0,01	27,25	1.35	2.50	49	58	68	82
0,03	27,00	2.05	4.45	35	62	81	89
0,05	27,25	1.40	3.05	42	54	75	86
0,07	26,75	1.45	3.15	43	57	79	90
0,01	27,00	1.25	3.45	12	65	71	78
0,03	26,00	1.30	3.05	26	78	97	93
0,05	26,50	1,40	3,45	3	39	52	78
0,07	25,00	1,10	2,20	26	65	81	101

Sh-2 0,01 . % , -

(1). Sh-2 0,03 0,07 . % -

7 , -

28 28 . -

0,03 . % . Sh-2, -

0,03 . % Sh-2 0,03 . % -

(27 %) -

(. 1.) , -

0,03 . % Sh-2 12 % -

28 (. 1.) -

3 , Sh-2 -

3 - 7 (, . 1.) FS-20 -

() , FS-20 -

FS-20 5 - 25 . (0,05 . % -

5). , -

FS-20, -

, 0,05 . % FS-20
 , (0,03 0,07 (. %)).
 FS-20 0,03 % FS-20
 ,
 . FS-20 0,01 . %
 , 28
 , FS-20 ().
 1 , FS-20
 FS-20 0,07 . % (),
 ,
 , - .
 FS-20
 (. 2).
 0,03 . % FS-20) , 0,01 0,05 . %
 FS-20 -
 Sh-2,
 Sh-2. -

Sh-2 0,03 . %.

Sh-2 (. 3.) (d·10⁻¹⁰,) -

[11]: CaAl₄O₇ (4,44; 3,598; 3,501; 3,08; 2,715; 2,60; 2,432; 2,055; 2,002), CaAl₂O₄ (4,667; 2,968; 2,851; 2,432; 2,402; 2,191; 2,023), CaAl₂O₄·10H₂O (14,16; 7,16; 4,72; 3,708; 2,554), Ca₂Al₂O₅·8H₂O (10,89; 5,46; 3,598), Ca₆Al₂(SO₄)₃(OH)₁₂·26H₂O (4,99; 4,84; 4,72; 3,231; 2,204),

Na₆Ca₂Al₆Si₆O₂₄(CO₃)·2H₂O (5,46; 3,645; 2,74; 2,60; 2,187).

Sh-2. – Ca₆Al₂(SO₄)₃(OH)₁₂·26H₂O

– Na₆Ca₂Al₆Si₆O₂₄(CO₃)·2H₂O (. 3).

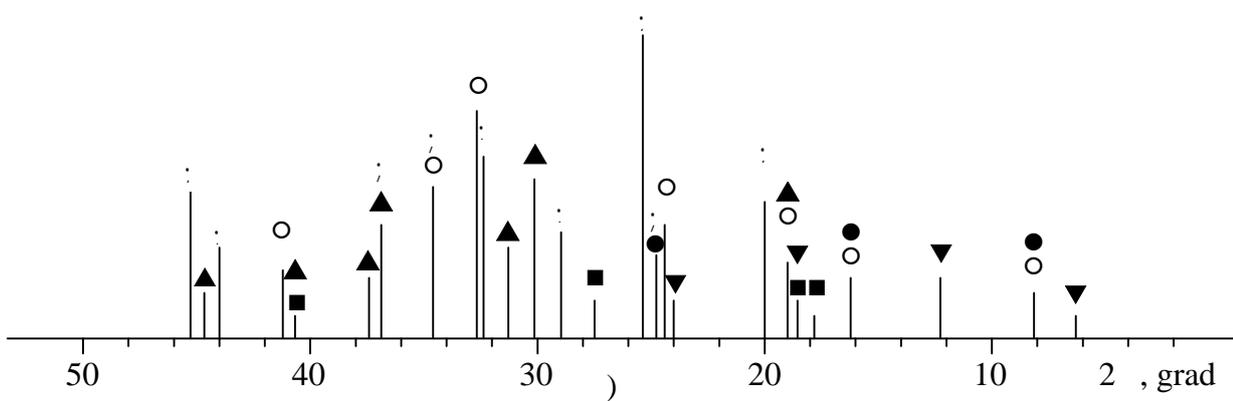
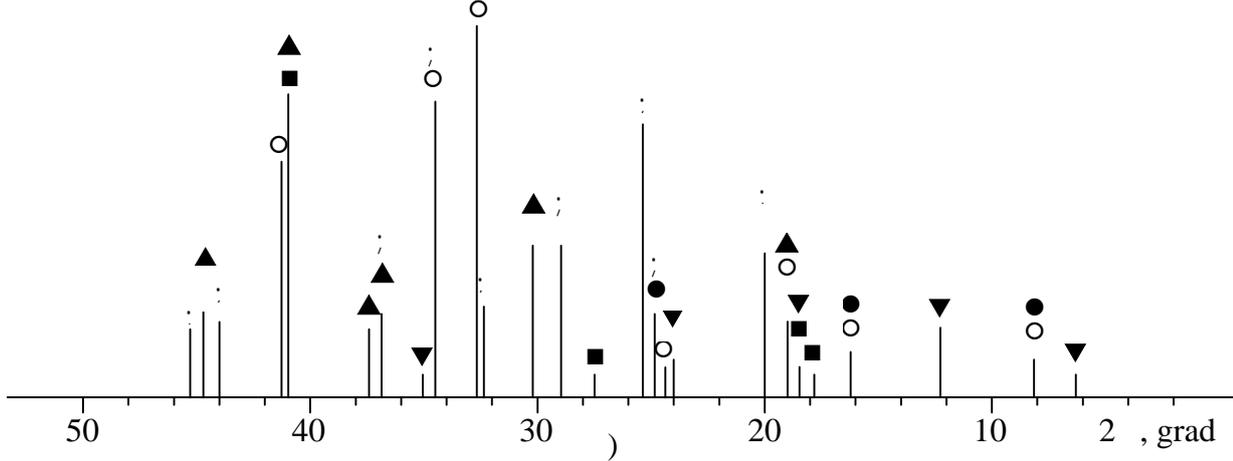
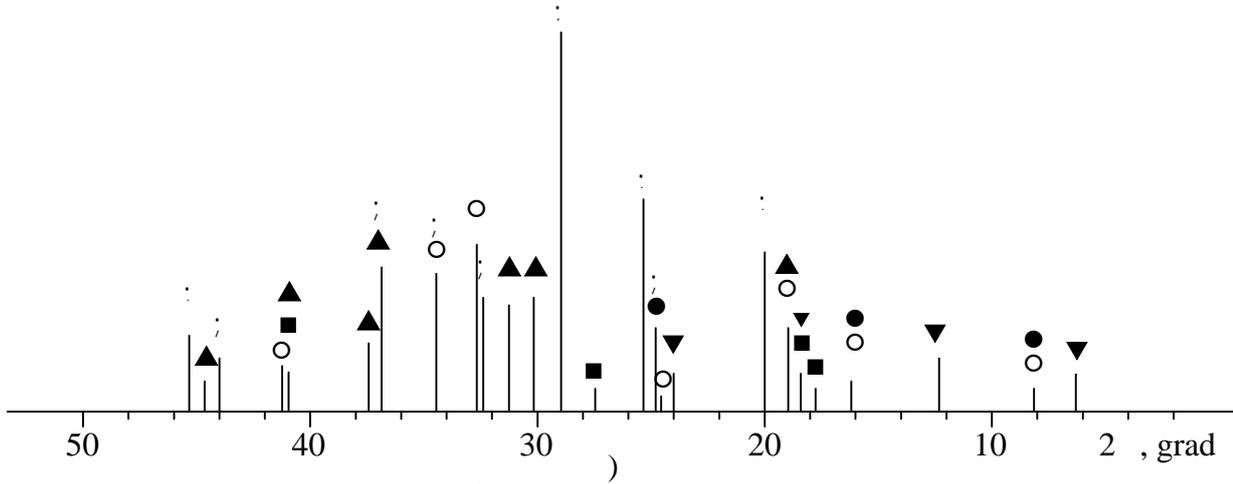
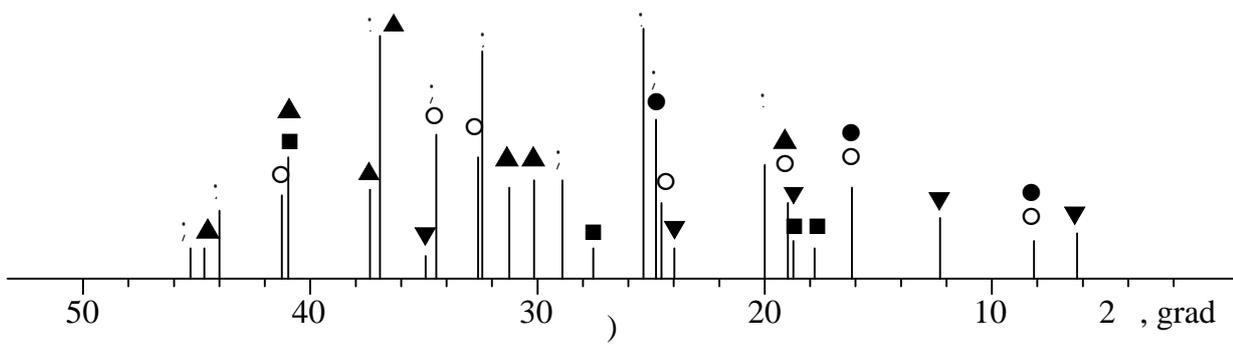
Sh-2

Sh-2 0,03 . %

12 %

FS-20

Sh-2



.3. - (28)

Sh-2:) 0,01 %,) 0,03 %,) 0,05 %,) 0,07 %.

; - CaAl_4O_7 , \blacktriangle - CaAl_2O_4 , \blacktriangledown - $\text{CaAl}_2\text{O}_4 \cdot 10\text{H}_2\text{O}$, \blacksquare - $\text{Ca}_6\text{Al}_2(\text{SO}_4)_3(\text{OH})_{12} \cdot 26\text{H}_2\text{O}$,
 \bullet - $\text{Ca}_2\text{Al}_2\text{O}_5 \cdot 8\text{H}_2\text{O}$, \circ - $\text{Na}_6\text{Ca}_2\text{Al}_6\text{Si}_6\text{O}_{24}(\text{CO}_3) \cdot 2\text{H}_2\text{O}$

: 1. -

2. , 2005. - 512 .

.. // “ ”. “ , - : “ ”. - 2006. - 13. - . 16 - 24. **3.** // - , 2006. - 183 . **4.** // - , 2006. - 292 . **5.** // , 2006, 5. - . 44-48. **6.** () // , 2003, 8. - . 28-31. **7.** // , 2006, 4. - . 135-141. **8.** 3 . % // ”, : , 2006, 106. - . 63-70. **9.** // “ ”, : - , 2005, 105. - . 98-105. **10.** // , 2002, 6. - . 6-8. **11.** - : , 1981. - 335 .

19.10.06