

[]

Lafarge Secar 71

[]

Al₂O₃

CaO

Al₂O₃ CaO

CA₂

() BF-25 BF-20 BF-15

[]

/

Al₂O₃-SiC-C

()

()

°C

- mm

Pechiney

°C

Finger Test

% /

Silicona

- mm

%			
BF-25	BF-20	BF-15	
			- mm
			%
	/		
	/		()
/	/	/	- mm

, K_{α} JEOL-JDX 8030
 mA KV (CCS)
 ASTM C133-97
 CAM SCAN (SEM)
 (EDS) MV 2300 ASTM C20-97
 Finger Test
 * * cm^3
 () cm
 cm
 SiC
 () ()
 Finger Test
 $\times \times mm^3$
 $^{\circ}C$
 cc
 $^{\circ}C$
 BF-15 $^{\circ}C$
 ($< \mu m$)
 X
 :

L.O.I	SO ₃	MnO	K ₂ O	Na ₂ O	SiO ₂	TiO ₂	Fe ₂ O ₃	CaO	MgO	Al ₂ O ₃	
/	/	/	/	/	/	/	/	/	/	/	

Fe	C	S	Mn	Si	
/	/	/	/	/	

CaO

BF-25 BF-20 BF-15

SiO₂

[]

(Secar 71)

()

)

cm

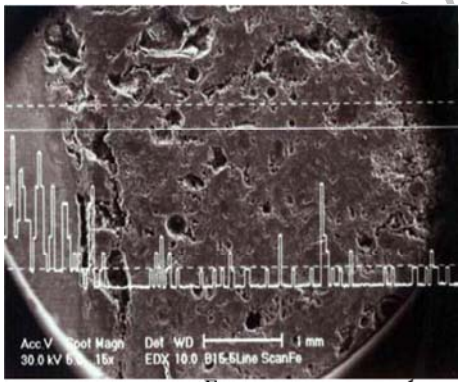
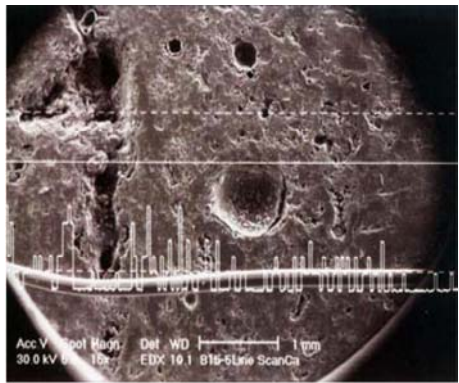
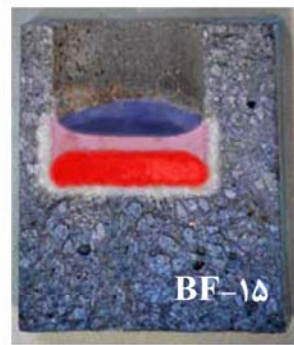
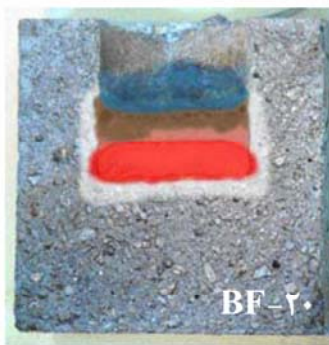
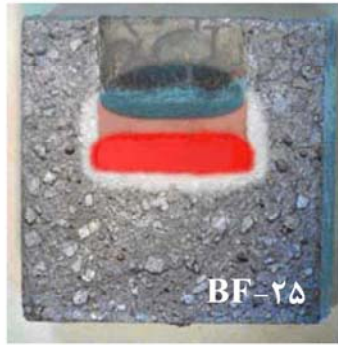
- cm

[]

CaO

Al₂O₃-SiC-C :

BF-25	BF-20	BF-15	(°C)	
/	/	/		g/cm ³
/	/	/		
/	/	/		
/	/	/		
/	/	/		%
/	/	/		
/	/	/		
/	/	/		
/	/	/		MPa
/	/	/		
/	/	/		
/	/	/		
/	/	/	%	



Al₂O₃ ()
 Al₄C₃ CO₂ CO
 Al₂O₃

() BF- : cm
 .Mg () Fe (-)
 BF- () BF-15
 15
 - μm BF-
 .(-)

(Akermanite)
(corundum)

(Gehlenite)

(Anorthite)

[]

FeO

FeO

()

FeO

(Fayalite)

BF-20

SiC

CAMS

)

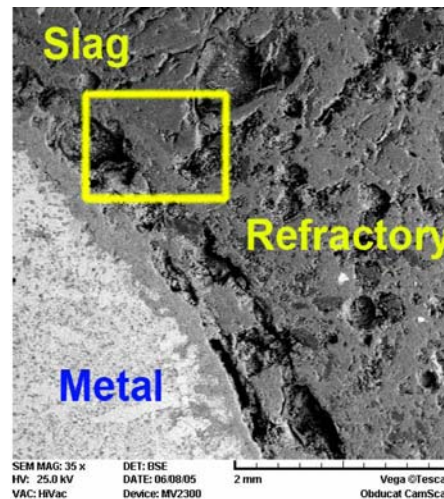
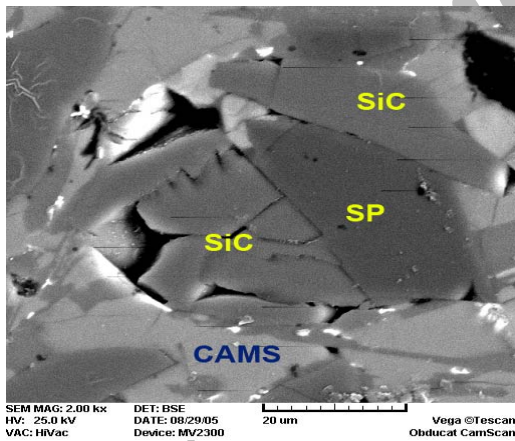
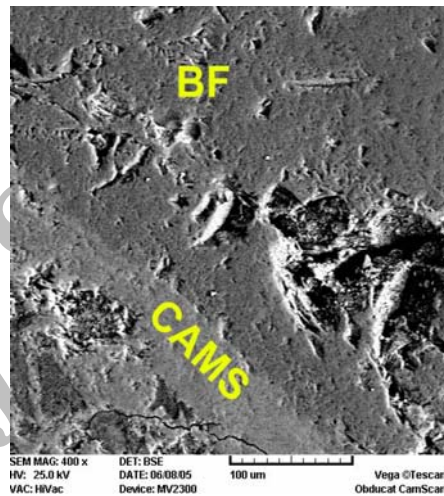
[]

(-)

[]

TiO₂

CaO



SEM :

(BF-20)

)

CA₆

[]

(-)

BF-

BF-

BF-

:

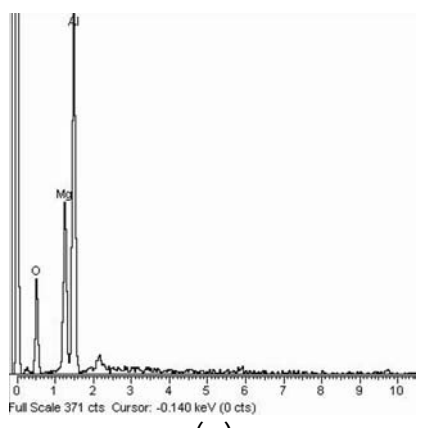
x

()

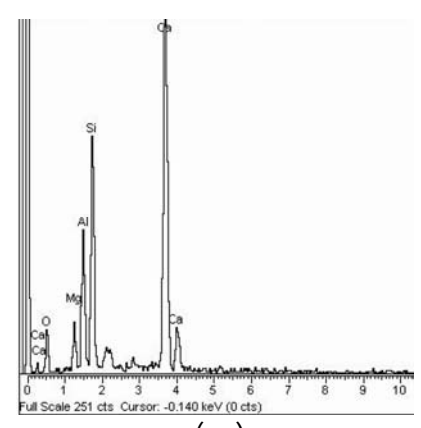
x

()

BF-15



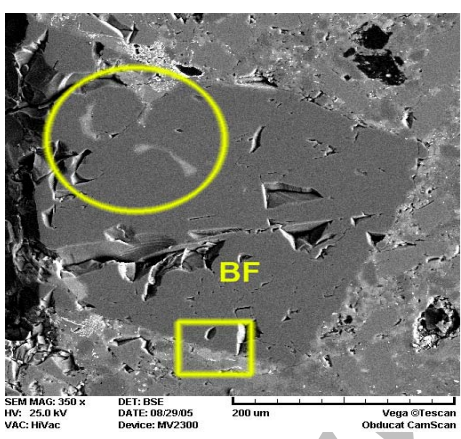
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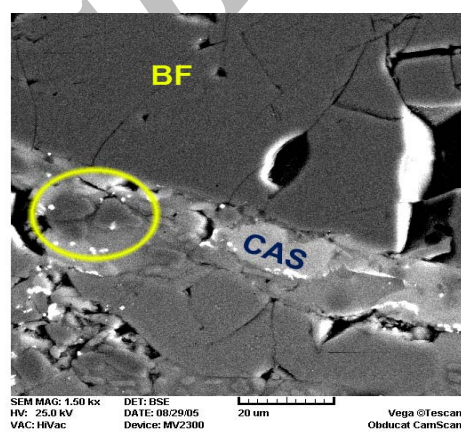
()

EDS :

() (CMAS) ()



()



()

SEM :

[]

(-)

SiC BF-15

CaO- (CAMS) CaO-Al₂O₃-MgO-SiO₂

(-) (CAM) Al₂O₃-MgO

-Al₂O₃-MgO-CaO

SiO₂

CaO-Al₂O₃-SiO₂ (-)

CA₆ ()

(-)

(-)

(-)

Al₂O₃ SiO₂

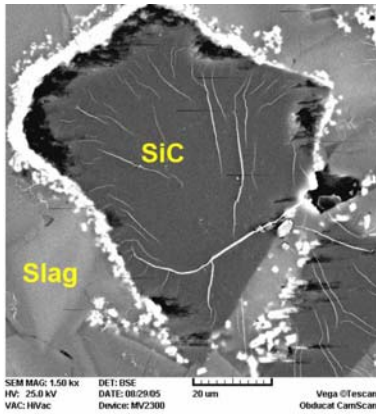
Ti

Si Al Mn

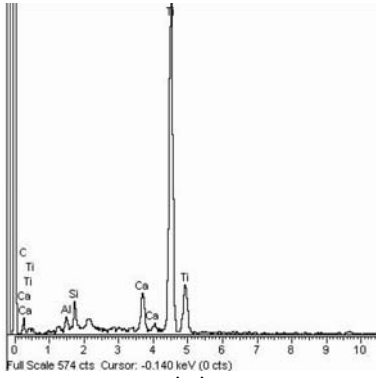
TiO₂

MnO

[]



()



()

SEM ():

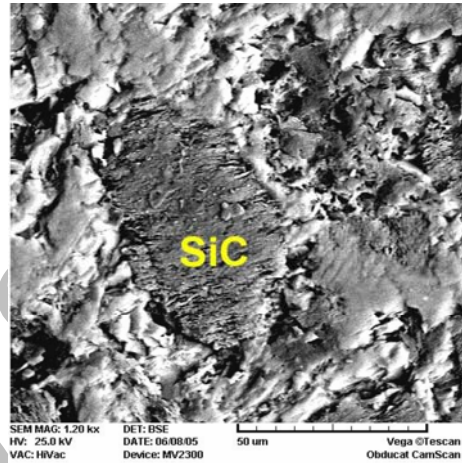
. SiC

EDS ()

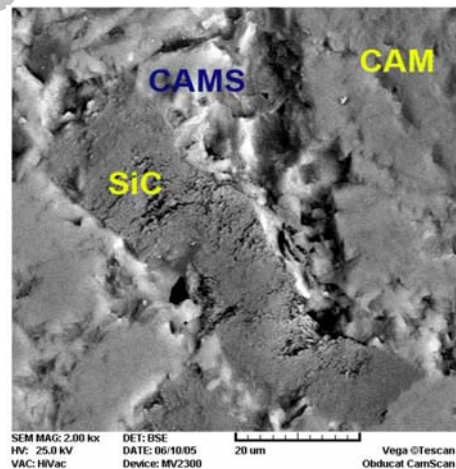
(BF-25 BF-20 BF-15)

Finger Test

()



()



()

TA-15

CaO-

SiC

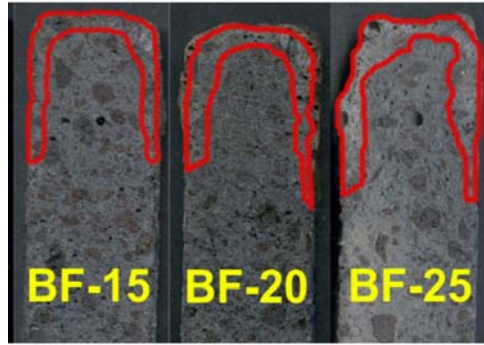
:

() SiC ()

Al₂O₃-MgO-SiO₂

BF-25

Al₂O₃-SiC-C



SiO₂

Finger Test

BF-

SiO₂

BF-25

15

Finger Test

()

()

MgO

MgO .

CaO

MgO

[]

MgO

[]

BF-15

[]

CaO

()

BF-15

CaO

CaO

BF-15

CaO .

CaO .

Al₂O₃

CA₂

CaO-

SiO₂ CaO-

[]

Al₂O₃-SiC-C

Al₂O₃

MgO

CaO

L.O.I	SO ₃	MnO	K ₂ O	Na ₂ O	SiO ₂	TiO ₂	Fe ₂ O ₃	CaO	MgO	Al ₂ O ₃	
/	/	/	/	/	/	/	/	/	/	/	
-	/	/	/	/	/	/	/	/	/	/	Slag-BF-15
-	/	/	/	/	/	/	/	/	/	/	Slag-BF-20
-	/	/	/	/	/	/	/	/	/	/	Slag-BF-25

-%

. []

BF-15

Finger Test

Finger Test

BF-15

BF-25

Al₂O₃-SiC-C

%

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