

\*

. .

---

(750-400)

1050

. (16-1)

475

( - $\delta$ )

(625-550)

625

---

: \_\_\_\_\_

-

-

\*

( )

1940

w

[1]

[2]

[1]

(sensitization)

.(healing)

.[3]

healing

.[5]

AISI 403  
660 600  
Cr<sub>23</sub>C<sub>6</sub>

540 450

.[4]

.[6]

1050 Solution treatment -1 SSC

625 550 475 400 -2  
4 750 700

625 475 -3  
16 8 6 4 1 .[7]

: -2  
: 2-1

---

) 2-3  
.(

924 (Normalizing)  
(Aging) 600

6% FeCl<sub>3</sub> ( ) / (1) Spectro Max-X  
. 2 0.5 : 2-2  
PS6 5\*10 32  
(1) :  
1000+ 200 -  
/ 0.5

(1)

Ti	P	S	Mn	Si	Mo	Ni	Cr	C	
0.009	0.017	0.002	0.69	0.25	0.76	5.6	15.5	0.05	%

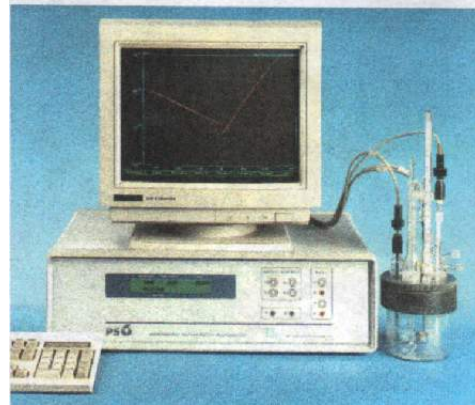
- = :W

.<sup>2</sup> :A

.<sup>3</sup> / :d

. :t

: \_\_\_\_\_ **2-5**



) (1)

PS 6 (

.Olympos

Fry

5

: \_\_\_\_\_ **2-4**

40 + CuCl<sub>2</sub>

(ASTM G48)

30 +

30 + HCl

%6

(FeCl<sub>3</sub>)

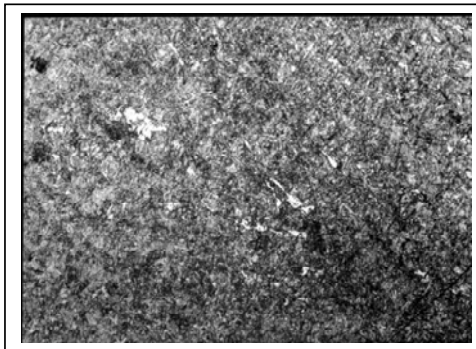
100

900 (FeCl<sub>3</sub>·6H<sub>2</sub>O)

:

72

.(2)



(2)

50X .

1050

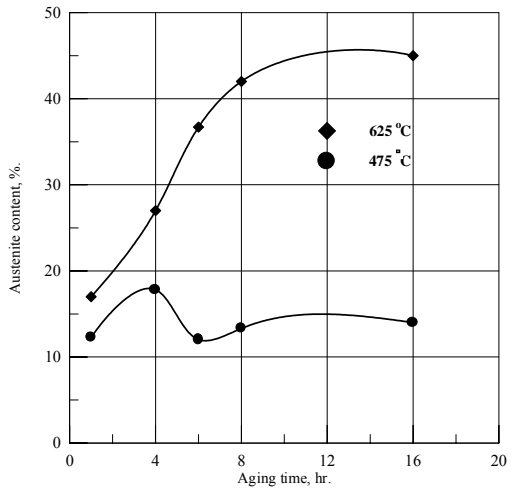
50

$$CR = \frac{3650 \times W}{A \times d \times t}$$

:

/

:CR



(4)

XRD  
 .(ASTM E975-95)

: -3

3-1

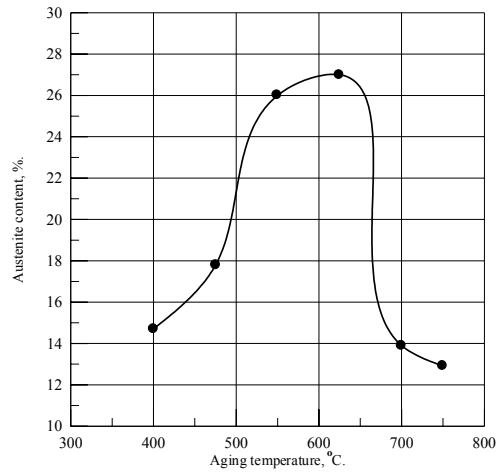
(3)

: 3-2

625

750

(11) (5)



4

(3)

625

4

400

(5)

625 475

(4)

475

%17

625

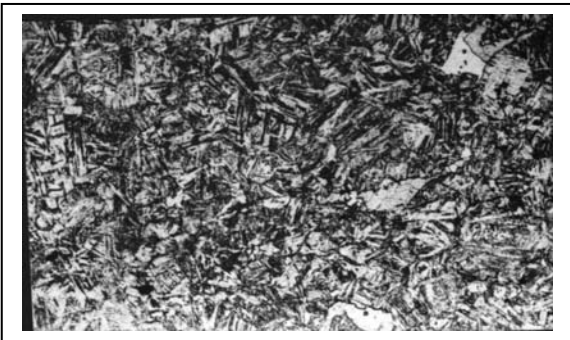
16 1

%45



(6)

200X . 475 °C



(7)

475

100X. 4

4

550

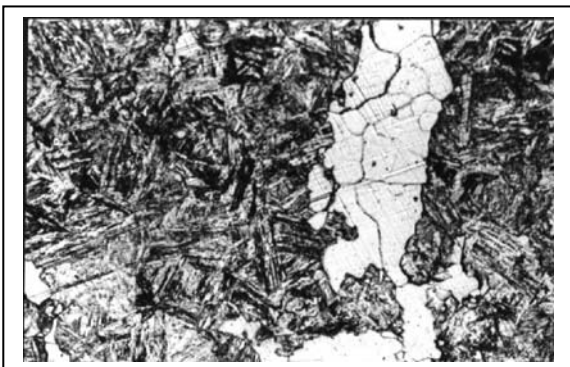
4

475

475

(8)

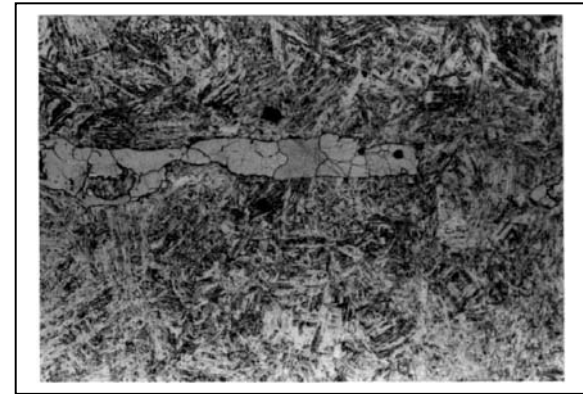
.%26



(8)

200X. 4

550



(5)

200 X. 4

400

(6)

475

475  
(7)

550  
(8)

%18

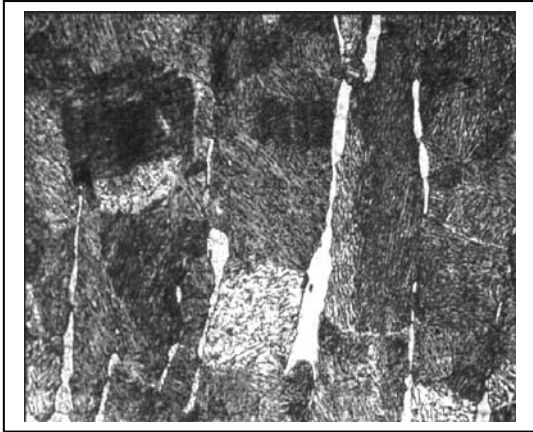
(3)

%27

(11) 4 700

4 625

(9)

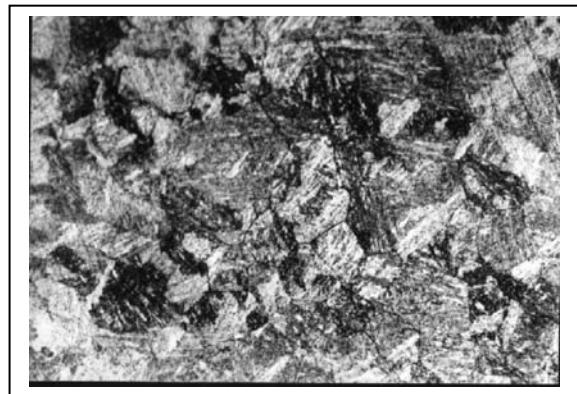


(11)

500X . 4 700

16

(10)



(9)

200X . 4 625 °C

3-3

( )

4 (12)

)

( %6

:

-1

. 475 400

2.35

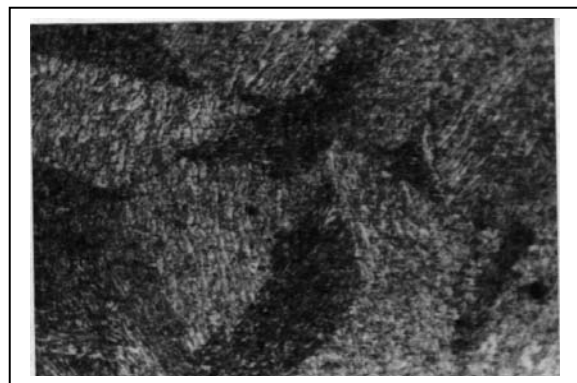
-2

. 475

/

-3

550 475

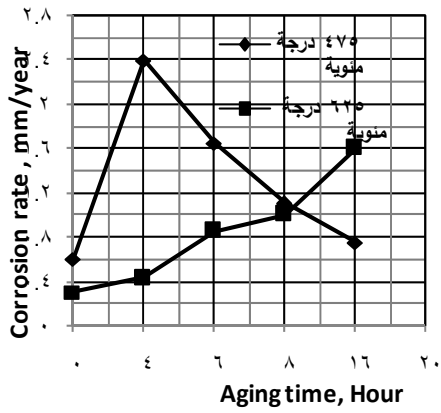


Oc

(10)

1000X . 16 625





(13)

625 475  
( )  
625  
6  
3-4

(14)

4

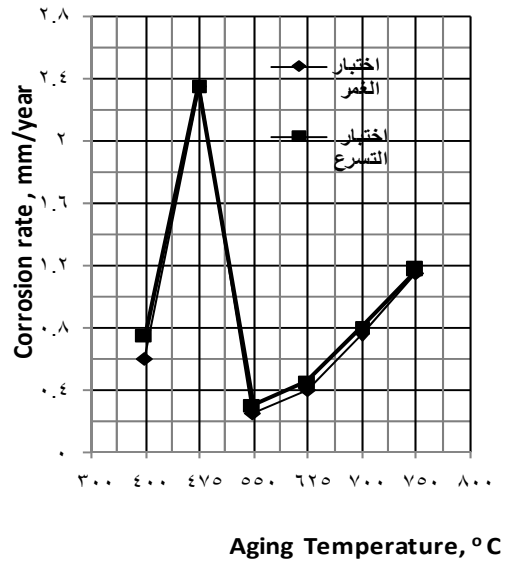
625 400

625

750 625

/ 0.17 -4  
625 550

-5



(12)

4

)

(

(13)

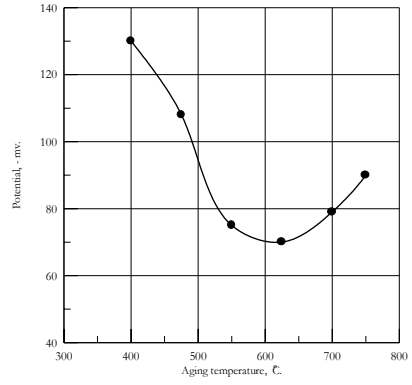
625 475

425

4

475

625  
 3-5  
 : ( )  
 (16)



4

(14)

625 475

475

(15)

625

( )

475

-1

6

475

4

8

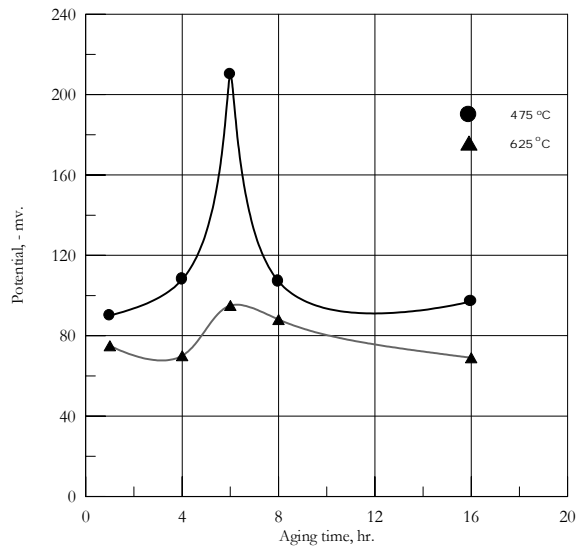
6

4

-2

625

8



(15)

16

(18)

(18e)

(18)

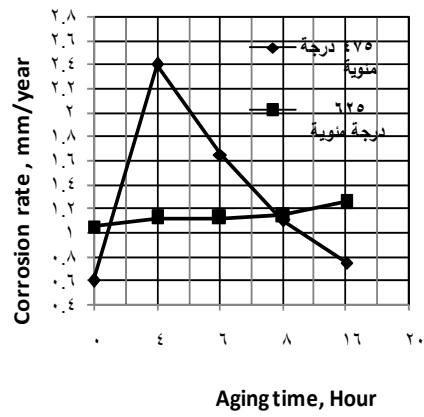
16

(18k)

(19)

475

625



(16)

625 475

3-6

:

(19)

(17)

475

(17b)

550

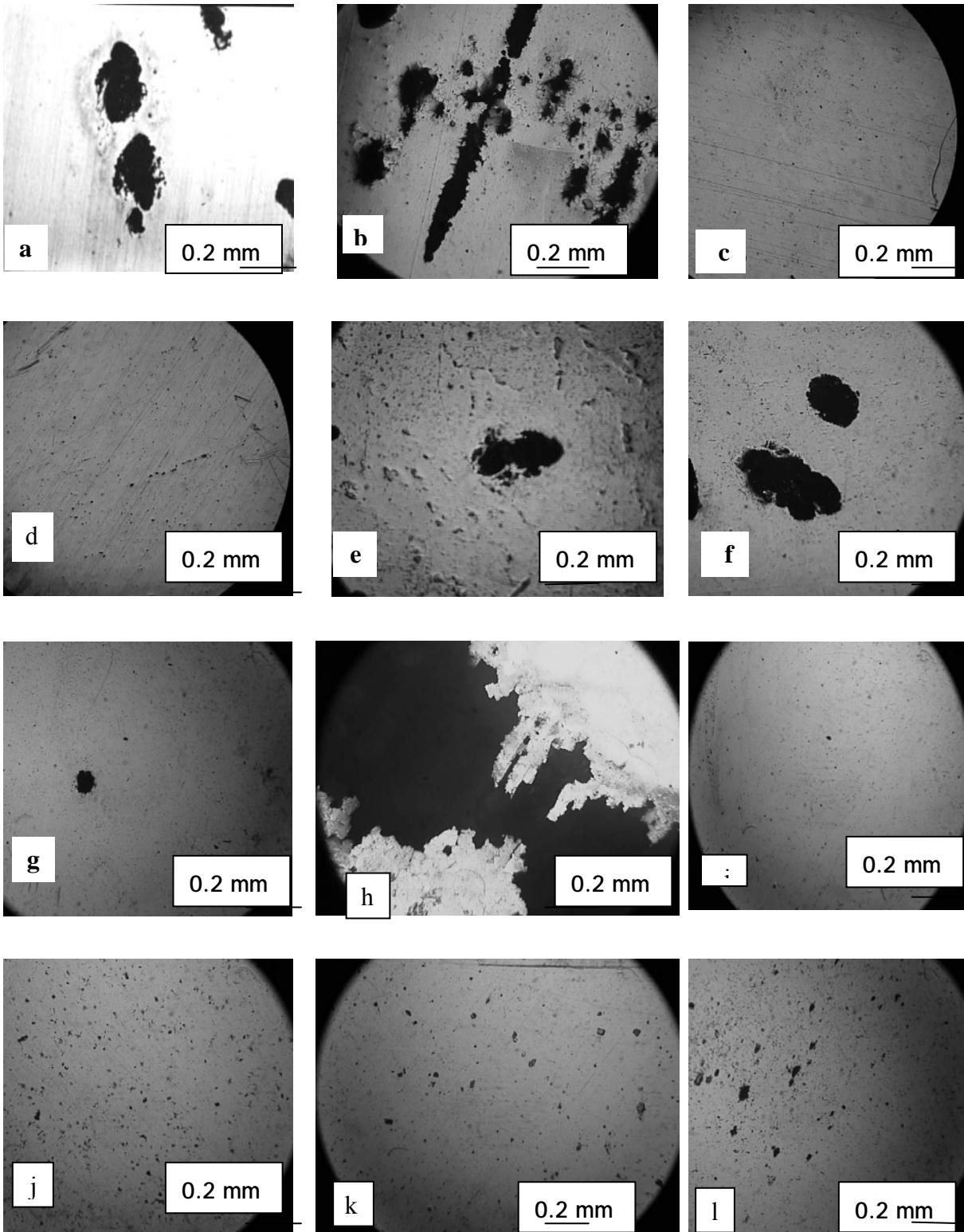
(17c)

750

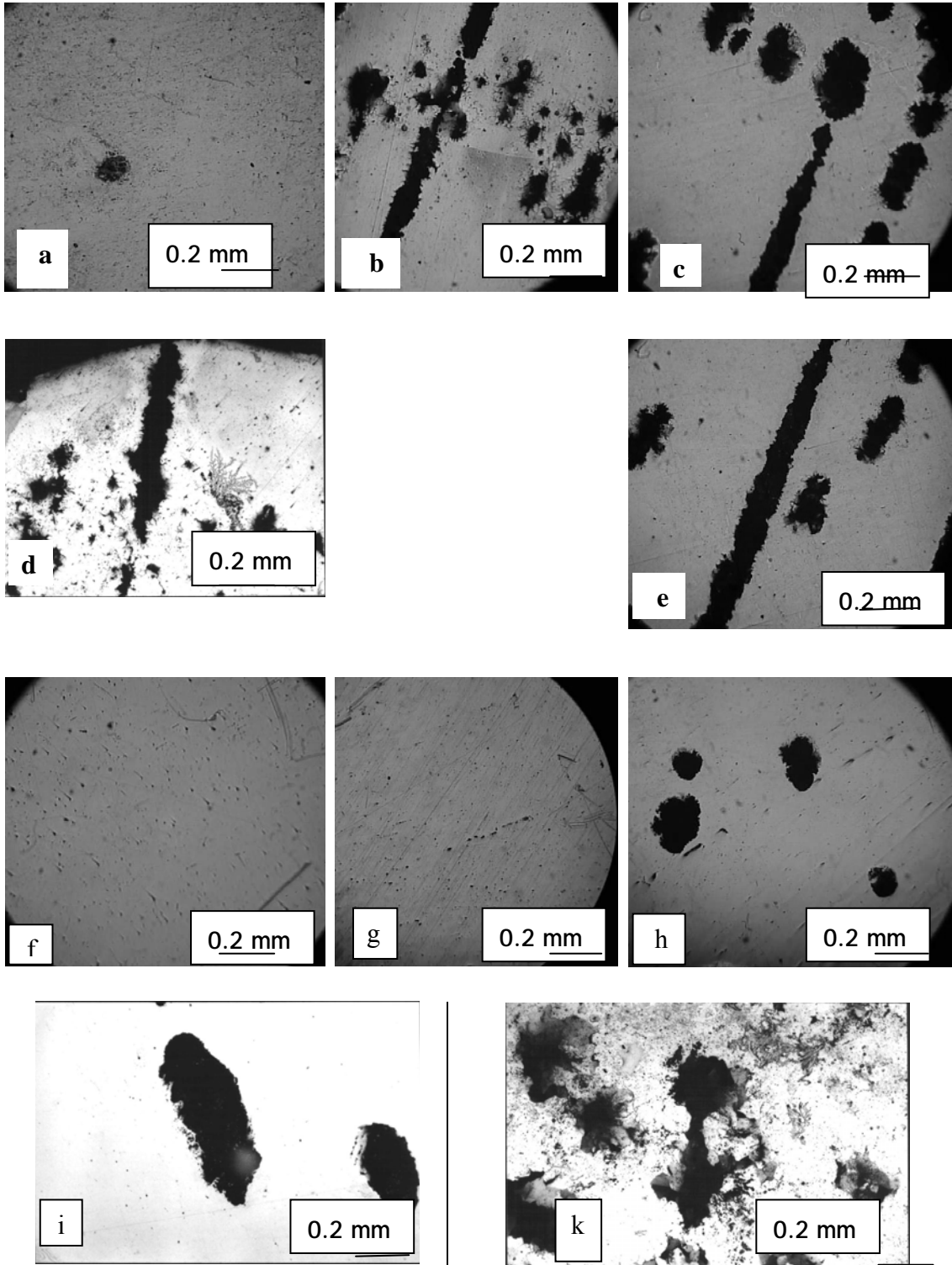
550

475

(17f)



(a,g) 400. (f,l) 750 (e,k) 700 (d,j) 625 (c,i) 550 (b,h) 475  
 (g,h,i,j,k,l) (a,b,c,d,e,f) (17)



(e) 16hrs (d) 8hrs (c) 6hrs (b) 4hrs (a) 1hr

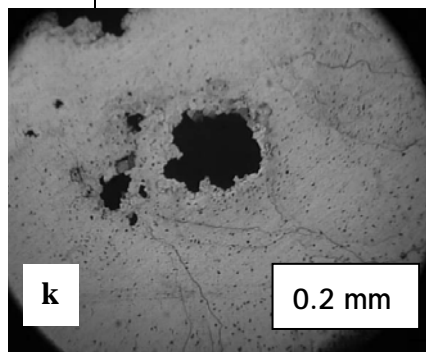
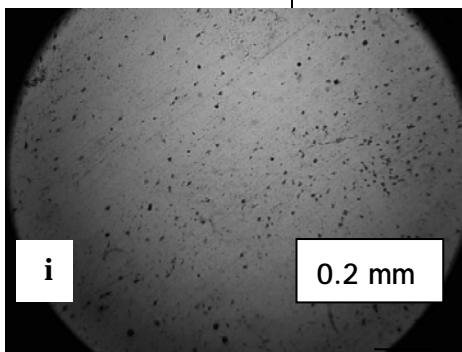
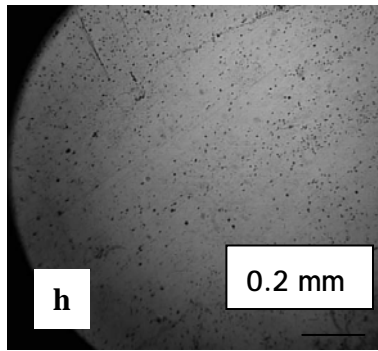
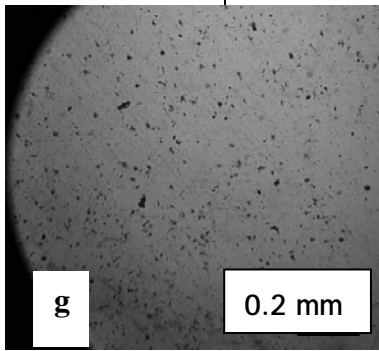
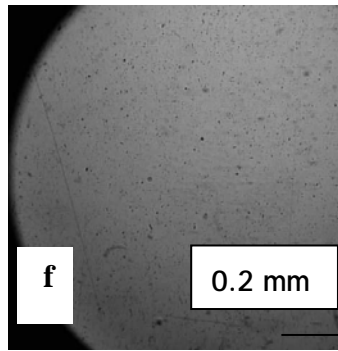
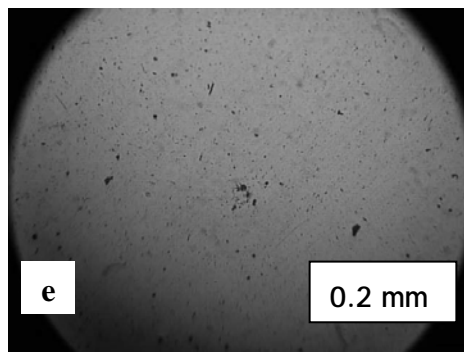
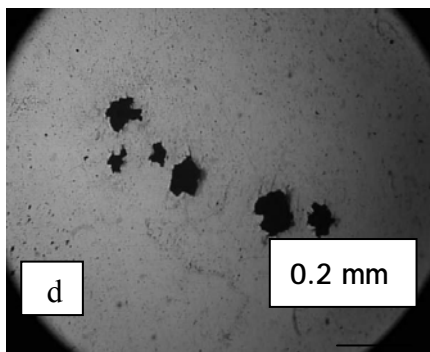
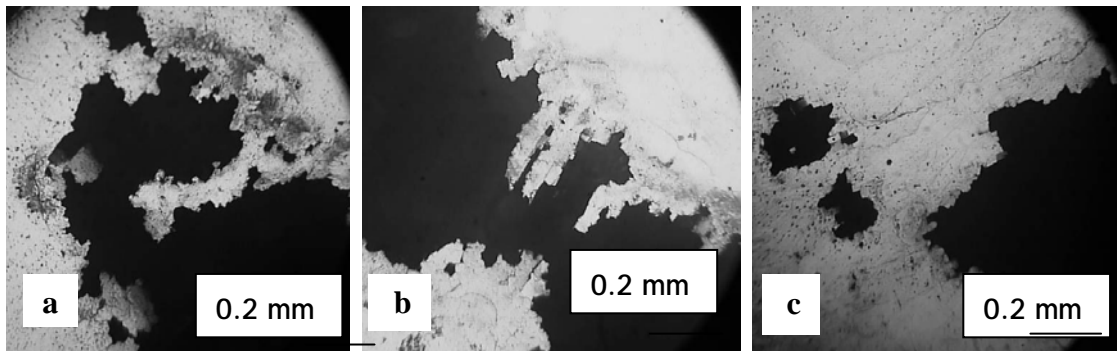
(18)

625

f,g,h,i,k .

475

a,b,c,d,e .(



(d)8hrs (c)6hrs (b)4hrs (a) 1hr

625

f,g,h,I,k .

475

a,b,c,d,e .(

(19)

)(e)16hrs

: -4

1-4

TiC

Cr<sub>23</sub>C<sub>6</sub>

%2

750 - 700

( )

[8]

M<sub>s</sub> = 120 - 150

500

625

.(4) (3)

.[9]

(5)

625

.(11)

625

475

700

625 - 400

625

(3)

0.5

3

---

625

700

Cr<sub>23</sub>C<sub>6</sub>

4

(11)

( )

750

700

Cr<sub>23</sub>C<sub>6</sub>

4

---

**2-4**

---

. [11]

475

475

. (12)

(19b) (18) (17b)

. [10](Mo<sub>2</sub>C)

475

8

4

550

(17c,i)

. (16) (13)

550

(12)

Cr<sub>23</sub>C<sub>6</sub>

750

625

16

Cr<sub>23</sub>C<sub>6</sub>



		:	
			-1
			-2
	400		
	625		
27			-3
625		%13	
		750	
	750		-4
		:	
	475		-*
		.Mo <sub>2</sub> C	
625 - 550			-*
	750		-*
			-5
		625 550	

- 
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