



2.

2.1.

1000 (1800 ~ 2100[r.p.m])  
 1050 가 (Cr<sub>2</sub>O<sub>3</sub>가 )  
 1050 가 ( )

1. 1050

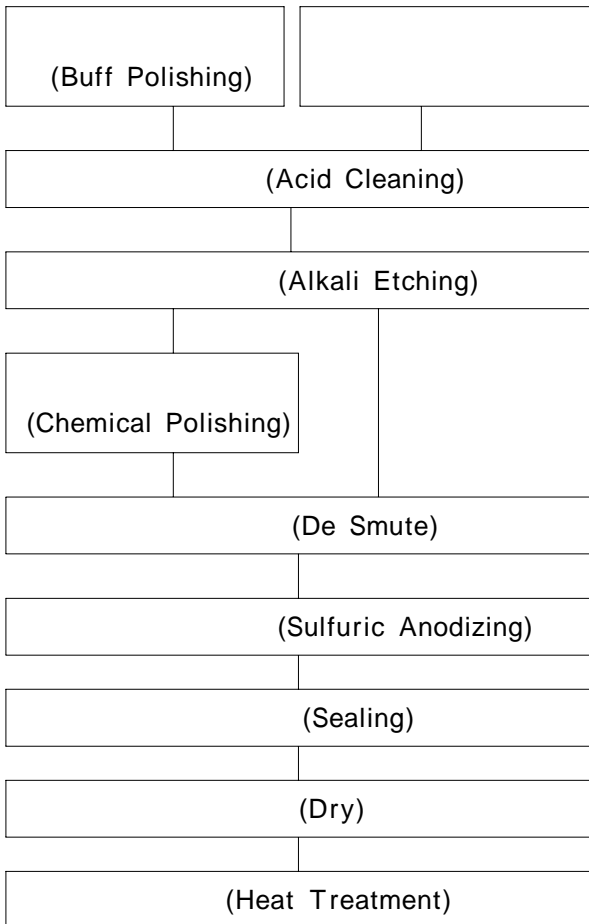
Table 1. The chemical component of 1050 aluminum

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
	0.25	0.40	0.05	0.05	0.05	-	0.05	0.03	99.50
	<	<	<	<	<		<	<	>

2.2.

가

1



- : 10[%]( )  
 - : 70 ~ 80[ ], 2 ~ 3

가

- : 5[%]( ),  
 2[%],  
 - : 60 ~ 80[ ], 10 ~ 20

가

99.5[%]

1.

Fig. 1. Schematic diagram of aluminum experimental Procedure

1600×1200×800[mm],

- : (84[%]) 41.6[g/ ],

(d=1.84) 15.5[g/ ], (d=1.42) 6.0[g/ ]  
80, 90

[ ] 3  
100[ ] 2 30 , 110[ ] 1 30

100[ ]  
XRD

SEM

가

XRD

[5],

가

SEM

XRD

가

peak

- :  
- : 30[ ], 1

( )가 가

9 , 13 , 18

- : 15[%]( )

- : (13[V]),

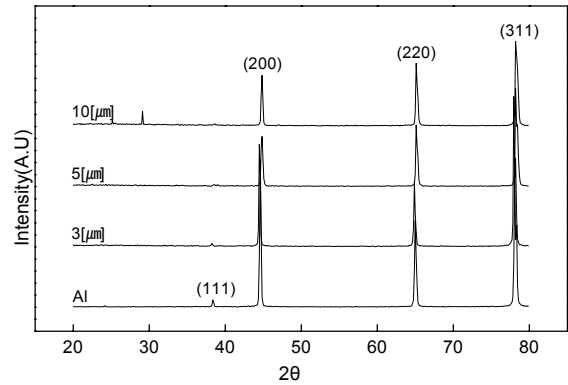
(1.1 ~ 1.2[A/dm<sup>2</sup>])

- :

1600×1200×800[mm]

21[ ]

10



2. 100[ ]

XRD

Fig. 2. XRD patterns of anodized aluminum sample according to various thicknesses after chemical polishing at 100[ ]

(RTA)

2.3.

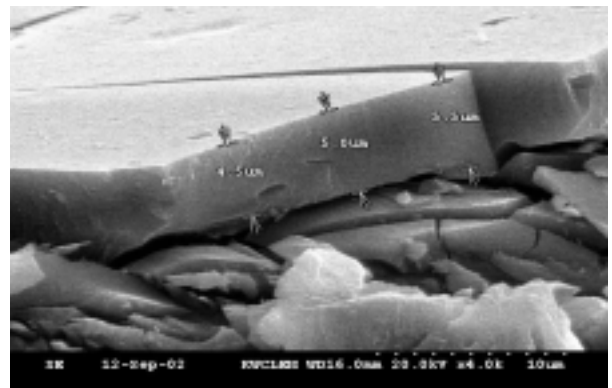
X-ray

(XRD) ,

(FESEM)

2.4.

2 3



3. 100[ ]

5[μm]

SEM

Fig. 3. SEM images of anodized aluminum sample according to 5[μm] thickness after chemical polishing at 100[ ]

4 XRD  
SEM

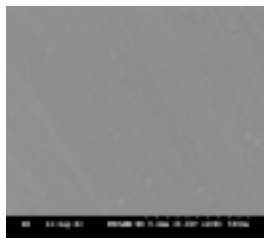
, 가

가

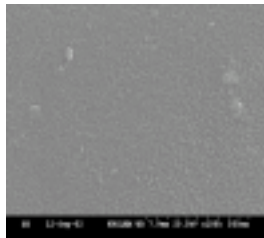
가

가

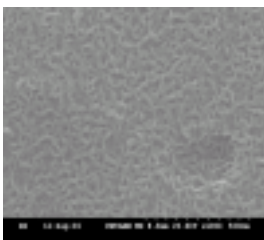
4(a)  
4(b),(c),(d)



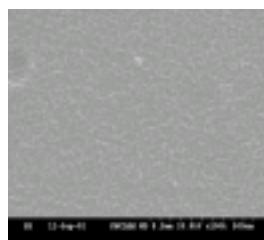
(a) Al



(b) 3[μm]



(c) 5[μm]



(d) 10[μm]

4. 100[ ]  
SEM

Fig. 4. SEM images of anodized aluminum sample after chemical polishing at 100[ ]

5 6

3[μm]

SEM

XRD

XRD pattern

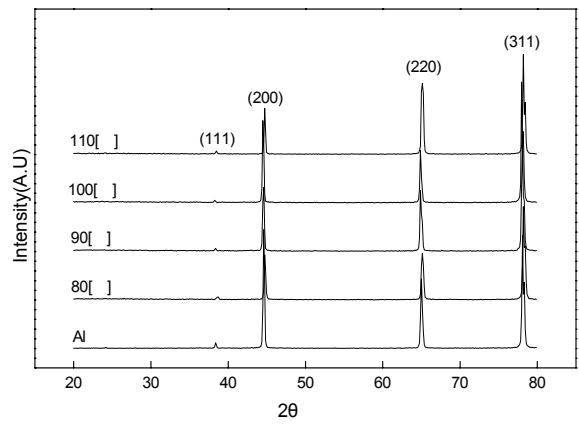
가

SEM

가 가

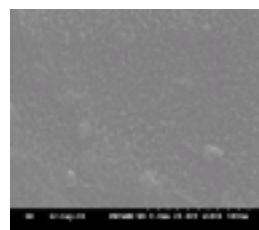
100 ~ 140[ ]  
[6],

가 가

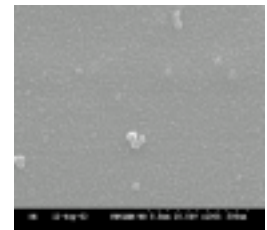


5. 3[μm]  
XRD

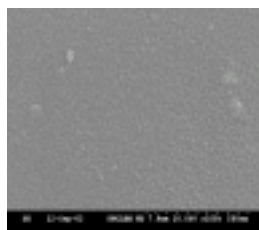
Fig. 5. XRD patterns of anodized aluminum sample according to 3[μm] thickness after chemical polishing at various temperatures



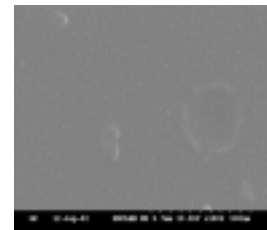
(a) 80[ ]



(b) 90[ ]



(c) 100[ ]



(d) 110[ ]

6. 3μm  
SEM

Fig. 6. SEM images of anodized aluminum sample according to 3[μm] thickness after chemical polishing at various temperature

### 3.

1)

XRD SEM

2)

가

가 가

3)

[1] P. V. Rysselberg, H. A. Johansen, J. of electrochemical Society, 106, 355(1959).

[2] R. W. Franklin, D. J. Stirland, J. of electrochemical Society, 110, 262(1963).

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Vol.12, No.7, P.540, 2002, 7.

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