

(19)(12)(KR)(A)

(51) 。 Int. Cl. ⁷ B21K 7/12		(11) (43)	10-2005-0011285 2005 01 29
(21)	10-2003-0050301		
(22)	2003 07 22		
(71)			
	148-12		
(72)			
	2 92	103-1207	
(74)			
	:		
(54)			

，
，
，
；
；
；
(Ingot)
1 가
가 1 가
；
2 가
가
가
2
，
，
，
，
1
2

3 .

4 , .

5 가 (, ,) .

6 (CATIA) .

, , , .

, (Hydro-forming) ,

20% (Steel) (Structual rigidity) 가

, (Front side member) (Hydro-forming)

가 가 .

, (Press) ,

가 가 ,

가 .

, 가 ,

Rib) 가 , (Flange) 가 (

, , , ,
 ;
 (Ingot) ; 가 , 가
 ; 1 가 ,
 가 1 가 1 가 (?) , ,
 2 (); 2 가 ,
 ; 가 가 .
 ,
 1 , 2
 , , , ,
 , , , ,
 (Press) (3) (3) (1)가 (5)
 , (3) (3) (1) (3) (5)
 (S10) (3) (5)
 (S10) (1)
 가 (3) ,
 가 ,
 가 .
 (5; , , ,)
 (9) (7) ,
 , 가 (5) , (3) (3)
 2% , 7%
 , (S10) (5) (10)
 (Ingot) 가 , (5)
 (S20) .

, (S20) 510 ~520 .

(S20) (5) (S10) (

3) (S30) (BP) (20) 1 가

, 10° 80%

(S30) (BP)가 1 가 (5) (S40)

, 2 (S40) (30) 1 (5)

, (5)

, 1 515 ~525 .

(가)

), 2 170 ~180 , (T6 7.5~8.5

(S40) (5) (3)

(41,43) (S50) (45) (47) , (3)

(40)

, 2 가 (5) (47) , (45) (47) (49)

(5)

(S50) , (5) 800bar

(5) , 900bar (SP) , 900bar (49) 900bar

(51) (53) (S50) 가 (3) (5)

(S40) 1 , 2 (S20)

, 3 , A B 가 , (S50)

1 가 , B

1

[1]

	Hydroforming	Hydroforming	
	6061 - T6()	A	B
(kg _f /mm ²)	31.6	30.9	30.8

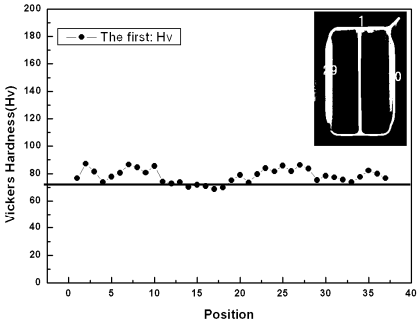
(kg _f /mm ²)	29.7	29.5	29.8
(%)	9.2	7.8	9.1

가 , A . ,
(6061-T4 F) (6
061-T6) , (74Hv) . 2
가 가 , 4 (, ,) .

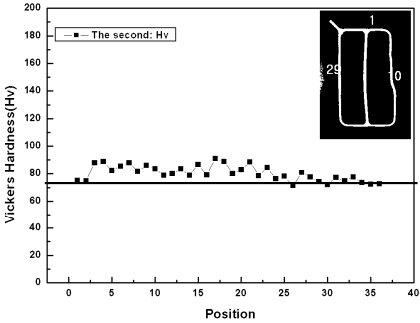
[2]

	6061-0	6061-T4(F)	6061-T6
(Hv:100g)	27	48	74

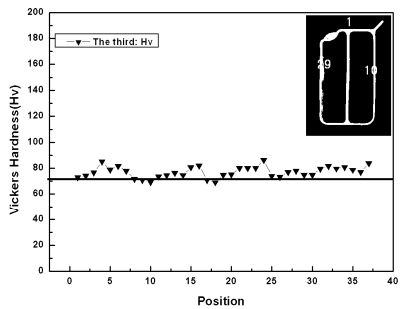
1. 2. 3 , , 가 .
[1]



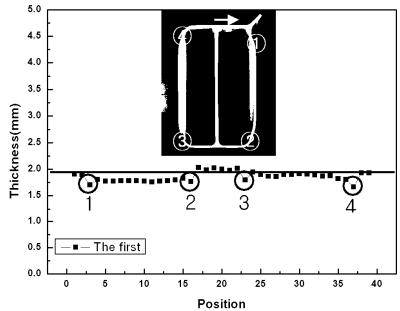
[2]



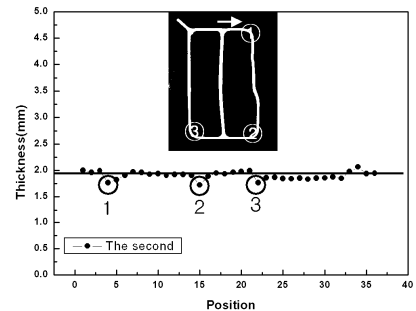
[3]



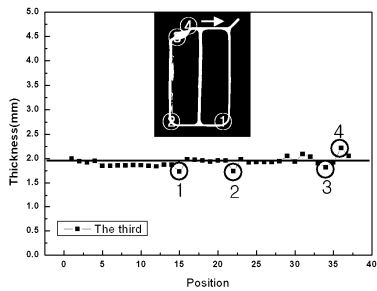
가 (5) 2mm
가 (7;Rib) 2mm 1.98mm 1.
98mm 4
4. 5. 6 가 가 가
[4]



[5]



[6]



가 , 5 (5) 가 (, ,) 가 , 3
, KSD 6759 , (5) 가
37% , 가 53% 가

[3]

		119.2	67.2	2	
		± 0.86	± 0.61	± 0.15	
	(5EA)	119.36	67.65	2.04	
		965.50	964.90	965.05	
		1.30	2.20	1.30	1.61
		0.79	1.22	1.10	0.8

(5) (5) , (3) ,
(5) (S50) .
, (Tool) (S50) (Point) 3
(Input) 가 (CATIA) (Vector) (Scanning) , 3
, 6
.
(S50) (3) 3 가 11 , 4
58% , 19 ± 0.5000mm 가 11 ,
8 7 가 .

[4]

Point	(deviation)	Point	가
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510 ~520 .

5.

1 ,

10 ° .

6.

1 , ,

1 515 ~525 , 2 170 ~180 ,
7.5~8.5 .

7.

1 , ,

800bar , 900bar

8.

,

,

,

(Ingot) 가
1 ;

2 ; ,

1 가

2 가 1 가 가 (?) ,
, 3 가

3 ;

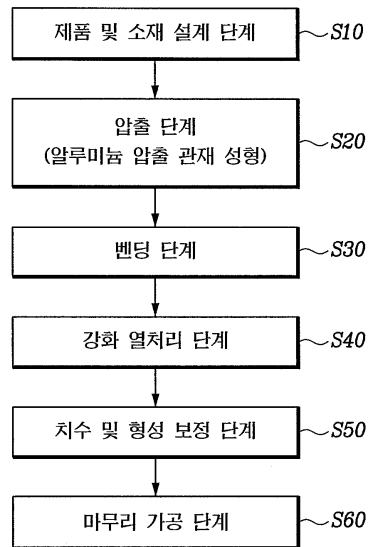
3
2 가 ,

4 ;

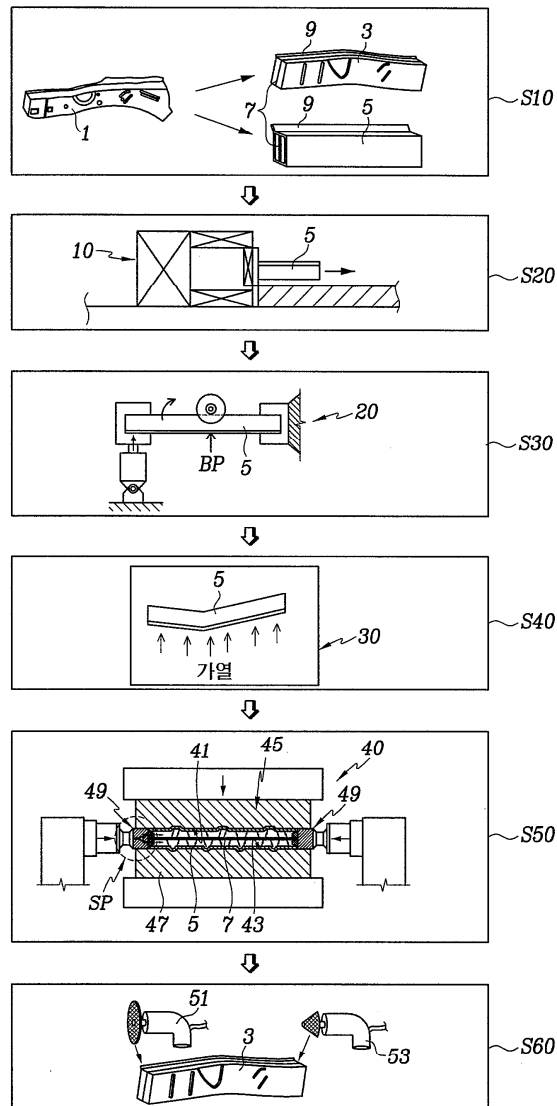
4 가 5 ;

.

1



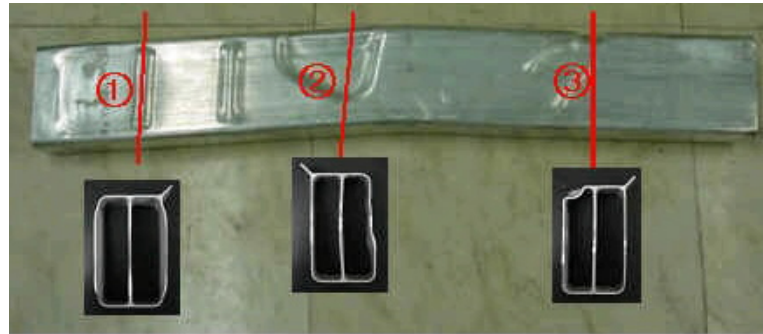
2



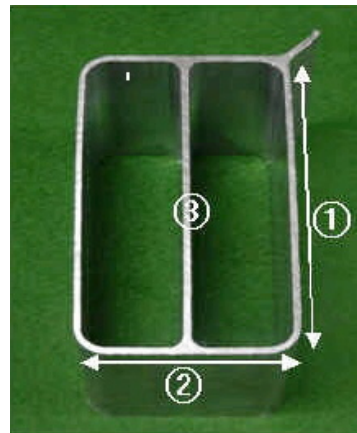
3



4



5



6

