

Sprue의 길이와 주조압이 비귀금속 합금의 주조성에 미치는 영향에 관한 연구

신구전문대학 기과기공과

A STUDY ON THE CASTABILITY OF BASE METAL ALLOYS WHICH ARE SPRUE LENGTH AN CASTING PRESSURE.

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Abstract

The purpose of this study was to evaluate the effect of sprue length and casting pressure on the relative castability of the base metal alloys, commonly used to make porcelain metal restoration.

Samples of total 30 were constucted and devided into 6 groups according to three v ariables (low, medium , high) .

The total number of complety cast squares were counted, verified and recorded.

The results of this

1. main effect of casting pressure was statistically significant.(P <0.05)
2. main effect of sprue length was not statistically significant.

목 차

		1.2) 1962	Partial Denfure
		frame Work	Base Metal Alloys
		65%	Sowter(1962)가 가
		3)	
		Crown and Birdge	Porcelain
		Metal Alloys	Base Noble
		Metal Alloys	가
		가	
		Semi-Precious Alloys	Base Metal Alloys
		가	
		Base Metal Alloys	Semi-Precious
		Alloys	
1930	Partial Denture frame Work	Ch-	Base Metal
	Base Metal Alloys		

I . 서 론

가 가
가

4.5)

Base Metal Alloys

Wax Pattern

Investment , Sprue
, Casting Wax Pattern

6.7)

Wight et

al⁸⁾ Sprue Wax Pattern
Venting, Investmnet

Barreto et al⁹⁾ Hinman et al¹⁰⁾ Base Metal
Alloys

11)

12)

Ni-Cr

가 Sprue
wax pattern Bar

Sprue

Base Metal Alloys 가

II. 실험 재료 및 방법

1. 실험 재료

Porcelain Base Metal Alloys

VERA-BOND(CAALBA DENT INC
U.S.A)

(HI-Temp: Whip-Mix Corp U.S.A)

2. 실험 방법

Pattern (0.4mm) Screen
(가 5cm, 3cm)

Runner Bur Method

12)

가 Rousseau

Method

5 (10gauge

Round wax, 10mm, 15mm) 1cm

Rousseau runtier bar(
6gauge round wax, 7cm)

Pattern Ring

가 1/4inch가

wax pattern

Cleaner(Surcast. G.C. Japan) wax pattern

wax ring(8cm, 7cm)

Carbon free phosphate boned investment HI-
Temp investment (Whip Mix
Corp U. S.A)

60 Setting Wax

ring

1800 40

Vera bond New Metal
/Proanne
(Kerr. U.S.A. 3)

Arm

3,4,5

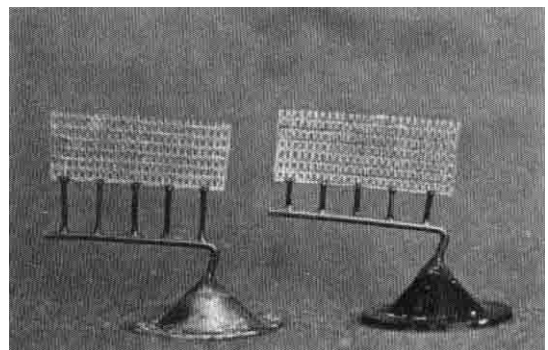
6

50µm Aluminum Oxide sand Sand
Blasting

(, ,) 10

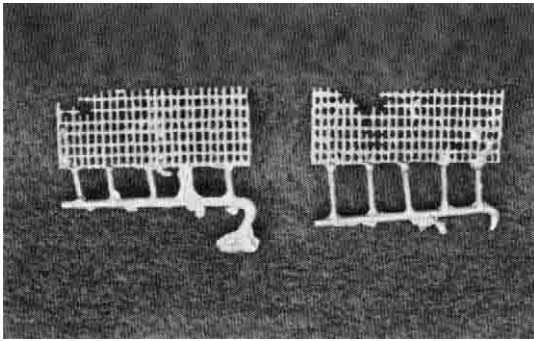
30

(182)

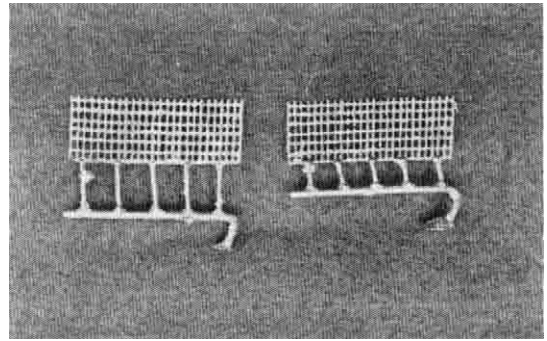


1. Rousseau

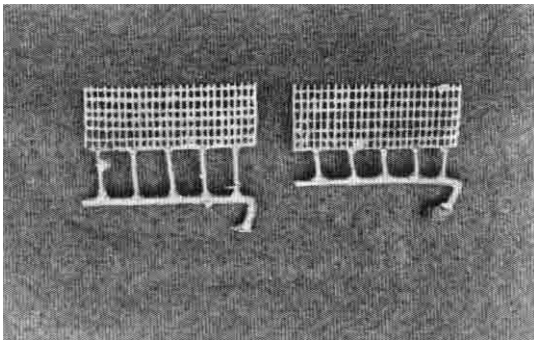
2.



2-1.



2-2.



2-3.

III. 실험 결과

Sprue

1>

1.

Sprue의 길이 구조압	저	중	고
1.0cm	156.6	177	178.6
1.5cm	148.5	169.2	170.8

< 1> Sprue 가 가 (3) X Sprue (two-way ANOVA) 가 가 . < 2>

2.

Source of Variation	S	SS	df	MS	F
Main Effects	Length of Sprue	464.133	1	464.133	1.804
	Casting Pressure	3037.400	2	1518.700	5.904 **
2-way interaction.					
Length of Sprue	Casting Pressure	0.067	2	0.033	0
Explained		350.160	5	700.320	2.723 **
Residual		6173.200	24	257.217	
total		9674.800	29	333.614	

**P < 0.05
91

< 2>

P<0.05

Sprue

Shaffe μ m

, Sprue

< 3>

(Tw-way interaction)

< 3>

가

가

5%

가

3. Shaffé

주 조 압	저	중	고
저			
중	**		
고	**		

** P<0.05

IV. 총 괄

Base Metal Alloys Crown & Bridge,
Porcelain Gold Alloys

Base Metal Alloys
higher Yeild Strength, higher modulus of
elasticity, lower cost 가

4,5,11,13,14)

Sprue 가

(1/4inch)

Sprue

Metal

Sprue 가

5%

가

가

Shaffe

, Sprue

4), Mclean⁵⁾

wax

Pftern

가

Sprue

Rousseau

30

runner bur

Sprue

Rousseau runner Bur

1.0cm, 1.5cm

wax Pattern

Ring

4,5,15)

1/4inch

Vera-Bond

V. 결 론

1. Sprue (1.0cm, 1.5cm)
2. (, ,)
 . (P<0.05)

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