

The Moulding Analysis of Mega Block Support for the Large Ship Construction

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Key words : Molding Analysis, Pin-jig, Casting plan, Solidification process, Compressive load support

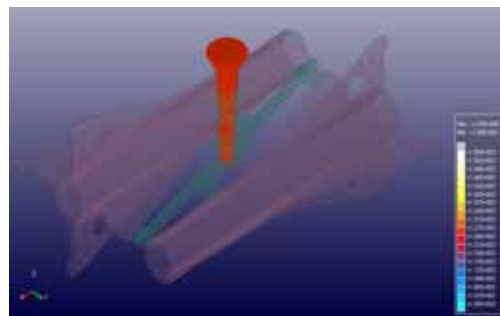
1.

가

3.

Fig.1

가



(a) 5%



(c) 20%



(e) 40%



(f) 60%

2.

GCD800

Ce, Ca

0.04%

, Ca, Ce

0.02%

가 Mg, Mg

GCD800

Table.1 Table.2

Table.1 Mechanical properties of GCD800 alloys

Yield Strength (N/mm ²)	Tensile Strength (N/mm ²)	Elongation (%)	Hardness Test (H _B)
Min 320	Min 500	Min 7	150 ~ 30
388.9	530.7	13.0	194

Table.2 Chemical compositions of GCD800 alloys (wt. %)

C	Si	Mn	P	S	Mg	Cu	Mo, Cr
3.65	2.67	0.32	0.031	0.001	0.040	0.308	-

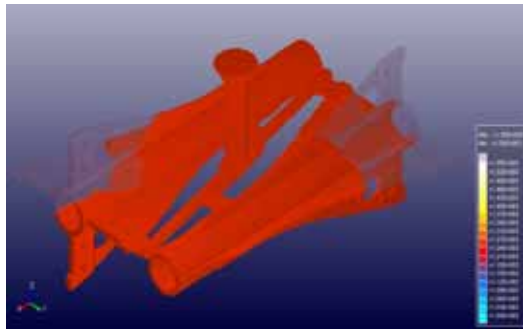
(OLYMPUS)

×1,000

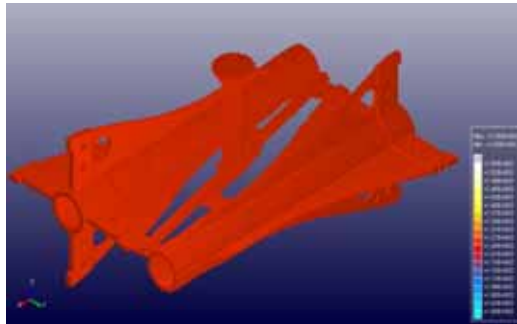
100,

50,

1.5



(h) 80%



(j) 100%

Fig. 1 Filling analysis results

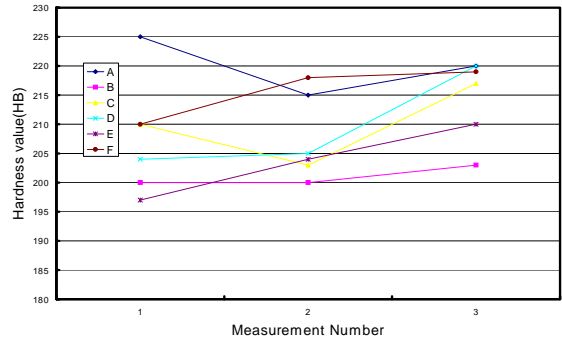


Fig.3 Measurement results to the H_B hardness test

60~)% 가

Fig. 2

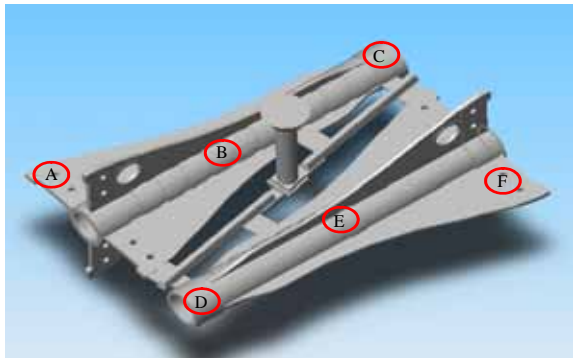


Fig. 2 The experiment position of casting parts

Table. 3 Hardness test results (H_B)

	Upper Zoon	Midium Zoon	Under Zoon
A	225	215	220
B	200	200	203
C	210	203	217
D	204	205	220
E	197	204	210
F	210	218	219
Av.	207.67	207.50	214.83

Fig. 2 A, B, C, E, F G

Table.

3

H_B 200

1. 100ton 가 1.759e7 N/m², 7.577e4 N/m²
 , 150ton 가 4.397e7 N/m²,
 1.894e5 N/m²
 250ton

2. 가 가

3. 가
 H_B200
 530.7 N/mm², 388.9
 N/mm² 13%

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