

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.7
C04B 2/10

(11)
(43)

2003-0054639
2003 07 02

(21) 10-2001-0084840
(22) 2001 12 26

(71) 1

(72) 1 ()

(74)
:

(54)

(Rotary Kiln)

(Burner Frame);
(Impeller)

가

6

, COG,

1

2

COG

3

4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

X-Z 2

COG

10

/

/

/

COG

/

(CaO)

(Rotary Kiln)

(Shaft Kiln)

가
(CaCO₃)

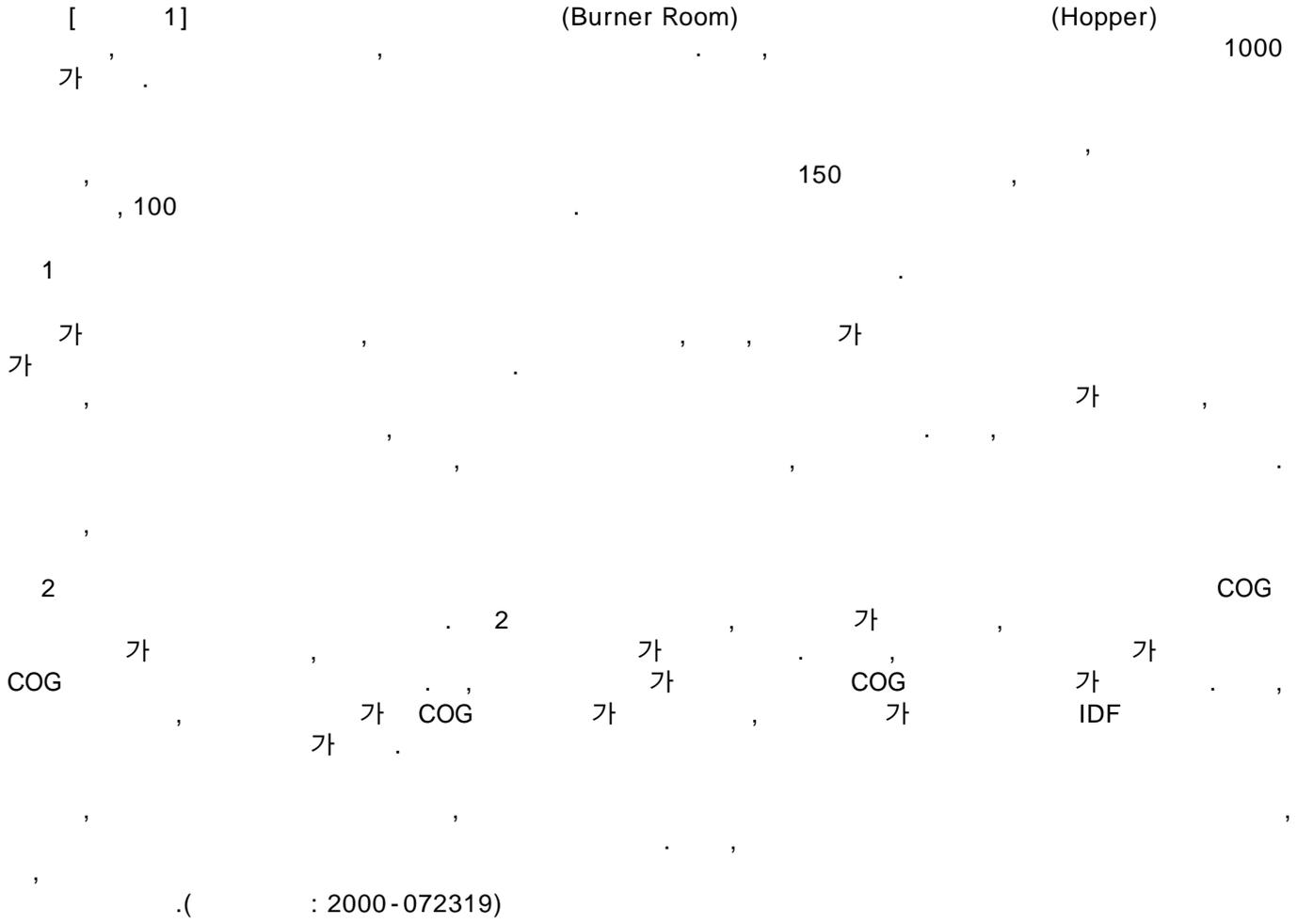
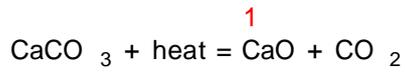
(Burner)

(Burner Frame)

1600

가

가 [1]



(Rotary Kiln)

(Burner Frame);
(Impeller)

10 ~ 45

(Rotary Kiln) 가 (Plate)가 (Burner Frame)

(Burner Room) 30 ~ 70

3 COG , COG 3 (a)

3 (b) (Burner Frame)

3 (c) 225mm 8 (Pipe) 600mm (Impeller) 8 가 10 ~ 45 가

4 3 가 (Plate)

5 (Fan) 500 mmH₂O -10 ~ -5 mmH₂O 5 (b) IDF 5 (a)

6 5 45 ~ 60 30 ~ 70 45 ~ 60 가

7 3 7 (a) COG

2 3 (Solid Modelling) 7 (b)

8 X-Z 2 가 , 가 COG , COG

가 가 .

9 COG COG

가 , , COG 가 가

10 (A) 가 가 가 1

가 , 10 B 가 (Revers Flow (B')) 가 , 3

11 10 (Y-Z , X=7.000mm) , Y-Z

11 COG 가 가 가

12 (Y-Z , X = 3m) , ,

가 , 12 500 , ,

13 Y-Z (Y-Z , X = 7m) 13 ,

14 , 14 , 가

COG ,

15

가 , ,

(Wire) 45 60

16 A B / , C 1 m 16

A, B , 200 , 200 ~ 300 C 40 가

17 / 45
 0 t/d
 50
 10,000 Nm³/hr
 14,000 Nm³/hr
 [1]

[1]

	설치전	설치후
평균온도(°C)	51.54	54.98
표준편차(°C)	31.12	18.41
냉각공기유량(Nm ³ /Hr)	13,810	10,350
COG유량(Nm ³ /Hr)	3,650	3,524

[1] , 13,810 Nm³/hr 10,350 Nm³/hr 25%
 , 51 55 , COG
 , 3.3% ,
 가

18 / 490 t/day

18 , 11,950 Nm³/hr
 10,490 Nm³/hr 12% , 67.2 68.7 ,

IDF , COG
 19 , COG
 19 , (Stroke)가 , COG
 , 80 Nm³/hr
 , COG

COG 가 , 가 ,
 COG 가
 100 , , 1000 1 ,
 20 / , 10
 20 , 가 ,
 , COG

[2]

[2]

		1차 시험 (방열판)			2차 시험 (방열판+유도 plate)			전체 효과
		설치전 (기준)	설치후 (방열판)	효과	설치전 (방열판)	설치후 (방열판+유도 plate)	효과	
생석회	평균온도(℃)	51.54	54.98	-	67.25	68.73	-	-
	온도편차(℃)	31.12	18.41	-	22.44	20.54	-	-
별각공기 유량(Nm ³ /Hr)		13,810	10,350	-25%	11,950	10,490	-12%	-37%
COG 유량(Nm ³ /Hr)		3650	3524	-3.50%	3807	3728	-2.00%	-5.50%

/ , 5 COG [2]

COG COG 5.5% 가

COG

COG

가

가

가

(57)

1. (Rotary Kiln)

(Burner Frame);

가

(Impeller)

2.

1

10 ~ 45

3.

(Rotary Kiln)

가 , 가

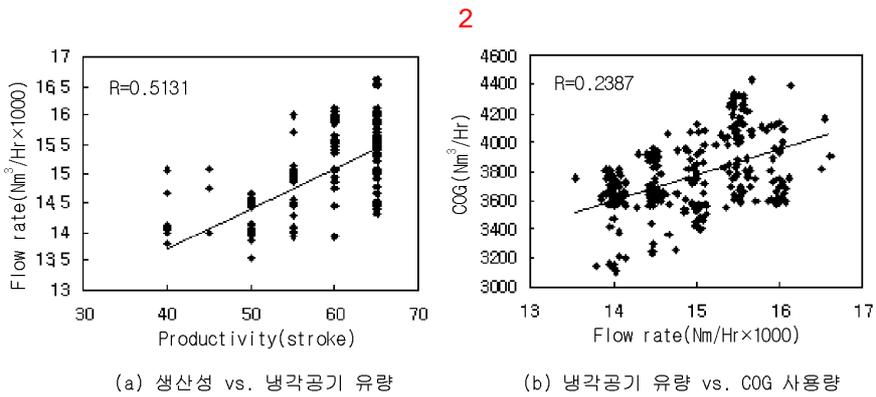
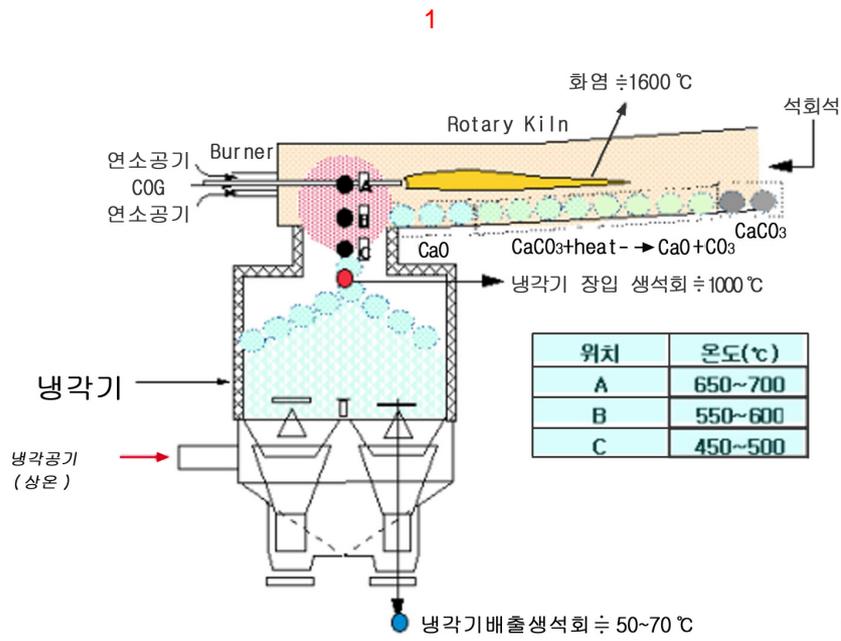
(Plate)가 (Burner Frame)

4.

3

30 ~ 70

(Burner Room)



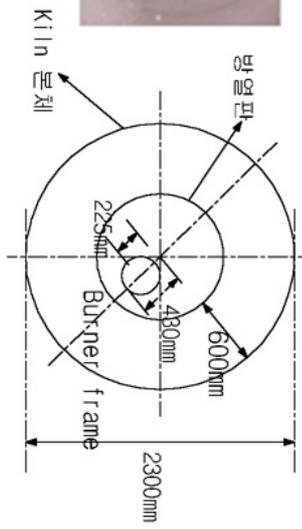
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(a) Idea sketch 도면

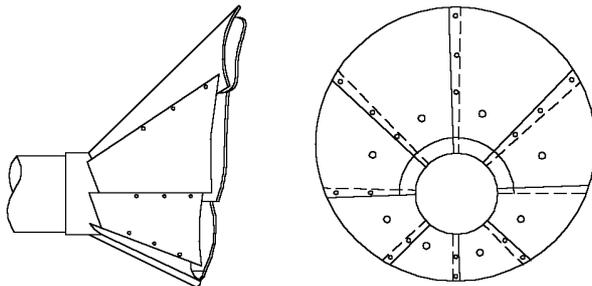


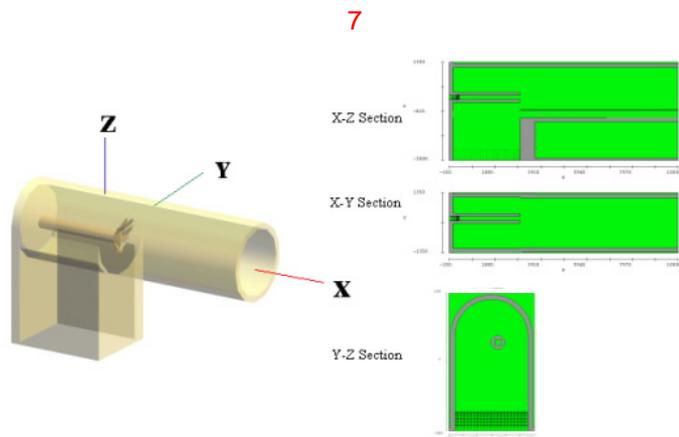
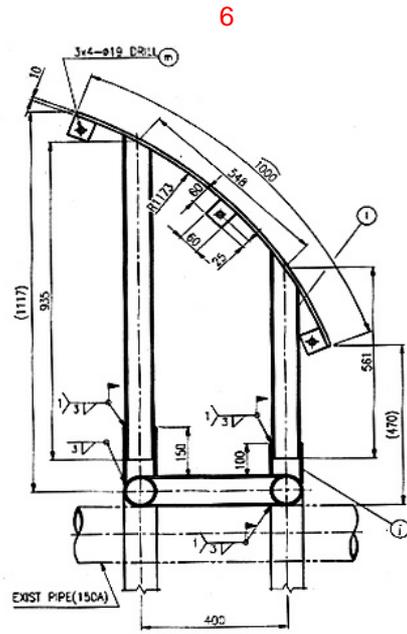
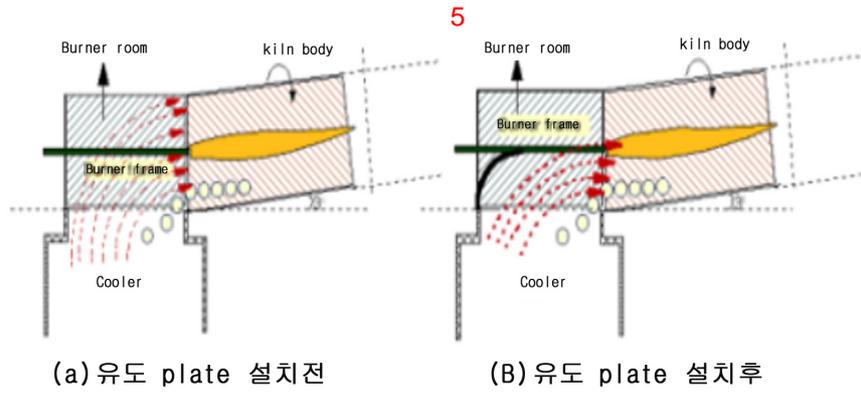
(b) Burner room 사진



(c) 개략 도면

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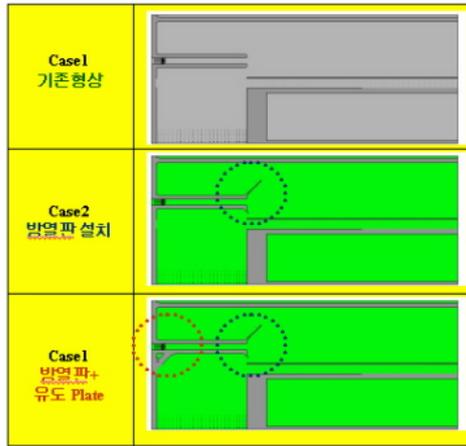




(a) Kiln의 3차원 solid modeling

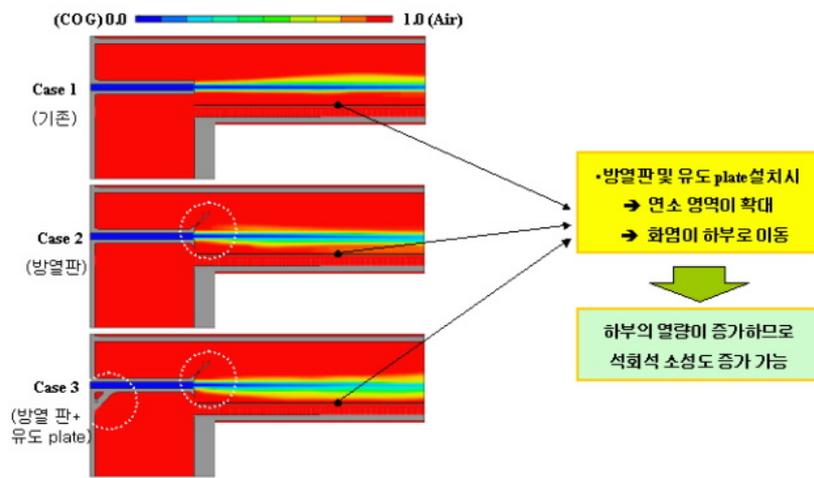
(b) 2차원 단면도

8

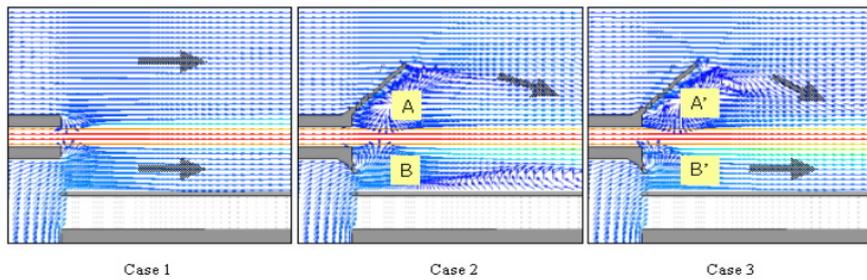


제 8도 방열판 및 냉각공기 유도 plate 설치 case별 단면도

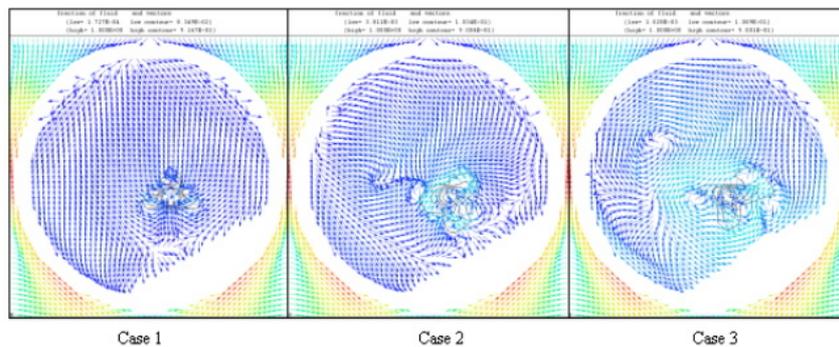
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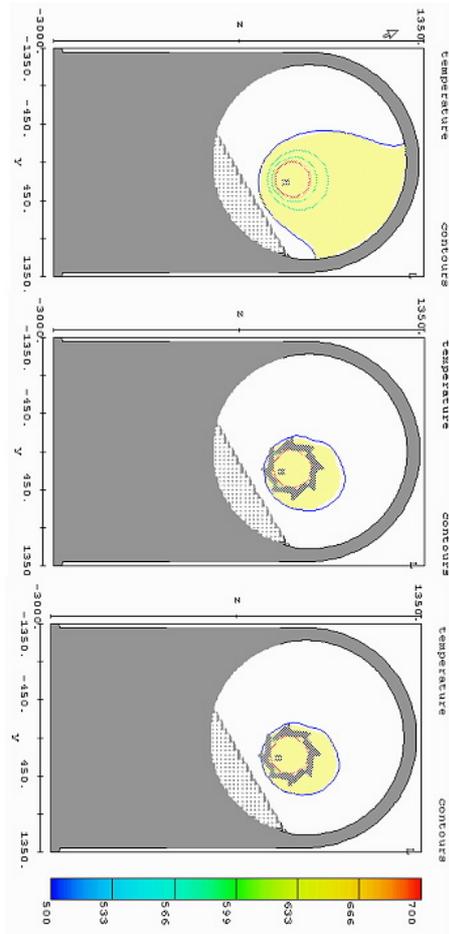
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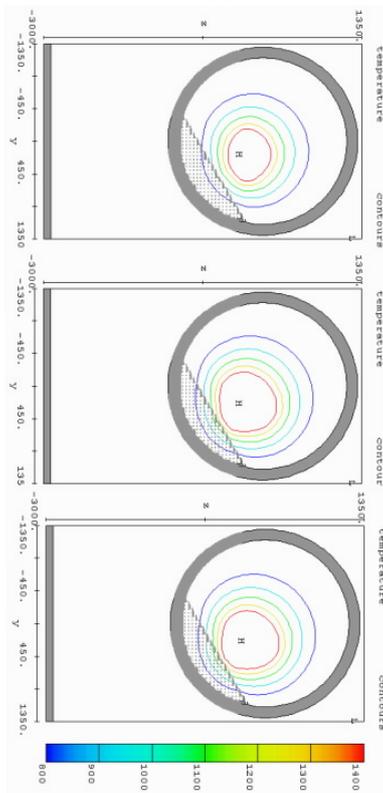
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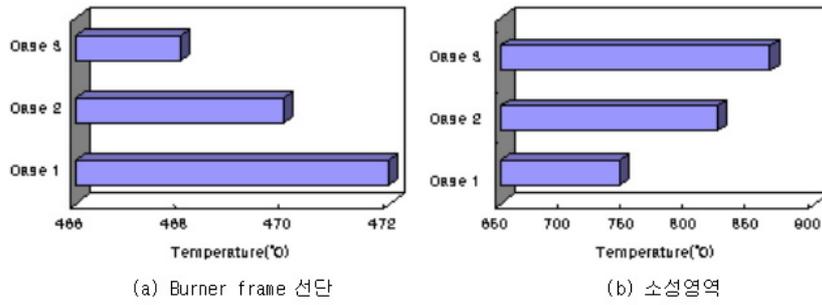
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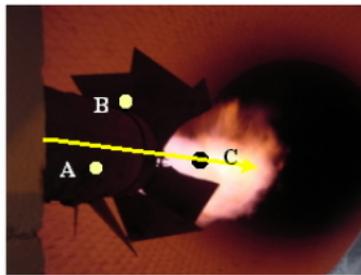
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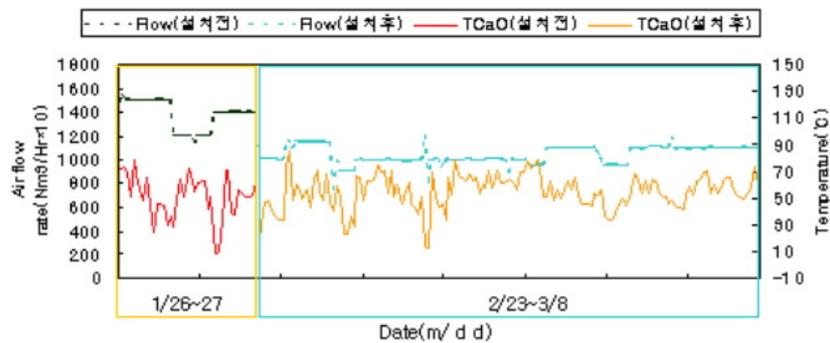


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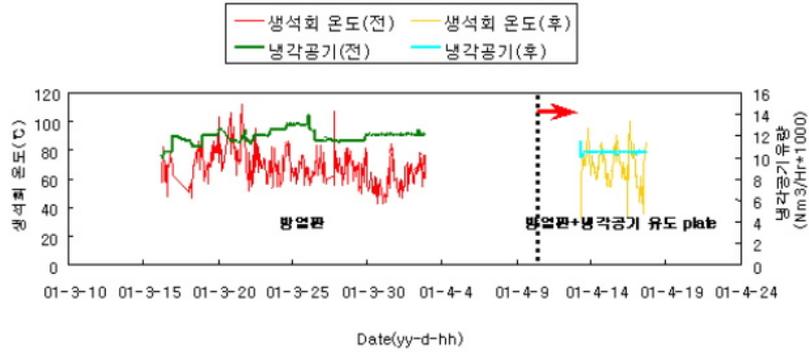


측정위치	A	B	C	생석회 상단
설치 전	704	780	780	820~860
설치 후	595	614	820	540~660

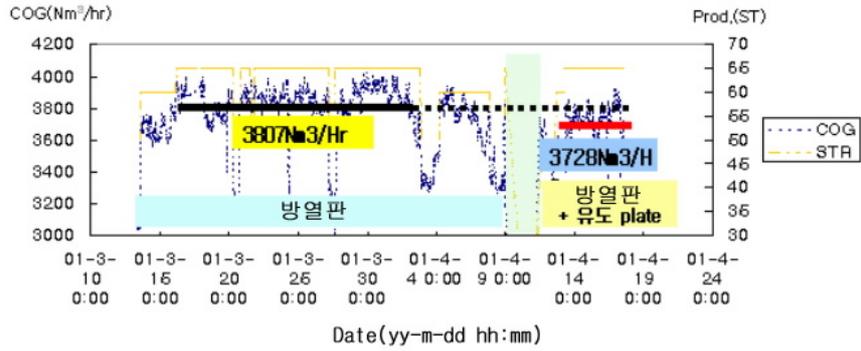
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18



19



20

