

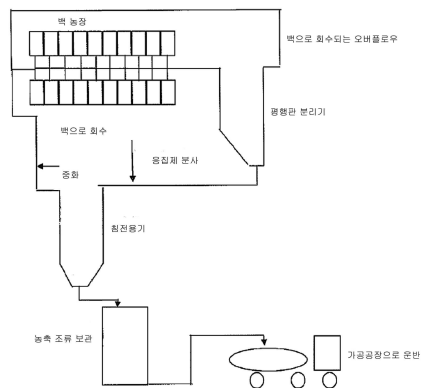
	(19) (12)	(KR) (A)	(11) (43)	10-2010-0039846 2010 04 16
(51)	Int. Cl.	(71)	' , 31	3079
(21)	C12M 3/02 (2006.01) C12M 1/04 (2006.01) C12P 7/64 (2006.01)	(72)	' , 31	3079
(22)	10-2010-7000904 () 2008 06 16	(74)	' , 31	3079
(85)	2010 01 14	(74)	' , 31	3079
(86)	PCT/AU2008/000845	(74)	' , 31	3079
(87)	WO 2008/151373 2008 12 18	(74)	' , 31	3079
(30)	2007903190 2007 06 14 (AU)	(74)	' , 31	3079
:	31	(74)	' , 31	3079

(54)

(57)

, , CO₂,

- 1



1

- a. ;
- b. ;
- c. , CO₂, .

2

1 , .

3

1 , (batch, 1) .

4

, .

5

4 , , .

6

1 , ,

- a. 50% ,
- b. 5000psi ,
- c. , / ,
- d. , .

7

6 , :

- a. , ;
- b. 1 , .

8

- 6 , :
- a. , , 2 ;
- b. ,

2

9

- 1 , , (batch),

10

- 9 , CO₂ ,

11

- 10 , ,

12

- 9 ,

13

- , ;
- , ;
- ,
- ,

14

- 13 , CO₂

15

- 13 14 , O₂

16

- 13 15 , ,
- a. ,
- b. .

17

16 , .

18

16 17 , , .

19

16, 17 , 18 , .

20

- a. , ;
- b. ;
- c. , .

21

, .

22

13 14 ,

- a. ;
- b. ,
- c. ;
- d. , ;
- e. ;
- f. 1 .

23

1 , ,

- g. ;
- h. .

24

23 , :

- a. ;
- b. ;

c. ;

d. .

25

23 , () .

26

a. 30:1 ;

b. 20 25 ;

c. ;

d. CO₂ ;

e. ,

(Nanochloropsis)

.

27

a. 50% ,

b. 5000psi

c. , /

d. ,

.

28

11 ,

a. , ;

b. 1 ,

.

29

11 ,

a. , , 2 ;

b. ,

2

.

30

.

31

[0001] ,

[0002] () , CO₂

[0003] () (B100) (5%-20% / B5 & B20) () 2

[0004] ,

[0005] (Environmental Protection Agency, EPA)

[0006] (CO₂) , () , () ,

[0007] ,

[0008] - " "

[0009] (polycyclic aromatic hydrocarbon, PAH) PAH . PAH nPAH

[0010] NGO () 125

[0011] , 2% 100% () 100% 20%

[0012] 2 .

[0013] . CO₂ .

[0014] .

[0015] , .

[0016] CO₂ .

[0017] , ;

[0018] ;

[0019] ,

[0020] , .

[0021] , ;

[0022] ;

[0023] ,

[0024] .

[0025] , .

[0026] :

[0027] a. ;

[0028] b. ,

[0029] c. ;

[0030] d. , ;

[0031] e. ;

[0032] f. 1 ;

[0033] g. ;

[0034] h. .

[0035] .

[0036] .

[0037] , :

[0038]) ;

[0039]) ;

[0040]) ;

[0041]) .

[0042] , .

[0043] .

[0044] 1 .

2 1

1

3 1

2

4 .

5 .

6 , 3

7 6

8 6

9 6

10 11 1 9

12 10 11

13 10 11

14 .

15

16 15

17 15 .
18 .
19 .
20 .
21 18, 19, 20
22 .
23 1 .
24 1 .

[0045] , .

[0046] 1 , , 10 (branch)
 (batch)

[0047] 2 3 5 . 1 9
10 13 ,

[0048] ,
 .

[0049] , , .

[0050] :

[0051] .

[0052] .

[0053] .

[0054] ,

[0055] .

[0056] · LED

[0057] .

[0058] .

[0059] .

[0060] .

[0061] .

[0062] 10 13 ,
 .

[0063] 10 11 ,

[0064] 12 13 , LED

[0065] 11 (starter) LED

[0066] 2 9 1 6 3 3

[0067]

[0068] 17 60 16

[0069] 4, 5 6

[0070] 6 3 7, 8 9 CO₂

[0071] 15 (branch) 5% 50%

[0072] 10

[0073] 5% 50% 2.5%

[0074] () 5%

[0075] 18 , (" ") , (" ")
pH 11
[0076] pH 8
()
[0077] 15
[0078] .
[0079] .
[0080] .
[0081] .
[0082] .
[0083] ,
[0084]
[0085]
[0086]
[0087]
[0088]
[0089] .
[0090] .
[0091] .
[0092] , , ()
[0093] .
[0094]
[0095] 5 38 20 30 ,

[illegible]

(waterline)

[0117]

[0118]

15kg

[0119]

1

[0120]

(Nanochloropsis

Oculata)

[0121]

[0122]

• 4-6

[0123]

[0124]

[0125]

• 20-30

[0126]

• 2500-6000

[0127]

• pH 7.5-8.5

[0128]

• 10-36ppt

[0129]

[0130]

• NaNO₃ - 150mg/1

[0131]

• NaHPO₄ - 8.69mg/1

[0132]

• 2 EDTA - 10mg/1

[0133]

• MnCl₂ - 0.22mg/1

[0134]

• CoCl₂ - 0.11mg/1

[0135]

• CuSO₄, 5H₂O - 0.0196mg/1

[0136]

• ZnSO₄, 7H₂O - 0.044mg/1

[0137]

• Na₂SiO₃, 2H₂O - 60mg/1

[0138]

• B₁₂ - 1.0 /1

[0139]

• - 1.0 /1

[0140]

• HCl - 0.2mg/1

[0141]

CO₂ , pH 7.5
8.5 , 1kg 1-1.7kg CO₂

[0142]

31-68(%)

[0143]

"

"

[0144]

[0145] A)

[0146]

[0147]

[0148]

[0149]

[0150] B)

[0151]

[0152]

[0153]

[0154]

[0155]

[0156]

[0157]

[0158]

[0159] A-

[0160]

[0161]

[0162]

[0163]

[0164]

[0165] B-

[0166]

[0167]

[0168]

[0169]

() , .

2 , pH

pH

()

()

5000psi

(

1

2

1

2

(/

2

).

(")

(Concentrated Algae Bio

Mass"CAB")

2. PH CAB

() ()

5000psi /

" (Algal Broth)"

(&)

6.

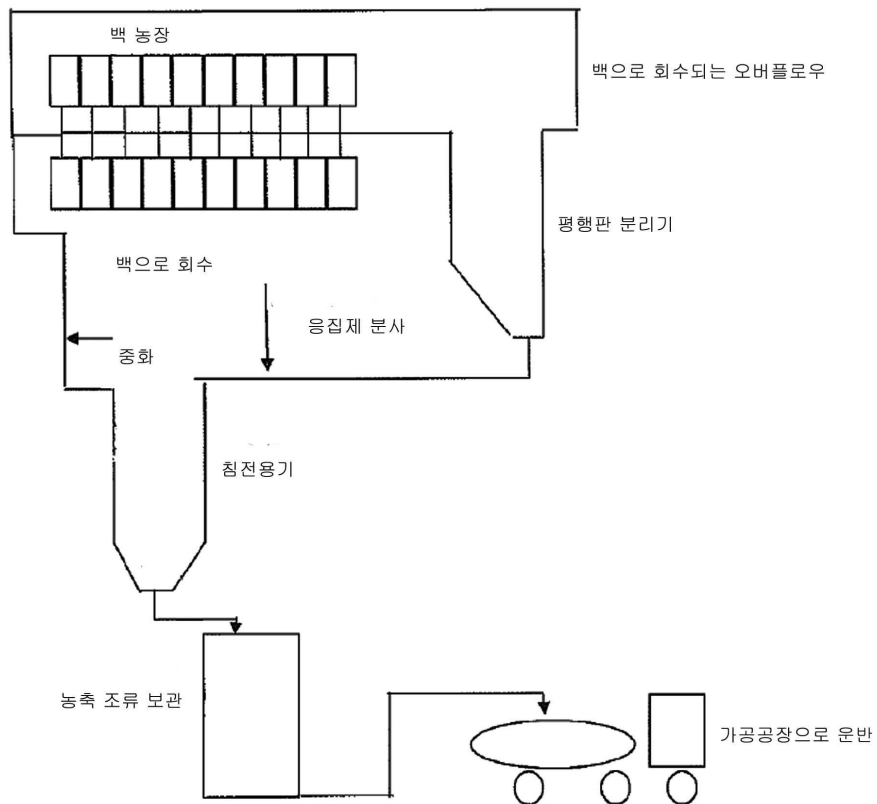
7.

():

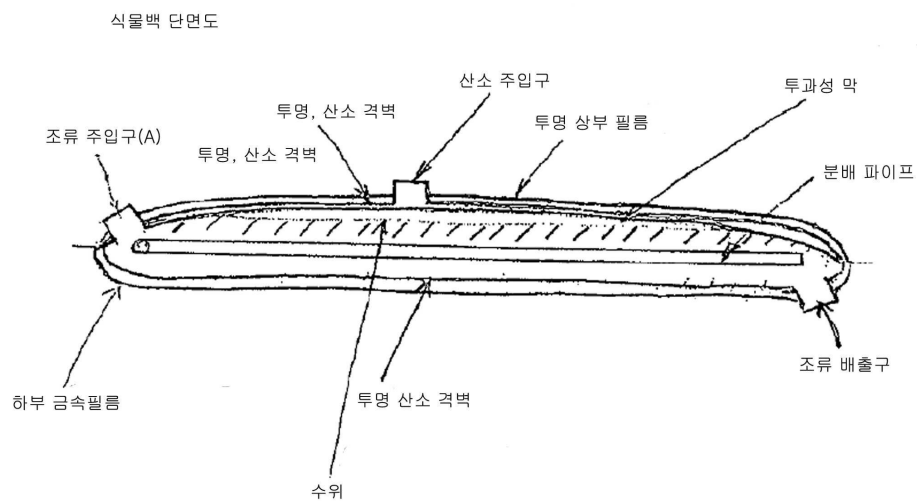
(leaf)

[0170] . 1 , ,
[0171] . 2 .
[0172] .
[0173] .
[0174] a. ()
[0175] . , 6%-8% .
[0176] . , .
[0177] b. (, 130 30 ,)
[0178] c. () .
[0179] 9. ()
[0180] . () .
[0181] . 8
[0182] . ()
[0183] . 8 .
[0184] .
 , , .

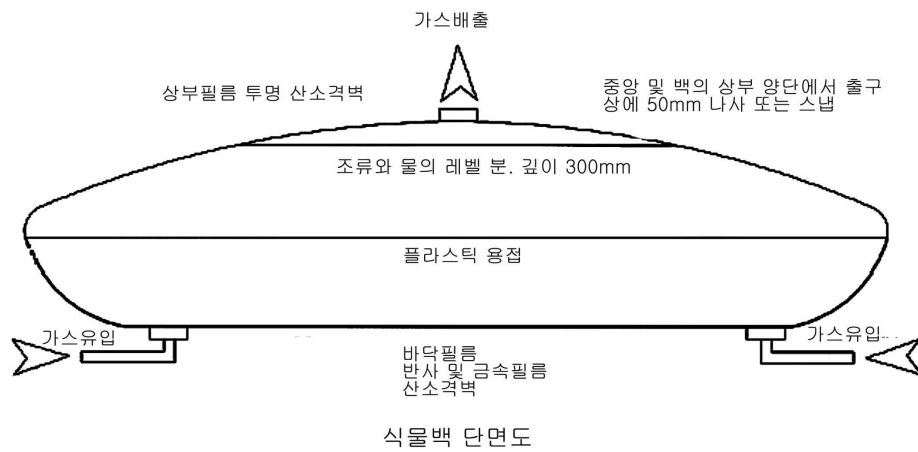
1



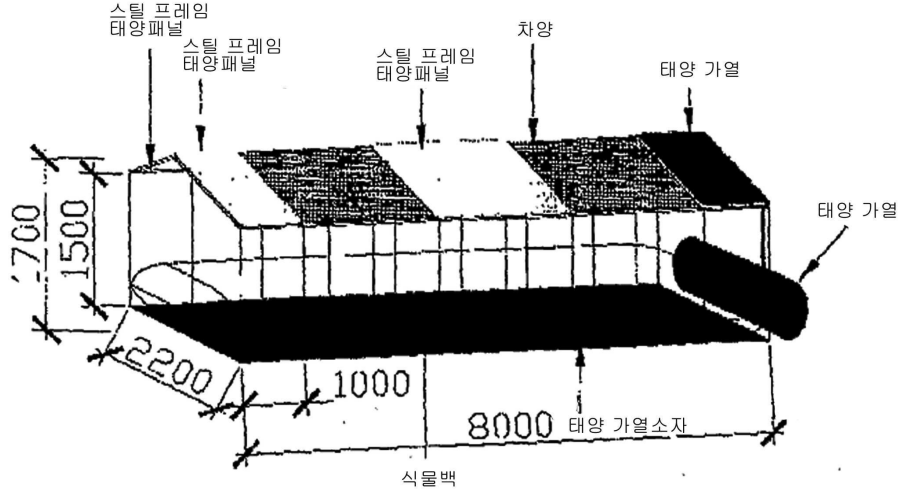
2



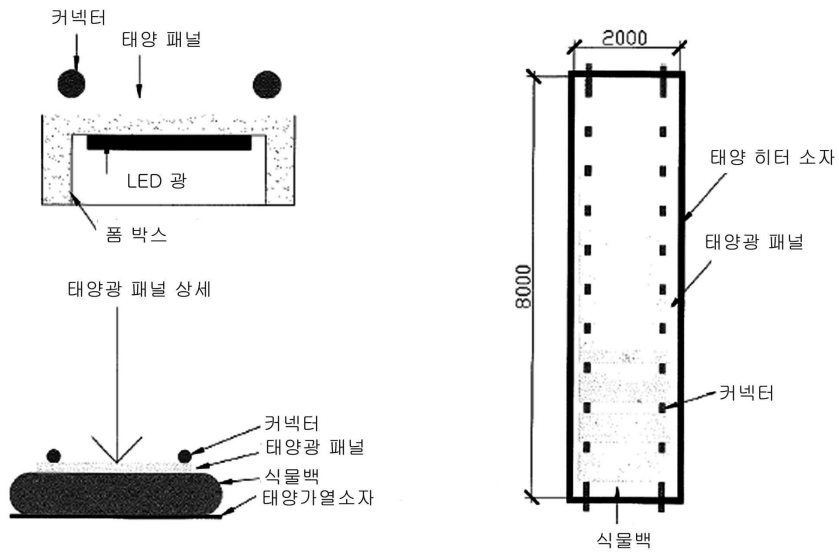
3



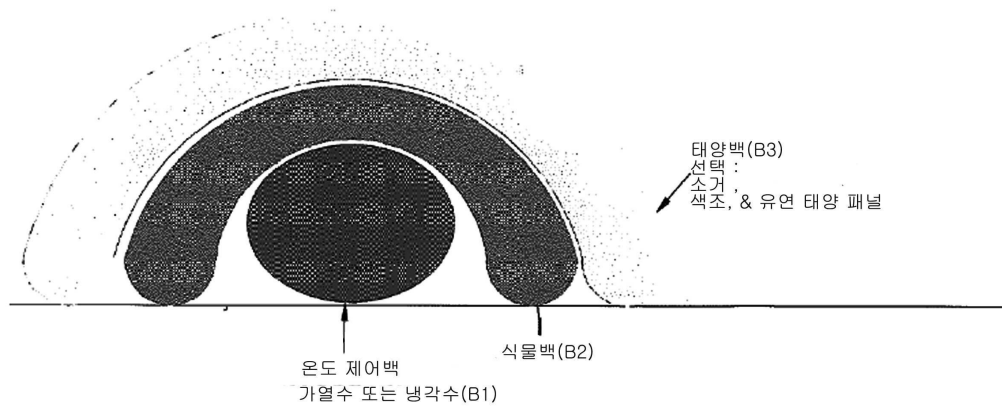
4



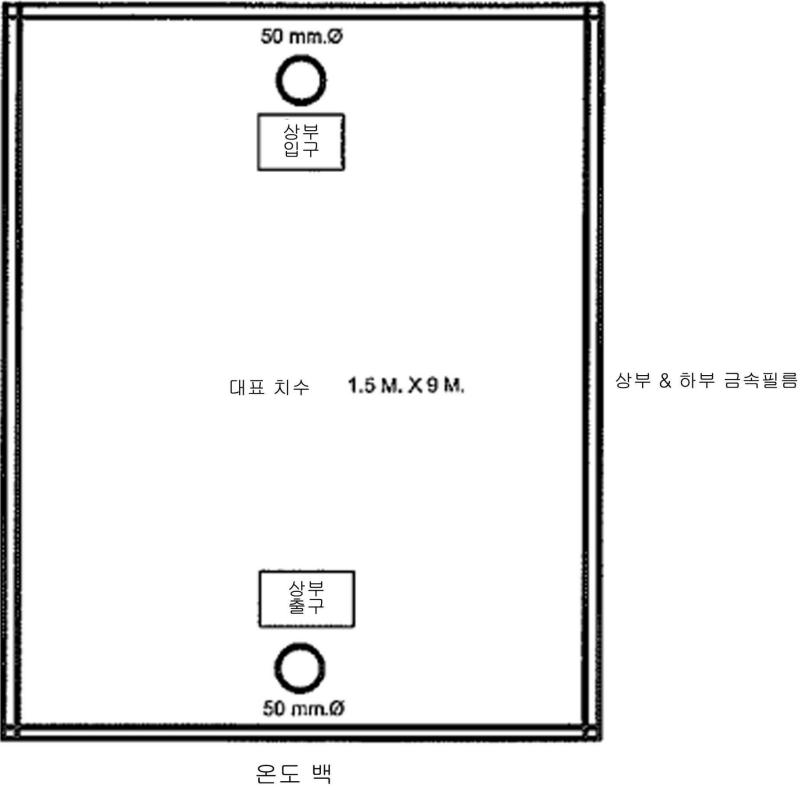
5



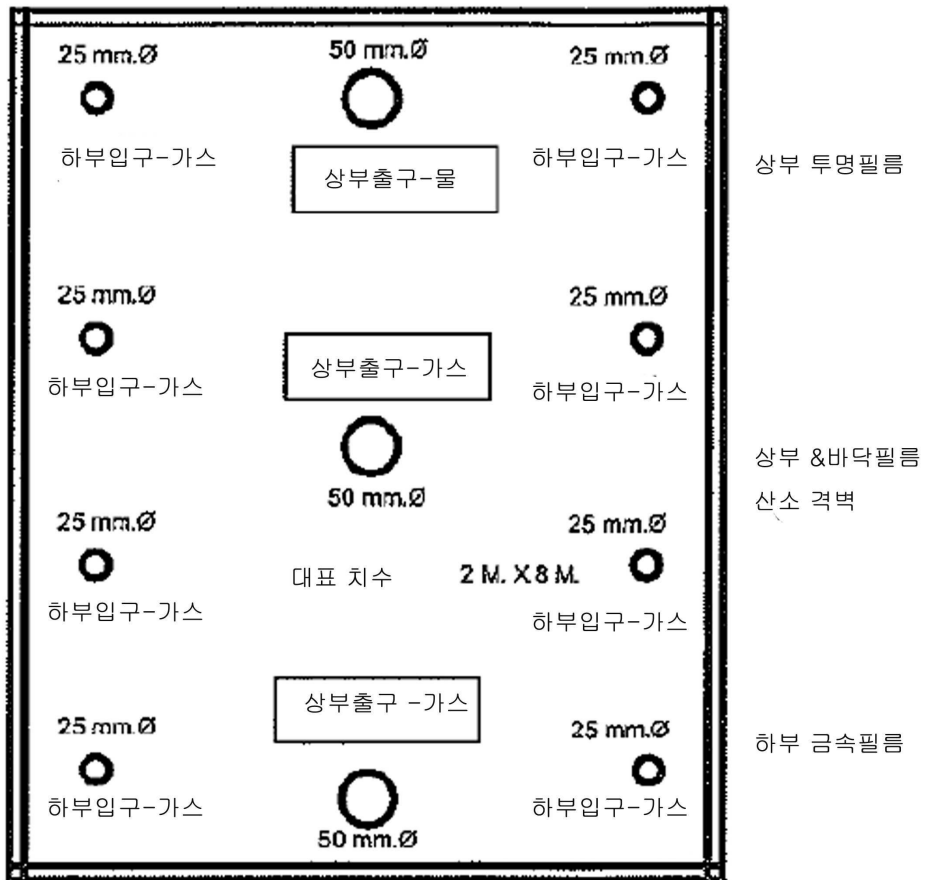
6



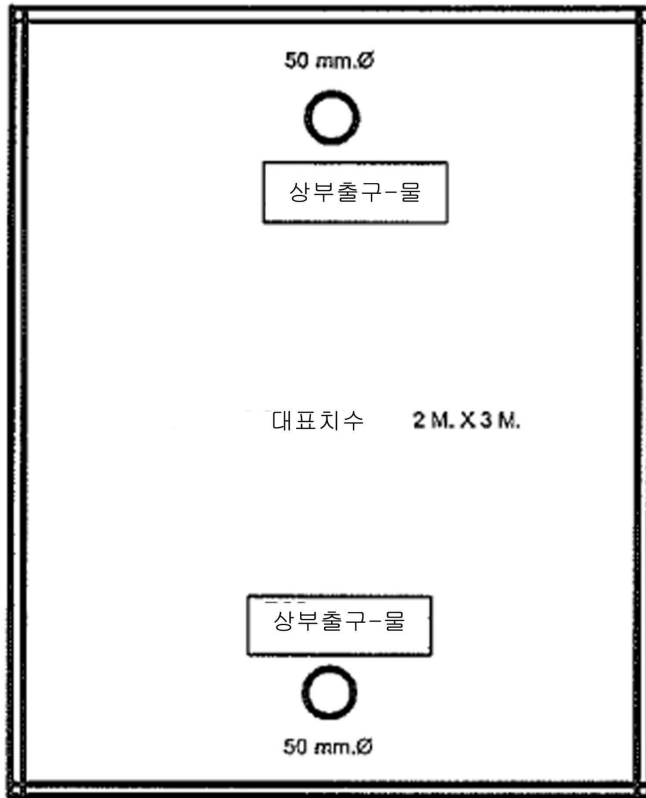
7



8



9



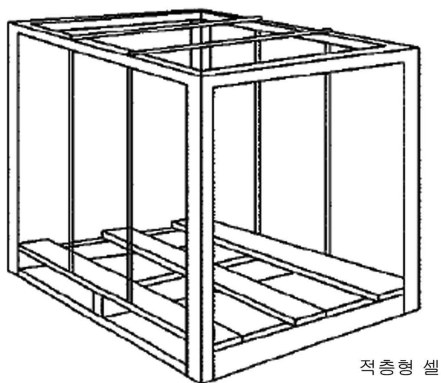
색조 연성 솔라 판넬 중에
상부필름 선택

방수가 되는 상부 바닥 필름

하부 투명필름

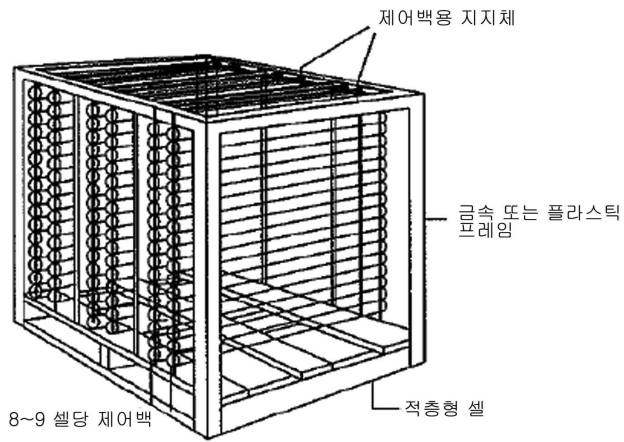
솔라 백

10

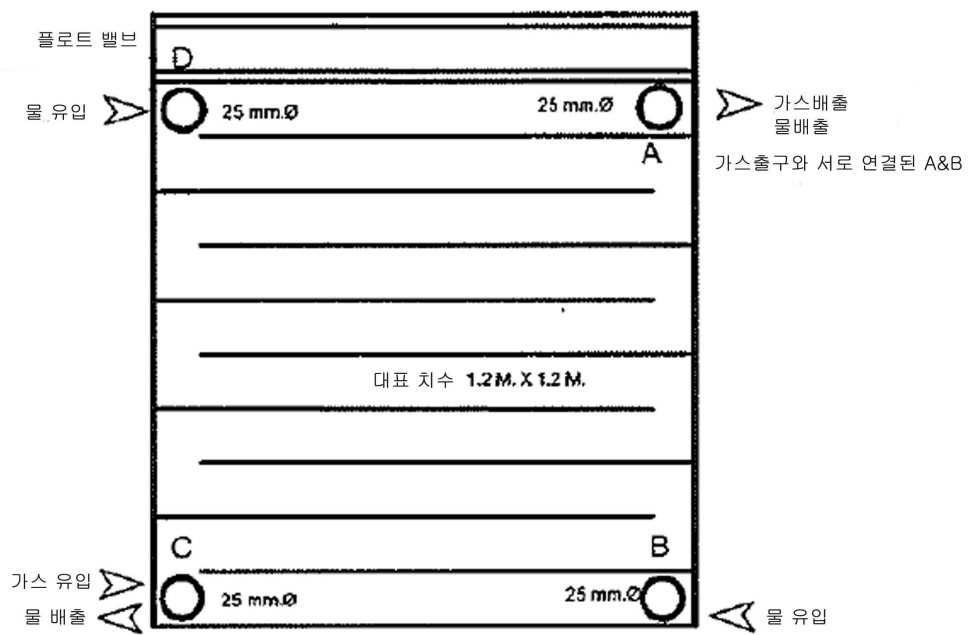


적층형 셀

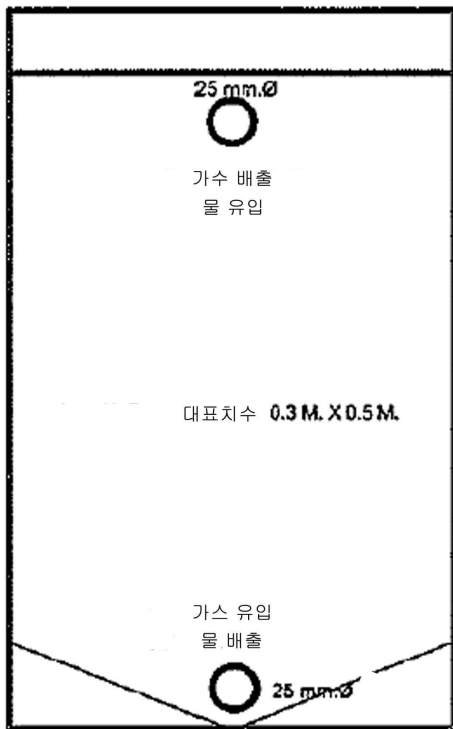
11



12

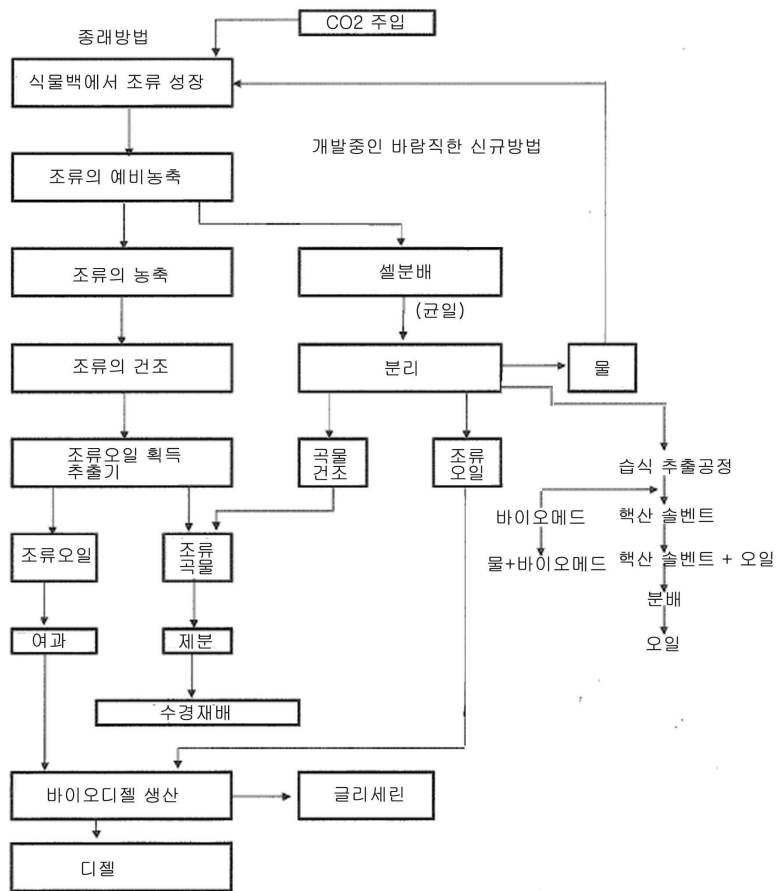


13

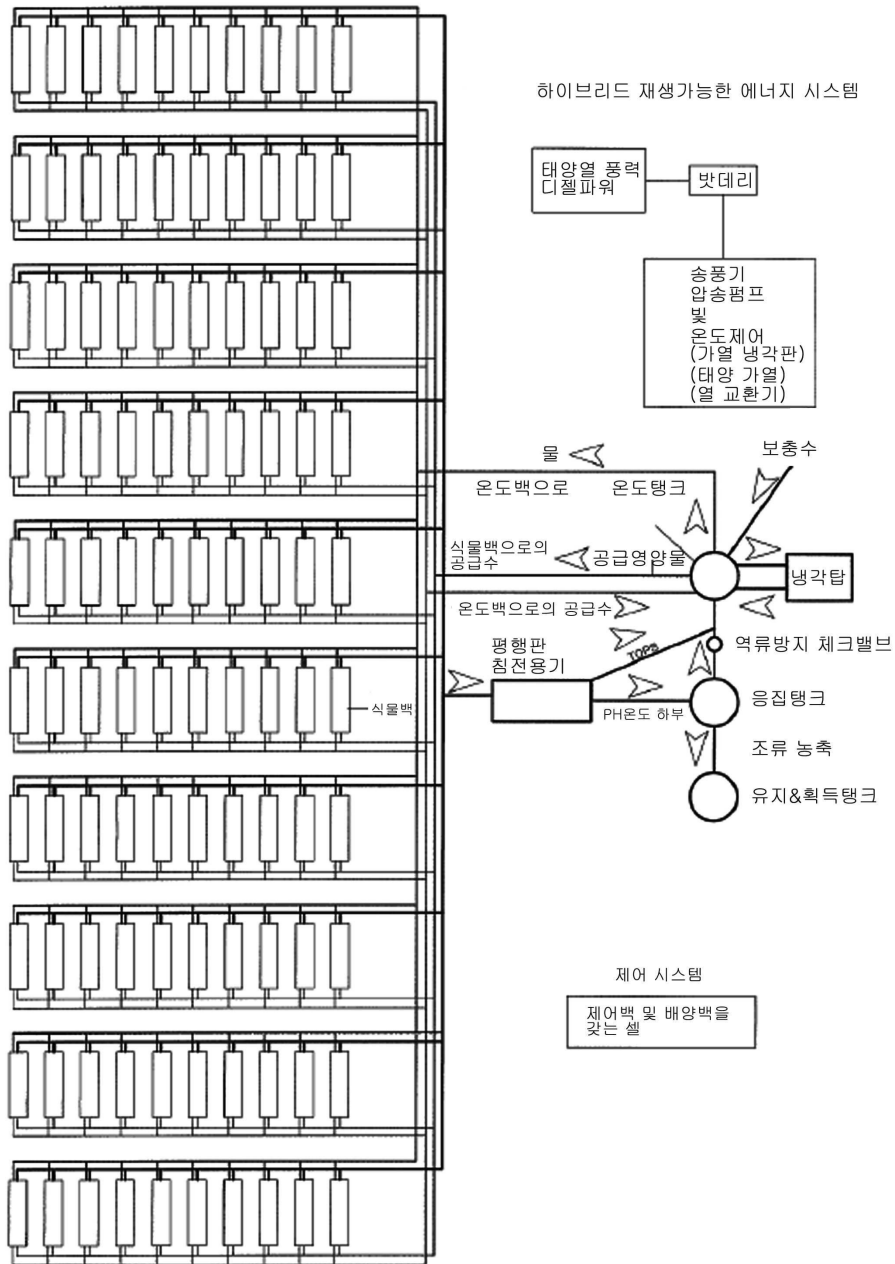


14

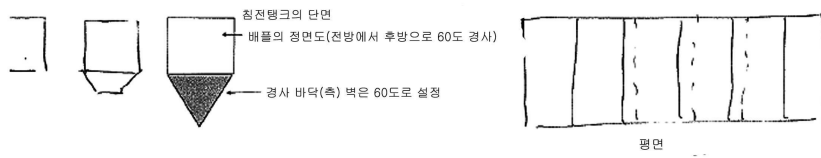
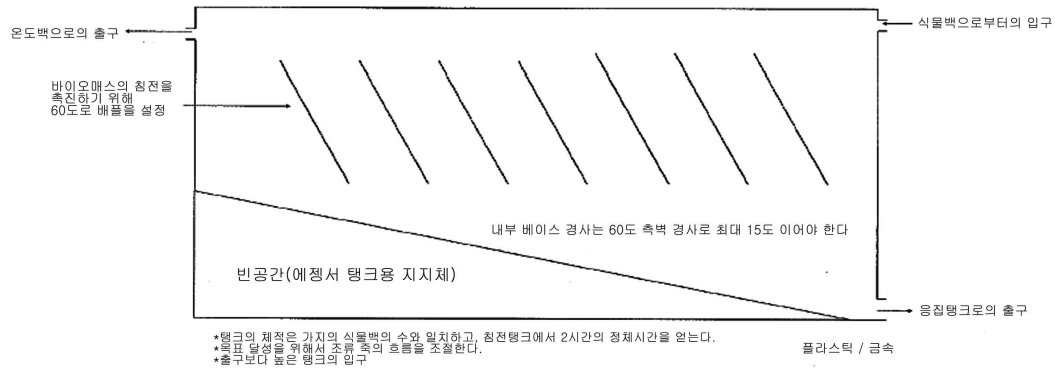
조류에서 바이오디젤까지 플로우차트



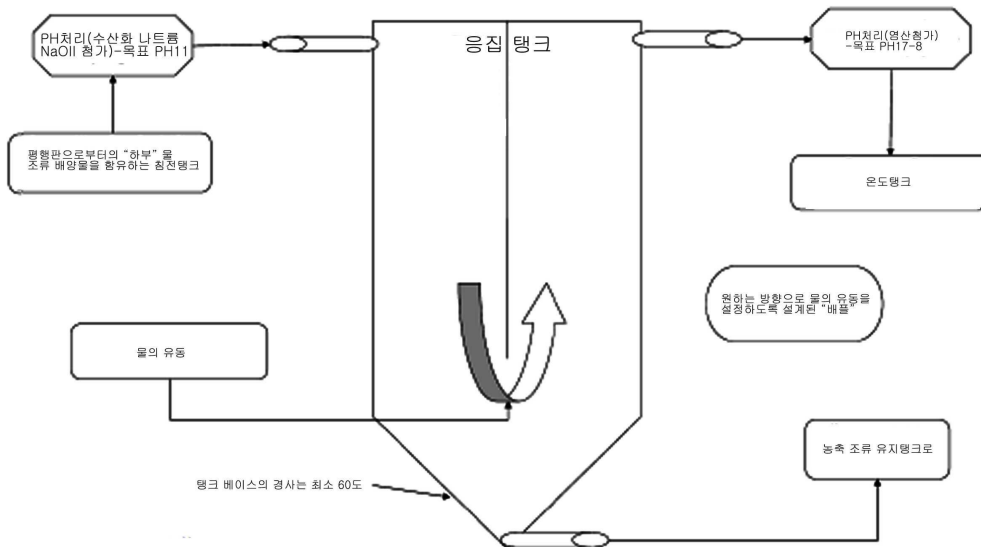
15



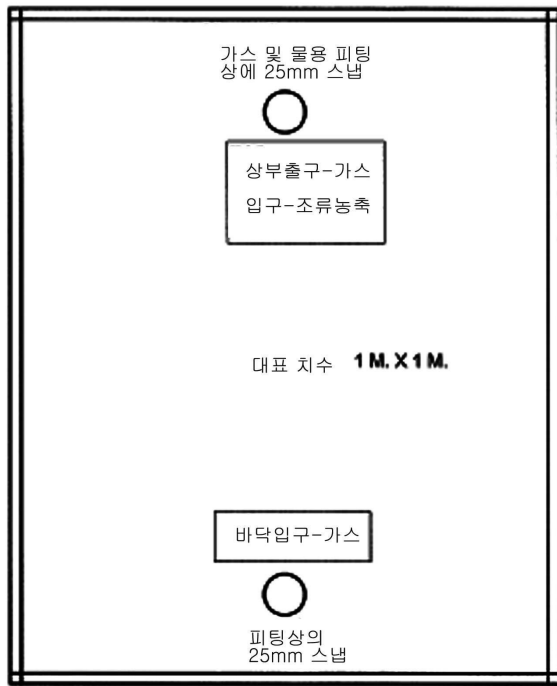
16



17

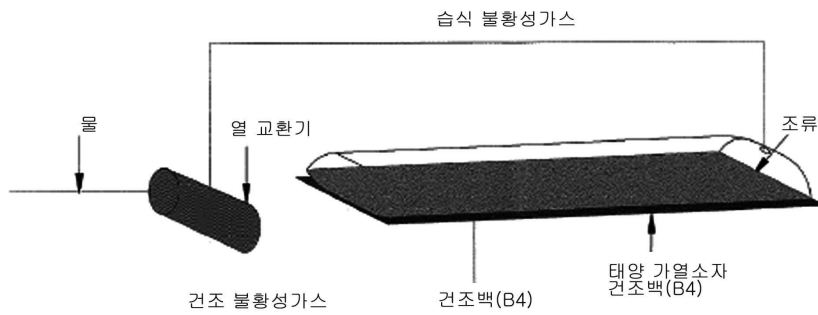


18

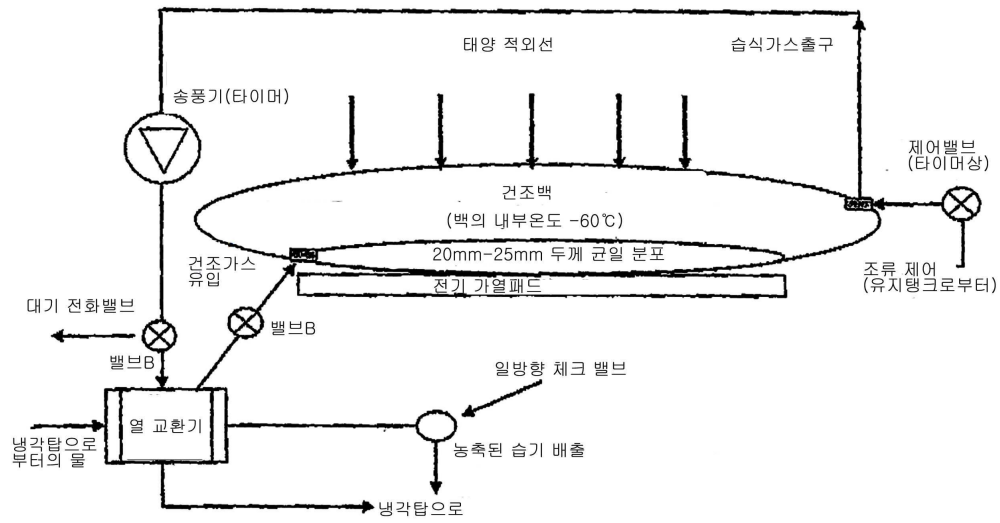


건조 백

19



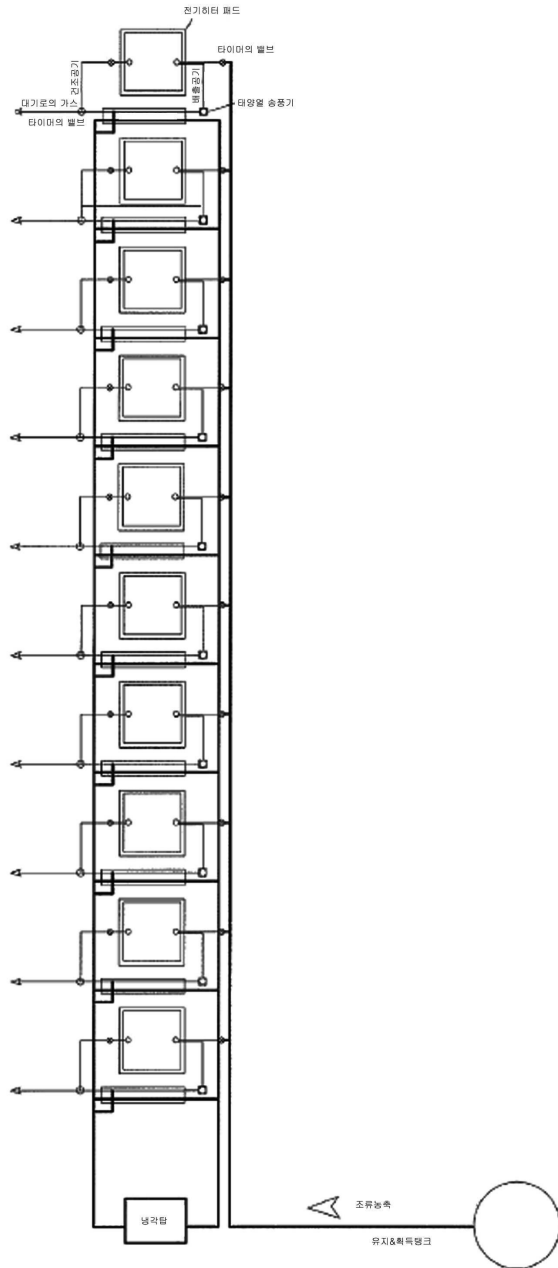
20



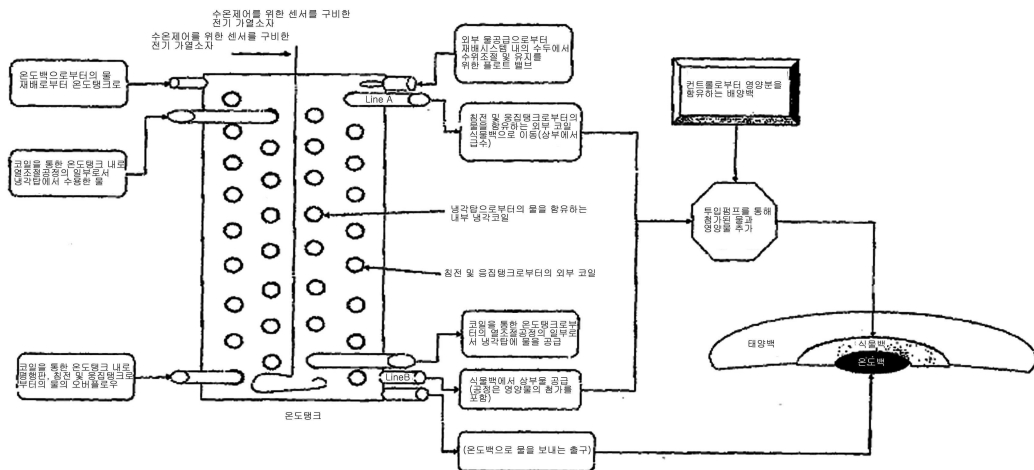
주: 밸브A와 B는 동시 작동 장치, 즉 밸브B가 닫히면 밸브A가 대기이며, 인터벌 송풍기 장치로 설정

건조백 치수 - 1mtr x 1mtr
재질 - 상부 및 금속 하부에 투명필름 또는 상부와 하부 모두 투명

21



22



23

