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(72) -41100 7

-41010 가 229

-41010 37

-41100 40

-42015 13

(74) :

(54) 가

(20) , (20) (19) (16) (P)
(21)가 (21) 1 (B_S)
20) (37) (37) , 1 (B_S) , (20) (
1 (V_B)

(non-invasive: 非侵襲性)

가

가

가

37

가 (

)

가

가,

1

가

2

가

가

가 가

가

가

(

)

가

가

(, PVD)

가

가

가

1

1

1

1

가

가

0.1

20

1 가 , 가

2 1 .

3 가 1 .

4 3 .

5 2 .

6 4 .

7 가 , 가

1 , 1 (P) (5) (6) (3) (1) (6) (2) , (8)

(7) (9), (10)

(2) (12)가 (11) , (13) (11)

(5) (P) () , (P) ()

(13) (5) (11, 13) (5) (5)

(P)

(9) (11) - (pre-dilution node; 15a) (13)

- (post-dilution node; 15b) (9) - (15a) - (2) (15b)

(10) (11) (16a) (17) , (13) (1

3a) (16) , (12) (15b) (13a) (16)

(18) (18) - (S_{TB})

(18) (18) (13a) (T_F) (P)

(13)
(16a) .

(18) (18a) , (16a) 가 / (18c) (13) (13a) ,
(18b) .

(P) (2) .
(16) (T_P) , (16a) (16a) (18) (T_{SET}
(T_P))
, (16a) (T_P) 37 (T_{SET}) , (T_P) (T_{SET})
(ΔT) (T_D) (T_F) (T_{SET})
(T_{SET}) (2) (T) , (P) (1
8) .

(T_P) (16a) (T_P) (ΔT) (16) (T_P) (T_{SET}
) (ΔT)가 , (T_F) (13a) (ΔT) (T_{SET}
가 , (ΔT)가 , (T_F) (13a) (T_P)가 (T_{SET})
, (T_P), (P) (T_{SET})가
.

(17) (12) (12)가 , (12)가 (16a) T_F (T_{SET}
) (ΔT) , (12)가 , (T_F) (T_{SET})
(ΔT) .
, (T_{SET}) , .

2 3 (16) (19) , (11) (19)
(20) , / (16a) .

(19) (thermopile; 21) (22) (21)
(23)(4) (23) (24)] (16a)
(25) (25) (24) (21)
(V_B) , IR(5)
가 (Seebeck effect) (21)
6 (21a) (21b) (21c) .
(21a) (21b) (21) (23)(4) (21a) (21b) ,
21d) (21c) (21d) (V_B) (0)가 (21b)가 (21d)
(V_B) (21) (21b)가 (21d) (2
3) (21d) (5 15 , 10) (2
2) . 2 4 , (22) (28)(4) , (29) ,
(16a)(2) (30) (28) (23) ,
(23) (21d) (21) (21b) (28) (3
1) (30) , (21) (S_{TP}) 가
(29) (Peltier cell) ,
(32) (34)(2 3) , (32) (33)(
,) (21) (23) (33) (21) (3
5) . (34) (29) (S_{TP}) (I_C)

(30) (36) .

가² (B_S)³ , (P) (20) (21) (37) (21) (37) 가 (B_S) 30 4
 23) (24) . 가 , (37) 가 (B_S) 30 4
 0 , (4- -1-)(PMP) , 30 40
 , (P) .

가 (B_S)(⁵) (B_P) (21) (20) (2 3). , (38)
 (23) (38)가 (24) 1 (39) , 1 (39)
 (20) (37) 2 (40) , (38)
 , (B_P) 8 μm 14 μm() .

, (P) (20) , 가 (B_S)
 (25) (V_B) (38) (24) 가 (21)
 , (37)가 (24) (21) , (24)
 , 가 (37) (21) (23) (22)
 , (V_B) .

, (P) . ,
 가 가 . (38) (B_P) (B_P) ,
 (21) (V_B) (V_B) .
 , (T_P) (V_B) .

1
 $T_P = F(V_B) + T_0$
 , F(V_B) , T₀ (21) (23), (21d) (21b)
 가 .

, (T_P) , 1
 2 .

2
 $T_P = T_0 + K \times V_B$
 K .

7 , 45 (2) (46) (hae
 mofiltration machine) , (49) (47)
 (48) . (10)가 , (16)가
 .

(45) (10) (1) ,
 .

(10) , 가

, , 가 , PN
가 .

(28) , (23) (21)
가 .

(57)

1.

(20) , (20) (T_P)^(P) 1 (V_B)
(19)
(19) (21) ,
(20) (21) 1 (B_S) (37)

1 (V_B) 1 (B_S)

2.

1 , (21) (23) (23) (24)
, (20) (37) (21) (24)

3.

1 2 , (21) (21a) (21b)
(thermopile)

4.

3 , (19) (21) (21b) (T₀)
(22)

5.

4 , (22)
(21) (21b) (T₀) 2 (S_{TP})
(thermister; 28) ;

(21) (32) (34) (29) ;

2 (S_{TP}) (28) 2 (S_{TP}) (I_C)
) (30)

6.

5 , (29) (Peltier cell)

7.

5 6 , (29) (34) (35) 가

8. 5 7 , (T₀) 5 15 .

9. 1 8 , (37) 1 (B_s) .

10. 1 9 , (37) 30 40 .

11. 1 10 , (37) , (4-
-1-)(PMP) .

12. 1 11 , (21) (20) (37) (38) .

13. 12 , (38) 1 (B_s) 2 (B_p) .

14. 13 , 2 (B_p) 8 μm 14 μm .

15. 13 14 , (38) .

16. 12 15 , (38) (20) (37) (40) .

17. 1 16 , 1 (B_s) (IR) .

18. 4 , 1 (V_B) (T_P)
, (19) (16a) 가 .

$T_P = F(V_B) + T_0$

19. 18 ,

$T_P = T_0 + K \times V_B$

, K .

20. (1; 45) , (11) ,
(3; 3, 15a; 3, 15b; 45; 15a; 45, 15b) (13) , (20)
, ,

1 19 (T_P) (16)

21.
20 (11) (P) (16) (3; 3, 15a; 3, 15b; 45; 15a; 45, 15b)
(T_P) 1 (T_P) (19) (T_{SE})
(13) (13a) (16a) (3; 3, 15a; 3, 15b)
(45; 15a; 45, 15b)

22.
21 (18) (13a) (16a)

23.
21 22 (18) (T_F), 37 가
(18a)

24.
21 23 (18) (13) (13a) (sea
t; 18b)

25.
21 24 (2) (2)
(12) (12) (10) (12) (17)
(16a) (12)가 (T_F) (T_{SET})

26.
21 25 (post-dilution node; 15b)
(13a) (15b)

27.
21 26 (3; 3, 15a; 3, 15b) (5)
(6) (3)

28.
21 26 (3; 3, 15a; 3, 15b) (5)
(6) (3)
(15a, 15b)

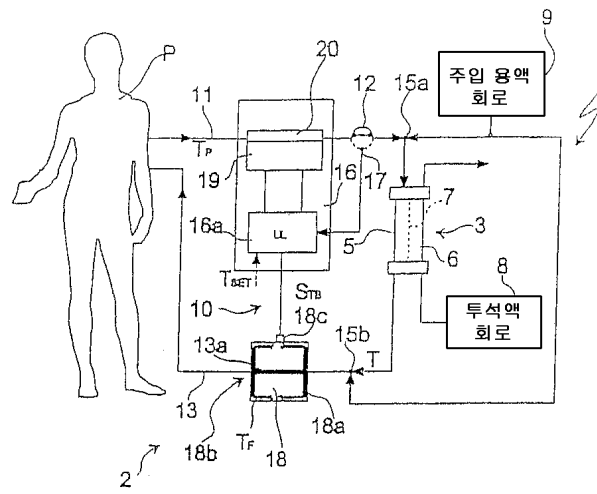
29.
21 26 (45; 45, 15a; 45, 15b) (45)

30.
21 26 (45; 45, 15a; 45, 15b) (45)
(15a, 15b)

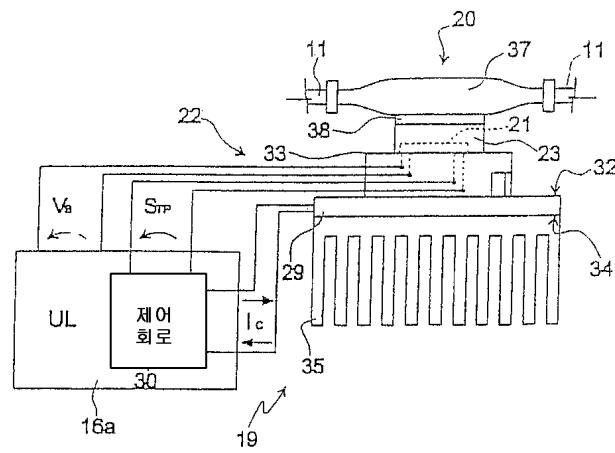
31.
21 (16a) (T_{SET}) 1 (T_P)
(T)

32.
21 31 (16a) (T_{SET}) 1 (T_P)
(T)

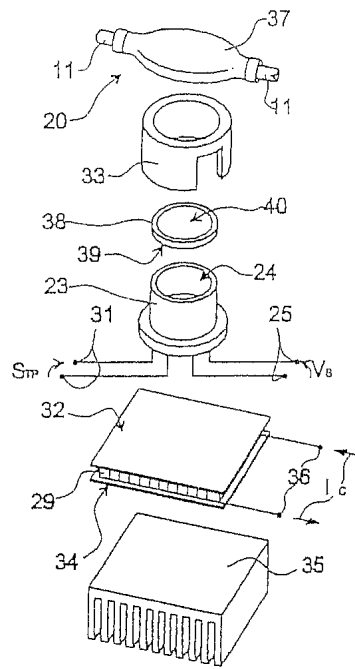
1



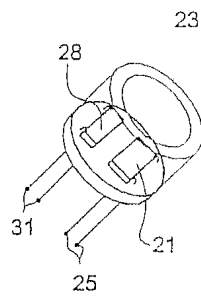
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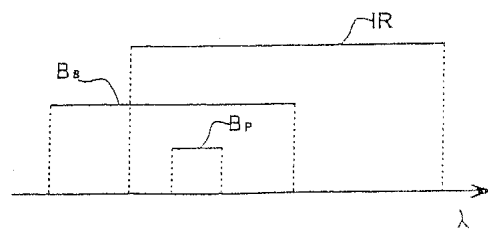
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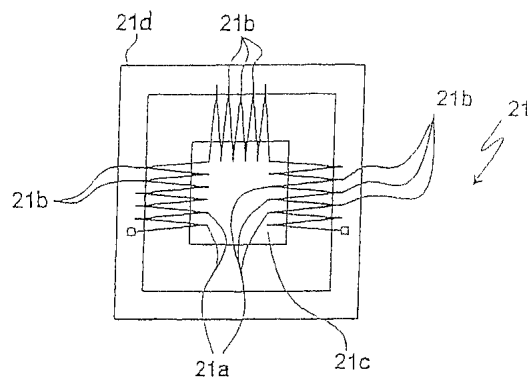
4



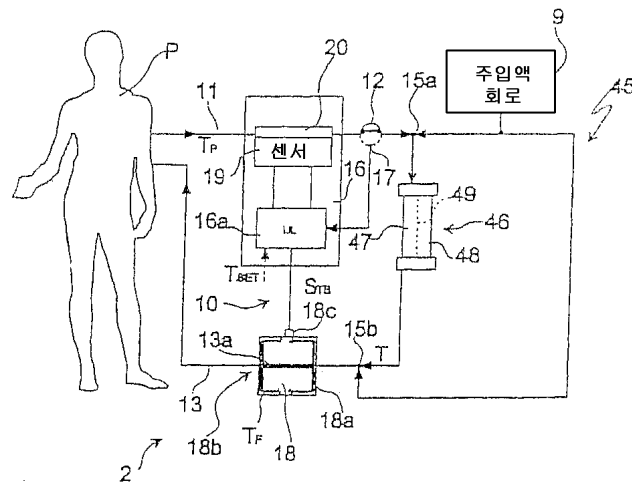
5



6



7



专利名称(译)	用于测量血液体外循环回路中的血液温度的非侵入性装置和具有该装置的装置		
公开(公告)号	KR1020040071271A	公开(公告)日	2004-08-11
申请号	KR1020047010251	申请日	2002-12-20
[标]申请(专利权)人(译)	甘布罗伦迪亚股份公司 감브로룬디아아베		
申请(专利权)人(译)	감브로룬디아아베		
[标]发明人	FONTANAZZI FRANCESCO 폰타나찌프란세스코 PAOLINI FRANCESCO 파올리니프란세스코 ZACCARELLI MASSIMO 자칼레리마시모 DECICCO GIORGIO 드치코조르지오 DELNEVO ANNALISA 델니보아날시아		
发明人	폰타나찌프란세스코 파올리니프란세스코 자칼레리마시모 드치코조르지오 델니보아날시아		
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外部链接	Espacenet		

摘要(译)

用于测量血液体外循环的回路中的血液温度的非侵入性装置 (16) 包括：线路 (20)，其中从患者流出的血液流动 (P)，以及温度传感器 (19)，连接到血液。所述线 (20) 设置有用用于测量电磁辐射强度的装置 (21)。测量装置 (21) 面向线 (20) 的连接部分或窗口 (37)，其可通过第一波段 (BS) 中的电磁辐射透射，并产生与电磁辐射相关的第一信号 (VB)。在第一个带 (BS) 中，因此血液的温度在管线 (20) 中流动。©KIPO & WIPO 2007

