

(19)



(12)

(10) CN 109223453 A
(43) 2019. 01. 18

(21) 201811140395 .X

(22) 2018 .09 .28

(71) 100076 1

(72)

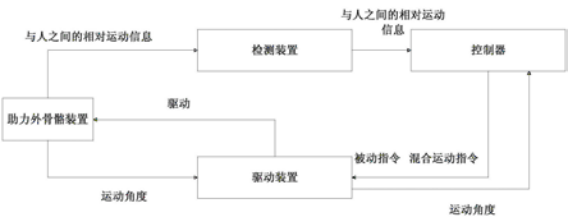
(74) 11009

(51)Int .Cl .
A61H 3/00(2006 .01)
A61H 1/02(2006 .01)
A61B 5/11(2006 .01)

权利要求书2页 说明书5页 附图2页

(54)

(57)



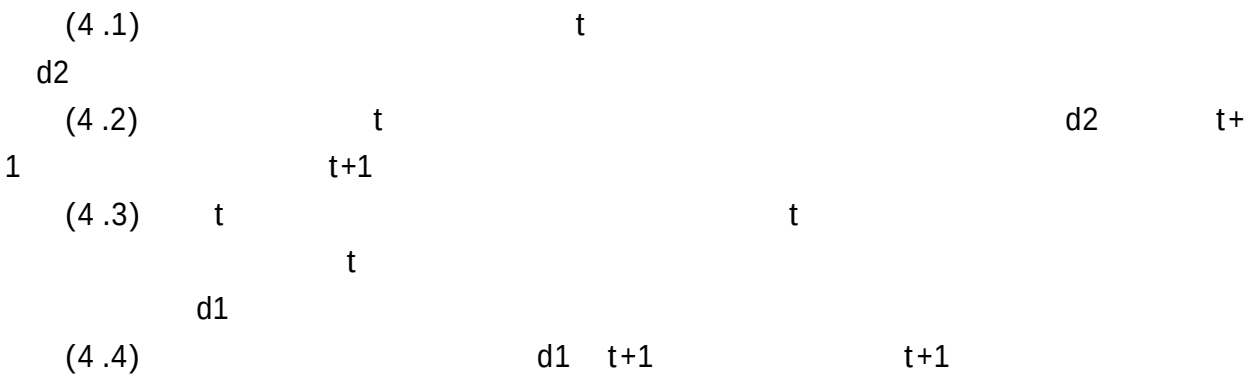
(
)

1 .

2 . 1

3 . 1

4 . 1



5. 4
(4.1)
(5.1) N
t N
x x x
d2 N 1
(5.2) x e t x e
- (5.3) x d1 d2 t-1
t
6. 3
t+1 i $k_1 \times a + k_2 \times b$ a b
k1 k2
7. 6
k1 k2 k1+k2 1
8. 7
k1 k2
- k1>k2 k2>k1
k1 k2 t-1
9. 3
t+1
a $\alpha + k\beta$ α t β t k
10. 8
k

[0001]

[0002]

[0003]

HULC

HAL

BLEEX

.

[0004]

[0005]

[0006]

[0007]

[0008]

[0009]

[0010]

[0011]

[0012]

[0013]

[0014]

[0015] (4 .1) t d_2 [0016] (4 .2) t d_2 $t+1$ $t+1$ [0017] (4 .3) t t t d_1 [0018] (4 .4) d_1 $t+1$ $t+1$

[0019] (4 .1)

[0020] (5 .1) N t N x x x d_2 N 1 [0021] (5 .2) x e t x e d_1 d_2 $t-1$ [0022] (5 .3) x t [0023] $t+1$ i $k_1 \times a + k_2 \times b$ a b k_1 k_2 [0024] k_1 k_2 k_1+k_2 1 [0025] k_1 k_2

[0026]

 $k_1 > k_2$ $k_2 > k_1$ k_1 k_2 $t-1$ [0027] $t+1$ a $\alpha + k\beta$ α t β t k

[0028] k

[0029]

[0030] (1)

[0031] (2)

k1 k2

[0032] (3)

[0033] 1

[0034] 2

[0035] 3

[0036] 4

[0037] 5

[0038]

1

[0039]

2

[0040]

[0041]

3

4

[0042]

[0043] (1) ()

[0044] (2) ()

[0045] (3)

[0046]

(1)

(2)

(3)

[0047]

[0048]

$$k \quad a \quad \alpha + k\beta \quad \alpha \quad t \quad \beta \quad t \quad t+1$$

PID

[0049]

[0050] 5

[0051] (4 .1) t

d2

[0052] (4 .2) t t

t

d1

[0053] 1) N (5)

t

N

x x

x d2

[0054] 2) x e t x e ()

d1 d2 t

d2' d2

d1' d1

d1' d2' t-1

[0055] 3) x t

[0056] (4 .3) t d2

$t+1$ c'
 [0057] (4.4) $t+1$
 [0058]

 [0059] $t+1$ i $k_1 \times a + k_2 \times b$ a b
 k_1 k_2 $k_1 + k_2$ 1
 [0060] k_1 k_2
 [0061]
 $k_1 > k_2$ $k_2 > k_1$
 k_1 k_2
 [0062] k_1 k_2 1
 k_1 1 k_2 0
 k_1 0 k_2 1

 [0063] k_1 k_2

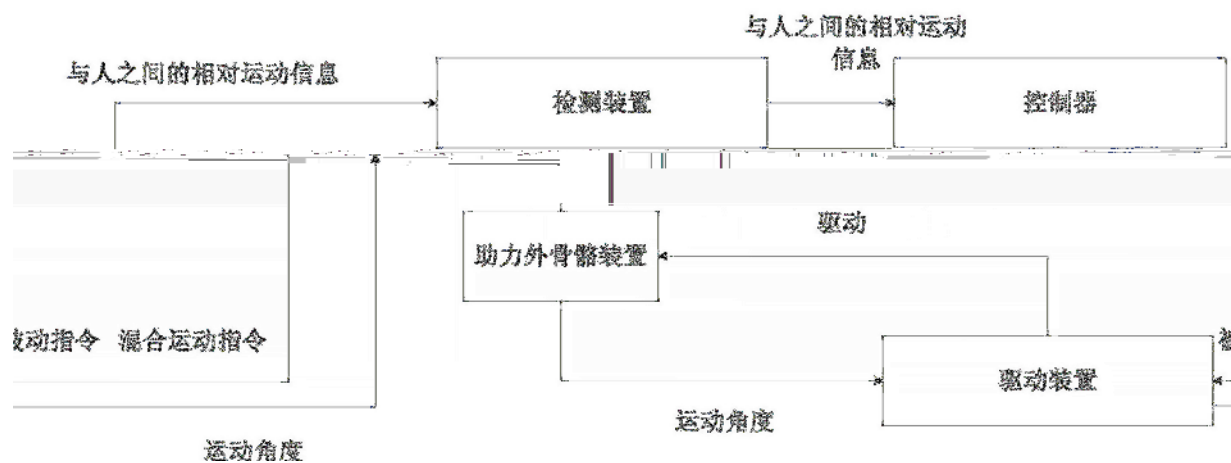
 k_1 k_2
 [0064]

 [0065]

 ()

 [0066]

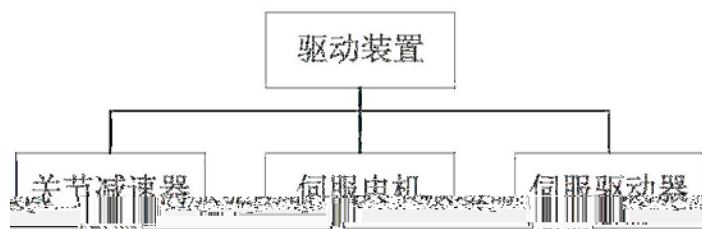
 [0067]



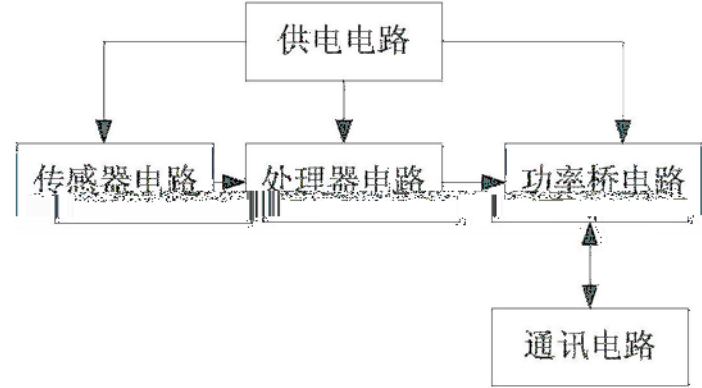
1



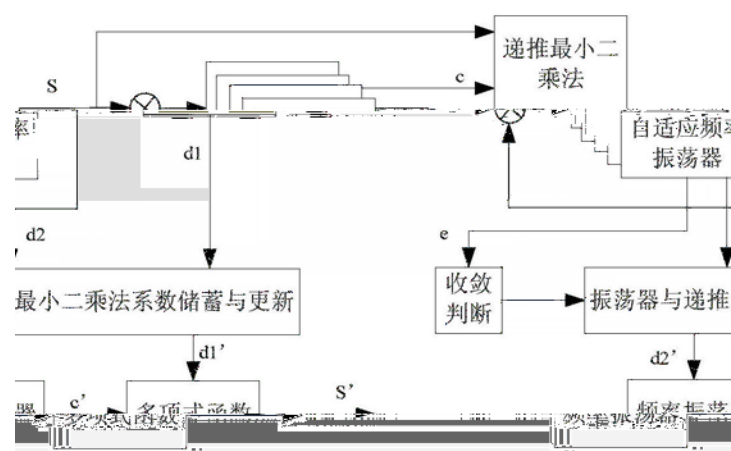
2



3



4



5