



湖南现代物流职业技术学院
HUNAN MODERN LOGISTICS COLLEGE

冷链物流技术与管理专业 技能考核题库



		.....	1
1		.....	1
1	1-1-1	" L"	1
2	1-1-2	" S"	3
3	1-1-3	.....	5
4	1-1-4	.....	7
2		.....	9
5	1-2-1	.....	9
6	1-2-2	" S"	11
7	1-2-3	.....	13
8	1-2-4	.....	15
9	1-2-5	.....	17
3		.....	19
10	1-3-1	.....	19
11	1-3-2	.....	21
12	1-3-3	.....	23
13	1-3-4	.....	25
14	1-3-5	.....	27
15	1-3-6	()	29
		.....	31
16	2-1-1	.....	31
17	2-1-2	.....	33
18	2-1-3	.....	35
19	2-1-4	.....	37
20	2-1-5	.....	39
2		.....	41
21	2-2-1	.....	41
22	2-2-2	.....	43
23	2-2-3	.....	45
3		.....	47
24	2-3-1	.....	47
25	2-3-2	.....	49
26	2-3-3	.....	51
27	2-3-4	.....	53
28	2-3-5	.....	55
4		.....	57
29	2-4-1	.....	57
30	2-4-2	.....	59
31	2-4-3	.....	61
32	2-4-4	.....	63

33	2-4-5	65
5		67
34	2-5-1	67
35	2-5-2	69
		71
1		71
36	3-1-1	71
37	3-1-2	73
38	3-1-3	75
39	3-1-4	77
2		79
40	3-2-1	79
41	3-2-2	81
42	3-2-3	83
43	3-2-4	85
44	3-2-5	87
3		89
45	3-3-1	89
46	3-3-2	91
47	3-3-3	95
4		103
48	3-4-1	103
49	3-4-2	105
50	3-4-3	107
		109
1		109
51	4-1-1	109
52	4-1-2	111
53	4-1-3	114
54	4-1-4	117
55	4-1-5	121
2		123
56	4-2-1	123
57	4-2-2	129
58	4-2-3	135
59	4-2-4	141
60	4-2-5	147
3		153
61	4-3-1	153
62	4-3-2	157
63	4-3-3	161
64	4-3-4	164
65	4-3-5	167
4		171

66	4-4-1	.....	171
67	4-4-2		
		.....	173
68	4-4-3	...	175
69	4-4-4	.	177
70	4-4-5	.....	179
71	4-4-6	.....	181
		.....	183
1		.....	183
72	5-1-1	.....	183
73	5-1-2	.....	185
74	5-1-3	.....	187
75	5-1-4	.....	189
76	5-1-5	.....	191
2		.....	193
77	5-2-1	.....	193
78	5-2-2	.....	195
3		.....	197
79	5-3-1	.....	197
80	5-3-2	.....	199

1
1 1-1-1 " L"

1
1-01 " L"

20cm

1.1m

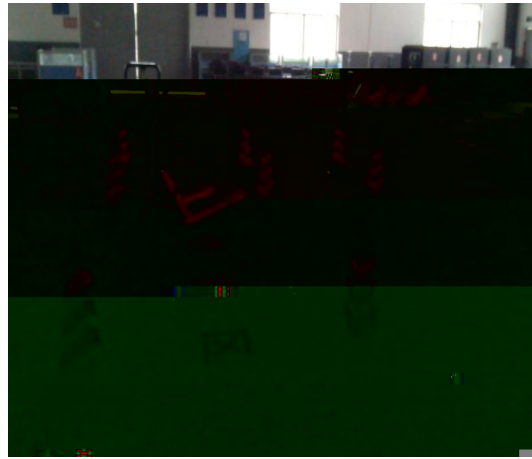
" L"

"

"



1-01



" L"

2

	1	
	8	1
	1	
	1	1

3

60

4

30		30	20	3 3	
20		10		3 3 2	
		10		2 3 20	
50		3		3	
		4		1-2	
		2		2	
		18			
		18			
		5		2	
		100			0

2 1-1-2 " S"

1

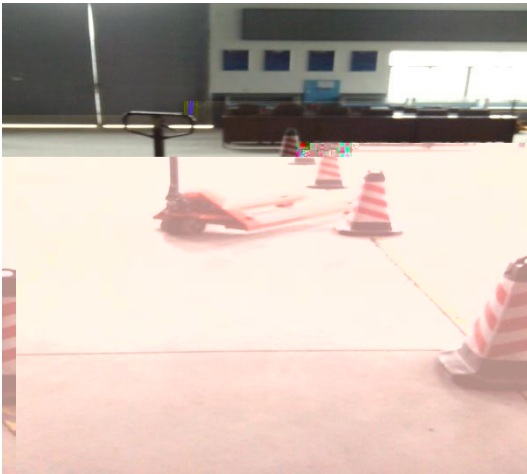
1-02

20cm

" S"

"

"



1-02 " S"

2

	1	
	4	1
	1	
	1	1

3

60

4

30		30	3 3 20	
20		10	3 3 2	
		10	2 3 20	
50		3	3	
		4	1-2	
		2	2	
		18		
		18		
		5	2	
		100		0

3

1-1-3



1

1-03

10m

1.5m

E

CD

CD

B F

A

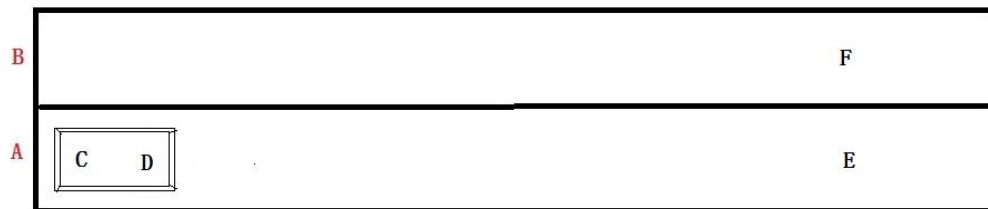
CD

B

F

"

"



1-03

2

1

1

4

1

1

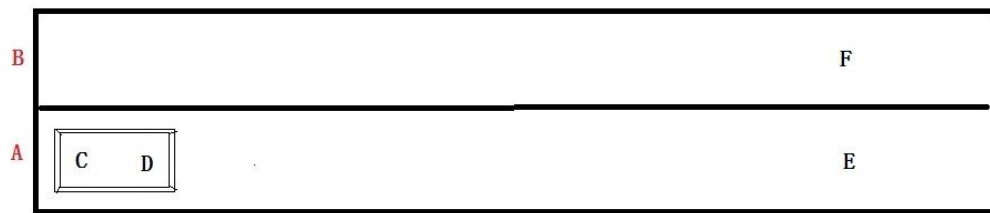
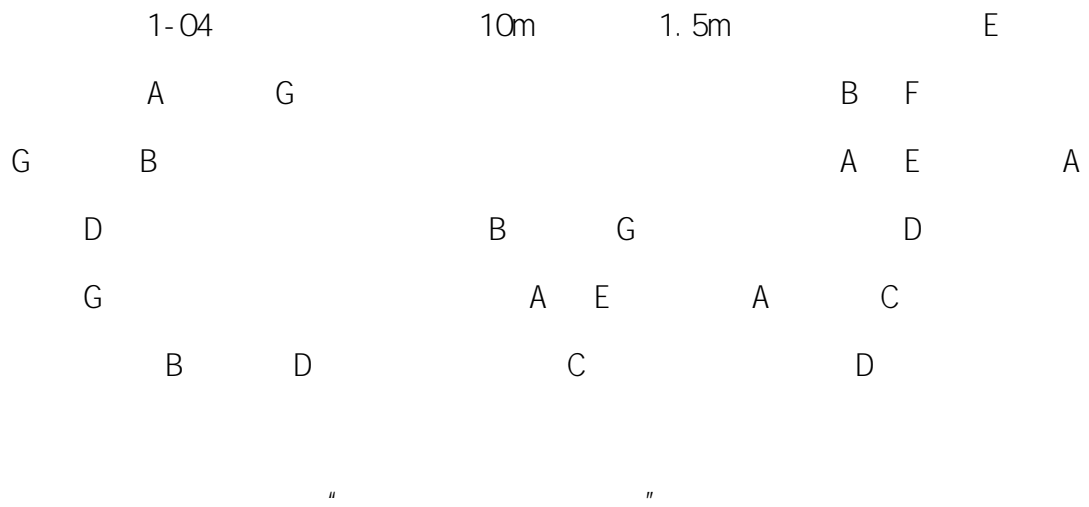
1

1

30			30	3 3 3 3	
				20	
20			10	3 3 2	
			10	2 3 20	
50			3	3	
			4	1-2	
			2	2	
			18	10	
			18	10	
			5	2	0
			100		

4 1-1-4

1



1-04

D

2

	1	1
	4	1
		1
	1	1

3

60

4

30		30		3 3 3 3	
20		10		3 3 2	
		10		2 3 20	
50		3		3	
		4		1-2	
		2		2	
		18		10	
		18		10	
		5		2	0
		100			

2
5 1-2-1



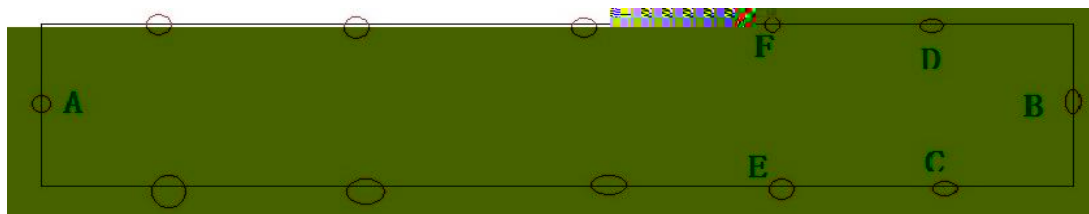
1

1-05 AB 20 CD

30cm CE 150cm

A B B A

60



1-05

1

" "

2

2

	1	20

3

60

4

40		10	5

			2 3	0
		30	5 5 5 5	
20	6S	10	6S 3-5	
		10	2 3 20	
40		30		
		10		
			60	

6 1-2-2 " S"



1

1-06

AB

AC

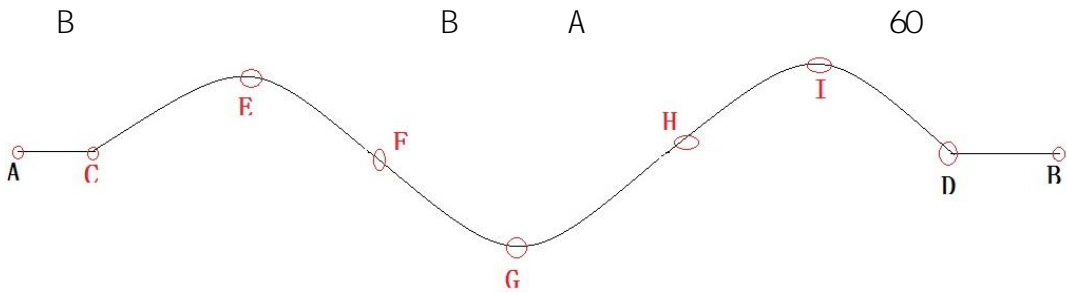
BD

350cm C I

40cm

C

A



1-06

" S"

1

"

"

2

2

	1	16

3

60

4

40		10	5
		2	
		3	

		30	5 5 5 5	0
20	6S	10	6S 3-5	
		10	2 3 20	
40		30	" S"	
		10		
			60	

7 1-2-3

1

1-07

AM MC

10

AB EF

30cm AE EG IK KC

3

AB

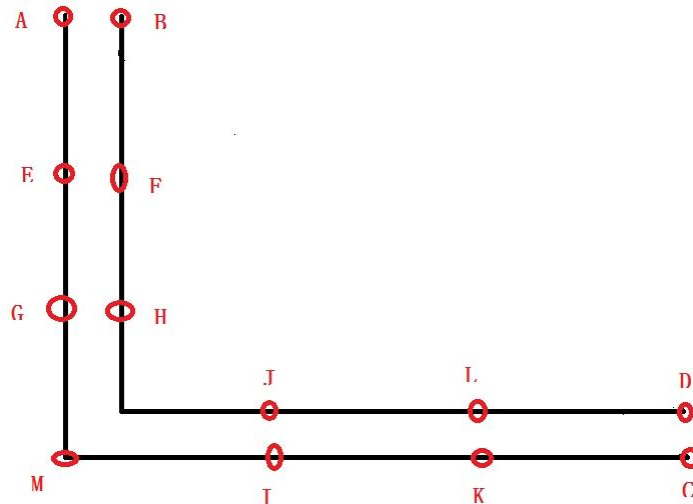
CD

CD

AB

60

M



1-07

1

"

"

2

2

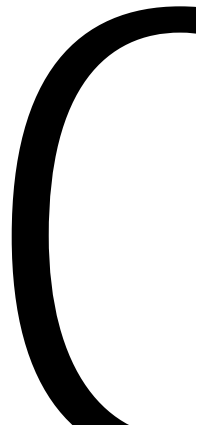
	1	16

3
60
4
40

10

2
3

5



8 1-2-4



1

1-08

4 5

7 8 1.5 4 9 8 10 1.5 4

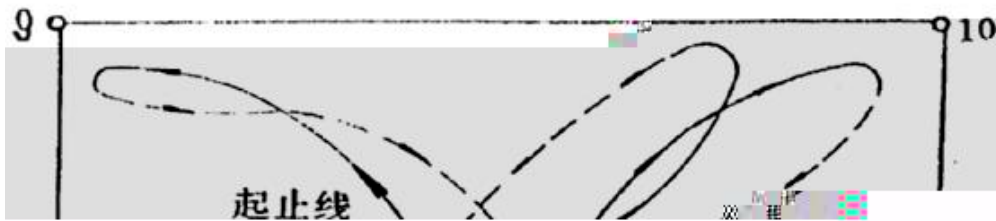
1 1 5 2 6 3 7 2 1 2 2 3 5

6 6 7 0.5 9

10 9

10

30



1-08

1

"

"

2

2

	1	16

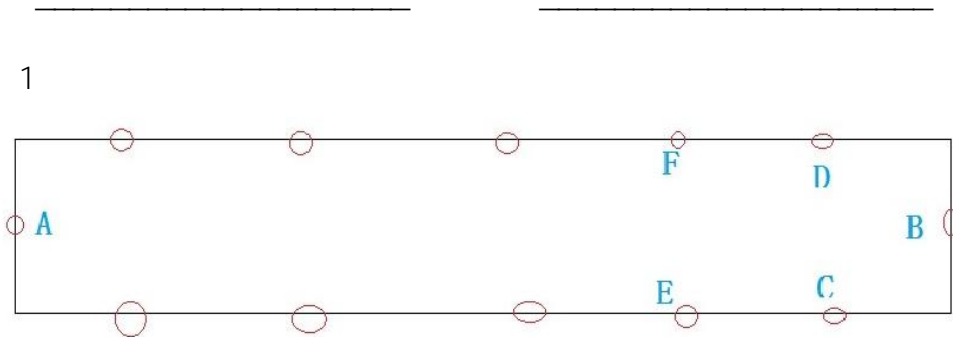
3

60

4

40		10	2 3	5
		30		5 5 5
20	6S	10	3-5	6S
		10		2 3 20
40		30	" S"	
		10		
			60	

9 1-2-5



1-09

1-09

AB

20

CD

30cm CD B

60cm A

CE 150cm

A

B

B

A

A

B

60

1

"

"

2

2

	1	20

3

60

4

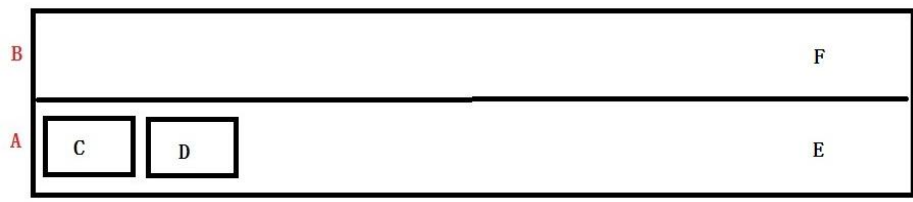
--	--	--	--

40		10	2 3	5	0
		30		5 5 5	
20	6S	10		6S 3-5	
		10		2 3 20	
40		30			
		10			
			30		

3
10 1-3-1



1
1-10 AB 20
30cm E A D
B F D B A C A E
C B F C D
D F 30



1-10

1
" "

2

2

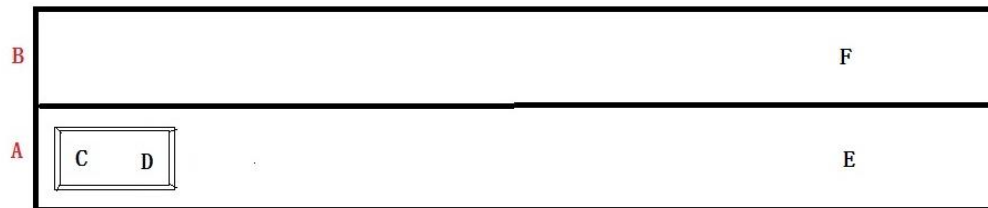
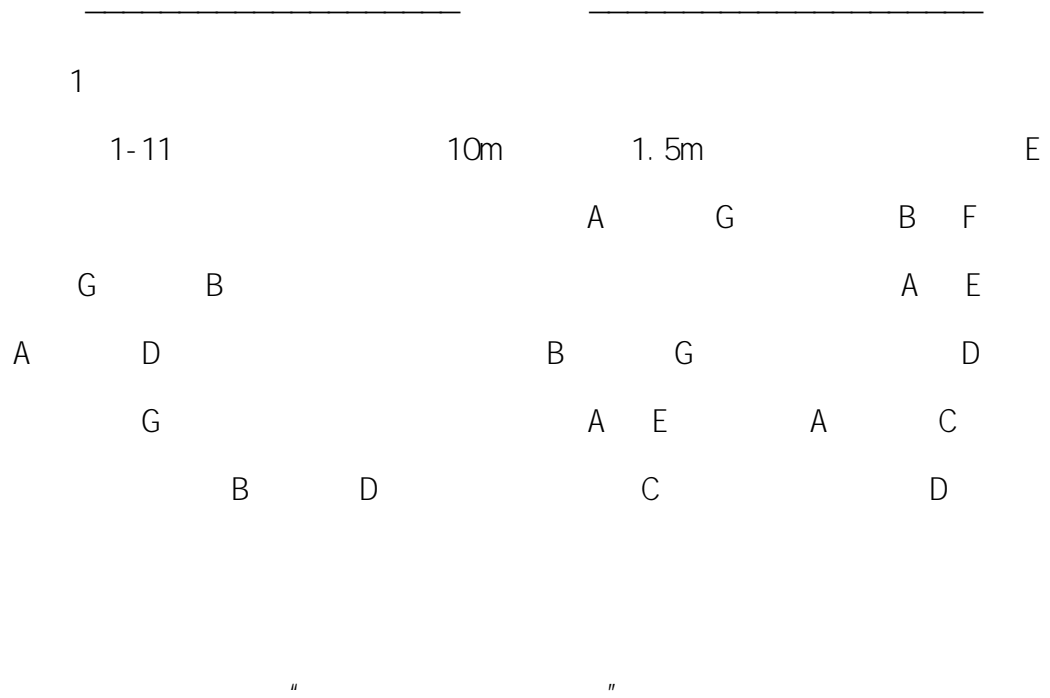
	1	20

3
60



40		10	2 3	5	0
		30		5 5 5	
20	6S	10	3-5	6S	
		10		2 3 20	
40		30			
		10			
			30		

11 1-3-2



1-11

D

2

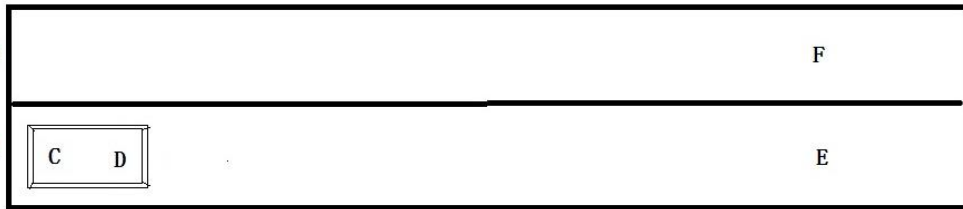
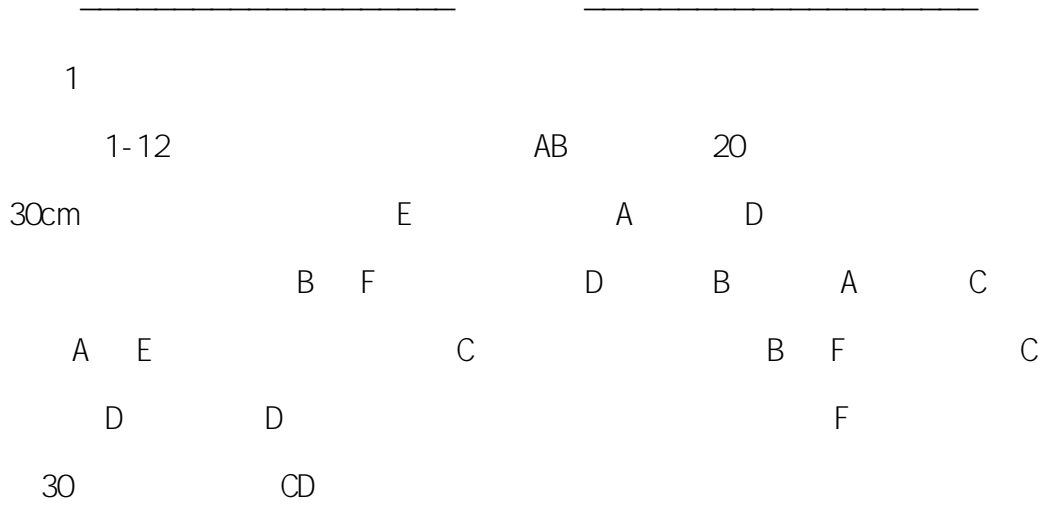
	1	1
	4	1
		1
	1	1

3

60

30			30	3 3 3 3	
			20		
20			10	3 3 2	
			10	2 3 20	
50			3	3	
			4	1-2	
			2	2	
			18	10	
			18	10	
			5	2	0
			100		

12 1-3-3



1-12

1

"

"

2

2

	1	20

3

60

4

E

40		10	2 3	5	0	
		30		5 5 5		
20	6S	10	3-5	6S		
		10		2 3 20		
40		30				
		10				
			60			

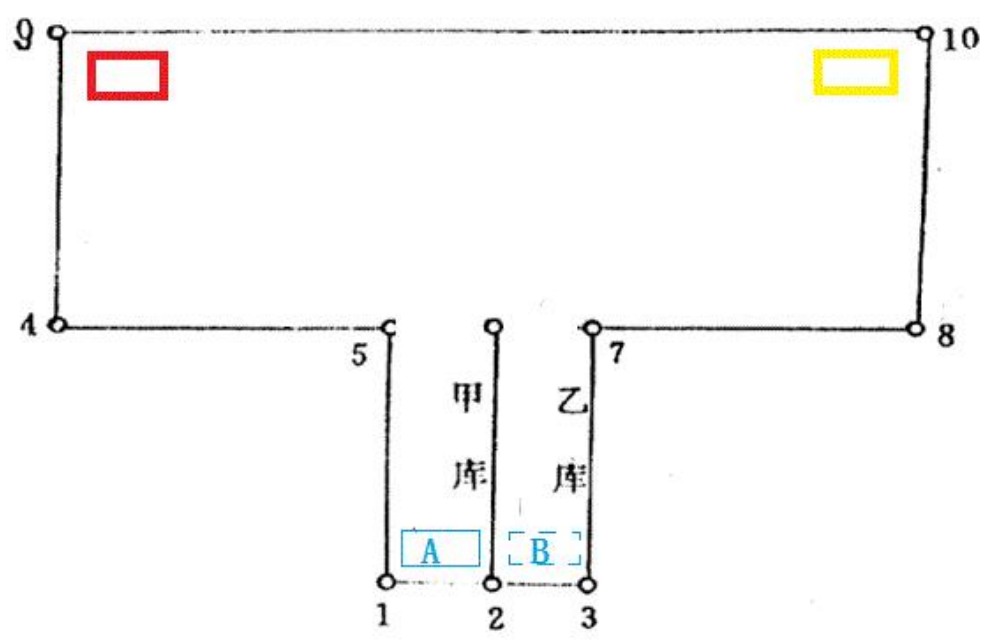
13 1-3-4

1												
1-13										4	5	
7	8	1.5			4	9	8	10	1.5		1	5
2	6	3	7	2	1	2	2	3	5	6	6	7
											0.5	

A

B

30



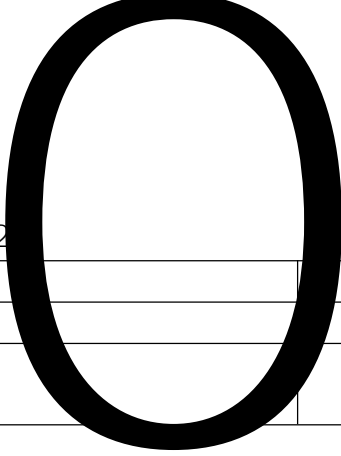
1-13

1

"

"

2



2		
	1	20

3
60
4
5
10
2
3
40
5
5
30
5
5
6S
10
3-5
6S
20
3
2
10
20
0

q

14 1-3-5

1

1-14

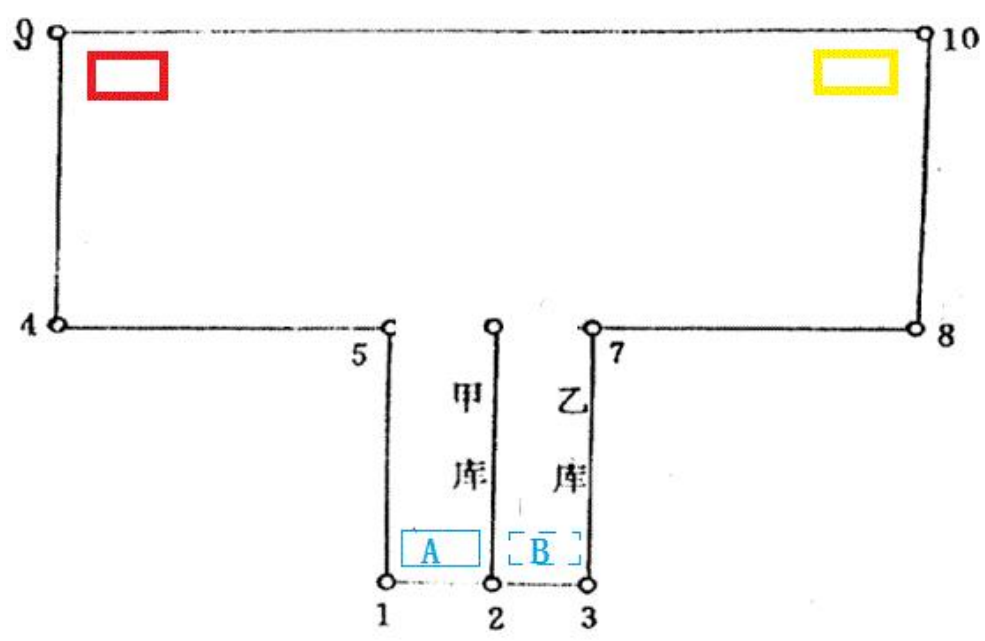
7 8 1.5 4 9 8 10 1.5 4 5

2 6 3 7 2 1 2 2 3 5 6 6 7 0.5

B

A

30



1-14

1

" "

2

2

	1	20

3

60

4

40		10	2 3	5
		30	5	5 5
20	6S	10	3-5	6S
		10	3 20	2
40		30		0
		10		
			60	

15

1-3-6

(

--	--	--

3

60

4

40		10	5 2 3	0
		30	5 5 5	
20	6S	10	6S 3-5	
		10	2 3 20	
40		30		
		10		
			30	

16 2-1-1

1

A B C D E F G7

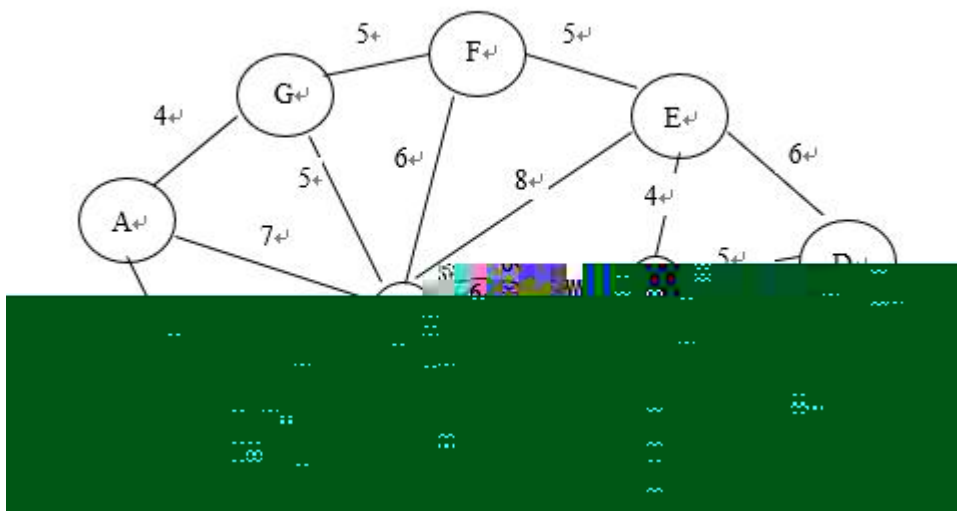
2-01

km

4 2

28km

	A	B	C	D	E	F	G
	1.2	0.5	2.4	1.5	1.1	0.7	0.8



2-01

A B C D E F G7

1

2

3

2

	2	30
	1	30 40

	Office	5	
		30	
	30	2	

3

120

4

2

100

20%

80%

(20)		5		0
		5		
		10		
(80)		30	15 15	
		50	30 20	

17 2-1-2

1

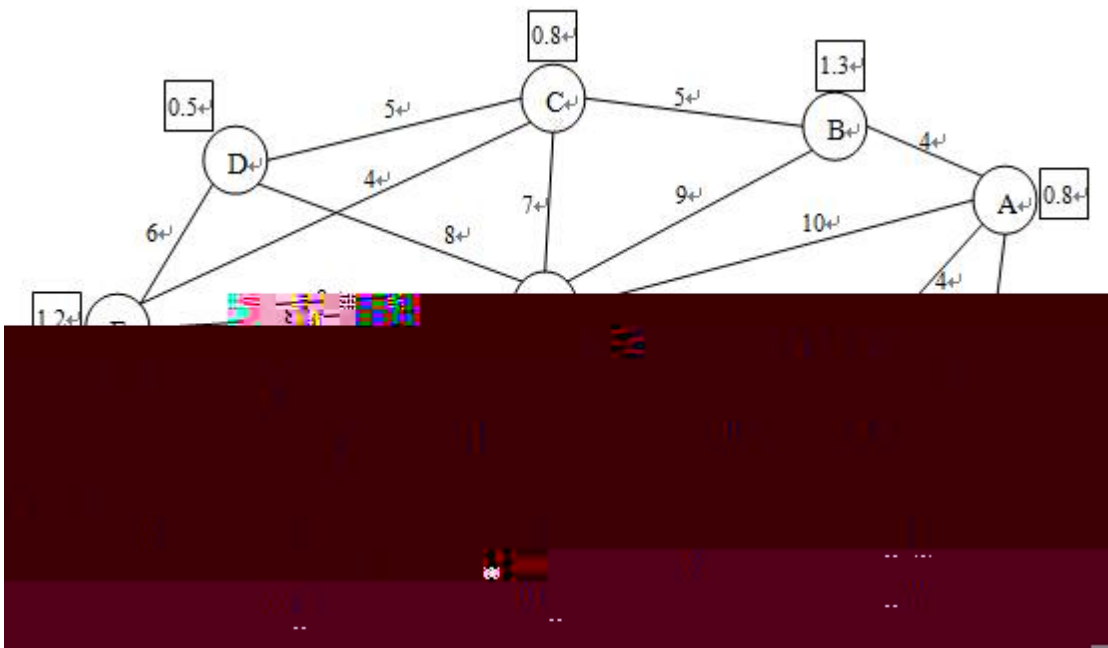
2-02 P

A-J

km

t 2t 4t

35km



2-02

2

	2	30
	1	30 40
Office	5	

	30	
	30	2

3

120

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)	30	15	30
	50	15		20

18 2-1-3

1

1' 2' 3' 4

1' 2' 3' 4

(=1,2,3,4)

(=1,2,3,4)₁

2-01

2-01

/

/	1	2	3	4	
1	3	6	2	4	60
2	5	3	3	4	50
3	1	7	5	2	50
4	6	2	10	5	70
	90	30	70	40	

1

2 Excel

2

	2	30
	1	30 40
	Office	5
	30	
	30	2

3
120
4

2

100

20%

80%

(20)		5		0	
		5			
		10			
(80)		40	25 15		
	Excel	40	Excel 10 30		

19 2-1-4

1

$A_1 \quad A_2 \quad A_3 \quad \quad \quad B_1 \quad B_2 \quad B_3 \quad B_4$
 $A_i \quad i=1, 2, 3 \quad \quad \quad B_j \quad j=1, 2, 3, 4 \quad 1t$
 $t \quad \quad \quad /t$

/	1	2	3	4	
1	3	11	3	10	7
2	1	9	2	8	4
3	7	4	10	5	9
	3	6	5	6	

1

2 Excel

2

	2	30
	1	30 40
Office	5	
	30	
30	2	

3

60

4

2

100

20%

80%

(20)		5		0
		5		
		10		
(80)		40	25 15	
	Excel	40	Excel 10 30	

20 2-1-5

1

X=4, Y=4

	X	Y		
P1	3	8	2000	0.4
P2	8	2	3000	0.4
P3	2	5	2500	0.6
P4	6	4	1000	0.6
P5	8	8	1500	0.6

Excel

2

	2	30
	1	30 40
Office	5	
	30	
30	2	

3

60

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)	80	Excel	

2
21 2-2-1

1

2-02

2-02

1	2	3	4	5	6	7	8	9	10
140	159	136	157	173	131	177	188	154	179



4

2

100

20%

80%

(20)		5		0
		5		
		10		
(80)		20	10 20	
	Excel	60	Excel N=3 10 10 N=5 10 10 , 0.3 10 10	

22 2-2-2

1

2-03

2-03

	1	2	3	4	5	6	7	8	9	10
	3.3	3.5	3.2	3.7	3.5	3.4	3.5	3.8	3.6	3.7

;

1

2 N=3 N=5 , EXCEL

3 0.4 EXCEL

2

	2	30
	1	30 40
	Office	5
	30	
	30	2

3

120

4

2

100

20%

80%

5

(20)

5

10

0

(80 *

10

23 2-2-3

1

2-04

2-04

	1	2	3	4	5	6	7	8	9	10	11	12
	60	70	55	80	90	65	70	75	60	80	90	100

;

1

2

$N=3$

$W_1=0.5, W_2=0.3, W_3=0.2$

EXCEL

3

0.5

EXCEL

2

	2	30
	1	30 40
	Office	5
	30	
	30	2

3

120

4

2

100

20%

80%

(20)		5		0
		5		
		10		
(80)		20	10 20	0
	Excel	60	Excel N=3 10 10 Wt - 1=0.5, Wt - 2=0.3 Wt - 3=0.2 10 0.5 10 , 10 10	

3
24 2-3-1



1

b

:

200~300

E m'í

β ê

	Office	5	
		30	
	30	2	

3 90

4

20		5		5	0			
		5		1				
		10		4		5		
80		20		8		1	4	
		6		2		8	1	
		16		10		1	2	6
		13		1		2	9	4
		17		9		1	8	3
		8				2	8	

25 2-3-2



1

× × 390m m

× 280mm× 234mm 1200mm× 1000mm× 150mm

1000 mm

12000

3985 mm

2550 mm

1

2

3

2

	2	30
	1	30 40
	Office	5
	30	
	30	2

3

90

4

2

100

20%

80%

5

(20)

5

10

0

(80)

80

26 2-3-3

1

2 3 3

500KG L1210x V800x H1020 mm 1200mmx 1000mm
 × 150mm 2-05
 2-05

		mm (× ×)	KG	
1		260*200*200	18	25
2		340*250*280	20	19

2

	2	30	
		1 30 40	
	Office	5	
	30		
	30	2	

3

90

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)	80	(10 20) 60 30	

27 2-3-4

1

2 3 3

500KG L1210x V800x H1020 mm 1200mmx 1000mm
 × 150mm 2-06
 2-06

		mm (× ×)	KG	
1		490*230*230	18	20
2		550*440*280	12	12

2

	2	30	
		1 30 40	
	Office	5	
	30		
	30	2	

3

60

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)	80	(10 20) 30 60	

28 2-3-5



1

15KG

400mmx 280mmx 234mm

25*40

7

1000Kg

34

30

360

0.65

1

2

3

2

	2	30
	1	30 40
	Office	5
	30	
	30	2

3

90

4

2

100

20%

80%

4
29 2-4-1

1

3-5

A

1

2

2

	1	
	30	2

3

90

4

20		10	5	5
		10	5	
		40	6	16

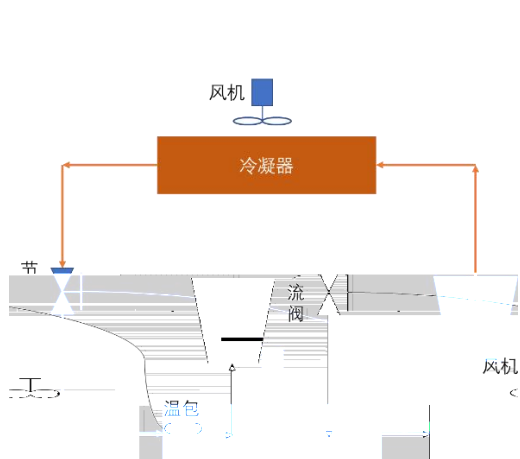
80			12 40	0
		40	10 10 10	
		100		

30 2-4-2

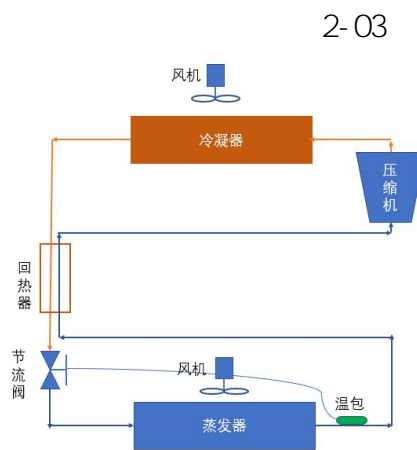
1

-5 6000m³ 0 -5 1000 m³ -25 500m³ -18

R404A R134A, R744



2-03



2-04

2-04

40%

1

R744

?

2

3

2

	2	30
	1	30 40
	Office	5
	30	
	30	2

3

90

4

2

100

20%

80%

20		10	5	0
		10	5	
80		12	6 12	
		12	4 12	
		14	1 2 3 12	
		16	4 16	
		16	4 16	
		10	10	
		100		

31 2-4-3

1

20		10	5	0
		10	5	
80		24	3 24	
		27	6	
		29	3 4 / 5 3 29	
		100		

32 2-4-4



1

-25 500m³ -18

-5

	30	2	
--	----	---	--

3

120

4

2

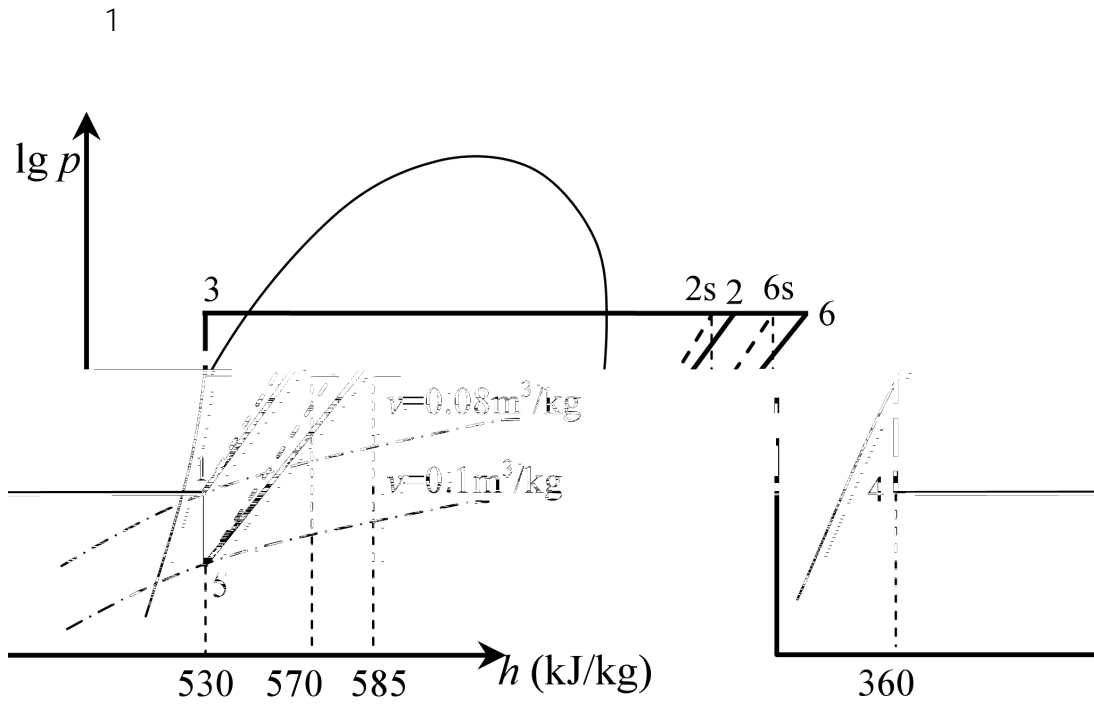
100

20%

80%

20		10	5	
		10	5	
80		8		0
		36	3	
		36	3 36	
		100		

33 2-4-5



-25 500m³ -18
 -5 6000m³ 0 -5 1000m³
 50Hz Vh=0.1m³/s v=0.8
 $\eta = 0.9$ $\eta_m = 0.85$ x 1-2s

5-6s

1

2

3

1-2-3-4-1

2

	2	30
	1	30 40
	Office	5
	30	
	30	2

3

120

4

2

100

20%

80%

20		10	5	0
		10	5	
			5	
80		5		
		15	5 15	
		15	3 15	
		45	15 15 15	
		100		

20		10	5	0
		10	5	
80		10	5	
		35	3	
		35	3	
		100		

35 2-5-2

1

"

"

5

2

0

1

2

3

2

	1 30 40	
	Office 5	
	30	
	30 2	

3

120

4

2

100

20%

80%

--	--	--	--

20		10	5	
		10	5	
80		10	5	0
		35	3	
		35	5		35
		100		

1
36 3-1-1

1

(A B) 3000 , 100

5%

20%

	(/)	()
	2.5	7
	6.0	4
	10.35	2

A

2

	2 30	
	1 30 40	
	Office 5	
	30	
	30 2	

3

60

4

2

20%

80%

(20)	5		0
	5		
	10		
(80)		80	A

37 3-1-2

1

600 , 150

20%

1

	(/)	()
	2	10
	3	7
	4	4
	8	2

2

	2	30
	1	30 40
	Office	5
		30
	30	2

3

60

4

2 100

20% 80%

--	--	--	--

5

5

(20)

0

38

3-1-3

(20)	5		0
	5		
	10		
(80)		80	

39 3-1-4

1

600

1000

	/		/
	30	10	5
	45	7	5
	55	4	6
	80	2	8

2

	2	30
	1	30 40
	Office	5
		30
	30	2

3

60

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)		80	

2
40 3-2-1

1

A1 A2 A3

B1 B2 B3 B4

$A_i \quad i=1, 2, 3$

$B_j \quad j=1, 2, 3, 4$

1t

t

/t

	1	2	3	4	
1	3	11	3	10	7
2	1	9	2	8	4
3	7	4	10	5	9
	3	6	5	6	

2

	2	30
	1	30 40
Office	5	
	30	
30	2	

3

60

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)		80	

41 3-2-2

1

	A B	A	20
0.03m ³	B 10	0.02m ³	
10		20m ³	
		A B	
	90%	100%	

2

	2 30	
	1 30 40	
Office	5	
	30	
30	2	

3

60

4

	2	100
	20%	80%

(20)	5		0
	5		
	10		

(80)		80	A B

42 3-2-3

1

					()
				15	0.035
				5	0.040
				5	0.040
				8	0.035
				10	0.030

KS1011150008

64

		20
		15

DD1011150012

102

		30
		35
		30

QH1011100012

95

		35
		20
		20

2

A	15	15600× 2300× 2500
B	8	9600× 2300× 2500
C	5	5600× 2200× 2300

1

2

2

	2	30
	1	30 40
	Office	5
		30
	30	2

3

60

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)		80	

				800
				200
				1000
			8	

2

		2	30	
			1 30 40	
	Office	5		
		30		
	30	2		

3

60

4

2

100

20%

80%

	5		
	5		
(20)	10		0
(80)	80		

44 3-2-5

1

A B C	A	20
0.05 m ³ B 10	0.04m ³ C	20
0.03 m ³		
10	20m ³	
100%		90%

2

	2 30	
	1 30 40	
Office	5	
	30	
30	2	

3

60

4

	2	100
20%	80%	

	5	

(20)		5		0
		10		
(80)		80		

3
45 3-3-1

1
2010 8 12

160ml 500 5kg 6000 500 1%
, 500 0.8 /
2010 8 15 2010 8 16

*	*	*	*	*	*	*
*		*		*		

46 3-3-2

1

2010 11 6 10:00

YD201010170004

89

100A45

40× 20× 15cm	20kg	200	2.4M	100B37
35× 25× 10cm	10kg	150	1.3M	100C64
18× 26× 8cm	10kg	100	0.4M	100D87
41× 22× 20 cm	15kg	100	1.8 M	
100E28	23.4× 10.5× 6.6 cm	20kg	100	
0.1 M				

YD201010170001

40

18

30× 25× 15cm

16kg

0.5 M

YD201010170002

150

HK3227

20

80× 66× 32cm

30kg

25M

YD201010170003

120

35× 22× 14cm

12kg

1.3 M

BC0001

FTK128

38 M

10T

13910056927

YSJJD001

2010 11 6 21 30

FH01 23:00

DHYBB001

2010 11 7 5:00

11:00

14:00

16:00

80

4000

CSJL001

*		*						
		*			*			
*								
*								
*								

2

	2	30
	1	30 40
	Offi ce	5
		30
	30	2

3

60

4

2

100

20%

80%

(20)		5		0
		5		
		10		
(80)		80		

47 3-3-3

1

2019 3 20

KH002

1

0371-64351003

23

40 1000KG 5.6m³

20 500KG 2.8 m³

20 600KG 2.8 m³

3 25

3 24

12

0371-56348790 50

13

300kg 5m³

43

0371-56372387 50

10

200kg 6m³

39

0371-56358901 50

17 300kg 3.2m³

20 YSDH001 400km

240km HBC01 A39027 20m³

6

13251556785

21

QTZD001

9.6m

8

20m3

8

YD001

YD002

YD003

YD004 21 20

2019 3 22 7

9

18

23 8

12

*			*		kg	*		M
*			*			*		

(20)	5		0
	5		
	10		
(80)		80	

47 3-13

1

2019 8 20

KH003

161

0377-57851300

100

60 600KG 3.6m³

40 800KG 1.8 m³

10 150KG 2.8 m³

8 25

8 24

12

0371-56348790 50

13 200kg 1.6m³

43

0371-56372387 60

10

200kg 1.8m³

39

0371-56358901 50

17 300kg 2.2m³

362

0371-58339901 60

17 200kg 1.8m³

20

JHGE001

400km

240km

HB001

A39026

6

:								:	
*		()		*	(M ³)		---		
(km)									
*	(km)	()		*					

*				*	(kg)	(M ³)	*		
				()					

*				*	(kg)	(M ³)	*		
				()					

2

	2	30
	1	30 40

	Office	5	
		30	
	30	2	

3

45

4

2

100

20%

80%

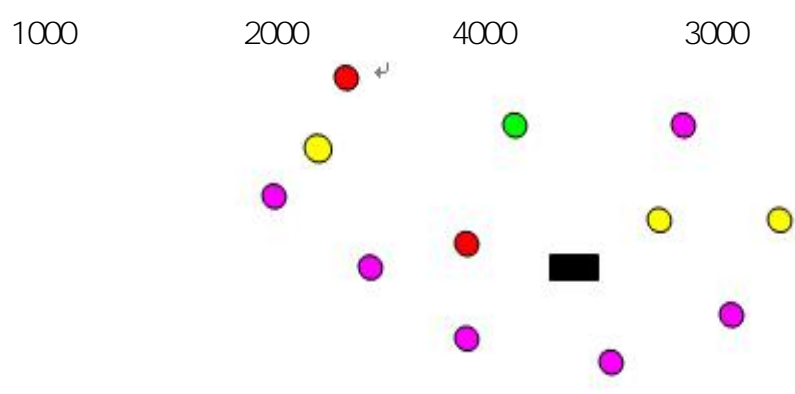
(20)	5		0
	5		
	10		
(80)		80	

4
48 3-4-1



1

10000



2

	2	30
		1 30 40
	Office	5
		30
	30	2

3

60

4

2

100

20%

80%

(20)	5		0
	5		
	10		
(80)	20		
	30		
	30		

(20)	5		0
	5		
	10		
(80)		20	
		30	
		30	

50 3-4-3

1

QH1011100012

95

		35
		20
		20

KS1011150008

64

		35
		20
		10

DD1011150012

102

		30
		35
		30



1
51 4-1-1

1

1993 05 1

200 3
6000 3 5000 3 4500 2019
4 5

200 4 3.6

J20190405123

D20190401012

2019-4-5

			mm		
1	A		500*400*200	32	120
2	B		500*400*200	36	150

1

3

2

2

	2	30
		1 30 40
	Office	5
		30
	30	2

3

60

4

20	5		5	0
	5		1 4	
	10		5 5	
80	20		20	
	20		20	
	20		20	
	20		20	

52 4-1-2

1

A 12000 B 12000 C 6000 A B
A B 1.2 A 7
30000 21000 1500 7 90000
45000 3000

2019 8

5 3000 6909995110586 2500
6905734301468 A 385mmx 285mm
x 235mm 10 A

6m x 2m 0.7 2019 8

4 8 5 10

1

			D20190804012		J20190805123

④ 7 A B

2

2

	2	30
		1 30 40
	Office	5
		30
	30	2

3

60

4

20	5		5	0
	5		1	
	10		4 5 5	
80	20		20	
	20		20	
	20		20	
	20		20	

--	--

53 4-1-3



1

A 12000 B 12000 C 6000 B
A B 1.2
20 30 10
8 2 1200mm
1000mm 1.4 m
2019 8
5 3000 6909995110586 2500
6905734301468 A 385mm x 285mm
x 235mm 10 A
6m x 2m 0.7 2019 8
4 8 5 10
8 5 1 2
1 1

			D20190804012		J20190805123

④ 8 5

2

2

		2		30	
			1	30	40
	Ofi ce		5		
			30		
	30		2		

3

60

4

20	5			5	0
	5			1	
	10			4	
80	20			5	5
	20			20	
	20			20	
	20			20	

		20		20	

54 4-1-4

1

A

2019

3200547

1308737

95871

A

1200 mm*1000 mm* 100 mm

20 kg

400 kg

1500 mm

300 mm

AD

395mm* 285mm* 160mm

8 kg 2019 4 A

/			
6902774003017		22	60
6917878007441	AD	910	30
6918010061360		150	25
6920855052068		108	35
6920855784129		950	50
6920907800173		37	30
6932010061808		86	80
6932010061822		190	45
6932010061839		130	45
6939261900108		38	35

1

AD

A

ABC

ABC

6920855784129	950	1	10.00%	950	36.25%	
6917878007441	910	2	20.00%	1860	70.97%	
6932010061822	190	3	30.00%	2050	78.21%	

6918010061360	150	4	40.00%	2200	83.94%	
6932010061839	130	5	50.00%	2330	88.90%	
6920855052068	108	6	60.00%	2438	93.02%	
6932010061808	86	7	70.00%	2524	96.30%	
6939261900108	38	8	80.00%	2562	97.75%	
6920907800173	37	9	90.00%	2599	99.16%	
6902774003017	22	10	100.00%	2621	100.00%	

④

2

2

	2	30
		1 30 40
	Office	5
		30
	30	2

3

60

4

20	5		5	0
	5		1	
	10		4 5	
80	30		5 10 15	
	10		5	

		20	ABC	10 10	
		20			

55 4-1-5

1

A

1200 mm * 1000 mm * 100 mm 20 kg
400 kg 1500 mm 300 mm
495 mm * 285 mm * 260 mm 6 kg

2019 4 A

/		
6902774003017		42
6917878007441	AD	2510
6918010061360		550
6920855052068		508
6920855784129		2250
6920907800173		37
6932010061808		386
6932010061822		690
6932010061839		430
6939261900108		38
6932010061830	73°	600

0.2m

2017 7 4

13:50

13:10 A

1

40

2

2

2

	2	30
		1 30 40
	Offi ce	5
		30
	30	2

3

60

4

20	5			5
	5			1
	10			4
80	30			5
	10			5
	20		15	10
	20			10
				20
				0

2
56 4-2-1



1

30

36

()

1.

1

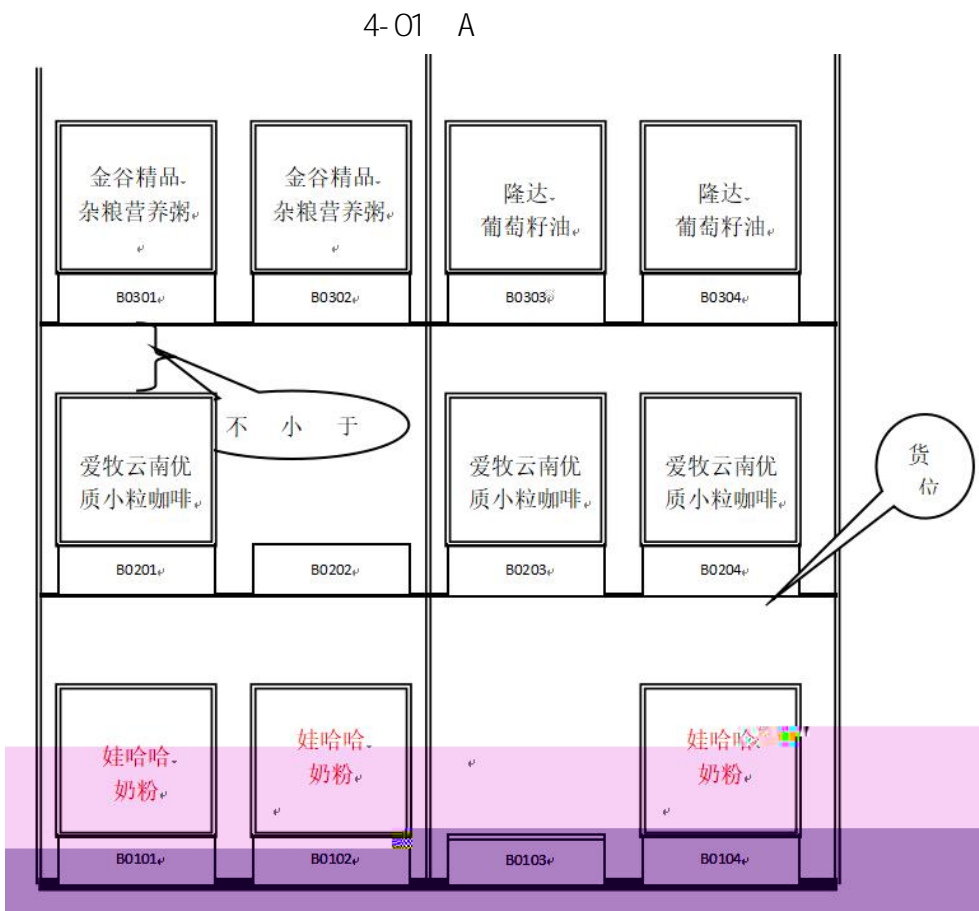
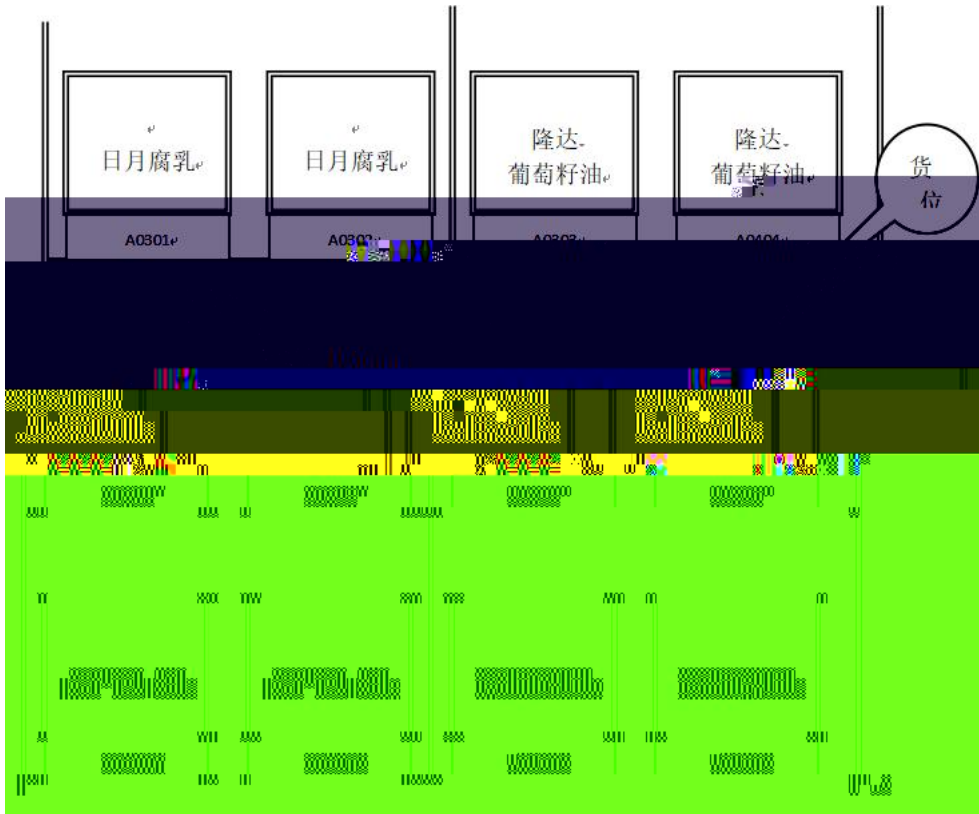
2

()

3

4-01

4-02



3/A@E

#D101

			30	40.5*25.0*20.5cm		
			36	38.0*25.5*23.5cm	36	



2 Ę 6^m b 1

B ↓

ε √

57 4-2-2



1

32

36

1.

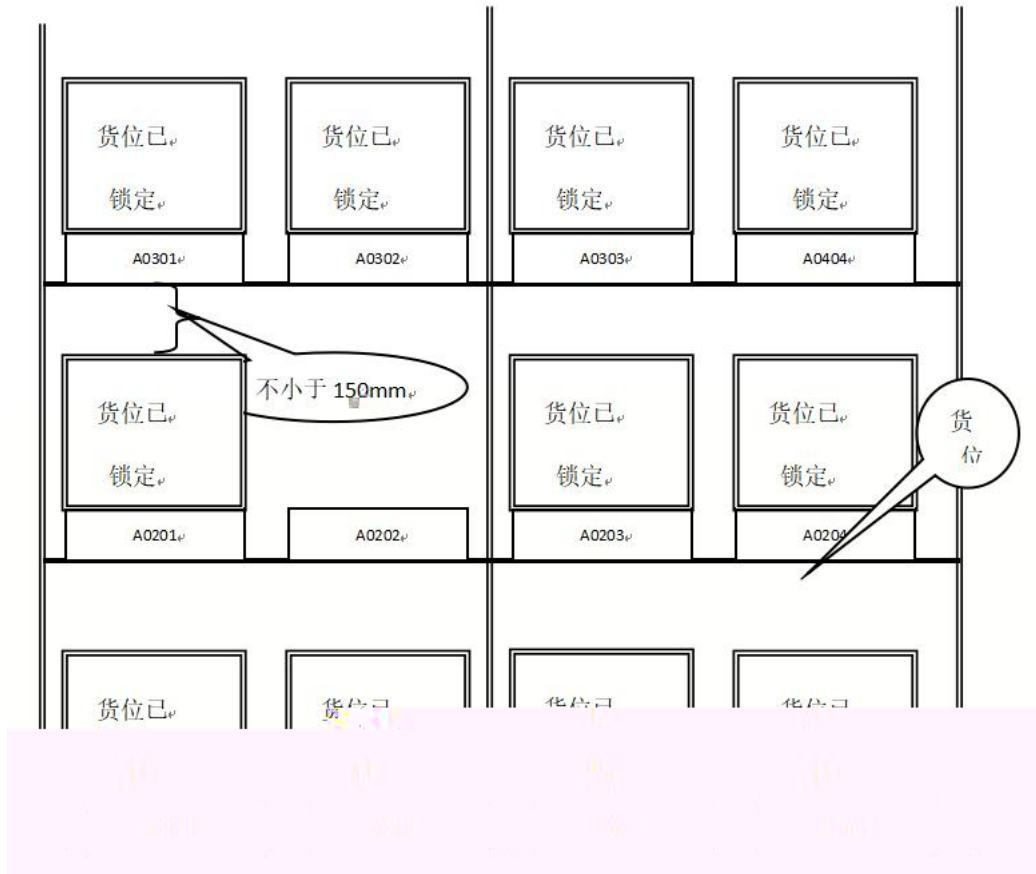
1

2

3

4-03

4-04



4-03 A



4-04 B

4

20191026001

HD101116001

			32		32		
		596ml	36		36		

2.

1

2

3

4

5

6

RF

RF

7

8

RF

RF

1.

						2019. 10. 3
2019						

1000001

2

1

2

B

	1		1200		
	3	2	2×2	2	2
			4	1	1
		1	10	1	RF
					2
	10		10		1
	1200×	1000×	144 mm	30	20
				2	6
					1

60

				-5
				-5
	20			-5
				-5
		5S		-5
	15			- 2
				0

60			-4	
			-4	
			-5	
		10		
		5	W&S	
		15		
			RF	
		15		
	RF			
20		10		
		10		
			-5	
			-3	

58

4-2-3

32

34

1.

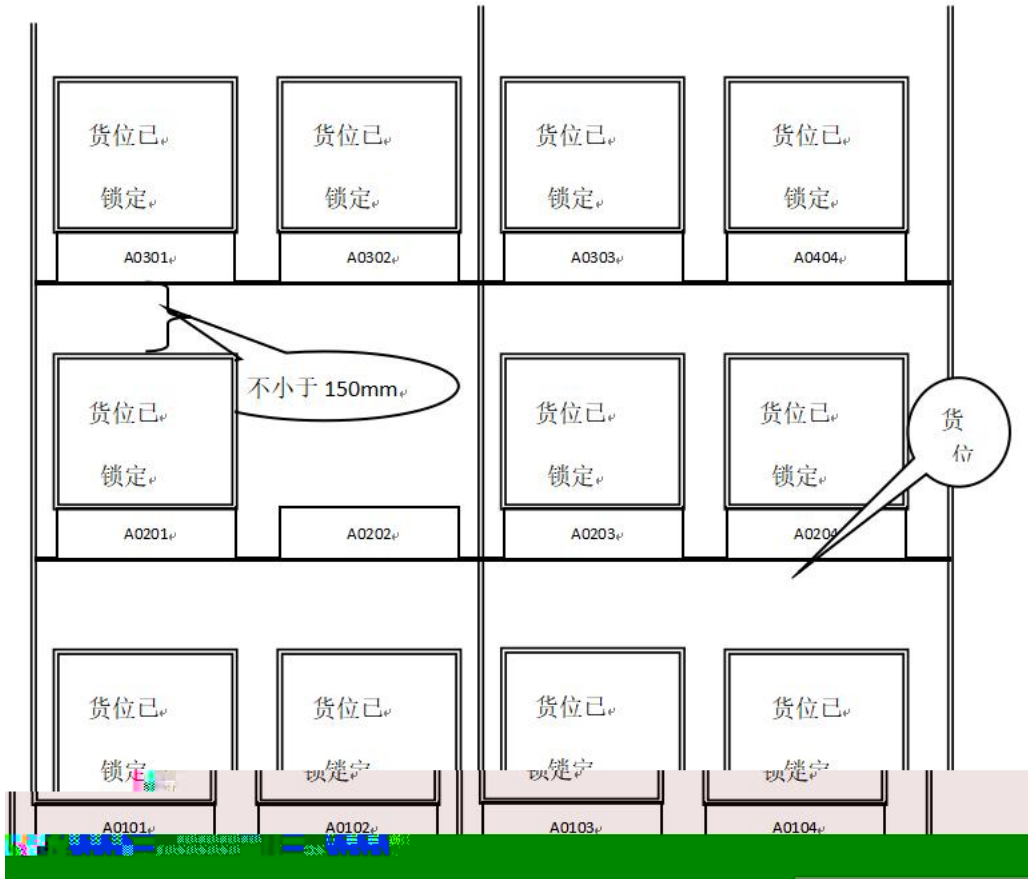
1

2

3

4-05

4-06



4-05 A



4-06 B

4

20151026002

HD1011160002

			32	40.5*25.0*20.5cm	32		
			34	38.0*25.5*23.5cm	34		

2

1

2

3

4

5

6

RF

RF

7

;

8

RF

RF

1.

					2019. 10. 3
2019					

1000001

2

1

2

B

	1		1200		
	3	2	2× 2	2	2
			4	1	1
		1	10	1	RF
					2
	10		10		1
	1200× 1000× 144	mm	30		20
		2	6		1

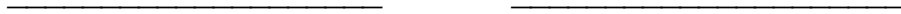
60

			-5	
			-5	
	20		-5	
		5S	-5	0
	15		- 2	

60			-4	
			-4	
			-5	
		10		
		5	W&S	
		15		
			RF	
		15		
	RF			
20		10		
		10		
			-5	
			-3	

59

4-2-4



34

34

1.

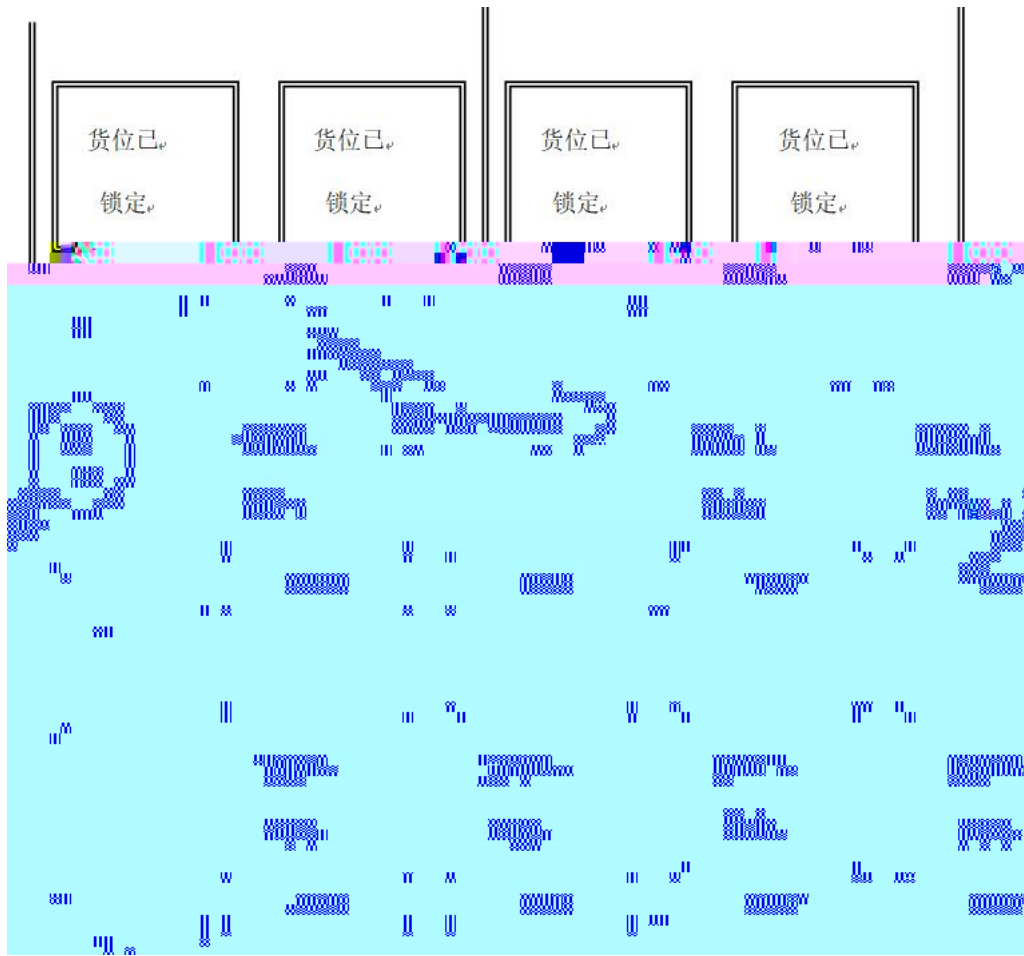
1

2

3

4-07

4-08



4-07 A



4-08 B

4

20151026003

HD1011160003

			34		34		
			34		34		

2

1

2

3

4

5

6

RF

RF

7

8

RF

RF

1.

						2019. 10. 3
2019						

1000001

2

1

2

B

1

' - ' ω ω g -

p

2

f

B

60			-4	
			-4	
			-5	
		10		
		5	W&S	
		15		
			RF	
		15		
	RF			
20		10		
		10		
			-5	
			-3	

60

4-2-5



34

35

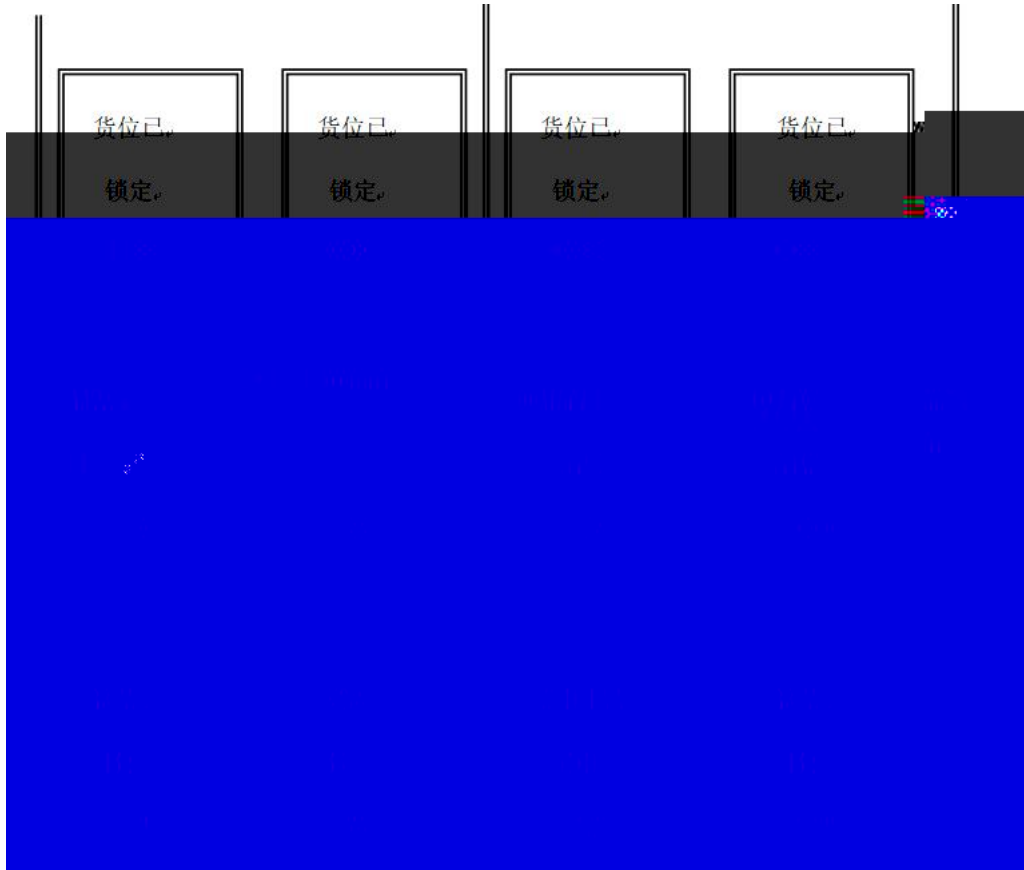
1

2

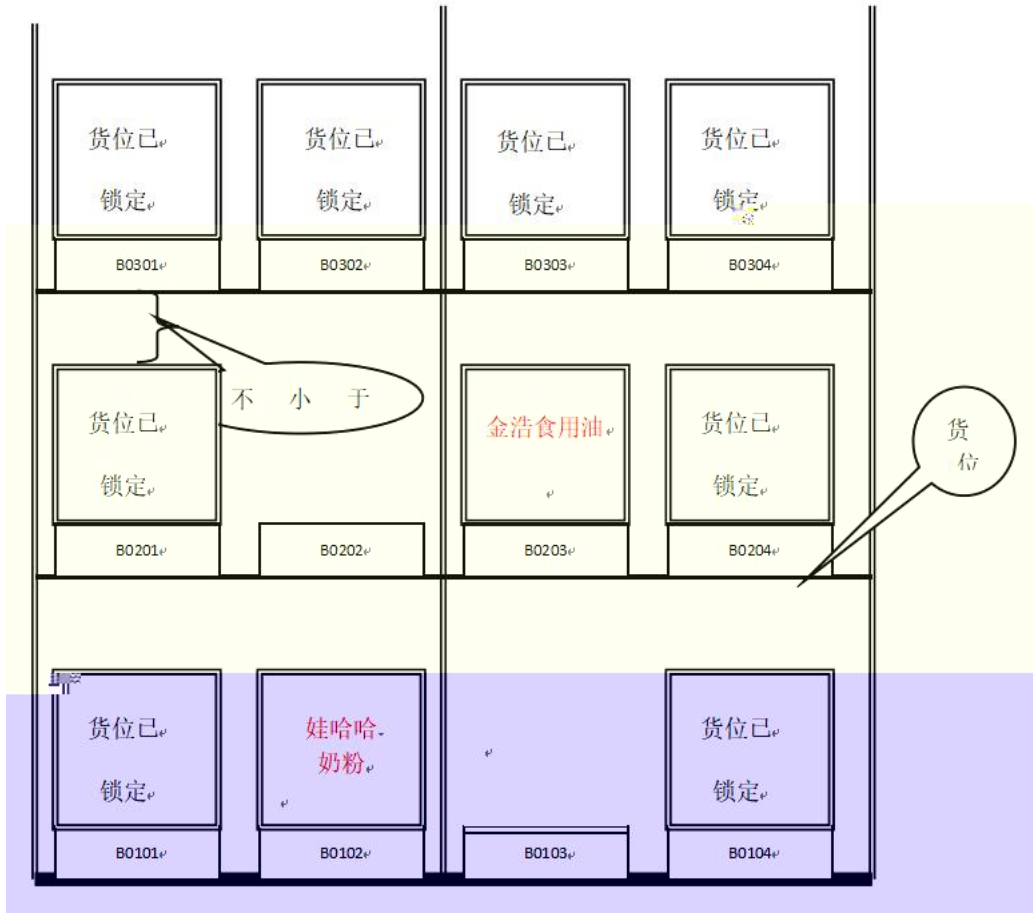
3

4-09

4-10



4-09 A



4-10 B

4

20191026004

HD1011160004

		108g	34		34		
		250ml	35		35		

2

1
2
3
4
5
6
7
8

RF

RF

RF

RF

1.

						2019. 10. 3
2019						

1000001

--	--	--	--	--	--

2

1

2

B

	1		1200		
	3	2	2x 2	2	2
			4	1	1
		1	10	1	RF
	10		10		1
	1200x 1000x 144	mm	30		20
		2	6		1

60

				-5
				-5
				-5
		5S		-5
		15		- 2
				0

60			-4	
			-4	
			-5	
		10		
		5	W&S	
		15		
			RF	
		15		
	RF			
20		10		
		10		
			-5	
			-3	

3
61 4-3-1

1.

2019. 10. 26

			()			
1				10		
2				10		
3				10		
		---	---			

2019. 10. 26

			()			
1				12		
2				12		
3				12		
		---	---			

2

1 ₩

2
3
4
5
6
7
8

RF

	1		1200			
	3	2	2× 2		2	2
			4	1	1	2
		1	10	1	RF	2
	10		10		1	
	1200×	1000×	144 mm	30		20
			2	8		1

60

20%

62 4-3-2

1.

2019. 10. 26

			()			
1				10		
2				10		
		---	---			

2019. 10. 26

			()			
1				12		
2				12		
3				12		
		---	---			

2.

1 ₩

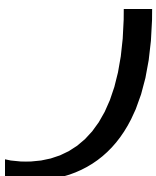
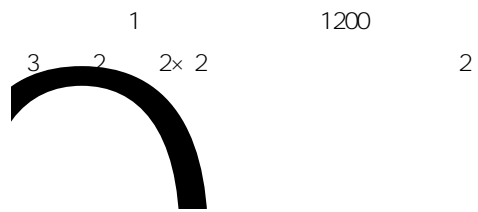
2

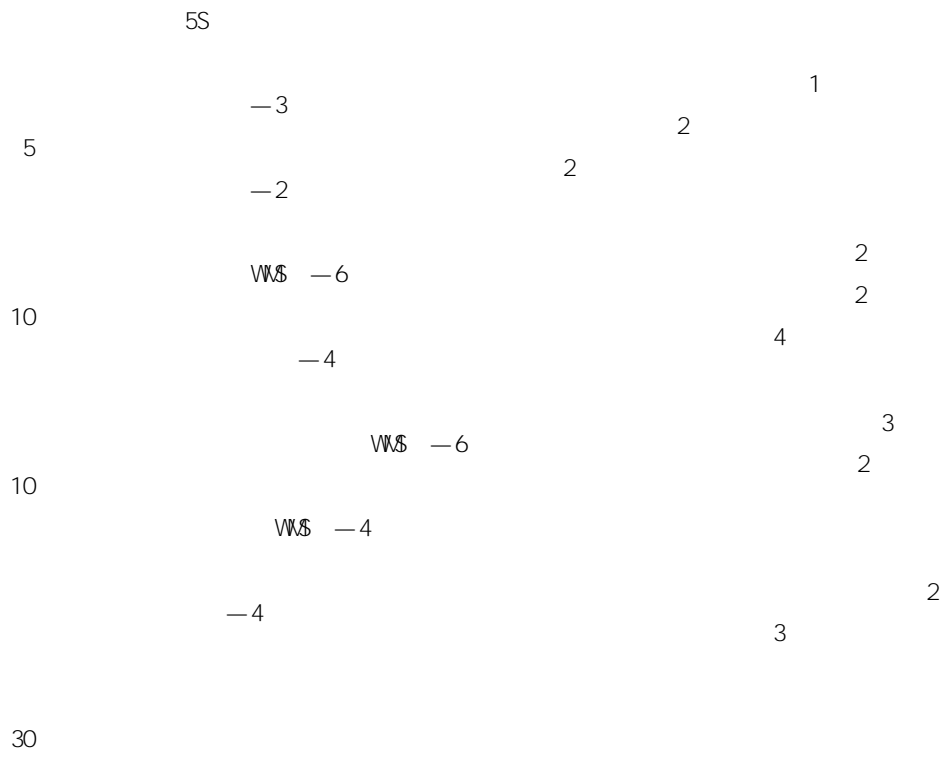
3

4

5
6
7
8

RF





80

63 4-3-3

1.

2019. 10. 26

			()			
1				10		
2				10		
		---	---			

2019. 10. 26

			()			
1				12		
2				12		
3				18		
		---	---			

2.

1 ₩

2

3

4

5

RF

6

7

8

		5S	
80	5	-3	1
		-2	2
	10	W\$ -6	2
		-4	2
	10	W\$ -6	4
		W\$ -4	3
	30	-4	2
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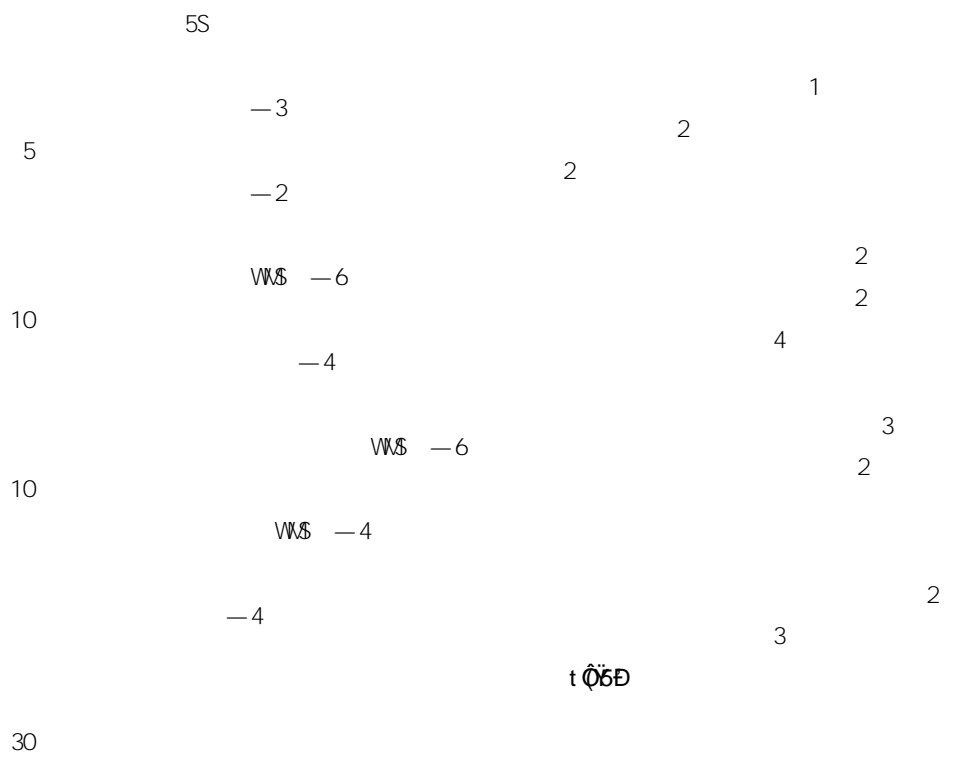
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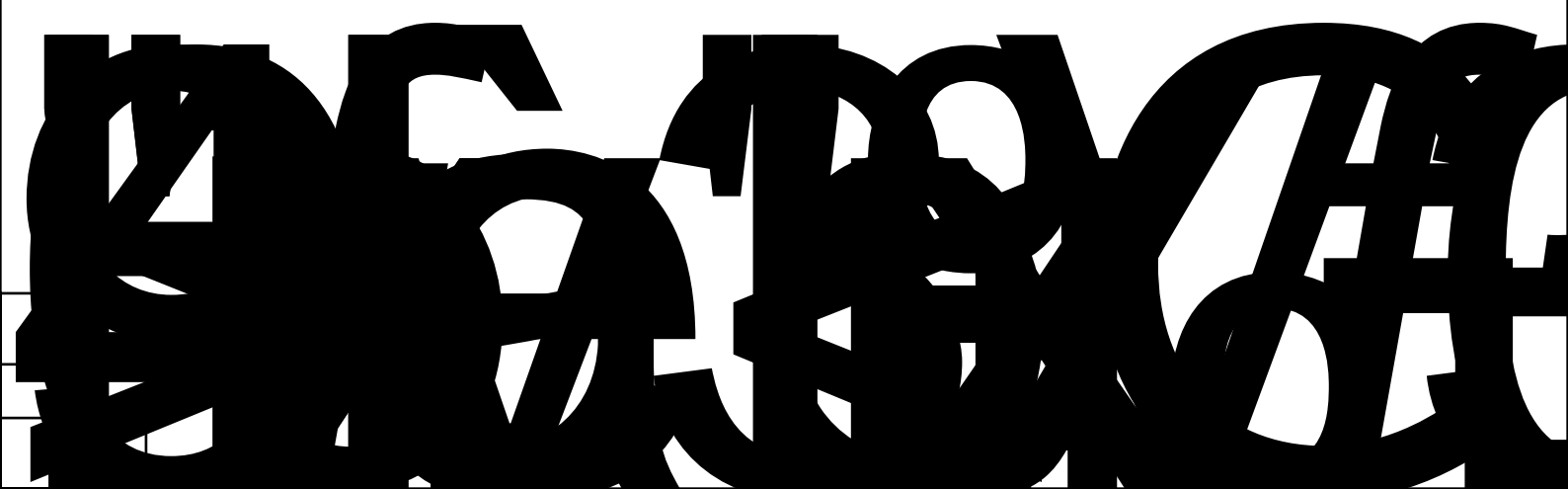
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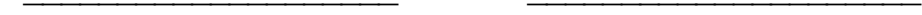
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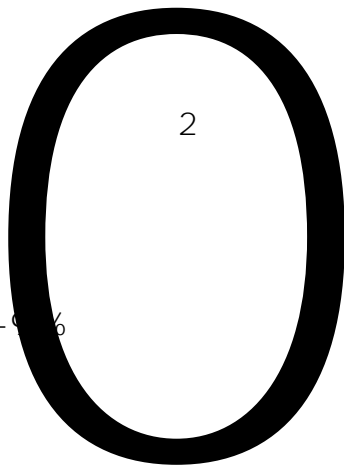
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