

(2)

3.

3.1

3.1.1 (air conditioning) , , ,

가

, 2 .

가) (comfort air conditioning)

, ,

.

) (industrial air conditioning)

, , .

3.1.2

가) 가 ((顯熱))

) (減濕) 가 ((潛熱))

) (,) .

3.2

3.2.1

가)

a) (乾空氣)(dry air)

78%, 21%, 가 , ,

b) (moist air)

가 가

c) (saturated air)

가 가

가

.

)

a) (乾球溫度)(dry bulb temperature)

가 가 (停止空氣) ,

.

b) (濕球溫度)(wet bulb temperature)

(感溫部分)

가 가 .

가 .

c) (露点溫度)(dew point temperature)

가 (擬縮) ,

(擬縮) (露点溫度) .

)

a) (specific humidity)

(1kg') (kg). : kg/kg'

b) (relative humidity)

가

c) (degree of saturation)

(比較濕度) ,

%

)

a) (顯熱)(sensible heat)

,

(顯熱)

b) (潛熱)(latent heat)

가

가

가

가

(潛熱)

c) (enthalpy)

가

가 ((顯熱)+ (潛熱)) . (0

0

0

.)

)

(比體積)(m³/kg)

1kg

가

) (比重量)(kg/m³)

21 , 760mmHg 1.2kg/m³ ,
가 .

3.2.2 (空氣線圖)(Psychrometric chat)

가
(濕空氣線圖)
(球溫度), (濕球溫
度), (露点溫度), , (比體積)
가 .

(空氣線圖) 760mmHg

i-x (線圖)가

t-x

t-i

가

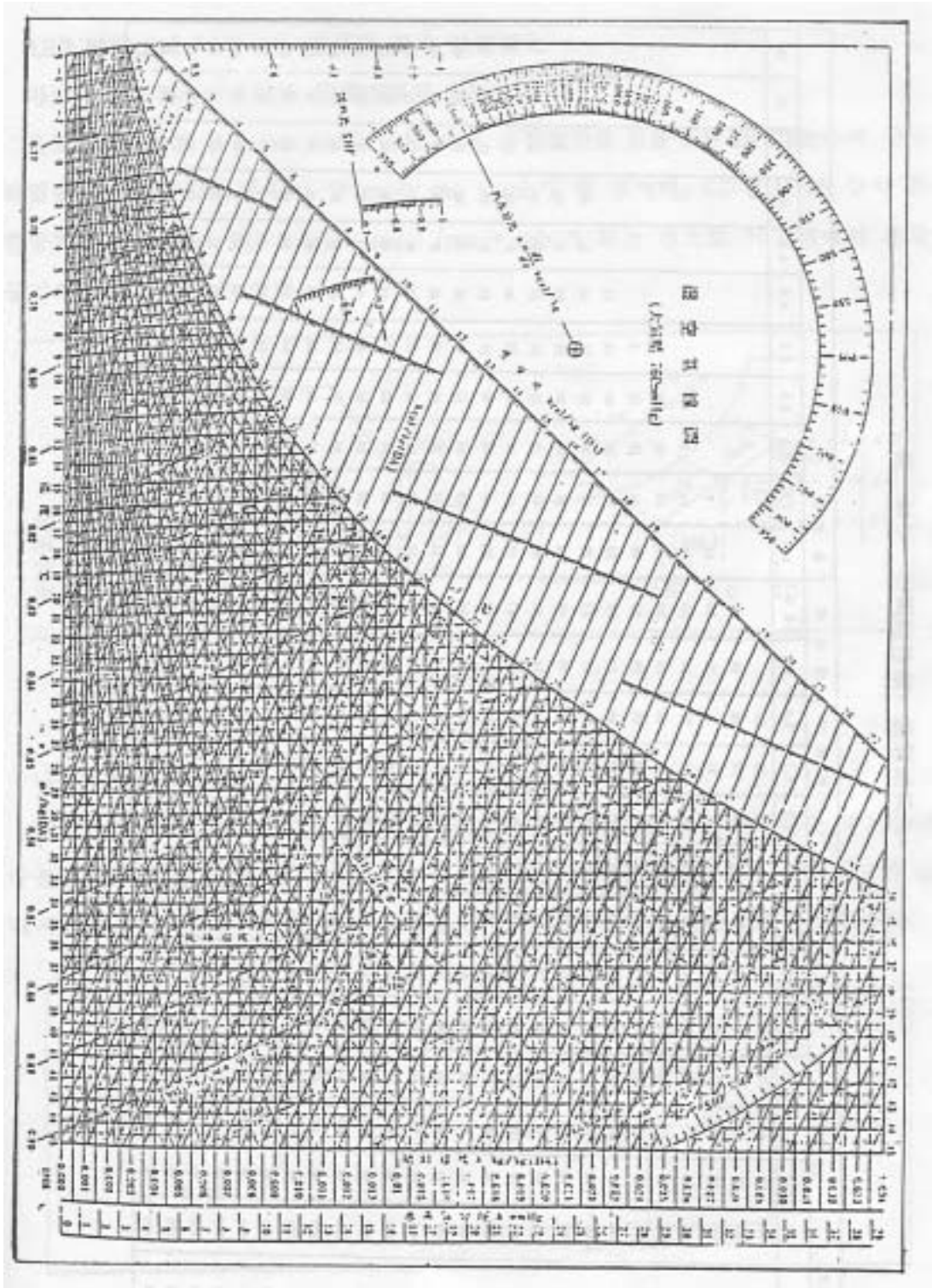
< 8> i-x ,

u ,

(熱水分比)

가 24

가 19 62%가 (乾濕球)

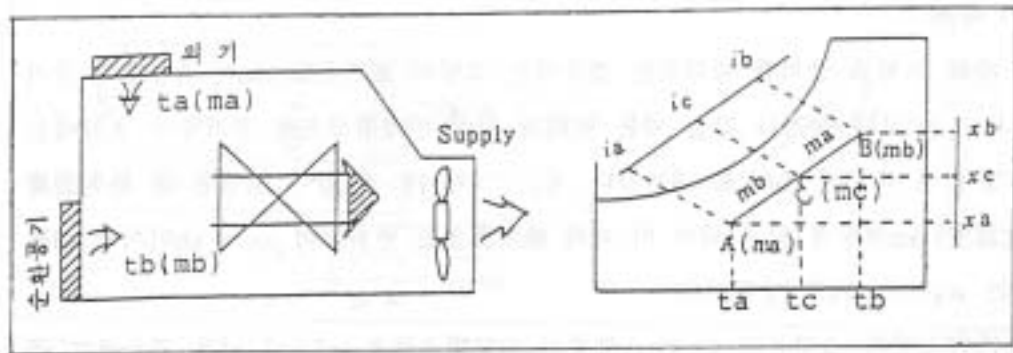


乾球溫度																								
相對濕度																								
℃	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10	11	12	13
0	98	91	82	72	65	56	48	40	33	26	20													
2	100	93	84	76	68	60	53	45	39	32	25	18	12		7									
4	100	93	85	78	71	64	58	50	43	37	31	25	18											
6	100	94	86	79	73	66	60	53	47	41	36	30	25	19	14									
8	100	94	87	80	75	69	63	56	51	45	40	35	30	25	20	15								
10	100	94	88	81	76	71	65	59	54	49	44	39	34	29	24	19	15							
12	100	95	89	83	78	73	68	63	57	52	48	43	38	33	29	24	20	15						
14	100	95	90	85	80	75	70	65	60	55	51	47	42	38	34	30	25	21	18	14				
16	100	95	91	86	81	77	72	67	62	57	54	49	46	42	38	34	30	26	22	19	16			
18	100	95	91	86	81	78	73	68	64	59	56	51	48	45	41	37	31	27	23	20	17	13		
20	100	95	91	87	82	79	74	70	66	62	58	54	51	47	44	40	36	33	30	27	24	21	18	9
22	100	96	91	87	83	80	75	71	68	64	60	57	54	50	46	43	40	37	34	31	28	25	22	19
24	100	96	92	88	84	80	76	72	69	65	62	59	56	52	49	45	43	40	37	34	31	28	25	22
26	100	96	92	88	84	81	77	73	70	66	64	61	58	54	51	48	45	43	40	37	34	31	28	25
28	100	96	93	89	85	82	78	74	71	67	65	62	59	56	53	51	47	45	42	40	37	34	31	28
30	100	96	93	89	86	83	79	75	72	69	66	63	61	58	55	53	50	47	44	42	40	37	34	31
32	100	96	93	89	86	83	80	76	74	71	68	64	62	60	57	55	52	49	46	44	41	39	36	33
34	100	96	93	89	87	84	81	78	75	72	69	65	63	61	58	56	53	51	48	46	44	41	39	36
36	100	96	93	90	87	85	82	79	75	72	69	65	64	62	59	57	54	52	49	46	44	41	39	36
38	100	97	94	91	88	85	82	79	76	73	70	67	65	63	60	58	55	53	50	48	45	43	40	37
40	100	97	94	92	89	86	83	79	77	74	71	68	66	64	61	59	56	54	51	49	47	45	42	39
42	100	97	94	92	89	86	84	80	78	75	72	70	68	65	63	60	58	55	53	51	49	47	45	42
44	100	97	95	92	90	87	84	81	79	76	73	71	68	66	63	61	59	56	54	52	50	48	46	43
46	100	97	95	92	90	87	84	81	79	76	74	72	70	67	65	63	61	59	56	54	52	50	48	46
48	100	97	95	92	90	87	84	81	79	76	74	72	70	67	65	63	61	59	57	55	53	51	49	47
50	100	97	95	92	90	87	84	81	79	76	74	72	70	68	65	63	61	59	57	55	53	51	49	47

3.2.3 (線圖上)

가) (外氣)

ta	A	ma kg	tb	B	mb kg	
		C	mc	ma + mb	가	, < 9>
C		BC : AB = ma : (ma + mb)가				C



< 9>

) 가

Fin coil 가 가

가 , < 10> (等)

ta tb . 가

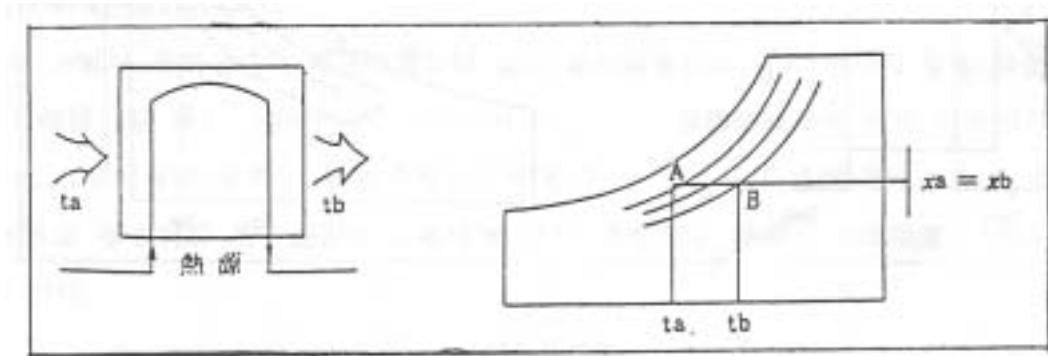
< 10> A 가 , B 가

AB , 가 가

가	ta	tb
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B	tb	(%),
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(濕球溫度), (比體積)



< 10>

)

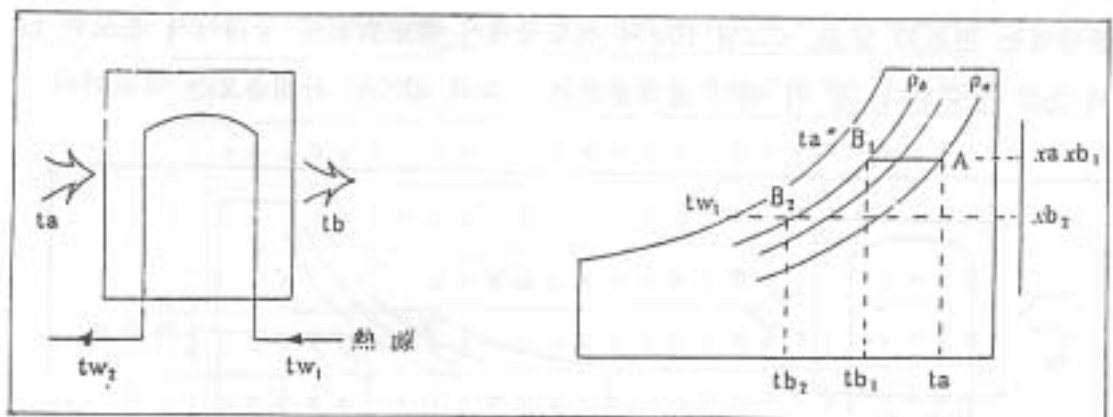
a) tw_1 A

ta'' 가

가 tb_1 , < 11> B_1

(等) ((等比濕度)) x_a

$x_a = x_b$ ρ_a ρ_b .

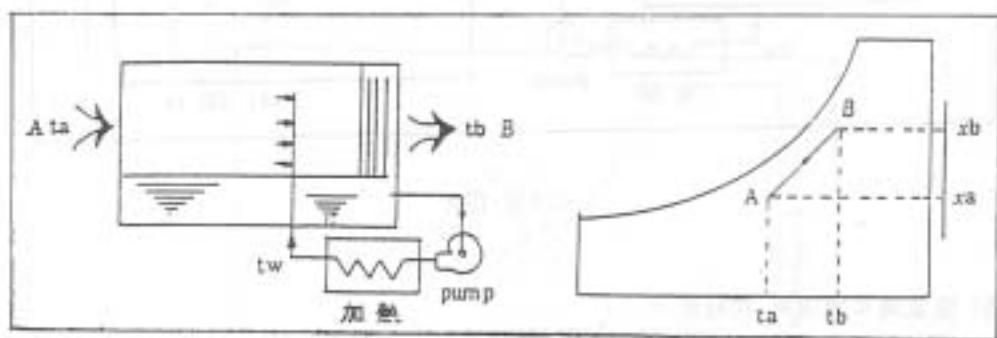


< 11>

b) tw_1 A ta''

xa xb_2 B_2 .
 tb_2 ρ_b .

) (噴霧) 가
 (噴霧) tw 가 A ta
 (噴霧) 가 (噴霧)
 spray room(washer room) B
 가 xa xb ta tb .

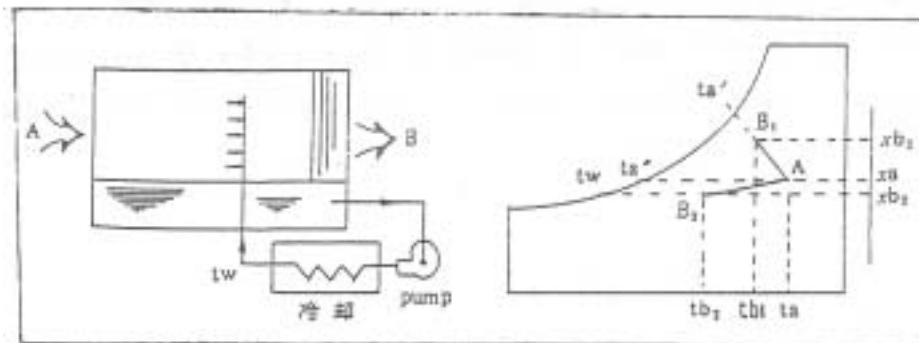


< 12 >

) (噴霧)
 a) (噴霧) tw 가 A
) (冷却除濕)
 가 A B_2 . ta tb_2
 xa xb_2 .
 b) A (w

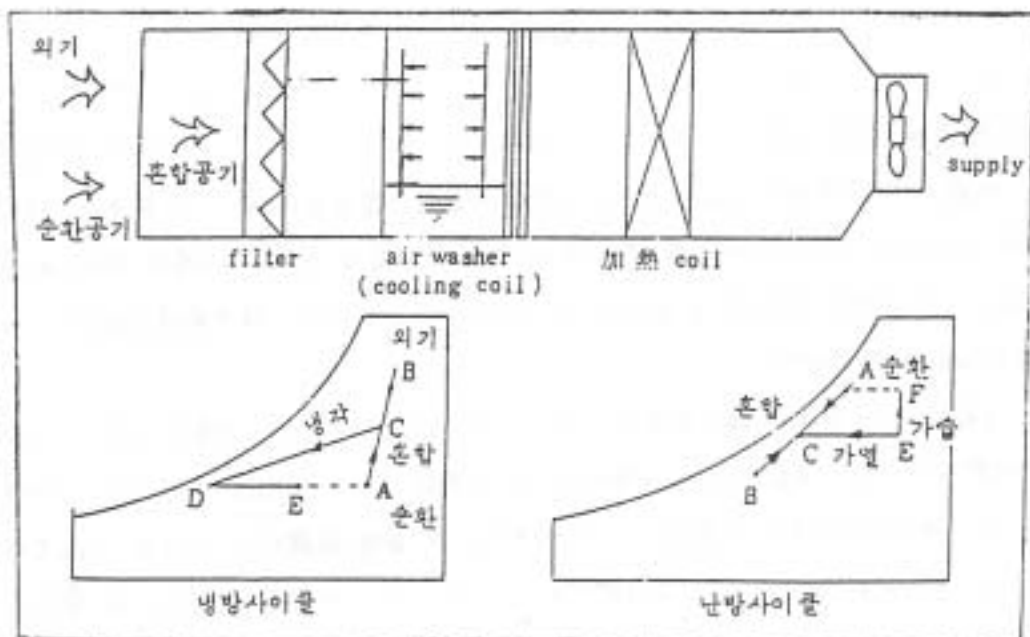
가 A-B₁ $\mathbf{x}\mathbf{b}_1$

ta

$$\text{tb}_1$$


< 13>

)



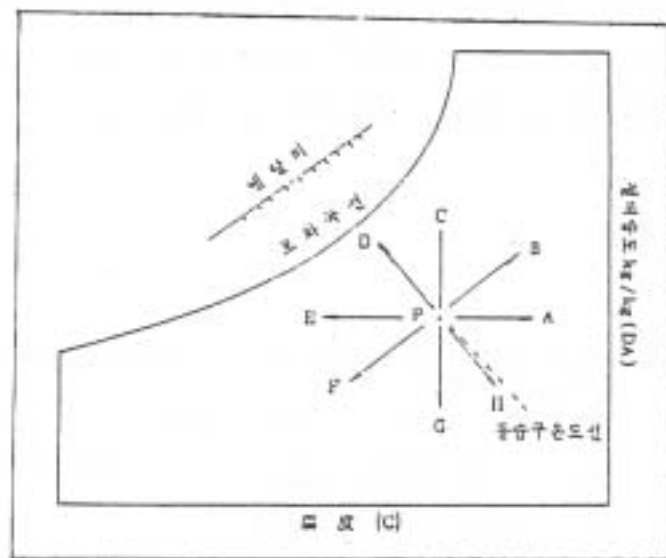
< 14>

14

> a) , b) , c) 가

, a) , b) 가
 , c) 가 가 가

i-x < 15> .



< 15>

P

a) $P \rightarrow A$ 가 : 가 가

b) $P \rightarrow B$ 가 가 : 가
가 .

c) $P \rightarrow C$ (等温)가 :

가

d) $P \rightarrow D$

: P

(露点温度)

가

P

e) $P \rightarrow E$

(顯熱冷却):

f) $P \rightarrow F$

(減濕冷却): P

(凝縮)

g) $P \rightarrow G$

(等溫減濕): $P \rightarrow C$

h) $P \rightarrow H$ 가

:

,

가

가

가