國立屏東科技大學 九十五 學年度 碩士班暨碩士在職專班招生考試 熱力學

【請回答以下四題,並詳細寫出步驟】

- 一、 200 m³ 之容器儲存冷媒 134-a。假設容器內之容積 90%為液體,10%為氣體(vapor), 壓力為 100 kPa,則容器內之冷媒 134-a 為若干 kg?其乾度(quality)又為若干? (15 分)
- 二、兩股穩定空氣進入一控制容積內。其中一股在點 1 進入,其狀態為 350 kPa、150 ,低流速,質量流率(mass flow rate)為 0.025 kg/s ;另一股在點 2 進入,其狀態為 350 kPa、15 ,流速低。單股空氣在點 3 處流出控制容積,其狀態為 100 kPa、-40 ,流經一直徑 25mm 之管。控制容積以 1.2 kW 之速率傳熱至外界,並產生輸出功率 4.5 kW。試求在點 2 處之空氣質量流率(mass flow rate)。 (25 分)
- 三、 水蒸氣流過充分絕熱(perfectly insulated)的內徑為 5 cm 的管道內,由於摩擦而產生壓力的降低。在某個截面 1 處的壓力為 7 atm,比容為 $0.308~\text{m}^3/\text{kg}$,焓為 683~kcal/kg;而在下游的某截面 2 處的壓力為 6.3~atm,比容為 $0.338~\text{m}^3/\text{kg}$,焓為 680~kcal/kg。求在兩個截面的平均流速和流量。(1~cal=4.184~J) (25~分)
- 四、一配有活塞之汽缸裝有 200 kPa、150 之水蒸氣,其容積為 1.5 m³。現在輸入 750 kJ 之功壓縮水蒸氣,使其終溫為 240 ,在此程序中,有 1500 kJ 之熱量傳至溫度為 20 之外界。試問此程序是否可能? (35 分)

國立屏東科技大學 九十五 學年度 碩士班暨碩士在職專班招生考試 熱力學

		E m			内能 king			焓 kJikg			類 klike: K	
igi °C	飽和 駆力 P _{or} WPa	飽和 液體 70	的和 汽體 %	飽和 液體 い	蒸發	御和 八體 以	動和 波響 か	高聲 小 _k	飲料 汽槽 九	飽和 液體 ム	高級 Sa	數形 門體 分
00	1.5538	0.001157	0.12736	850.65	1744.7	2595.3	852.45	1940.7	2793.2	2.3309	4.1014	6.432
05	1.7230	0.001164		873,04 895,53	1724.5	2597.5 2599.5	875.04 897.76	1921.0	2796.0	2.3780	4.0172	6.395
10 15	2.104	0.001173	0.10441	918.14	1703.9 1682.9	2601.1	920.62	1879.9		2.4714	3.8507	6.322
20	2.318	0.001190	0.08619	940,87	1661.5	2602.4	943.62	1858.5	2802.1		3.7683	6.286
25	2.548	0.001199	0.07849	963.73	1639.6	2603.3	966.78	1836.5	2803.3		3.6863	6.250
30	2.795	0.001209	0.07158	986,74	1617.2	2603.9	990.12	1813-8	2804.0		3,6047	6,214
95 10	3.060	0.001219	0.05537	1009.89	1594.2 1570.8	2604.1 2604.0	1013.62	1790.5 1766.5	2804.2 2803.8		3.5233	6.179
45	3.648	0.001240	0.05471	1056.71	1546.7	2603.4	1061.23	1741.7	2803.0		3.3612	6.108
50.	3.973	0.001251	0.05013	1080.39	1522.0	2602.4	1085.36	1716.2		2.7927	3.2802	6.073
55	4.319	0.001263	0.04598	1104.28	1596.7		1109.73	1689.8	2799.5		3.1992	6.037
50	4.688	0.001276	0.04221	1128.39	1470.6	2599.0	1134.37	1662.5		2.8838	3.1181	5.966
65 70	5.081	0.001289	0.03877	1152.74	1443,9 1416,3	2596.6 2593.7	1159.28 1184.51	1634,4 1605.2	2793.6 2789.7	2.9294	3.0368	5.930
75	5.942	0.001317	0.03279	1202.25	1387.9	2590.2	1210.07	1574.9	2785.0		2.8730	5.893
90	6.412	0.001332	0.03017	1227.46	1358.7	2586.1	1235.99	1543.6		3.0668	2.7903	5.857
85	6.909	0.001348	0.02777	1253.00	1328.4	2581.4	1262.31	1511.0		3,1130	2.7070	5.819
90 95	7,436	0.001366	0.02557 0.02354	1278.92 1305.2	1297.1 1264.7	2576.0 2569.9	1289.07 1316.3	1477.1 1441.8	2766.2 2758.1		2.5227	5.782
00	8.581	0.001404	0.02167	1332.0	1231.0	2563.0	1344.0	1404.9			2.4511	5.704
	\-6 水蒸汽		-									
過數	水蒸汽	U k Oko	b	S billion of	,	U	h	5	P	ß	h	
過熱	水蒸汽	kJ/kg	king	kJ/kg - K	m ⁶ /kg	kJ/kg	kJ/kg	s kl/vig· K			ń klúg	
過熱 r c	水藻汽 r m ¹ /kg	kJ/kg P = 0.01 M	kJ/kg Pa (45.81°	kJ/kg · K CJ*	m ⁶ /kg	kJ/kg = 0.05 M	kJ/kg Pa (81.33)	s kulfing K	m\kg	0 kJ/kg P~ 0.10	kling MPa (99.	63°C)
過數	水蒸汽 v m ¹ %g	P = 0.01 M 4 2437.9	kJ/kg Pa (45.81°	kJ/kg - K	m ⁶ /kg	kJ/kg	kJ/kg Pa (81.33°	s kl/vig· K	m\kg	// kJ/kg P~ 0.10	kling MPa (99.	63°C)
過熱 7 °C 節和 ¹ 50 100	水蒸汽 V m ¹ kg 14.67 14.86 17.19	P = 0.01 M 4 · 2437.9 9 · 2443.9 6 · 2515.5	RJNg Pa (45.81° 2584.7 2592.6 2687.5	8.1502 8.1749 8.4479	m ⁵ /kg P 3.240 3.418	kJ/kg = 0.05 M	kJ/kg Pa (81.33° 2645.9	s kulfing K	in Vkg	# kJ/kg P~ 0.10 0 2506.	kIrig MPa (99, 1 2675.	63°C) 5 7.1
過酬 7 °C 節和 ¹ 50 100 350	水蒸汽 V m ¹ /kg 14.67 14.86 17.19 19.51	P = 0.01 M 4 2437.9 9 2443.9 6 2515.5 2 2567.9	RJNg Pa (45.81° 2584.7 2592.6 2687.5 2783.0	8.1502 8.1749 8.4479 8.6882	m ⁵ /kg P 3.240 3.418 3.889	kJ/kg = 0.05 M 2483.9 2511.6 2585.6	k3/kg Pa (81.33° 2645.9 2682.5 2780.1	5 kJ/kg · K C3 7.5939 7.6947 7.9401	1.6940 1.6950 1.936	# kJ/kg P= 0.10 0 2506. 8 2506.4 2582.4	MPa (99. 1 2675. 7 2676. 8 2776.	63°C) 5 7.3 2 7.3 4 7,6
過酬 7 °C 能和 [†] 50 100 350 200	水蒸汽 ド m ¹ %g 14.67 14.86 17.19 19.51 21.82	#J/kg P = 0.01 M 4 · 2437.9 9 · 2443.9 6 · 2515.5 2 · 2567.9 5 · 2661.3	RJ/kg Pa (45.81° 2584.7 2592.6 2687.5 2783.0 2879.5	8.1502 8.1502 8.1749 8.4479 8.6882 8.9038	m*/kg P 3.240 3.418 3.889 4.356	kJ/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9	RJ/kg Pa (81.33) 2645.9 2682.5 2780.1 2877.7	s kJ/vg · K 70 7.5939 7.6947 7.9401 8.1580	1.694/ 1.695/ 1.936/ 2.172	# kJlkg P= 0.10 0 2506. 8 2506. 4 2582.8 2668.	MPa (99. 1 2675. 7 2676. 8 2776. 1 2875.	63°C) 5 7.3 2 7.3 4 7.4 3 7.8
通酬 *C 節和* 50 100 250 250 300	水蒸汽 V m ¹ %g 14.67 14.86 17.19 19.51 21.82 24.13 26.44	#.//kg P = 0.01 M 4 2437.9 9 2443.9 6 2515.5 2 2587.9 5 2661.3 6 2736.0	RJNg Pa (45.81* 2584.7 2592.6 2687.5 2783.0 2879.5 2977.3	8.1502 8.1749 8.4479 8.6882	m ⁵ /kg P 3.240 3.418 3.889	2483.9 2483.9 2511.6 2585.6 2659.9 2735.0	RJ/kg Pa (81.33) 2645.9 2682.5 2780.1 2877.7 2976.0	5 kJ/kg · K 7.5939 7.6947 7.9401 8.1580 8.3556	1.694/ 1.695/ 1.936- 2.172 2.406	# kJ/kg P = 0.10 0 2506. 8 2506. 8 2508. 2508. 2733.	kl/kg MPa (99, 1 2675, 7 2676, 8 2776, 1 2875, 7 2974,	63°C) 5 7.3 2 7.3 4 7.6 3 7.6 3 8.6
通酬 *C 節和* 50 100 250 250 250 400	ル m ¹ %g 14.67 14.86 17.19 19.51 24.81 26.44 31.06	#./kg P = 0.01 M 4	RJNg Pa (45.81* 2584.7 2592.6 2687.5 2783.0 2679.5 2977.3 3076.5 3279.6	8,1502 8,1749 8,479 8,6882 8,9038 9,1002 9,2813 9,6077	7 3.240 3.418 3.889 4.356 4.820 5.284 6.209	2483.9 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5	R3/kg Pa (81.33) 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9	s kJ/vg · K 70 7.5939 7.6947 7.9401 8.1580	1.694/ 1.695/ 1.936- 2.172 2.406	# kJ/kg P = 0.10 0 2506. 8 2506. 8 2508. 2508. 2733.	kling MPa (99, 1 2675, 7 2676, 8 2776, 1 2875, 7 2974, 4 3074,	63°C) 5 7.3 2 7.3 4 7.6 3 7.8 3 8.6 3 8.3
通酬 7 °C 節和* 500 1000 200 250 400 500	ル 蒸汽 V m ³ 版 14.67 14.86 17.19 19.50 21.82 24.13 26.43 31.06 35.67	#.0kg P = 0.01 M 4 * 2437.9 9 2443.9 6 2515.5 2 2567.9 5 2661.3 6 2736.0 5 2812.1 3 2968.9 9 3132.3	RJNg Pa (45.81° 2584.7 2592.6 2687.5 2783.0 2879.5 2977.3 3076.5 3279.6 3489.1	8.1502 8.1749 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8978	7 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134	2483.9 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0	R3/kg Pa (81.33) 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7	s kJ/kg · K C) 7.5939 7.6947 7.9401 8.1580 8.3556 8.5373 8.8642 9.1546	1.6940 1.6940 1.936- 2.172 2.406 2.639 3.103 3.565	8 2506. 8 2506. 8 2506. 2582. 2688. 2733. 2810. 2967. 3131.	MPa (99) 1 2675. 7 2676. 8 2776. 1 2875. 7 2974. 4 3074. 9 3278. 5 3488.	63°C) 5 7.3 2 7.3 4 7.4 3 7.8 3 8.0 3 8.2 2 8.5 1 8.8
通酬 *C 節和* 50 100 250 250 250 400	ル - 本 - 本 - 本 - 本 - 本 - 本 - 本 - 本 - 本 -	#.//kg P = 0.01 M 4	RJNg Pa (45.81° 2584.7 2592.6 2687.5 2783.0 2679.5 2977.3 3076.5 3279.6 3489.1 3705.4	8.1502 8.1549 8.4479 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8978 10.1608	m*Ng P 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.057	2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2	R3/kg Pa (81.33) 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1	s kulvg · K 7.6947 7.6947 7.9401 8.1580 8.3556 8.5373 8.8642 9.178	1.694/ 1.694/ 1.936/ 2.173 2.405 2.639 3.103 3.565 4.028	8 2506.3 2506.3 2506.3 2508.3 2610.4 2687.3 3301.5	MPa (99. 7 2675. 7 2676. 8 2776. 1 2875. 7 2974. 4 3074. 9 3278. 5 3488. 9 3704.	63°C) 5 7.3 2 7.3 4 7.4 3 7.8 3 8.0 3 8.2 2 8.5 1 8.8 4 9.0
超期 [†] rc	ル	#.//kg P = 0.01 M 4	king Pa (45.81* 2592.6 2687.5 2783.0 2879.5 2977.3 3076.5 3279.6 3489.1 3705.4 3928.7 4159.0	kJ/kg·K CI* 8.1502 8.1749 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8078 10.1608 10.4028 10.6281	m*Ng P 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.057	kl/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4	RJ/kg Pa (81.33' 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5	5 kJ/kg · K Co 7.5939 7.6947 7.9401 8.3556 8.5373 8.8642 9.178 9.6599	1.694/ 1.695/ 1.936- 2.172 2.406 2.639 3.103 3.565 4.028 4.490	8 2506. 8 2506. 8 2506. 8 2506. 2502. 2608. 2733. 2810. 2967. 3131. 3301. 3479.	MPa (99 1 2676. 7 2676. 8 2776. 1 2875. 7 2974. 4 3074. 9 3278. 5 3488. 9 3704. 2 3928.	63°C) 5 7.3 2 7.3 4 7.4 3 7.8 3 8.3 3 8.2 2 8.5 1 8.8 4 9.0 2 9.3
過酬 7 *C	ル 蒸汽 ド m ³ Ng 14.67 14.86 17.19 19.50 21.82 24.13 26.44 31.06 35.67 40.29 44.91 49.52 64.14	#.//wg P = 0.01 M 4	king Pa (45.81*) 2592.6 2687.5 2783.0 2679.5 2977.3 3076.5 3279.6 3489.1 3705.4 3928.7 4159.0 4396.4	8.1502 8.1749 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8978 10.1608 10.4028 10.6281 10.8396	7 3,240 3,418 3,889 4,356 4,820 5,284 6,209 7,134 8,057 8,981	ki/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6	ki/kg Pa (81.33° 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3706.1 3928.5 4198.9	5 kJ/kg · K 7.5939 7.6947 7.9401 8.1580 8.3556 8.5273 8.8642 9.6599 9.8952 9.8952	1.694/ 1.695/ 1.936/ 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414	8 kJ/kg P = 0.10 0 2506. 3 2506. 4 2582. 2533. 2810. 2967. 3131. 3301. 3479. 3633.	MPa (99. 1 2675. 7 2676. 8 2776. 1 2875. 7 2974. 4 3074. 9 3278. 5 3484. 2 3928. 5 4158.	63°C) 5 7.3 2 7.3 4 7.4 3 7.8 3 8.6 3 8.2 2 8.5 1 8.8 4 9.0 2 9.3 6 9.5
過數 7 °C 100 150 250 250 400 600 700 800 1000	ル 薬汽 V m ³ %g 14.67 14.86 17.19 19.51 24.13 26.44 31.66 40.29 44.91 49.52 54.14 58.75	#.//wg P = 0.01 M 4	Ring Pa (45.81" 2584.7 2592.6 2687.5 2783.0 2879.5 3076.5 3279.6 3489.1 4199.0 4395.4 4540.6	8.1502 8.1749 8.4479 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 10.1608 10.4028 10.6281 10.8395 11.0393	7 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.057 8.961 9.904 10.828 11.751	ki/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 4052.9 4052.9	ki/kg 2645.9 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3706.1 3928.5 4198.9 4396.3 4640.5	5 kJ/kg · K 7.5939 7.6947 7.9941 8.1580 8.3556 8.5373 8.8642 9.178 9.6599 9.8952 10.2954	1.694/ 1.695/ 1.936/ 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414 5.875	8 2506. 8 2506. 8 2506. 8 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 301. 9 301.	MPa (99. 1 2675. 7 2676. 8 2776. 1 2875. 7 2974. 9 3278. 9 3278. 9 3488. 9 3704. 9 328. 5 4156. 3 4396. 3 4396.	8.0k 63°C) 5 7.3 4 7.4 3 7.8 3 8.6 3 8.2 2 8.5 1 9.0 9.5 1 9.5 1 9.5 3 9.5 1 9.5
超期 ¹ / C / C / C / C / C / C / C / C / C /	ル - 本 - 本 - 本 - 本 - 本 - 本 - 本 - 本 - 本 -	#.//wg P = 0.01 M 4	king Pa (45.81* 2584.7 2592.6 2687.5 2793.0 2879.5 3076.5 3279.6 3489.1 3705.4 4159.0 4396.4 4640.6 4891.2	8.1502 8.1749 8.4479 8.4679 8.6882 8.9038 9.1002 9.2813 9.6077 9.8978 10.1608 10.4028 10.6281 10.8396 11.0393 11.2287	m*Ng P 3.240 3.418 3.889 4.359 4.820 5.284 6.209 7.134 8.057 8.981 9.904 10.828 11.751 12.674	kJ/kg = 0,05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 3854.9 4052.9 4257.4	ki/kg Pe (81.33* 2645.9* 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4198.9 4396.3 4640.5 4691.1	5 kJ/kg · K 7.5939 7.6947 7.9401 8.3556 8.5373 8.8642 9.1546 9.4178 9.6599 9.8852 10.9967 10.4859	1.694/ 1.695/ 1.936- 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414 5.875 6.337	8 2506. 8 2506. 8 2506. 8 2506. 8 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 301. 9 405. 9 405. 9 405.	MPa (99. 1 2675. 7 2676. 8 2776. 1 2875. 7 2974. 4 3074. 9 3278. 9 3278. 9 3488. 9 3704. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488. 9 3488.	8.0k 63°C) 5 7.3 2 7.4 4 7.4 3 7.4 3 8.5 3 8.2 2 8.5 1 8.8 4 9.0 2 9.3 6 9.5 1
過數 7 °C 100 150 250 250 400 600 700 800 1000	ル - 本 - 本 - 本 - 本 - 本 - 本 - 本 - 本 - 本 -	#.//kg P = 0.01 M 4	king Pa (45.81" 2592.6 2687.5 2783.0 2879.5 2977.3 3076.5 3279.6 3489.1 3705.4 3928.7 4159.0 4396.4 4640.6 4891.8	kJikg · K CIr 8.1502 8.1749 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8078 10.1608 10.4028 10.6281 10.8395 11.0393 11.2267 11.4091	m*hg P 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.057 8.981 19.904 10.828 11.751 12.674 13.897	ki/kg = 0,05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 3854.9 4052.9 4257.4 4467.8	ki/kg Pa (81.33' 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4158.9 4396.3 460.5 4891.1 5147.7	5 k/wg · K C3 7.5939 7.6947 7.9401 8.1580 8.3533 8.8642 9.1046 9.4178 9.6599 9.8852 10.0957 10.2954 10.4659 10.6662	1.694/ 1.695/ 1.936- 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414 5.875 6.337 6.799	g kJ/kg P = 0.10 0 2506. 8 2506. 4 2562. 2668. 2733. 2810. 2967. 3131. 4952. 4467. 3464. 4257. 3	MPa (99. 2675. 2676. 2676. 2776. 2974. 3074. 3074. 3074. 3074. 31928. 3488. 3496. 3496. 4396. 44158. 4458. 4458. 4458. 4458. 447.	8.0k 63°C) 5 7.3 2 7.4 3 7.4 3 8.3 3 8.3 2 8.5 1 8.8 4 9.0 2 9.3 6 9.5 1 9.7 3 9.5 1 10.3
超期 7 °C	ル 蒸汽 ド 14.67 14.86 17.19 19.51 21.82 24.34 31.06 35.67 40.29 44.91 49.52 64.14 58.75 67.98 72.60	#.//kg P = 0.01 M 4	Ring Pa (45.81" 2592.6 2687.5 2783.0 2879.5 2977.3 3076.5 3279.6 3489.1 3705.4 3928.7 4159.0 4396.4 4640.6 4891.2 5409.7	kJ/kg·K CIr 8.1502 8.1749 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8078 10.1608 10.4028 10.6281 10.8395 11.0393 11.2593 11.4091 11.5811	m*Ng P 3.240 3.418 3.889 4.356 4.820 7.134 8.057 10.828 11.751 12.674 13.597 14.521	ki/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9 2736.0 2811.3 2968.5 3132.0 3002.2 3479.4 3663.6 3854.9 4052.9 4257.4 4467.8 4683.6	ki/kg Pa (81.33° 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3706.1 3928.5 4198.9 4396.3 4640.5 4891.7 51407.7 5409.6	5 k/wg·K C3 7.5939 7.6947 7.9401 8.1880 8.5573 8.5642 9.1546 9.4178 9.6895 10.0967 10.2964 10.4859 10.6082 10.6382	1.6944 1.6958 1.936- 2.172 2.406 2.639 3.103 3.565 4.028 4.4902 5.414 5.875 6.337 6.799 7.260	# kJ/kg P = 0.10 0 2506. 3 2506. 4 2582. 2683. 2810. 3901. 34763. 3854. 4052. 4467. 4683.	MPa (99. 7 2675. 7 2676. 8 2776. 8 2776. 1 2875. 7 2974. 4 3074. 9 3278. 9 3488. 9 3704. 9 3928. 1 4158. 3 4396. 3 4458. 3 4591. 7 5147. 5 5409.	8.0k 63°C) 5 7.3 2 7.3 4 7.4 3 7.8 3 8.2 2 8.5 1 8.8 4 9.5 6 9.5 1 9.7 3 9.9 0 10.1 6 10.3 5 10.5
過酬 7 *C	ル 薬汽 V m ³ %g 14.67 14.86 17.19 12.82 24.13 26.44 31.66 35.67 40.29 44.91 49.12 63.37 67.98 72.60 0.88	#.//wg P = 0.01 M 4	Ring Pa (45.81* 2594.7 2592.6 2687.5 2783.0 2879.5 2977.3 3076.5 3279.6 3489.1 3705.4 3928.7 4159.0 4396.4 4640.6 4891.2 5147.8 5409.7 6(120.23*	kJ/kg·K CIr 8.1502 8.1749 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8078 10.1608 10.4028 10.6281 10.8395 11.0393 11.2593 11.4091 11.5811	#Ng P 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.087 9.904 10.828 11.751 12.674 13.897 14.521	ki/kg = 0,05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 3454.9 4052.9 4467.8 4683.6 - 0.30 MP	ki/kg Pa (81.33* 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4188.9 4396.3 460.5 4691.1 5147.7 5409.6	5 kJ/kg · K Co 7.5939 7.6947 7.9401 8.3566 8.5373 8.8642 9.1046 9.4178 9.6599 9.8852 10.0967 10.2964 10.4858 10.6662 10.8382	1.694/ 1.695/ 1.936- 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414 5.875 6.337 6.799 7.260	g kJ/kg P = 0.10 0 2506. 8 2506. 4 2562. 2658. 2733. 2810. 2967. 3131. 4552. 4467. 4683. 9 = 0.40 5	MPa (99. 7 2675. 7 2676. 8 2776. 8 2776. 9 3278. 9 3278. 9 3278. 9 328. 9 3488. 9 3498. 9 3928. 9 4158. 1 4396. 1 4396. 1 449. 1 44143.	8.0% 63°C) 5 7.3 4 7.4 3 7.8 3 8.0 3 8.2 1 8.8 4 9.0 2 9.3 6 9.5 1 9.7 1 9.7 1 10.5 6 10.3 6 10.3 6 10.5 6 6 10.3
超輪 7 °C 100 100 250 250 250 250 250 250 100 100 1100 1200 1300 1300	w m	#.//wg P = 0.01 M 4	Ring Pa (45.81" 2584.7 2592.6 2687.5 2783.0 2879.5 3076.5 3279.6 3489.1 4199.0 4396.4 4640.6 4891.2 5147.8 5409.7 2768.8	8,1502 8,1502 8,1749 8,4479 8,4479 8,6882 8,9038 9,1002 9,2813 9,6077 9,8978 10,4028 10,6281 10,6395 11,0393 11,2267 11,4091 11,5811	m*Ng P 3.240 3.418 3.899 4.820 5.284 6.209 7.134 8.057 8.961 10.828 11.751 12.674 13.597 14.521 P 0.6058 0.6339	ki/kg - 0.05 M 2483.9 2511.6 2585.6 2659.9 2735.0 3302.2 3479.4 3663.6 3854.9 4257.4 4467.8 4683.6 - 0.30 MP	ki/kg 2645.9 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.9 4396.3 4640.6 4891.1 5147.7 5409.6 1133.55 2751.0	5 k/wg·K C3 7.5939 7.6947 7.9401 8.1880 8.5573 8.5642 9.1546 9.4178 9.6895 10.0967 10.2964 10.4859 10.6082 10.6382	1.6944 1.6958 1.936- 2.172 2.406 2.639 3.103 3.565 4.028 4.4902 5.414 5.875 6.337 6.799 7.260	# kJ/kg P = 0.10 0 2506. 3 2506. 4 2582. 2683. 2810. 3901. 34763. 3854. 4052. 4467. 4683.	MPa (99, 1 2675, 2676, 8 2776, 8 2776, 1 2875, 7 2974, 4 3074, 9 3278, 5 3488, 9 3704, 9 3928, 6 4158, 3 4396, 3 4591, 7 5147, 5 5409, 4Pa (143, 6 27388, 6 2738, 6 2738, 6 2738, 6 2738, 6 2738, 6 2738, 6 2738, 6 27	8.0k 63°C) 5 7.3 4 7.4 3 7.8 3 8.5 3 8.5 3 8.5 1 8.8 4 9.0 4 9.0 5 10.1 6 10.3 5 10.5 6 63°C) 6 6.8 6 6.8
超期 7 °C	ル 薬汽 V m ³ %g 14.67 14.86 17.19 19.51 21.82 24.13 26.44 31.06 35.67 49.52 54.14 58.75 63.37 67.98 72.60 0.88 0.99 1.08	#.//wg P = 0.01 M 4	Ring Pa (45.81*) 2584.7 2592.6 2687.5 2783.0 2879.5 3076.5 3279.6 3489.1 3705.4 3928.7 4159.0 4396.4 4640.6 4891.2 5147.8 5409.7 \(\) (120.23 2768.8 2870.5	8,1502 8,1749 8,479 8,4479 8,6882 8,9038 9,1002 9,2813 9,6077 10,1608 10,4028 10,6281 10,8395 11,2287 11,4091 11,5811 **Ci	7 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.087 8.981 9.904 10.828 11.751 12.674 13.597 14.521 P. 0.6058 0.6339 0.7163	ki/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9 2738.0 2811.3 2968.5 3132.0 3479.4 3663.6 3854.9 4257.4 4467.8 4683.6 - 0.30 MP 2543.6 25570.8 2660.7	ki/kg 2645.9 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4198.9 4396.3 4640.5 3 (133.55) 2725.3 2761.0 2863.6	5 kJ/kg · K 7.5939 7.6947 7.9401 8.1586 8.5373 8.8642 9.1478 9.6599 9.8952 10.2964 10.4859 10.6662 10.6662 10.6382	1.694/ 1.694/ 1.695/ 1.936/ 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414 5.875 6.337 6.799 7.260 6.4706 0.4706 0.5544	# kJ/kg P = 0.10 0 2506. 8 2506. 8 2506. 8 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506. 9 2506.	MPa (99) 1 2675. 7 2676. 8 2776. 1 3074. 9 3278. 9 3278. 9 3704. 9 3278. 9 3704. 9 3456. 9 3704. 9 3478. 9 3704. 9 3478. 9 3704. 9 3278. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704. 9 3704.	8.0% 63°C) 5 7.3 2 7.3 4 7.4 3 8.3 3 8.3 3 8.3 3 8.3 3 9.5 6 9.5 1 0.5 6 6.8 6 9.5 6 6.8 6 9.5 6 9
超期 50 100 150 200 250 800 1200 1200 1200 1200 1200 1200 1200	ル 蒸汽 V m ³ Ng 14.67 14.86 17.19 19.51 24.13 26.44 31.06 35.67 40.29 44.91 49.52 64.14 58.75 67.98 72.60 0.88 0.95 1.08 1.19	#.//wg P = 0.01 M 4	Ring Pa (45.81* 2594.7 2592.6 2687.5 2783.0 2879.5 3076.5 3279.6 3499.1 3705.4 4159.0 4396.4 4640.6 489.1 5147.8 5409.7 6120.23 2706.7 2768.8 2870.5 2971.0	8,1502 8,1502 8,1749 8,4479 8,6882 8,9038 9,1002 9,2813 9,6077 9,8978 10,1608 10,4028 10,6281 10,8396 11,0287 11,2287 11,4091 11,5811 **CI	#Ng P 3.240 3.418 3.889 4.356 4.820 7.134 8.057 8.981 19.904 10.828 11.751 12.674 13.597 14.521 P. 0.6058 0.6339 0.7163 0.7964	kJ/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.4 467.8 4683.6 - 0.30 MP 257.4 467.8 2570.8 2650.7 2728.7	ki/kg Pe (81.33* 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4198.9 4396.3 4640.5 4095.7 5409.6 5133.55* 2725.3 2761.0 2865.6 2967.6	5 kJ/kg · K Co 7.5939 7.6947 7.9401 8.3566 8.5373 8.8642 9.178 9.4578 9.4578 9.8852 10.9567 10.4859 10.6662 10.8382 **Ci	1.694/ 1.695/ 1.936- 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414 5.875 6.337 6.799 7.260 9.402/ 0.4702 0.5342 0.5961	8 kJ/kg P = 0.10 0 2506. 8 2506. 4 2562. 2668. 2733. 2810. 2967. 3131. 3301. 3479. 3663. 3663. 4652. 4467. 4463. 475. 4663. 2666. 2666. 2766.	MPa (99. 7 2676. 7 2676. 8 2776. 8 2776. 9 3278. 9 3278. 9 3704. 2 3928. 9 4158. 9 4458. 9	8.0k 63°C) 5 7.3 2 7.3 4 7.4 3 8.6 3 8.2 8 8.8 4 9.3 6 9.5 6 9.5 6 10.3 6 10.3 6 6.8 8 6.9 6 6.8 8 6.9 6 7.3
超期 7 °C	ル 薬 汽 V m ³ %g 14.67 14.86 17.19 12.82 24.13 26.44 31.66 35.67 40.29 44.91 49.52 63.37 67.98 72.60 0.88 0.95 1.08 1.19 1.08 1.19 1.1	#.//wg # 0.01 M # 2437.9 9 2443.9 6 2515.5 2 2561.3 5 2661.3 5 2968.9 9 3132.3 5 3479.6 6 3663.8 1 3855.0 7 4053.0 7 4053.0 7 4057.5 7 4467.9 2 4683.7 P = 0.20 MF 57 2529.5 96 2576.9 96 2576.9 96 2576.9 96 2576.9 96 2576.9 96 2576.9 96 2576.9 97 2529.5 98 2576.9 98 2576.9	Ring Pa (45.81* 2594.7 2592.6 2687.5 2783.0 2879.6 3076.5 3279.6 3489.1 3705.4 3928.7 4159.0 4396.4 4640.6 4891.2 2706.7 2768.8 2870.5 2971.0 3071.8	kJikg · K CI* 8.1502 8.1749 8.4479 8.6882 8.9038 9.1002 9.2813 9.6077 9.8078 10.1608 10.4028 10.6281 10.8396 11.0393 11.2287 11.4091 11.5811 **CI	#Ng P 3.240 3.418 3.889 4.350 5.284 6.209 7.134 8.087 9.904 10.828 11.751 12.674 13.597 14.521 0.6058 0.6339 0.7164 0.8753 0.7964 0.8753	ki/kg = 0.05 M 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 4683.6 - 0.30 MP 2543.6 2570.8 2660.7 2728.7 2886.7	R/Ng Pa (81.33*) 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4188.9 4396.3 4640.5 4891.1 5147.7 5409.6 5133.55*) 2725.3 2761.0 2863.6 2967.6 3069.3	5 kl/kg·K 7.5939 7.6947 7.9401 8.1580 8.35373 8.8642 9.1546 9.4579 9.6599 9.8852 10.0957 10.2954 10.4859 10.6962 10.8382	1.694/ 1.695/ 1.936/ 2.172 2.406 2.639 3.103 3.565 4.028 4.952 5.414 5.875 6.337 7.260 9.4062 0.4706 0.5342 0.5951 0.6548	# kJ/kg P = 0.10 0 2506. 8 2506. 4 2582. 2583. 2610. 2967. 3131. 3479. 3479. 4663. 3454. 4667. 4683. 2664. 2664. 2664. 2766. 2804.8	MPa (99. 7 2675. 7 2676. 8 2776. 8 2776. 9 3278. 9 3278. 9 3488. 9 3488. 9 3928. 9 4158. 1 4396. 1 443. 5 2738.8 2 266.1 2 2964. 2 3966.8	kuk 663°Ci
超期 7 °C	ル 薬 汽 V m ³ %g 14.67 14.86 17.19 19.51 21.82 24.13 26.44 31.06 35.67 49.52 54.14 51.82 54.15 63.37 67.98 72.50 0.88 0.99 1.08 1.19 1.15 1.17 1.17 1.17	#.//wg P = 0.01 M 4	Ring Pa (45.81*) 2584.7 2592.6 2687.5 2783.0 2879.5 3279.6 3489.1 3705.4 3928.7 4159.0 4396.4 4640.6 4891.2 5147.8 5409.7 \(\) (120.23 2706.7 2768.8 2870.5 2971.0 3071.8 3276.6 3487.1	8,1502 8,1502 8,1749 8,4479 8,6882 8,9038 9,1002 9,2813 9,6077 9,8978 10,1608 10,4028 10,6281 10,8396 11,0287 11,2287 11,4091 11,5811 **CI	#Ng P 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.057 8.961 10.828 11.751 12.674 13.597 14.521 P 0.6058 0.6339 0.7163 0.7764 0.8753 1.0315	ki/kg - 0.05 M 2483.9 2511.6 25816.2 2659.9 2736.0 3302.2 3479.4 3663.6 3854.9 4257.4 4467.8 4683.6 - 0.30 MP 2543.6 2570.8 2660.7 2728.7 2806.7 2966.6	ki/kg Pe (81.33* 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3706.1 3928.5 4198.9 4396.3 4640.6 4891.1 5147.7 5409.6 7 2753.0 2865.6 2067.6 33275.0	5 kJ/kg · K 7.5939 7.6947 7.9401 8.1580 8.3556 8.5373 8.8642 9.1546 9.4178 9.6599 9.8952 10.4959 10.6962 10.8382 **OI	1.694/ 1.694/ 1.695/ 1.936/ 2.639 3.103 3.565/ 4.028 4.490 4.962 5.414 5.875 6.337 6.799 7.260 0.4766 0.5342 0.5548 0.7726	# L/Ng P = 0.10 D 2506. B 2506. 4 2582. 2696. 2733. 2810. 2967. 3301. 3479. 3634. 3634. 4052. 4467. 4667. 4683. 7 = 0.40 2646. 2726. 1 2804.8 2964.8 2796.	kIng MPa (99) 1 2675. 7 2676. 8 2776. 1 2976. 4 3074. 9 3278. 9 3498. 9 3704. 9 3498. 9 3496. 9 3496. 9 3496. 9 4491. 9 4491.	kulk 63°C) 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2
超期 50 100 150 200 250 300 1000 1200 1200 1200 1200 1200 1200	ル 蒸汽 V m ³ Ng 14.67 14.86 17.19 19.51 24.13 26.44 31.06 35.67 49.52 64.14 58.75 67.98 72.60 0.88 0.99 1.19 1.31 1.54 1.78 2.01:	#.//wg # 2437.9 # 2437.9 # 2437.9 # 2437.9 # 2588.8 # 2731.2 # 2588.8 # 2588.8	Ring Pa (45.81*) 2584.7 2592.6 2687.5 2783.0 2879.5 3076.5 3279.6 3489.1 3705.4 459.6 4690.2 5147.8 5409.7 (120.23 2706.7 2768.8 3276.5 2971.0 3071.8 3276.1 3704.0	8,1502 8,1749 8,4479 8,4479 8,6882 8,9038 9,1002 9,2813 9,6077 9,8978 10,1608 10,4028 10,6281 10,8395 11,2287 11,4091 11,5811 **CI 7,1272 7,2795 7,2795 7,5066 7,7086 7,8926 8,2218 8,5133 8,7770	#Ng P 3.240 3.418 3.889 4.356 4.820 7.134 8.057 8.961 9.904 10.828 11.751 12.674 13.597 14.521 P. 0.6058 0.6339 0.7964 0.8753 1.0915 1.1967 1.3414	kJ/kg - 0,05 M 2483.9 2511.6 2585.6 2659.9 2738.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 4052.9 4057.8 4683.6 - 0.30 MP 2543.6 2570.8 2680.7 2728.7 2806.7 2728.7 2806.7 3300.8	kilkg Pe (81.33* 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4198.9 4396.3 4640.1 5147.7 5409.6 6133.55* 2725.3 2761.0 2865.6 2967.6 3669.3 3275.0 3486.0 34703.2	5 kl/kg·K 7.5939 7.6947 7.9401 8.1580 8.35373 8.8642 9.1546 9.4579 9.6599 9.8852 10.0957 10.2954 10.4859 10.6962 10.8382	1.694/ 1.694/ 1.695/ 1.936/ 2.172 2.406 2.639 3.103 3.565 4.028 4.490 4.952 5.414 5.875 6.337 6.799 7.260 7.260 0.5548 0.776 0.5548 0.776 0.6548 0.776 0.893	# kJ/kg P = 0.10 0 2506. 8 2506. 8 2506. 8 2506. 9 2506.	MPa (99) 1 2675. 7 2676. 8 2776. 1 3074. 9 3278. 9 3278. 9 3704. 9 3278. 9 3704. 9 3489. 9 3704. 9 3278. 9 3704. 9 3278. 9 3704. 9 3278. 9 3704. 9 3278. 9 3704. 9 3278. 9 3704. 9 3278. 9 3066. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766. 9 3766.	kuk 63°C) 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2
超期 7 °C	ル 薬 汽 V m ³ %g 14.67 14.86 17.19 121.82 24.13 26.44 31.67 40.29 44.91 49.12 63.37 67.38 72.60 0.88 0.95 1.08 1.19 1.54 1.78 2.01 1.31 2.24 1.31 2.24	#.//wg # 0.01 M # 2437.9 9 2443.9 6 2515.5 2 2587.9 6 2736.0 5 2812.1 3 2968.9 9 3132.3 5 3479.6 6 3663.8 1 3855.0 7 4467.9 2 4257.5 7 4467.9 2 4257.5 7 4467.9 2 4257.5 7 2529.5 9 2576.9 9 2576.9 9 2576.9 9 2576.9 9 3301.4 1 3478.8	Ring Pa (45.81* 2594.6 2697.5 2783.0 2879.5 2977.3 3076.5 3279.6 3499.1 3705.8 4159.0 4396.4 4640.6 489.6 5147.8 5409.7 6 (120.23 2706.7 2768.8 2870.5 3487.1 3071.8 3276.6 3487.1 3704.0 3927.6	8,1502 8,1502 8,1749 8,4479 8,6882 8,9038 9,1002 9,2813 9,6077 9,8078 10,1608 10,4028 10,6281 10,8395 11,2287 11,4091 11,5811 **CI*** 7,1272 7,2795 7,5066 7,7086 7,8926 8,2218 8,5133 8,7770 9,0194	#Ng P 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.087 9.904 10.828 11.751 12.674 13.897 14.521 P. 0.6058 0.6339 0.7164 0.8753 1.0315 1.18614 1.4957	### Links ### 2483.9 2511.6 2585.6 2659.9 2735.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 3454.9 4257.8 4683.6 - 0.30 MP 2543.6 2570.8 2660.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7 2728.7 2806.7	R/Ng Pa (81.33* 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3705.1 3928.5 4158.9 4396.3 460.5 4691.1 5147.7 5409.6 6133.55* 2725.3 2761.0 2865.6 2067.6 3069.3 3275.0 3486.0 3486.0 3486.0 34927.1	5 kJ/kg · K C3 7.5939 7.6947 7.9401 8.15806 8.3556 8.5373 8.8642 9.1146 9.4198 9.6599 9.8852 10.0967 10.2960 10.8382 **C1 6.9919 7.0778 7.3115 7.5166 7.7022 8.0330 8.3251 8.5892 8.8319	1.694/ 1.695/ 1.936- 2.172 2.406 2.639 3.103 3.565 4.029 4.952 5.414 5.875 6.337 6.799 7.260 0.5342 0.5951 0.6548 0.7726 0.893 1.0055 1.1215	# kJ/kg P = 0.10 0 2506. 8 2506. 4 2582.2 2688.2 2733.3 2810.2 2967.9 3131.6 3301.8 4052.6 4257.3 4467.1 4683.9 2 0.40 3 2 2646.8 2 2726.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8 2 2926.1 2 2804.8	MPa (99. 7 2676. 7 2676. 8 2776. 8 2776. 9 3278. 9 3278. 9 3488. 9 3496. 9 3496. 9 3496. 9 3273.4 9 3273.4 9 3273.4 9 3273.4 9 3273.4 9 3273.4 9 3273.4 9 3273.4 9 3273.4 9 3273.4	kuk 63°Ci 7 65°Ci 7 7 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9
超期 50 100 150 200 250 300 1000 1200 1200 1200 1200 1200 1200	ル 蒸汽 V m ³ Ng 14.67 14.86 17.19 19.51 24.13 26.44 31.06 35.67 49.52 64.14 58.75 67.98 72.60 0.88 0.99 1.19 1.31 1.54 1.78 2.01:	### N/Ng ### 2437.9 ### 2437.9 ### 2437.9 ### 2437.9 ### 2437.9 ### 2437.9 ### 2437.9 ### 2437.9 ### 2566.3 ### 2566	Ring Pa (45.81*) 2584.7 2592.6 2687.5 2783.0 2879.5 3076.5 3279.6 3489.1 3705.4 459.6 4690.2 5147.8 5409.7 (120.23 2706.7 2768.8 3276.5 2971.0 3071.8 3276.1 3704.0	8,1502 8,1749 8,4479 8,4479 8,6882 8,9038 9,1002 9,2813 9,6077 9,8978 10,1608 10,4028 10,6281 10,8395 11,2287 11,4091 11,5811 **CI 7,1272 7,2795 7,2795 7,5066 7,7086 7,8926 8,2218 8,5133 8,7770	#Ng P 3.240 3.418 3.889 4.356 4.820 5.284 6.209 7.134 8.057 8.981 10.828 11.751 12.674 13.597 14.521 P 0.6058 0.6339 0.7163 0.7964 0.8733 1.0315 1.1867 1.4414 1.4957 1.6499	kJ/kg - 0,05 M 2483.9 2511.6 2585.6 2659.9 2738.0 2811.3 2968.5 3132.0 3302.2 3479.4 3663.6 4052.9 4057.8 4683.6 - 0.30 MP 2543.6 2570.8 2680.7 2728.7 2806.7 2728.7 2806.7 3300.8	ki/kg 2645.9 2682.5 2780.1 2877.7 2976.0 3075.5 3278.9 3488.7 3706.1 3928.5 4198.9 4396.3 276.0 2865.6 2167.7 2865.6 2167.7 2865.6 31703.2 33275.0 3486.0 3703.2 3927.1 4157.8	5 kJ/kg·K 7.5939 7.6947 7.9401 8.3556 8.5373 8.8642 9.1546 9.4178 9.6599 9.8852 10.9567 10.6662 10.8382 CI 6.9919 7.0778 7.3115 7.5166 7.7022 8.0330 8.3251 8.38592	1.694/ 1.694/ 1.695/ 1.936/ 2.172/ 2.406 2.639 3.103 3.565/ 4.028 4.490 4.952 5.414 5.875 6.337 6.799 7.260 0.4706 0.5542 0.9561 0.6548 0.7726 0.8893 1.025 1.1215 1.2372	# kJ/kg P = 0.10 0 2506. 8 2506. 4 2562. 2668. 2733. 2810. 2967. 3131. 3301. 3479. 3663. 3663. 4652. 4467. 44683. 2766. 2804.8 2766. 2804.8 2766. 3129.2 3300.2	MPa (99) 1 2675. 7 2676. 8 2776. 1 2875. 7 2974. 4 3074. 9 3278. 9 3498. 9 3704. 9 3498. 9 3496.	8.0k 63°C) 5 7.3 2 7.3 3 8.4 3 8.5 3 8.5 4 9.5 6 9.5 6 9.5 6 10.3 6

國立屏東科技大學 九十五 學年度 碩士班暨碩士在職專班招生考試 熱力學

が理機	空製的理器製體性質 「 n king P,	o kJ/kg	32	KLINg · K
209.97 219.97 230.02 240.02	0.3363 0.3987 0.5477 0.5477	142.56 149.69 156.82 164.00	1707.0 1512.0 1346.0 1205.0	1.29559 1.34444 1.39105 1.43557 1.47824
250.05 260.09 270.11 280.13 285.14	0.7329 0.8405 0.9590 1.0889 1.1584	178.28 185.45 192.60 199.75 203.33	979.0 887.8 808.0 738.0 706.1	1.51917 1.55848 1.59634 1.63279 1.65055
290.16 295.17 300.19 305.22 310.24	1,2311 1,3068 1,3860 1,4686 1,5546	206.91 210.49 214.07 217.67 221.25	676.1 647.9 621.2 596.0 572.3	1.6802 1.68515 1.70203 1.71865 1.73498
315.27 320.29 325.31 330.34 340.42	1.6442 1.7375 1.8345 1.9352 2.149	224.85 228.42 232.02 235.61 242.82	549.8 528.6 508.4 489.4 454.1	1.75106 1.76690 1.78249 1.79783 1.82790
350.49 370.67 390.77 390.88	2.379 2.626 2.892 3.176 3.481	250.02 257.24 264.46 271.69 278.93	422.2 393.4 367.2 343.4 321.5	1.88543 1.91313 1.94001 1.96633
400.98 411.12 421.26 431.43 441.61	3,806 4,153 4,522 4,915 5,332	286.16 293.43 300.69 307.99 315.30	301.6 283.3 266.6 251.1 236.8	2.04142 2.04142 2.06533 2.06533
882224	5.775 6.245 6.742 7.268 7.824	322.62 329.97 337.32 344.70 352.08	223.6 211.4 200.1 189.5 179.7	2.11161 2.13407 2.15604 2.17760 2.19876
503.02 513.32 523.63 533.98 544.35	8.411 9.031 9.684 10.37	359.49 366.92 374.36 381.84 389.34	170.6 162.1 154.1 139.7	2.21952 2.23993 2.25997 2.27967 2.29906
\$ 17.5	11.86 12.66 13.50	396.86 404.42 411.97	133,1 127.0 121.2	2.31809 2.33685 2.35531

		位:					12		族	
		MACH.	-	28	SE KING		KJ/Ng		RUR	6
P MPa	で 経験な こ で	園深り	銀代を存職	型祭 3 年間	銀行込む機	開製を	86 E	数だら	開発の	選択し
90'0	-37.07	0.0007097	0.3100	3.41	206.12	3,46	221.27	224.72	0.0147	0.9520
80.0	-31.21	0.0007184	0.2366	10.41	209.46	10.47	217.92	228.39	0.0440	0.9447
0.10	-26.43	0.0007258	0.1917	16.22	212.18	16.29	215.06	231.35	0.0678	0.9395
0.12	-22.36	0.0007323	0.1614	21.53	214.50	21.32	212.54	233.86	0.0879	0.9354
0.14	-18.80	0.0007381	0.1395	25,66	216.52	72.77	210.27	236.04	0.1055	0.9322
0.16	-15.62	0.0007435	0.1229	29,66	218.32	29.78	208.18	237.97	0.1211	0.9296
0.18	-12.73	0.0007485	0.1098	33.31	219.94	33,45	206.26	239.71	0.1352	0.9273
0.20	-10.09	0.0007532	0.0993	36.69	221.43	36.84	204.46	241.30	0.1481	0.9253
0.24	-5.37	0.0007618	0.0834	42.77	224.07	42.95	201.14	244.09	0.1710	0.9222
0.28	-1.23	0.0007697	0.0719	48.18	226.38	48.39	198.13	246.52	0.1911	0.9197
0.32	2,48	0.0007770	0,0632	53,06	228 43	53.31	195,35	248.66	6802.0	0.9177
0.36	5.84	0.0007839	0.0564	57.54	230.28	57.82	192.76	250.58	0.2251	0.9160
0.4	8.93	0.0007904	0.0509	61.69	231.97	62.00	190.32	252,32	0.2399	0.9145
9.0	15.74	0.0008056	0.0409	70,93	235,64	71.33	184,74	256.07	0.2723	0.9117
9.0	21.58	0.0008196	0.0341	78.99	238.74	79,48	179.71	259.19	0.2999	0.9097
0.7	26.72	0.0008328	0.0292	86.19	241.42	86.78	175.07	261.85	0.3242	0.9080
8.0	31.33	0.0008454	0.0255	92.75	243.78	93,42	170.73	264.15	0.3459	0.9066
60	35.53	0,0008576	0,0226	98.79	245.88	99.56	166.62	266.18	0.3656	0.9054
Q.	39.39	0.0008695	0.0202	104.42	247.77	105.29	162,68	267.97	0.3838	0.9043
N	46.32	0.0008928	0.0166	114.69	251.03	115.76	155.23	270.99	0.4164	0.9023
4	52.43	0.0009159	0.0140	123.98	253.74	125.26	148.14	273,40	0.4453	0.9003
4	57.92	0.0009392	0.0121	132.52	256.00	134.02	141,31	275.33	0.4714	0.8982
00	62.91	0.0009631	0.0105	140.49	257.88	142.22	134.60	276.83	0.4954	0.8959
2.0	67.49	0.0009878	0,0093	148.02	259.41	149.99	127.95	277.94	0.5178	0.8934
10.00	77.59	0.0010562	0.0069	165.48	561.84	168 13	111.08	579 17	0.5687	0.8854
			The rest name of the		10.01	2	444		2000	