

水和水蒸汽性质图表

(法定单位制)

北京科学技术出版社



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0 ~ 800°C 0 ~ 100MPa

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说 明

水和水蒸汽性质图表是设计、科研和教学中必需的工具资料。我们以联邦德国 E·斯米特教授和 U·格里古尔教授编辑的《国际单位制的水和水蒸汽性质》1981 年修订第二版校正重印本为蓝本, 考虑我国大专和中专院校能源工程专业及热力学课程教学的需要, 选编了本图表, 它包括饱和状态 (依温度排列和依压力排列) 的水和水蒸汽表、水和过热蒸汽性质表。单位均采用法定单位制, 参数范围是 $0 \sim 800^{\circ}\text{C}$ 、 $0.001 \sim 100\text{MPa}$ 。

本书各图表中应用的热力参数和单位有:

热力学温度	T	K
摄氏温度	t	$^{\circ}\text{C}$
	$T - T_0 = t$	$T_0 = 273.15\text{K}$
饱和温度	t_s	$^{\circ}\text{C}$
压 力	p	Pa, MPa
比 容	v	m^3/kg
密 度	$\rho = \frac{1}{v}$	kg/m^3
焓	h	kJ/kg
汽化潜热	r	kJ/kg
熵	s	$\text{kJ}/(\text{kg} \cdot \text{K})$
饱和状态	水用角标'	汽用角标''

本图表主要适用于电力、石油、化工、核能等部门的专科学校和大专院校师生, 科研设计单位从事热能工作的科技人员, 火电厂 (包括大企业的自备电站) 从事锅炉、汽机工作的技术人员及工人。

表 1 饱和状态(按温度排列)

临 界 常 数

温度 374.15 °C

焓 2107.4 kJ/kg

压力 22.12 MPa

比容 0.00317 m³/kg

熵 4.4420 kJ/(kg·K)

t	T	p	v'	v''	ρ''	h'	h''	r	s'	s''
°C	K	10 ⁵ Pa	m³/kg	m³/kg	kg/m³	kJ/kg	kJ/kg	kJ/kg	kJ/(kg·K)	kJ/(kg·K)
0.00	273.15	0.006108	0.0010002	206.3	0.004847	-0.04	2501.6	2501.6	-0.0002	9.1577
0.01	273.16	0.006112	0.0010002	206.2	0.004851	0.00	2501.6	2501.6	0.0000	9.1575
1	274.15	0.006566	0.0010001	192.6	0.005192	4.17	2503.4	2499.2	0.0152	9.1311
2	275.15	0.007055	0.0010001	179.9	0.005558	8.39	2505.2	2496.8	0.0306	9.1047
3	276.15	0.007575	0.0010001	168.2	0.005946	12.60	2507.1	2494.5	0.0459	9.0785
4	277.15	0.008129	0.0010000	157.3	0.006338	16.80	2508.9	2492.1	0.0611	9.0526
5	278.15	0.008718	0.0010000	147.2	0.006795	21.01	2510.7	2489.7	0.0762	9.0269
6	279.15	0.009345	0.0010000	137.8	0.007258	25.21	2512.6	2487.4	0.0913	9.0015
7	280.15	0.010012	0.0010001	129.1	0.007748	29.41	2514.4	2485.0	0.1063	8.9762
8	281.15	0.010720	0.0010001	121.0	0.008267	33.60	2516.2	2482.6	0.1213	8.9513
9	282.15	0.011472	0.0010002	113.4	0.008816	37.80	2518.1	2480.3	0.1361	8.9265
10	283.15	0.012270	0.0010093	106.4	0.009396	41.99	2519.9	2477.9	0.1510	8.9020
11	284.15	0.013116	0.0010003	99.91	0.010001	46.19	2521.7	2475.5	0.1658	8.8776
12	285.15	0.014014	0.0010004	93.84	0.010666	50.38	2523.6	2473.2	0.1805	8.8536
13	286.15	0.014965	0.0010006	88.18	0.01134	54.57	2525.4	2470.8	0.1952	8.8297
14	287.15	0.015973	0.0010007	82.90	0.01206	58.75	2527.2	2468.5	0.2098	8.8060
15	288.15	0.017039	0.0010008	77.98	0.01282	62.94	2529.1	2466.1	0.2243	8.7826
16	289.15	0.018168	0.0010010	73.38	0.01363	67.13	2530.9	2463.8	0.2388	8.7593
17	290.15	0.019362	0.0010012	69.09	0.01447	71.31	2532.7	2461.4	0.2533	8.7363
18	291.15	0.02062	0.0010013	65.09	0.01536	75.50	2534.5	2459.0	0.2677	8.7135
19	292.15	0.02196	0.0010015	61.34	0.01630	79.68	2536.4	2456.7	0.2820	8.6908
20	293.15	0.02337	0.0010017	57.84	0.01729	83.86	2538.2	2454.3	0.2963	8.6684
21	294.15	0.02485	0.0010019	54.56	0.01833	88.04	2540.0	2452.0	0.3105	8.6462
22	295.15	0.02642	0.0010022	51.49	0.01942	92.23	2541.8	2449.6	0.3247	8.6241
23	296.15	0.02808	0.0010024	48.62	0.02057	96.41	2543.6	2447.2	0.3389	8.6023
24	297.15	0.02982	0.0010026	45.93	0.02177	100.59	2545.5	2444.9	0.3530	8.5806
25	298.15	0.03166	0.0010029	43.40	0.02304	104.77	2547.3	2442.5	0.3670	8.5592
26	299.15	0.03360	0.0010032	41.03	0.02437	108.95	2549.1	2440.2	0.3810	8.5379
27	300.15	0.03564	0.0010034	38.81	0.02576	113.13	2550.9	2437.8	0.3949	8.5168
28	301.15	0.03778	0.0010037	36.73	0.02723	117.31	2552.7	2435.4	0.4088	8.4959
29	302.15	0.04004	0.0010040	34.77	0.02876	121.48	2554.5	2433.1	0.4227	8.4751
30	303.15	0.04241	0.0010043	32.93	0.03037	125.66	2556.4	2430.7	0.4365	8.4546
31	304.15	0.04491	0.0010046	31.20	0.03205	129.84	2558.2	2428.3	0.4503	8.4342
32	305.15	0.04753	0.0010049	29.57	0.03382	134.02	2560.0	2425.9	0.4640	8.4140
33	306.15	0.05029	0.0010053	28.04	0.03566	138.20	2561.8	2423.6	0.4777	8.3939
34	307.15	0.05318	0.0010056	26.60	0.03759	142.38	2563.6	2421.2	0.4913	8.3740
35	308.15	0.05622	0.0010060	25.24	0.03961	146.56	2565.4	2418.8	0.5049	8.3543
36	309.15	0.05940	0.0010063	23.97	0.04172	150.74	2567.2	2416.4	0.5184	8.3348
37	310.15	0.06274	0.0010067	22.76	0.04393	154.91	2569.0	2414.1	0.5319	8.3154
38	311.15	0.06624	0.0010070	21.63	0.04624	159.09	2570.8	2411.7	0.5453	8.2962
39	312.15	0.06991	0.0010074	20.56	0.04865	163.27	2572.6	2409.3	0.5588	8.2772
40	313.15	0.07375	0.0010078	19.55	0.05116	167.45	2574.4	2406.9	0.5721	8.2583
41	314.15	0.07777	0.0010082	18.59	0.05379	171.63	2576.2	2404.5	0.5854	8.2395
42	315.15	0.08198	0.0010086	17.69	0.05652	175.81	2577.9	2402.1	0.5987	8.2209
43	316.15	0.08639	0.0010090	16.84	0.05938	179.99	2579.7	2399.7	0.6120	8.2025
44	317.15	0.09100	0.0010094	16.04	0.06236	184.17	2581.5	2397.3	0.6252	8.1842
45	318.15	0.09582	0.0010099	15.28	0.06546	188.35	2583.3	2394.9	0.6383	8.1661

表 1 饱和状态(按温度排列)(续)

t	T	p	v'	v''	e''	h'	h''	r	s'	s''
45	318.15	0.09582	0.0010099	15.28	0.06546	188.35	2583.3	2394.9	0.6383	8.1661
46	319.15	0.10086	0.0010103	14.56	0.06869	192.53	2585.1	2392.5	0.6514	8.1481
47	320.15	0.10612	0.0010107	13.88	0.07206	196.71	2586.9	2390.1	0.6645	8.1302
48	321.15	0.11162	0.0010112	13.23	0.07557	200.89	2588.6	2387.7	0.6776	8.1125
49	322.15	0.11736	0.0010117	12.62	0.07922	205.07	2590.4	2385.3	0.6906	8.0950
50	323.15	0.12335	0.0010121	12.05	0.08302	209.26	2592.2	2382.9	0.7035	8.0776
51	324.15	0.12961	0.0010126	11.50	0.08697	213.44	2593.9	2380.5	0.7164	8.0603
52	325.15	0.13613	0.0010131	10.98	0.09108	217.62	2595.7	2378.1	0.7293	8.0432
53	326.15	0.14293	0.0010136	10.49	0.09535	221.80	2597.5	2375.7	0.7422	8.0262
54	327.15	0.15002	0.0010140	10.02	0.09979	225.98	2599.2	2373.2	0.7550	8.0093
55	328.15	0.15741	0.0010145	9.579	0.1044	230.17	2601.0	2370.8	0.7677	7.9926
56	329.15	0.16511	0.0010150	9.159	0.1092	234.35	2602.7	2368.4	0.7804	7.9759
57	330.15	0.17313	0.0010156	8.760	0.1142	238.53	2604.5	2365.9	0.7931	7.9595
58	331.15	0.18147	0.0010161	8.381	0.1193	242.72	2606.2	2363.5	0.8058	7.9431
59	332.15	0.19016	0.0010166	8.021	0.1247	246.91	2608.0	2361.1	0.8184	7.9269
60	333.15	0.19920	0.0010171	7.679	0.1302	251.09	2609.7	2358.6	0.8310	7.9108
61	334.15	0.2086	0.0010177	7.353	0.1360	255.28	2611.4	2356.2	0.8435	7.8948
62	335.15	0.2184	0.0010182	7.044	0.1420	259.46	2613.2	2353.7	0.8560	7.8790
63	336.15	0.2286	0.0010188	6.749	0.1482	263.65	2614.9	2351.3	0.8685	7.8633
64	337.15	0.2391	0.0010193	6.469	0.1546	267.84	2616.6	2348.8	0.8809	7.8477
65	338.15	0.2501	0.0010199	6.202	0.1612	272.02	2618.4	2346.3	0.8933	7.8322
66	339.15	0.2615	0.0010205	5.948	0.1681	276.21	2620.1	2343.9	0.9057	7.8168
67	340.15	0.2733	0.0010211	5.706	0.1752	280.40	2621.8	2341.4	0.9180	7.8015
68	341.15	0.2856	0.0010217	5.476	0.1826	284.59	2623.5	2338.9	0.9303	7.7864
69	342.15	0.2984	0.0010223	5.256	0.1903	288.78	2625.2	2336.4	0.9426	7.7714
70	343.15	0.3116	0.0010228	5.046	0.1982	292.97	2626.9	2334.0	0.9548	7.7565
71	344.15	0.3253	0.0010235	4.846	0.2063	297.16	2628.6	2331.5	0.9670	7.7417
72	345.15	0.3396	0.0010241	4.656	0.2148	301.35	2630.3	2329.0	0.9792	7.7270
73	346.15	0.3543	0.0010247	4.474	0.2235	305.55	2632.0	2326.5	0.9913	7.7124
74	347.15	0.3696	0.0010253	4.300	0.2326	309.74	2633.7	2324.0	1.0034	7.6979
75	348.15	0.3855	0.0010259	4.134	0.2419	313.94	2635.4	2321.5	1.0154	7.6835
76	349.15	0.4019	0.0010266	3.976	0.2515	318.13	2637.1	2318.9	1.0275	7.6693
77	350.15	0.4189	0.0010272	3.824	0.2615	322.33	2638.7	2316.4	1.0395	7.6551
78	351.15	0.4365	0.0010279	3.680	0.2718	326.52	2640.4	2313.9	1.0514	7.6410
79	352.15	0.4547	0.0010285	3.541	0.2824	330.72	2642.1	2311.4	1.0634	7.6271
80	353.15	0.4736	0.0010292	3.409	0.2933	334.92	2643.8	2308.8	1.0753	7.6132
81	354.15	0.4931	0.0010299	3.283	0.3046	339.11	2645.4	2306.3	1.0871	7.5995
82	355.15	0.5133	0.0010305	3.162	0.3163	343.31	2647.1	2303.8	1.0990	7.5858
83	356.15	0.5342	0.0010312	3.046	0.3283	347.51	2648.7	2301.2	1.1108	7.5722
84	357.15	0.5557	0.0010319	2.935	0.3407	351.71	2650.4	2298.7	1.1225	7.5588
85	358.15	0.5780	0.0010326	2.829	0.3535	355.92	2652.0	2296.5	1.1343	7.5454
86	359.15	0.6011	0.0010333	2.727	0.3667	360.12	2653.6	2293.1	1.1460	7.5321
87	360.15	0.6249	0.0010340	2.630	0.3803	364.32	2655.3	2290.9	1.1577	7.5189
88	361.15	0.6495	0.0010347	2.536	0.3942	368.53	2656.9	2288.4	1.1693	7.5058
89	362.15	0.6749	0.0010354	2.447	0.4087	372.73	2658.5	2285.8	1.1809	7.4928
90	363.15	0.7011	0.0010361	2.361	0.4235	376.94	2660.1	2283.2	1.1925	7.4799
91	364.15	0.7281	0.0010369	2.279	0.4388	381.15	2661.7	2280.6	1.2041	7.4670
92	365.15	0.7561	0.0010376	2.200	0.4545	385.36	2663.4	2278.0	1.2156	7.4543
93	366.15	0.7849	0.0010384	2.125	0.4707	389.56	2665.0	2275.4	1.2271	7.4416
94	367.15	0.8146	0.0010391	2.052	0.4873	393.78	2666.6	2272.8	1.2386	7.4291
95	368.15	0.8453	0.0010399	1.982	0.5045	397.99	2668.1	2270.2	1.2501	7.4166
96	369.15	0.8769	0.0010406	1.915	0.5221	402.20	2669.7	2267.5	1.2615	7.4042
97	370.15	0.9094	0.0010414	1.851	0.5402	406.42	2671.3	2264.9	1.2729	7.3919
98	371.15	0.9430	0.0010421	1.789	0.5589	410.63	2672.9	2262.2	1.2842	7.3796
99	372.15	0.9776	0.0010429	1.730	0.5780	414.85	2674.4	2259.6	1.2956	7.3675
100	373.15	1.0133	0.0010437	1.673	0.5977	419.06	2676.0	2256.9	1.3069	7.3554
101	374.15	1.0500	0.0010445	1.618	0.6180	423.28	2677.6	2254.3	1.3182	7.3434
102	375.15	1.0878	0.0010453	1.566	0.6388	427.50	2679.1	2251.6	1.3294	7.3315
103	376.15	1.1267	0.0010461	1.515	0.6601	431.73	2680.7	2248.9	1.3406	7.3196
104	377.15	1.1668	0.0010469	1.466	0.6821	435.95	2682.2	2246.3	1.3518	7.3078
105	378.15	1.2080	0.0010477	1.419	0.7046	440.17	2683.7	2243.6	1.3630	7.2962

表1 饱和状态(按温度排列)(续)

t	T	p	v'	v''	q''	h'	h''	r	s'	s''
105	378.15	1.2080	0.0010477	1.419	0.7046	440.17	2683.7	2243.6	1.3630	7.2962
106	379.15	1.2504	0.0010485	1.374	0.7277	444.40	2685.3	2240.9	1.3742	7.2845
107	380.15	1.2941	0.0010494	1.331	0.7515	448.63	2686.8	2238.2	1.3853	7.2730
108	381.15	1.3390	0.0010502	1.289	0.7758	452.85	2688.3	2235.4	1.3964	7.2615
109	382.15	1.3852	0.0010510	1.249	0.8008	457.08	2689.8	2232.7	1.4074	7.2501
110	383.15	1.4327	0.0010519	1.210	0.8265	461.32	2691.3	2230.0	1.4185	7.2388
111	384.15	1.4815	0.0010527	1.173	0.8528	465.55	2692.8	2227.3	1.4295	7.2275
112	385.15	1.5316	0.0010536	1.137	0.8798	469.78	2694.3	2224.5	1.4405	7.2164
113	386.15	1.5832	0.0010544	1.102	0.9075	474.02	2695.8	2221.8	1.4515	7.2052
114	387.15	1.6362	0.0010553	1.069	0.9359	478.26	2697.2	2219.0	1.4624	7.1942
115	388.15	1.6906	0.0010562	1.036	0.9650	482.50	2698.7	2216.2	1.4733	7.1832
116	389.15	1.7465	0.0010571	1.005	0.9948	486.74	2700.2	2213.4	1.4842	7.1723
117	390.15	1.8039	0.0010579	0.9753	1.025	490.98	2701.6	2210.7	1.4951	7.1614
118	391.15	1.8628	0.0010588	0.9463	1.057	495.23	2703.1	2207.9	1.5060	7.1507
119	392.15	1.9233	0.0010597	0.9184	1.089	499.47	2704.5	2205.1	1.5168	7.1399
120	393.15	1.9854	0.0010606	0.8915	1.122	503.72	2706.0	2202.2	1.5276	7.1293
121	394.15	2.0492	0.0010615	0.8655	1.155	507.97	2707.4	2199.4	1.5384	7.1187
122	395.15	2.1145	0.0010625	0.8405	1.190	512.22	2708.8	2196.6	1.5491	7.1082
123	396.15	2.1816	0.0010634	0.8162	1.225	516.47	2710.2	2193.7	1.5599	7.0977
124	397.15	2.2504	0.0010643	0.7928	1.261	520.73	2711.6	2190.9	1.5706	7.0873
125	398.15	2.3210	0.0010652	0.7702	1.298	524.99	2713.0	2188.0	1.5813	7.0769
126	399.15	2.3933	0.0010662	0.7484	1.336	529.25	2714.4	2185.2	1.5919	7.0666
127	400.15	2.4675	0.0010671	0.7273	1.375	533.51	2715.8	2182.3	1.6026	7.0564
128	401.15	2.5435	0.0010681	0.7069	1.415	537.77	2717.2	2179.4	1.6132	7.0462
129	402.15	2.6215	0.0010691	0.6872	1.455	542.04	2718.5	2176.5	1.6238	7.0361
130	403.15	2.7013	0.0010700	0.6681	1.497	546.31	2719.9	2173.6	1.6344	7.0261
131	404.15	2.7831	0.0010710	0.6497	1.539	550.58	2721.3	2170.7	1.6449	7.0161
132	405.15	2.8670	0.0010720	0.6319	1.583	554.85	2722.6	2167.8	1.6555	7.0061
133	406.15	2.9528	0.0010730	0.6146	1.627	559.12	2723.9	2164.8	1.6660	6.9962
134	407.15	3.041	0.0010740	0.5980	1.672	563.40	2725.3	2161.9	1.6765	6.9864
135	408.15	3.131	0.0010750	0.5818	1.719	567.68	2726.6	2158.9	1.6869	6.9766
136	409.15	3.223	0.0010760	0.5662	1.766	571.96	2727.9	2155.9	1.6974	6.9669
137	410.15	3.317	0.0010770	0.5511	1.815	576.24	2729.2	2153.0	1.7078	6.9572
138	411.15	3.414	0.0010780	0.5364	1.864	580.53	2730.5	2150.0	1.7182	6.9475
139	412.15	3.513	0.0010790	0.5222	1.915	584.81	2731.8	2147.0	1.7286	6.9380
140	413.15	3.614	0.0010801	0.5085	1.967	589.10	2733.1	2144.0	1.7390	6.9284
141	414.15	3.717	0.0010811	0.4952	2.019	593.40	2734.3	2140.9	1.7493	6.9190
142	415.15	3.823	0.0010821	0.4823	2.073	597.69	2735.6	2137.9	1.7597	6.9095
143	416.15	3.931	0.0010832	0.4698	2.129	601.99	2736.9	2134.9	1.7700	6.9001
144	417.15	4.042	0.0010843	0.4577	2.185	606.29	2738.1	2131.8	1.7803	6.8908
145	418.15	4.155	0.0010853	0.4460	2.242	610.60	2739.3	2128.7	1.7906	6.8815
146	419.15	4.271	0.0010864	0.4346	2.301	614.90	2740.6	2125.7	1.8008	6.8723
147	420.15	4.389	0.0010875	0.4236	2.361	619.21	2741.8	2122.6	1.8110	6.8631
148	421.15	4.510	0.0010886	0.4129	2.422	623.52	2743.0	2119.5	1.8213	6.8539
149	422.15	4.634	0.0010897	0.4025	2.484	627.83	2744.2	2116.3	1.8315	6.8448
150	423.15	4.760	0.0010908	0.3924	2.548	632.15	2745.4	2113.2	1.8416	6.8358
151	424.15	4.889	0.0010919	0.3827	2.613	636.47	2746.5	2110.1	1.8518	6.8268
152	425.15	5.021	0.0010930	0.3732	2.679	640.79	2747.7	2106.9	1.8620	6.8178
153	426.15	5.155	0.0010941	0.3640	2.747	645.12	2748.9	2103.8	1.8721	6.8089
154	427.15	5.293	0.0010953	0.3551	2.816	649.45	2750.0	2100.6	1.8822	6.8000
155	428.15	5.433	0.0010964	0.3464	2.886	653.78	2751.2	2097.4	1.8923	6.7911
156	429.15	5.577	0.0010976	0.3380	2.958	658.11	2752.3	2094.2	1.9023	6.7823
157	430.15	5.723	0.0010987	0.3299	3.032	662.45	2753.4	2091.0	1.9124	6.7735
158	431.15	5.872	0.0010999	0.3219	3.106	666.79	2754.5	2087.7	1.9224	6.7648
159	432.15	6.025	0.0011011	0.3142	3.182	671.13	2755.6	2084.5	1.9325	6.7561
160	433.15	6.181	0.0011022	0.3068	3.260	675.47	2756.7	2081.3	1.9425	6.7475

表 1 饱和状态(按温度排列) (续)

t	T	p	v'	v''	Q''	h'	h''	r	s'	s''
160	433.15	6.181	0.0011022	0.3068	3.260	675.47	2756.7	2081.3	1.9425	6.7475
161	434.15	6.339	0.0011034	0.2995	3.339	679.82	2757.8	2078.0	1.9525	6.7389
162	435.15	6.502	0.0011046	0.2924	3.420	684.18	2758.9	2074.7	1.9624	6.7303
163	436.15	6.667	0.0011058	0.2856	3.502	688.53	2759.9	2071.4	1.9724	6.7218
164	437.15	6.836	0.0011070	0.2789	3.586	692.89	2761.0	2068.1	1.9823	6.7133
165	438.15	7.008	0.0011082	0.2724	3.671	697.25	2762.0	2064.8	1.9923	6.7048
166	439.15	7.183	0.0011095	0.2661	3.758	701.62	2763.1	2061.4	2.0022	6.6964
167	440.15	7.362	0.0011107	0.2600	3.847	705.99	2764.1	2058.1	2.0121	6.6880
168	441.15	7.545	0.0011119	0.2540	3.937	710.36	2765.1	2054.7	2.0219	6.6796
169	442.15	7.731	0.0011132	0.2482	4.029	714.74	2766.1	2051.3	2.0318	6.6713
170	443.15	7.920	0.0011145	0.2426	4.123	719.12	2767.1	2047.9	2.0416	6.6630
171	444.15	8.114	0.0011157	0.2371	4.218	723.50	2768.0	2044.5	2.0515	6.6548
172	445.15	8.311	0.0011170	0.2317	4.316	727.89	2769.0	2041.1	2.0613	6.6465
173	446.15	8.511	0.0011183	0.2265	4.415	732.28	2769.9	2037.7	2.0711	6.6384
174	447.15	8.716	0.0011196	0.2215	4.515	736.67	2770.9	2034.2	2.0809	6.6302
175	448.15	8.924	0.0011209	0.2165	4.618	741.07	2771.8	2030.7	2.0906	6.6221
176	449.15	9.137	0.0011222	0.2117	4.723	745.47	2772.7	2027.3	2.1004	6.6140
177	450.15	9.353	0.0011235	0.2071	4.829	749.88	2773.6	2023.8	2.1102	6.6059
178	451.15	9.574	0.0011248	0.2025	4.937	754.28	2774.5	2020.2	2.1199	6.5979
179	452.15	9.798	0.0011262	0.1981	5.048	758.70	2775.4	2016.7	2.1296	6.5899
180	453.15	10.027	0.0011275	0.1938	5.160	763.12	2776.3	2013.1	2.1393	6.5819
181	454.15	10.259	0.0011289	0.1896	5.274	767.54	2777.1	2009.6	2.1490	6.5739
182	455.15	10.496	0.0011302	0.1855	5.391	771.96	2778.0	2006.0	2.1587	6.5660
183	456.15	10.738	0.0011316	0.1815	5.509	776.39	2778.8	2002.4	2.1683	6.5581
184	457.15	10.983	0.0011330	0.1776	5.629	780.82	2779.6	1998.8	2.1780	6.5503
185	458.15	11.233	0.0011344	0.1739	5.752	785.26	2780.4	1995.2	2.1876	6.5424
186	459.15	11.488	0.0011358	0.1702	5.877	789.70	2781.2	1991.5	2.1972	6.5346
187	460.15	11.747	0.0011372	0.1666	6.003	794.15	2782.0	1987.8	2.2068	6.5268
188	461.15	12.010	0.0011386	0.1631	6.132	798.60	2782.8	1984.2	2.2164	6.5191
189	462.15	12.278	0.0011401	0.1596	6.264	803.06	2783.5	1980.5	2.2260	6.5113
190	463.15	12.551	0.0011415	0.1563	6.397	807.52	2784.3	1976.7	2.2356	6.5036
191	464.15	12.829	0.0011430	0.1531	6.533	811.98	2785.0	1973.0	2.2451	6.4959
192	465.15	13.111	0.0011444	0.1499	6.671	816.45	2785.7	1969.3	2.2547	6.4883
193	466.15	13.398	0.0011459	0.1468	6.812	820.92	2786.4	1965.5	2.2642	6.4806
194	467.15	13.690	0.0011474	0.1438	6.955	825.40	2787.1	1961.7	2.2738	6.4730
195	468.15	13.987	0.0011489	0.1408	7.100	829.88	2787.8	1957.9	2.2833	6.4654
196	469.15	14.289	0.0011504	0.1380	7.248	834.37	2788.4	1954.1	2.2928	6.4578
197	470.15	14.596	0.0011519	0.1352	7.398	838.86	2789.1	1950.2	2.3023	6.4503
198	471.15	14.909	0.0011534	0.1324	7.551	843.36	2789.7	1946.4	2.3117	6.4428
199	472.15	15.226	0.0011549	0.1298	7.706	847.86	2790.3	1942.5	2.3212	6.4353
200	473.15	15.549	0.0011565	0.1272	7.864	852.37	2790.9	1938.6	2.3307	6.4278
201	474.15	15.877	0.0011581	0.1246	8.025	856.88	2791.5	1934.6	2.3401	6.4203
202	475.15	16.210	0.0011596	0.1221	8.188	861.40	2792.1	1930.7	2.3496	6.4128
203	476.15	16.549	0.0011612	0.1197	8.354	865.92	2792.7	1926.7	2.3590	6.4054
204	477.15	16.893	0.0011628	0.1173	8.522	870.45	2793.2	1922.8	2.3684	6.3980
205	478.15	17.243	0.0011644	0.1150	8.694	874.99	2793.8	1918.8	2.3778	6.3906
206	479.15	17.598	0.0011660	0.1128	8.868	879.53	2794.3	1914.7	2.3872	6.3832
207	480.15	17.959	0.0011676	0.1106	9.045	884.07	2794.8	1910.7	2.3966	6.3759
208	481.15	18.326	0.0011693	0.1084	9.225	888.62	2795.3	1906.6	2.4060	6.3686
209	482.15	18.699	0.0011709	0.1063	9.408	893.17	2795.7	1902.6	2.4153	6.3612
210	483.15	19.077	0.0011726	0.1042	9.593	897.74	2796.2	1898.5	2.4247	6.3539
211	484.15	19.462	0.0011743	0.1022	9.782	902.31	2796.6	1894.3	2.4340	6.3466
212	485.15	19.852	0.0011760	0.1003	9.974	906.87	2797.1	1890.2	2.4434	6.3394
213	486.15	20.249	0.0011777	0.09834	10.17	911.45	2797.5	1886.0	2.4527	6.3321
214	487.15	20.651	0.0011794	0.09646	10.37	916.03	2797.9	1881.8	2.4620	6.3249
215	488.15	21.060	0.0011811	0.09463	10.57	920.63	2798.3	1877.6	2.4713	6.3176

表1 饱和状态(按温度排列)(续)

t	T	P	v'	v''	q''	h'	h''	r	s'	s''
215	488.15	21.060	0.0011811	0.09463	10.57	920.63	2798.3	1877.6	2.4713	6.3176
216	489.15	21.475	0.0011829	0.09283	10.77	925.23	2798.6	1873.4	2.4806	6.3104
217	490.15	21.896	0.0011846	0.09107	10.98	929.83	2799.0	1869.1	2.4900	6.3032
218	491.15	22.324	0.0011864	0.08936	11.19	934.44	2799.3	1864.9	2.4992	6.2961
219	492.15	22.758	0.0011882	0.08768	11.41	939.06	2799.6	1860.6	2.5085	6.2889
220	493.15	23.198	0.0011900	0.08604	11.62	943.67	2799.9	1856.2	2.5178	6.2817
221	494.15	23.645	0.0011918	0.08443	11.84	948.30	2800.2	1851.9	2.5271	6.2746
222	495.15	24.099	0.0011936	0.08286	12.07	952.93	2800.5	1847.5	2.5363	6.2674
223	496.15	24.560	0.0011954	0.08132	12.30	957.58	2800.7	1843.1	2.5456	6.2603
224	497.15	25.027	0.0011973	0.07982	12.53	962.22	2800.9	1838.7	2.5548	6.2532
225	498.15	25.501	0.0011992	0.07835	12.76	966.89	2801.2	1834.3	2.5641	6.2461
226	499.15	25.982	0.0012010	0.07691	13.00	971.55	2801.4	1829.8	2.5733	6.2390
227	500.15	26.470	0.0012029	0.07550	13.24	976.21	2801.5	1825.3	2.5825	6.2319
228	501.15	26.965	0.0012048	0.07412	13.49	980.88	2801.7	1820.8	2.5918	6.2249
229	502.15	27.467	0.0012068	0.07277	13.74	985.57	2801.8	1816.3	2.6010	6.2178
230	503.15	27.976	0.0012087	0.07145	14.00	990.26	2802.0	1811.7	2.6102	6.2107
231	504.15	28.493	0.0012107	0.07016	14.25	994.96	2802.1	1807.1	2.6194	6.2037
232	505.15	29.016	0.0012127	0.06889	14.52	999.68	2802.2	1802.5	2.6286	6.1967
233	506.15	29.547	0.0012147	0.06765	14.78	1004.4	2802.2	1797.9	2.6378	6.1896
234	507.15	30.086	0.0012167	0.06643	15.05	1009.1	2802.3	1793.2	2.6469	6.1826
235	508.15	30.632	0.0012187	0.06525	15.33	1013.8	2802.3	1788.5	2.6562	6.1756
236	509.15	31.186	0.0012207	0.06408	15.61	1018.6	2802.3	1783.8	2.6653	6.1686
237	510.15	31.747	0.0012228	0.06294	15.89	1023.3	2802.3	1779.0	2.6745	6.1616
238	511.15	32.317	0.0012249	0.06182	16.18	1028.1	2802.3	1774.2	2.6837	6.1546
239	512.15	32.893	0.0012270	0.06073	16.47	1032.8	2802.3	1769.4	2.6928	6.1476
240	513.15	33.478	0.0012291	0.05965	16.76	1037.6	2802.2	1764.6	2.7020	6.1406
241	514.15	34.071	0.0012312	0.05860	17.06	1042.4	2802.1	1759.8	2.7112	6.1336
242	515.15	34.672	0.0012334	0.05757	17.37	1047.2	2802.0	1754.9	2.7203	6.1266
243	516.15	35.281	0.0012355	0.05656	17.68	1052.0	2801.9	1749.9	2.7295	6.1196
244	517.15	35.898	0.0012377	0.05558	17.99	1056.8	2801.8	1745.0	2.7386	6.1127
245	518.15	36.523	0.0012399	0.05461	18.31	1061.6	2801.6	1740.0	2.7478	6.1057
246	519.15	37.157	0.0012422	0.05366	18.64	1066.4	2801.4	1735.0	2.7569	6.0987
247	520.15	37.799	0.0012444	0.05272	18.97	1071.2	2801.2	1730.0	2.7661	6.0917
248	521.15	38.449	0.0012467	0.05181	19.30	1076.1	2801.0	1724.9	2.7752	6.0848
249	522.15	39.108	0.0012490	0.05092	19.64	1080.9	2800.7	1719.8	2.7843	6.0778
250	523.15	39.776	0.0012513	0.05004	19.99	1085.8	2800.4	1714.6	2.7935	6.0708
251	524.15	40.452	0.0012536	0.04918	20.33	1090.7	2800.1	1709.5	2.8026	6.0639
252	525.15	41.137	0.0012560	0.04833	20.69	1095.5	2799.8	1704.3	2.8118	6.0569
253	526.15	41.831	0.0012584	0.04750	21.05	1100.4	2799.5	1699.1	2.8209	6.0499
254	527.15	42.534	0.0012608	0.04669	21.42	1105.3	2799.1	1693.8	2.8300	6.0429
255	528.15	43.246	0.0012632	0.04590	21.79	1110.2	2798.7	1688.5	2.8392	6.0359
256	529.15	43.967	0.0012656	0.04511	22.17	1115.1	2798.3	1683.2	2.8483	6.0290
257	530.15	44.697	0.0012681	0.04435	22.55	1120.1	2797.9	1677.8	2.8574	6.0220
258	531.15	45.437	0.0012706	0.04360	22.94	1125.0	2797.4	1672.4	2.8666	6.0150
259	532.15	46.185	0.0012731	0.04286	23.33	1130.0	2796.9	1667.0	2.8757	6.0080
260	533.15	46.943	0.0012756	0.04213	23.73	1134.9	2796.4	1661.5	2.8848	6.0010
261	534.15	47.711	0.0012782	0.04142	24.14	1139.9	2795.9	1656.0	2.8940	5.9940
262	535.15	48.488	0.0012808	0.04073	24.55	1144.9	2795.3	1650.4	2.9031	5.9869
263	536.15	49.275	0.0012834	0.04004	24.97	1149.9	2794.7	1644.8	2.9123	5.9799
264	537.15	50.071	0.0012861	0.03937	25.40	1154.9	2794.1	1639.2	2.9214	5.9729
265	538.15	50.877	0.0012887	0.03871	25.83	1159.9	2793.5	1633.6	2.9306	5.9658
266	539.15	51.693	0.0012914	0.03806	26.27	1165.0	2792.8	1627.8	2.9397	5.9588
267	540.15	52.519	0.0012942	0.03743	26.72	1170.0	2792.1	1622.1	2.9489	5.9517
268	541.15	53.355	0.0012969	0.03680	27.17	1175.1	2791.4	1616.3	2.9580	5.9446
269	542.15	54.202	0.0012997	0.03619	27.63	1180.1	2790.6	1610.5	2.9672	5.9375
270	543.15	55.058	0.0013025	0.03559	28.10	1185.2	2789.9	1604.6	2.9763	5.9304

表 1 饱和状态(按温度排列)(续)

t	T	p	v'	v''	q''	h'	h''	r	s'	s''
270	543.15	55.058	0.0013025	0.03559	28.10	1185.2	2789.9	1604.6	2.9763	5.9304
271	544.15	55.925	0.0013053	0.03500	28.57	1190.3	2789.1	1598.7	2.9855	5.9233
272	545.15	56.802	0.0013082	0.03442	29.06	1195.4	2788.2	1592.8	2.9947	5.9162
273	546.15	57.689	0.0013111	0.03385	29.55	1200.6	2787.4	1586.8	3.0039	5.9091
274	547.15	58.587	0.0013141	0.03329	30.04	1205.7	2786.5	1580.7	3.0131	5.9019
275	548.15	59.496	0.0013170	0.03274	30.55	1210.9	2785.5	1574.7	3.0223	5.8947
276	549.15	60.415	0.0013200	0.03220	31.06	1216.0	2784.6	1568.6	3.0315	5.8876
277	550.15	61.346	0.0013231	0.03166	31.58	1221.2	2783.6	1562.4	3.0406	5.8804
278	551.15	62.287	0.0013261	0.03114	32.11	1226.4	2782.6	1556.2	3.0499	5.8731
279	552.15	63.239	0.0013292	0.03063	32.65	1231.6	2781.5	1549.9	3.0591	5.8659
280	553.15	64.202	0.0013324	0.03013	33.19	1236.8	2780.4	1543.6	3.0683	5.8586
281	554.15	65.176	0.0013356	0.02963	33.75	1242.1	2779.3	1537.2	3.0775	5.8513
282	555.15	66.162	0.0013388	0.02914	34.31	1247.3	2778.1	1530.8	3.0868	5.8440
283	556.15	67.158	0.0013420	0.02867	34.88	1252.6	2777.0	1524.3	3.0960	5.8367
284	557.15	68.167	0.0013453	0.02820	35.47	1257.9	2775.7	1517.8	3.1053	5.8294
285	558.15	69.186	0.0013487	0.02773	36.06	1263.2	2774.5	1511.3	3.1146	5.8220
286	559.15	70.218	0.0013520	0.02728	36.66	1268.5	2773.2	1504.6	3.1239	5.8146
287	560.15	71.261	0.0013554	0.02683	37.27	1273.9	2771.8	1498.0	3.1331	5.8072
288	561.15	72.315	0.0013589	0.02639	37.89	1279.2	2770.5	1491.2	3.1424	5.7997
289	562.15	73.384	0.0013624	0.02596	38.52	1284.6	2769.1	1484.5	3.1518	5.7923
290	563.15	74.461	0.0013659	0.02554	39.16	1290.0	2767.6	1477.6	3.1611	5.7848
291	564.15	75.551	0.0013695	0.02512	39.81	1295.4	2766.2	1470.7	3.1704	5.7773
292	565.15	76.654	0.0013732	0.02471	40.48	1300.9	2764.6	1463.8	3.1798	5.7697
293	566.15	77.769	0.0013769	0.02430	41.15	1306.3	2763.1	1456.8	3.1891	5.7621
294	567.15	78.897	0.0013806	0.02390	41.83	1311.8	2761.5	1449.7	3.1985	5.7545
295	568.15	80.037	0.0013844	0.02351	42.53	1317.3	2759.8	1442.6	3.2079	5.7469
296	569.15	81.189	0.0013882	0.02313	43.24	1322.8	2758.2	1435.4	3.2173	5.7392
297	570.15	82.355	0.0013921	0.02275	43.96	1328.3	2756.4	1428.1	3.2268	5.7315
298	571.15	83.532	0.0013960	0.02238	44.69	1333.9	2754.7	1420.8	3.2362	5.7237
299	572.15	84.723	0.0014000	0.02201	45.43	1339.4	2752.9	1413.4	3.2457	5.7159
300	573.15	85.927	0.0014041	0.02165	46.19	1345.0	2751.0	1406.0	3.2552	5.7081
301	574.15	87.144	0.0014082	0.02129	46.96	1350.7	2749.1	1398.5	3.2647	5.7003
302	575.15	88.374	0.0014123	0.02094	47.75	1356.3	2747.2	1390.9	3.2742	5.6924
303	576.15	89.617	0.0014166	0.02060	48.54	1362.0	2745.2	1383.2	3.2837	5.6844
304	577.15	90.873	0.0014208	0.02026	49.36	1367.7	2743.2	1375.5	3.2933	5.6765
305	578.15	92.144	0.0014252	0.01993	50.18	1373.4	2741.1	1367.7	3.3029	5.6685
306	579.15	93.427	0.0014296	0.01960	51.02	1379.1	2739.0	1359.8	3.3125	5.6604
307	580.15	94.725	0.0014341	0.01928	51.88	1384.9	2736.8	1351.9	3.3221	5.6523
308	581.15	96.036	0.0014387	0.01896	52.75	1390.7	2734.6	1343.9	3.3318	5.6442
309	582.15	97.361	0.0014433	0.01864	53.64	1396.5	2732.3	1335.8	3.3415	5.6360
310	583.15	98.700	0.0014480	0.01833	54.54	1402.4	2730.0	1327.6	3.3512	5.6278
311	584.15	100.05	0.0014527	0.01803	55.46	1408.3	2727.6	1319.4	3.3609	5.6195
312	585.15	101.42	0.0014576	0.01773	56.40	1414.2	2725.2	1311.0	3.3707	5.6111
313	586.15	102.80	0.0014625	0.01743	57.36	1420.1	2722.7	1302.6	3.3805	5.6028
314	587.15	104.20	0.0014675	0.01714	58.33	1426.1	2720.2	1294.1	3.3903	5.5943
315	588.15	105.61	0.0014726	0.01686	59.33	1432.1	2717.6	1285.5	3.4002	5.5858
316	589.15	107.04	0.0014778	0.01657	60.34	1438.1	2714.9	1276.8	3.4101	5.5772
317	590.15	108.48	0.0014831	0.01629	61.37	1444.2	2712.2	1268.0	3.4200	5.5686
318	591.15	109.93	0.0014885	0.01602	62.43	1450.3	2709.4	1259.1	3.4300	5.5599
319	592.15	111.40	0.0014939	0.01575	63.50	1456.4	2706.6	1250.2	3.4400	5.5512
320	593.15	112.89	0.0014995	0.01548	64.60	1462.6	2703.7	1241.1	3.4500	5.5423
321	594.15	114.39	0.0015052	0.01522	65.72	1468.8	2700.7	1231.9	3.4601	5.5334
322	595.15	115.91	0.0015109	0.01496	66.86	1475.1	2697.6	1222.6	3.4702	5.5244
323	596.15	117.44	0.0015168	0.01470	68.03	1481.3	2694.5	1213.2	3.4804	5.5154
324	597.15	118.99	0.0015228	0.01445	69.23	1487.7	2691.3	1203.6	3.4906	5.5062
325	598.15	120.56	0.0015289	0.01419	70.45	1494.0	2688.0	1194.0	3.5008	5.4969

表 1 饱和状态(按温度排列)(续)

t	T	p	v'	v''	q''	h'	h''	r	s'	s''
325	598.15	120.56	0.0015289	0.01419	70.45	1494.0	2688.0	1194.0	3.5008	5.4969
326	599.15	122.14	0.0015352	0.01395	71.70	1500.4	2684.6	1184.2	3.5111	5.4876
327	600.15	123.73	0.0015416	0.01370	72.97	1506.9	2681.1	1174.2	3.5215	5.4781
328	601.15	125.35	0.0015481	0.01346	74.28	1513.4	2677.6	1164.2	3.5319	5.4685
329	602.15	126.98	0.0015547	0.01322	75.62	1519.9	2673.9	1154.0	3.5423	5.4588
330	603.15	128.63	0.0015615	0.01299	76.99	1526.5	2670.2	1143.6	3.5528	5.4490
331	604.15	130.29	0.0015684	0.01276	78.39	1533.2	2666.3	1133.1	3.5634	5.4391
332	605.15	131.97	0.0015755	0.01253	79.83	1539.9	2662.3	1122.5	3.5740	5.4290
333	606.15	133.67	0.0015827	0.01230	81.30	1546.6	2658.3	1111.7	3.5847	5.4188
334	607.15	135.38	0.0015902	0.01208	82.81	1553.4	2654.1	1100.7	3.5955	5.4084
335	608.15	137.12	0.0015978	0.01185	84.36	1560.3	2649.7	1089.5	3.6063	5.3979
336	609.15	138.87	0.0016055	0.01163	85.95	1567.2	2645.3	1078.1	3.6172	5.3872
337	610.15	140.64	0.0016135	0.01142	87.58	1574.2	2640.7	1066.6	3.6282	5.3764
338	611.15	142.42	0.0016217	0.01120	89.26	1581.2	2636.0	1054.8	3.6392	5.3653
339	612.15	144.23	0.0016301	0.01099	90.99	1588.3	2631.2	1042.9	3.6504	5.3541
340	613.15	146.05	0.0016387	0.01078	92.76	1595.5	2626.2	1030.7	3.6616	5.3427
341	614.15	147.89	0.0016476	0.01057	94.58	1602.7	2621.0	1018.3	3.6729	5.3312
342	615.15	149.76	0.0016567	0.01037	96.46	1610.0	2615.7	1005.7	3.6844	5.3194
343	616.15	151.64	0.0016661	0.01016	98.39	1617.5	2610.3	992.8	3.6959	5.3074
344	617.15	153.54	0.0016758	0.009962	100.4	1624.9	2604.7	979.7	3.7075	5.2952
345	618.15	155.45	0.0016858	0.009763	102.4	1632.5	2598.9	966.4	3.7193	5.2828
346	619.15	157.39	0.0016961	0.009566	104.5	1640.2	2593.0	952.8	3.7311	5.2702
347	620.15	159.35	0.0017067	0.009371	106.7	1648.0	2586.9	938.9	3.7431	5.2574
348	621.15	161.33	0.0017178	0.009178	109.0	1655.8	2580.7	924.8	3.7553	5.2444
349	622.15	163.33	0.0017292	0.008988	111.3	1663.8	2574.2	910.4	3.7676	5.2311
350	623.15	165.35	0.0017411	0.008799	113.6	1671.9	2567.7	895.7	3.7800	5.2177
351	624.15	167.39	0.0017532	0.008609	116.2	1680.4	2560.7	880.4	3.7933	5.2036
352	625.15	169.45	0.0017661	0.008420	118.8	1689.3	2553.5	864.2	3.8071	5.1893
353	626.15	171.54	0.0017796	0.008232	121.5	1698.4	2546.1	847.7	3.8209	5.1746
354	627.15	173.64	0.0017937	0.008045	124.3	1707.5	2538.4	830.9	3.8349	5.1596
355	628.15	175.77	0.0018085	0.007859	127.2	1716.6	2530.4	813.8	3.8489	5.1442
356	629.15	177.92	0.0018241	0.007674	130.3	1725.9	2522.1	796.2	3.8629	5.1283
357	630.15	180.09	0.0018406	0.007490	133.5	1735.2	2513.5	778.3	3.8772	5.1121
358	631.15	182.29	0.0018580	0.007306	136.9	1744.7	2504.6	759.9	3.8915	5.0953
359	632.15	184.51	0.0018764	0.007123	140.4	1754.3	2495.2	740.9	3.9061	5.0780
360	633.15	186.75	0.0018959	0.006940	144.1	1764.2	2485.4	721.3	3.9210	5.0600
361	634.15	189.02	0.0019167	0.006757	148.0	1774.2	2475.2	701.0	3.9362	5.0414
362	635.15	191.31	0.0019388	0.006573	152.1	1784.6	2464.4	679.8	3.9518	5.0220
363	636.15	193.62	0.0019626	0.006388	156.5	1795.3	2453.0	657.8	3.9679	5.0017
364	637.15	195.96	0.0019882	0.006201	161.3	1806.4	2440.9	634.6	3.9846	4.9804
365	638.15	198.33	0.0020160	0.006012	166.3	1818.0	2428.0	610.0	4.0021	4.9579
366	639.15	200.72	0.0020464	0.005819	171.9	1830.2	2414.1	583.9	4.0205	4.9339
367	640.15	203.13	0.0020802	0.005621	177.9	1843.2	2399.0	555.7	4.0401	4.9081
368	641.15	205.57	0.0021181	0.005416	184.6	1857.3	2382.4	525.1	4.0613	4.8801
369	642.15	208.04	0.0021618	0.005201	192.3	1872.8	2363.9	491.1	4.0846	4.8492
370	643.15	210.54	0.0022136	0.004973	201.1	1890.2	2342.8	452.6	4.1108	4.8144
371	644.15	213.06	0.0022778	0.004723	211.7	1910.5	2317.9	407.4	4.1414	4.7738
372	645.15	215.62	0.0023636	0.004439	225.3	1935.6	2286.9	351.4	4.1794	4.7240
373	646.15	218.20	0.0024963	0.004084	244.9	1970.5	2244.0	273.5	4.2325	4.6559
374	647.15	220.81	0.0028407	0.003458	289.2	2046.3	2155.0	108.6	4.3487	4.5166
374.15	647.30	221.20	0.00317	0.00317	315.5	2107.4	2107.4	0.0	4.4429	

表 2 饱和状态(按压力排列)

P	t	v'	v''	ρ''	h'	h''	r	s'	s''
10^5 Pa	$^{\circ}\text{C}$	m^3/kg	m^3/kg	kg/m^3	kJ/kg	kJ/kg	kJ/kg	$\text{kJ}/(\text{kg}\cdot\text{K})$	$\text{kJ}/(\text{kg}\cdot\text{K})$
0,010	6,9828	0,0010001	129,20	0,007739	29,34	2514,4	2485,0	0,1060	8,9767
0,015	13,036	0,0010006	87,98	0,01137	54,71	2525,5	2470,7	0,1957	8,8288
0,020	17,513	0,0010012	67,01	0,01492	73,46	2533,6	2460,2	0,2607	8,7246
0,025	21,096	0,0010020	54,26	0,01843	88,45	2540,2	2451,7	0,3119	8,6440
0,030	24,100	0,0010027	45,67	0,02190	101,00	2545,6	2444,6	0,3544	8,5785
0,035	26,694	0,0010033	39,48	0,02533	111,85	2550,4	2438,5	0,3907	8,5232
0,040	28,983	0,0010040	34,80	0,02873	121,41	2554,5	2433,1	0,4225	8,4755
0,045	31,035	0,0010046	31,14	0,03211	129,99	2558,2	2428,2	0,4507	8,4335
0,050	32,898	0,0010052	28,19	0,03547	137,77	2561,6	2423,8	0,4763	8,3960
0,055	34,605	0,0010058	25,77	0,03880	144,91	2564,7	2419,8	0,4995	8,3621
0,060	36,183	0,0010064	23,74	0,04212	151,50	2567,5	2416,0	0,5209	8,3312
0,065	37,651	0,0010069	22,02	0,04542	157,64	2570,2	2412,5	0,5407	8,3029
0,070	39,025	0,0010074	20,53	0,04871	163,38	2572,6	2409,2	0,5591	8,2767
0,075	40,316	0,0010079	19,24	0,05198	168,77	2574,9	2406,2	0,5763	8,2523
0,080	41,534	0,0010084	18,10	0,05523	173,86	2577,1	2403,2	0,5925	8,2296
0,085	42,689	0,0010089	17,10	0,05848	178,69	2579,2	2400,5	0,6079	8,2082
0,090	43,787	0,0010094	16,20	0,06171	183,28	2581,1	2397,9	0,6224	8,1881
0,095	44,833	0,0010098	15,40	0,06493	187,65	2583,0	2395,3	0,6361	8,1691
0,10	45,833	0,0010102	14,67	0,06814	191,83	2584,8	2392,9	0,6493	8,1511
0,11	47,710	0,0010111	13,42	0,07454	199,68	2588,1	2388,4	0,6738	8,1177
0,12	49,446	0,0010119	12,36	0,08089	206,94	2591,2	2384,3	0,6963	8,0872
0,13	51,062	0,0010126	11,47	0,08722	213,70	2594,0	2380,3	0,7172	8,0592
0,14	52,574	0,0010133	10,69	0,09351	220,02	2596,7	2376,7	0,7367	8,0334
0,15	53,997	0,0010140	10,02	0,09977	225,97	2599,2	2373,2	0,7549	8,0093
0,16	55,341	0,0010147	9,433	0,1060	231,59	2601,6	2370,0	0,7721	7,9869
0,17	56,615	0,0010154	8,911	0,1122	236,93	2603,8	2366,9	0,7883	7,9658
0,18	57,826	0,0010160	8,445	0,1184	241,99	2605,9	2363,9	0,8036	7,9460
0,19	58,982	0,0010166	8,027	0,1246	246,83	2607,9	2361,1	0,8182	7,9272
0,20	60,086	0,0010172	7,650	0,1307	251,45	2609,9	2358,4	0,8321	7,9094
0,21	61,145	0,0010178	7,307	0,1368	255,88	2611,7	2355,8	0,8453	7,8925
0,22	62,162	0,0010183	6,995	0,1430	260,14	2613,5	2353,3	0,8581	7,8764
0,23	63,139	0,0010189	6,709	0,1490	264,23	2615,2	2350,9	0,8702	7,8611
0,24	64,082	0,0010194	6,447	0,1551	268,18	2616,8	2348,6	0,8820	7,8464
0,25	64,992	0,0010199	6,204	0,1612	271,99	2618,3	2346,4	0,8932	7,8323
0,26	65,871	0,0010204	5,980	0,1672	275,67	2619,9	2344,2	0,9041	7,8188
0,27	66,722	0,0010209	5,772	0,1732	279,24	2621,3	2342,1	0,9146	7,8058
0,28	67,547	0,0010214	5,579	0,1793	282,69	2622,7	2340,0	0,9248	7,7933
0,29	68,347	0,0010219	5,398	0,1852	286,05	2624,1	2338,1	0,9346	7,7812
0,30	69,124	0,0010223	5,229	0,1912	289,30	2625,4	2336,1	0,9441	7,7695
0,32	70,615	0,0010232	4,922	0,2032	295,55	2628,0	2332,4	0,9623	7,7474
0,34	72,029	0,0010241	4,650	0,2150	301,48	2630,4	2328,9	0,9795	7,7266
0,36	73,374	0,0010249	4,408	0,2269	307,12	2632,6	2325,5	0,9958	7,7070
0,38	74,658	0,0010257	4,190	0,2387	312,50	2634,8	2322,3	1,0113	7,6884
0,40	75,886	0,0010265	3,993	0,2504	317,65	2636,9	2319,2	1,0261	7,6709
0,45	78,743	0,0010284	3,576	0,2796	329,64	2641,7	2312,0	1,0603	7,6307
0,50	81,345	0,0010301	3,240	0,3086	340,56	2646,0	2305,4	1,0912	7,5947
0,55	83,737	0,0010317	2,964	0,3374	350,61	2649,9	2299,3	1,1194	7,5623
0,60	85,954	0,0010333	2,732	0,3661	359,93	2653,6	2293,6	1,1454	7,5327
0,65	88,021	0,0010347	2,535	0,3945	368,62	2656,9	2288,3	1,1696	7,5055
0,70	89,959	0,0010361	2,365	0,4229	376,77	2660,1	2283,3	1,1921	7,4804
0,75	91,785	0,0010375	2,217	0,4511	384,45	2663,0	2278,6	1,2131	7,4570
0,80	93,512	0,0010387	2,087	0,4792	391,72	2665,8	2274,0	1,2330	7,4352
0,85	95,152	0,0010400	1,972	0,5071	398,63	2668,4	2269,8	1,2518	7,4147
0,90	96,713	0,0010412	1,869	0,5350	405,21	2670,9	2265,6	1,2696	7,3954
0,95	98,204	0,0010423	1,777	0,5627	411,49	2673,2	2261,7	1,2865	7,3771

表 2 饱和状态(按压力排列) (续)

P	t	v'	v''	ρ''	h'	h''	r	s'	s''
1.0	99.632	0.0010434	1.694	0.5904	417.51	2675.4	2257.9	1.3027	7.3598
1.1	102.32	0.0010455	1.549	0.6455	428.84	2679.6	2250.8	1.3330	7.3277
1.2	104.81	0.0010476	1.428	0.7002	439.36	2683.4	2244.1	1.3609	7.2984
1.3	107.13	0.0010495	1.325	0.7547	449.19	2687.0	2237.8	1.3868	7.2715
1.4	109.32	0.0010513	1.236	0.8088	458.42	2690.3	2231.9	1.4109	7.2465
1.5	111.37	0.0010530	1.159	0.8628	467.13	2693.4	2226.2	1.4336	7.2234
1.6	113.32	0.0010547	1.091	0.9165	475.38	2696.2	2220.9	1.4550	7.2017
1.7	115.17	0.0010563	1.031	0.9700	483.22	2699.0	2215.7	1.4752	7.1813
1.8	116.93	0.0010579	0.9772	1.023	490.70	2701.5	2210.8	1.4944	7.1622
1.9	118.62	0.0010594	0.9290	1.076	497.85	2704.0	2206.1	1.5127	7.1440
2.0	120.23	0.0010608	0.8854	1.129	504.70	2706.3	2201.6	1.5301	7.1268
2.1	121.78	0.0010623	0.8459	1.182	511.29	2708.5	2197.2	1.5468	7.1105
2.2	123.27	0.0010636	0.8098	1.235	517.62	2710.6	2193.0	1.5627	7.0949
2.3	124.71	0.0010650	0.7768	1.287	523.73	2712.6	2188.9	1.5781	7.0800
2.4	126.09	0.0010663	0.7465	1.340	529.64	2714.5	2184.9	1.5929	7.0657
2.5	127.43	0.0010675	0.7184	1.392	535.34	2716.4	2181.0	1.6071	7.0520
2.6	128.73	0.0010688	0.6925	1.444	540.87	2718.2	2177.3	1.6209	7.0389
2.7	129.98	0.0010700	0.6684	1.496	546.24	2719.9	2173.6	1.6342	7.0262
2.8	131.20	0.0010712	0.6460	1.548	551.44	2721.5	2170.1	1.6471	7.0140
2.9	132.39	0.0010724	0.6251	1.600	556.51	2723.1	2166.6	1.6595	7.0023
3.0	133.54	0.0010735	0.6056	1.651	561.43	2724.7	2163.2	1.6716	6.9909
3.1	134.66	0.0010746	0.5872	1.703	566.23	2726.1	2159.9	1.6834	6.9799
3.2	135.75	0.0010757	0.5700	1.754	570.90	2727.6	2156.7	1.6948	6.9693
3.3	136.82	0.0010768	0.5538	1.806	575.46	2729.0	2153.5	1.7059	6.9589
3.4	137.86	0.0010779	0.5385	1.857	579.92	2730.3	2150.4	1.7168	6.9489
3.5	138.87	0.0010789	0.5240	1.908	584.27	2731.6	2147.4	1.7273	6.9394
3.6	139.86	0.0010799	0.5103	1.960	588.53	2732.9	2144.4	1.7376	6.9297
3.7	140.83	0.0010809	0.4974	2.011	592.69	2734.1	2141.4	1.7476	6.9205
3.8	141.78	0.0010819	0.4851	2.062	596.77	2735.3	2138.6	1.7574	6.9116
3.9	142.71	0.0010829	0.4734	2.113	600.76	2736.5	2135.7	1.7670	6.9028
4.0	143.62	0.0010839	0.4622	2.163	604.67	2737.6	2133.0	1.7764	6.8943
4.1	144.52	0.0010848	0.4516	2.214	608.51	2738.7	2130.2	1.7856	6.8860
4.2	145.39	0.0010858	0.4415	2.265	612.27	2739.8	2127.5	1.7945	6.8779
4.3	146.25	0.0010867	0.4318	2.316	615.97	2740.9	2124.9	1.8033	6.8700
4.4	147.09	0.0010876	0.4226	2.366	619.60	2741.9	2122.3	1.8120	6.8623
4.5	147.92	0.0010885	0.4138	2.417	623.16	2742.9	2119.7	1.8204	6.8547
4.6	148.73	0.0010894	0.4053	2.467	626.67	2743.9	2117.2	1.8287	6.8473
4.7	149.53	0.0010903	0.3972	2.518	630.11	2744.8	2114.7	1.8368	6.8401
4.8	150.31	0.0010911	0.3894	2.568	633.50	2745.7	2112.2	1.8448	6.8330
4.9	151.08	0.0010920	0.3819	2.619	636.83	2746.6	2109.8	1.8527	6.8260
5.0	151.84	0.0010928	0.3747	2.669	640.12	2747.5	2107.4	1.8604	6.8192
5.2	153.33	0.0010945	0.3611	2.769	646.53	2749.3	2102.7	1.8754	6.8059
5.4	154.76	0.0010961	0.3485	2.870	652.76	2750.9	2098.1	1.8899	6.7932
5.6	156.16	0.0010977	0.3367	2.970	658.81	2752.5	2093.7	1.9040	6.7809
5.8	157.52	0.0010993	0.3257	3.070	664.69	2754.0	2089.3	1.9176	6.7690
6.0	158.84	0.0011009	0.3155	3.170	670.42	2755.5	2085.0	1.9308	6.7575
6.2	160.12	0.0011024	0.3059	3.270	676.01	2756.9	2080.8	1.9437	6.7464
6.4	161.38	0.0011039	0.2968	3.369	681.46	2758.2	2076.8	1.9562	6.7357
6.6	162.60	0.0011053	0.2883	3.469	686.78	2759.5	2072.7	1.9684	6.7252
6.8	163.79	0.0011068	0.2803	3.568	691.98	2760.8	2068.8	1.9802	6.7150
7.0	164.96	0.0011082	0.2727	3.667	697.06	2762.0	2064.9	1.9918	6.7052
7.2	166.10	0.0011096	0.2655	3.766	702.03	2763.2	2061.1	2.0031	6.6956
7.4	167.21	0.0011110	0.2587	3.866	706.90	2764.3	2057.4	2.0141	6.6862
7.6	168.30	0.0011123	0.2522	3.964	711.68	2765.4	2053.7	2.0249	6.6771
7.8	169.37	0.0011137	0.2461	4.063	716.35	2766.4	2050.1	2.0354	6.6683
8.0	170.41	0.0011150	0.2403	4.162	720.94	2767.5	2046.5	2.0457	6.6596
8.2	171.44	0.0011163	0.2347	4.261	725.43	2768.5	2043.0	2.0558	6.6511
8.4	172.45	0.0011176	0.2294	4.360	729.85	2769.4	2039.6	2.0657	6.6429
8.6	173.44	0.0011188	0.2243	4.458	734.19	2770.4	2036.2	2.0753	6.6348
8.8	174.41	0.0011201	0.2195	4.557	738.45	2771.3	2032.8	2.0848	6.6269

表2 饱和状态(按压力排列)(续)

p	t	v'	v''	q''	h'	h''	r	s'	s''
9.0	175.36	0.0011213	0.2148	4.655	742.64	2772.1	2029.5	2.0941	6.6192
9.2	176.29	0.0011226	0.2104	4.754	746.76	2773.0	2026.2	2.1033	6.6116
9.4	177.21	0.0011238	0.2061	4.852	750.82	2773.8	2023.0	2.1122	6.6042
9.6	178.12	0.0011250	0.2020	4.950	754.81	2774.6	2019.8	2.1210	6.5969
9.8	179.01	0.0011262	0.1981	5.049	758.74	2775.4	2016.7	2.1297	6.5898
10.0	179.88	0.0011274	0.1943	5.147	762.61	2776.2	2013.6	2.1382	6.5828
10.5	182.02	0.0011303	0.1855	5.392	772.03	2778.0	2005.9	2.1588	6.5659
11.0	184.07	0.0011331	0.1774	5.637	781.13	2779.7	1998.5	2.1786	6.5497
11.5	186.05	0.0011359	0.1700	5.883	789.92	2781.3	1991.3	2.1977	6.5342
12.0	187.96	0.0011386	0.1632	6.127	798.43	2782.7	1984.3	2.2161	6.5194
12.5	189.81	0.0011412	0.1569	6.372	806.69	2784.1	1977.4	2.2338	6.5051
13.0	191.61	0.0011438	0.1511	6.617	814.70	2785.4	1970.7	2.2510	6.4913
13.5	193.35	0.0011464	0.1457	6.862	822.49	2786.6	1964.2	2.2676	6.4780
14.0	195.04	0.0011489	0.1407	7.106	830.08	2787.8	1957.7	2.2837	6.4651
14.5	196.69	0.0011514	0.1360	7.351	837.46	2788.9	1951.4	2.2993	6.4526
15.0	198.29	0.0011539	0.1317	7.596	844.67	2789.9	1945.2	2.3145	6.4406
15.5	199.85	0.0011563	0.1275	7.840	851.69	2790.8	1939.2	2.3292	6.4285
16.0	201.37	0.0011586	0.1237	8.085	858.56	2791.7	1933.2	2.3436	6.4175
16.5	202.86	0.0011610	0.1201	8.330	865.27	2792.6	1927.3	2.3576	6.4065
17.0	204.31	0.0011633	0.1166	8.575	871.84	2793.4	1921.5	2.3713	6.3957
17.5	205.72	0.0011656	0.1134	8.820	878.28	2794.1	1915.9	2.3846	6.3853
18.0	207.11	0.0011678	0.1103	9.065	884.58	2794.8	1910.3	2.3976	6.3751
18.5	208.47	0.0011701	0.1074	9.310	890.75	2795.5	1904.7	2.4103	6.3651
19.0	209.80	0.0011723	0.1047	9.555	896.81	2796.1	1899.3	2.4228	6.3554
19.5	211.10	0.0011744	0.1020	9.801	902.75	2796.7	1893.9	2.4349	6.3459
20.0	212.37	0.0011766	0.09954	10.05	908.59	2797.2	1888.6	2.4469	6.3367
20.5	213.63	0.0011787	0.09716	10.29	914.32	2797.7	1883.4	2.4585	6.3276
21.0	214.85	0.0011809	0.09489	10.54	919.96	2798.2	1878.2	2.4700	6.3187
21.5	216.06	0.0011830	0.09272	10.78	925.50	2798.6	1873.1	2.4812	6.3100
22.0	217.24	0.0011850	0.09065	11.03	930.95	2799.1	1868.1	2.4922	6.3015
22.5	218.41	0.0011871	0.08867	11.28	936.32	2799.4	1863.1	2.5030	6.2931
23.0	219.55	0.0011892	0.08677	11.52	941.60	2799.8	1858.2	2.5136	6.2849
23.5	220.68	0.0011912	0.08495	11.77	946.80	2800.1	1853.3	2.5241	6.2769
24.0	221.78	0.0011932	0.08320	12.02	951.93	2800.4	1848.5	2.5343	6.2690
24.5	222.87	0.0011952	0.08152	12.27	956.98	2800.7	1843.7	2.5444	6.2612
25.0	223.94	0.0011972	0.07991	12.51	961.96	2800.9	1839.0	2.5543	6.2536
25.5	225.00	0.0011991	0.07835	12.76	966.87	2801.2	1834.3	2.5640	6.2461
26.0	226.04	0.0012011	0.07686	13.01	971.72	2801.4	1829.6	2.5736	6.2387
26.5	227.06	0.0012031	0.07541	13.26	976.50	2801.6	1825.0	2.5831	6.2315
27.0	228.07	0.0012050	0.07402	13.51	981.22	2801.7	1820.5	2.5924	6.2244
27.5	229.07	0.0012069	0.07268	13.76	985.88	2801.9	1816.0	2.6016	6.2173
28.0	230.05	0.0012088	0.07139	14.01	990.48	2802.0	1811.5	2.6106	6.2104
28.5	231.01	0.0012107	0.07014	14.26	995.03	2802.1	1807.1	2.6195	6.2036
29.0	231.97	0.0012126	0.06893	14.51	999.53	2802.2	1802.6	2.6283	6.1969
29.5	232.91	0.0012145	0.06776	14.76	1004.0	2802.2	1798.3	2.6370	6.1903
30	233.84	0.0012163	0.06663	15.01	1008.4	2802.3	1793.9	2.6455	6.1837
31	235.07	0.0012200	0.06447	15.51	1017.0	2802.3	1785.4	2.6623	6.1709
32	237.45	0.0012237	0.06244	16.02	1025.4	2802.3	1776.9	2.6786	6.1585
33	239.18	0.0012274	0.06053	16.52	1033.7	2802.3	1768.6	2.6945	6.1463
34	240.88	0.0012310	0.05873	17.03	1041.8	2802.1	1760.3	2.7101	6.1344
35	242.54	0.0012345	0.05703	17.54	1049.8	2802.0	1752.2	2.7253	6.1228
36	244.16	0.0012381	0.05541	18.05	1057.6	2801.7	1744.2	2.7401	6.1115
37	245.75	0.0012416	0.05389	18.56	1065.2	2801.4	1736.2	2.7547	6.1004
38	247.31	0.0012451	0.05244	19.07	1072.7	2801.1	1728.4	2.7689	6.0896
39	248.84	0.0012486	0.05106	19.58	1080.1	2800.8	1720.6	2.7829	6.0789
40	250.33	0.0012521	0.04975	20.10	1087.4	2800.3	1712.9	2.7965	6.0685
41	251.80	0.0012555	0.04850	20.62	1094.6	2799.9	1705.3	2.8099	6.0583
42	253.24	0.0012589	0.04731	21.14	1101.6	2799.4	1697.8	2.8231	6.0482
43	254.66	0.0012623	0.04617	21.66	1108.5	2798.9	1690.3	2.8360	6.0383
44	256.05	0.0012657	0.04508	22.18	1115.4	2798.3	1682.9	2.8487	6.0286

表 2 饱和状态(按压力排列)(续)

P	ε	v'	v''	ρ''	h'	h''	r	s'	s''
45	257.41	0.0012691	0.04404	22.71	1122.1	2797.7	1675.6	2.8612	6.0191
46	258.75	0.0012725	0.04304	23.24	1128.8	2797.0	1668.3	2.8735	6.0097
47	260.07	0.0012758	0.04208	23.76	1135.3	2796.4	1661.1	2.8855	6.0004
48	261.37	0.0012792	0.04116	24.29	1141.8	2795.7	1653.9	2.8974	5.9913
49	262.65	0.0012825	0.04028	24.83	1148.2	2794.9	1646.8	2.9091	5.9824
50	263.91	0.0012858	0.03943	25.36	1154.5	2794.2	1639.7	2.9206	5.9735
51	265.15	0.0012891	0.03861	25.90	1160.7	2793.4	1632.7	2.9320	5.9648
52	266.37	0.0012924	0.03782	26.44	1166.8	2792.6	1625.7	2.9431	5.9561
53	267.58	0.0012957	0.03707	26.98	1172.9	2791.7	1618.8	2.9541	5.9476
54	268.76	0.0012990	0.03633	27.52	1178.9	2790.8	1611.9	2.9650	5.9392
55	269.93	0.0013023	0.03563	28.07	1184.9	2789.9	1605.0	2.9757	5.9309
56	271.09	0.0013056	0.03495	28.62	1190.8	2789.0	1598.2	2.9863	5.9227
57	272.22	0.0013089	0.03429	29.16	1196.6	2788.0	1591.4	2.9967	5.9146
58	273.35	0.0013121	0.03365	29.72	1202.3	2787.0	1584.7	3.0071	5.9066
59	274.46	0.0013154	0.03303	30.27	1208.0	2786.0	1578.0	3.0172	5.8986
60	275.55	0.0013187	0.03244	30.83	1213.7	2785.0	1571.3	3.0273	5.8908
61	276.63	0.0013219	0.03186	31.39	1219.3	2784.0	1564.7	3.0372	5.8830
62	277.70	0.0013252	0.03130	31.95	1224.8	2782.9	1558.0	3.0471	5.8753
63	278.75	0.0013285	0.03076	32.51	1230.3	2781.8	1551.5	3.0568	5.8677
64	279.79	0.0013317	0.03023	33.08	1235.7	2780.6	1544.9	3.0664	5.8601
65	280.82	0.0013350	0.02972	33.65	1241.1	2779.5	1538.4	3.0759	5.8527
66	281.84	0.0013383	0.02922	34.22	1246.5	2778.3	1531.9	3.0853	5.8452
67	282.84	0.0013415	0.02874	34.79	1251.8	2777.1	1525.4	3.0946	5.8379
68	283.84	0.0013448	0.02827	35.37	1257.0	2775.9	1518.9	3.1038	5.8306
69	284.82	0.0013481	0.02782	35.95	1262.2	2774.7	1512.5	3.1129	5.8233
70	285.79	0.0013513	0.02737	36.53	1267.4	2773.5	1506.0	3.1219	5.8162
71	286.75	0.0013546	0.02694	37.12	1272.5	2772.2	1499.6	3.1308	5.8090
72	287.70	0.0013579	0.02652	37.70	1277.6	2770.9	1493.3	3.1397	5.8020
73	288.64	0.0013611	0.02611	38.29	1282.7	2769.6	1486.9	3.1484	5.7949
74	289.57	0.0013644	0.02572	38.89	1287.7	2768.3	1480.5	3.1571	5.7880
75	290.50	0.0013677	0.02533	39.48	1292.7	2766.9	1474.2	3.1657	5.7811
76	291.41	0.0013710	0.02495	40.08	1297.6	2765.5	1467.9	3.1742	5.7742
77	292.31	0.0013743	0.02458	40.68	1302.6	2764.2	1461.6	3.1827	5.7673
78	293.21	0.0013776	0.02422	41.29	1307.4	2762.8	1455.3	3.1911	5.7606
79	294.09	0.0013809	0.02387	41.90	1312.3	2761.3	1449.1	3.1994	5.7538
80	294.97	0.0013842	0.02353	42.51	1317.1	2759.9	1442.8	3.2076	5.7471
81	295.84	0.0013876	0.02319	43.12	1321.9	2758.4	1436.6	3.2158	5.7404
82	296.70	0.0013909	0.02286	43.74	1326.6	2757.0	1430.3	3.2239	5.7338
83	297.55	0.0013942	0.02254	44.36	1331.4	2755.5	1424.1	3.2320	5.7272
84	298.39	0.0013976	0.02223	44.98	1336.1	2754.0	1417.9	3.2399	5.7207
85	299.23	0.0014009	0.02193	45.61	1340.7	2752.5	1411.7	3.2479	5.7141
86	300.06	0.0014043	0.02163	46.24	1345.4	2750.9	1405.5	3.2558	5.7076
87	300.88	0.0014077	0.02133	46.87	1350.0	2749.4	1399.3	3.2636	5.7012
88	301.70	0.0014111	0.02105	47.51	1354.6	2747.8	1393.2	3.2713	5.6948
89	302.51	0.0014145	0.02077	48.15	1359.2	2746.2	1387.0	3.2790	5.6884
90	303.31	0.0014179	0.02050	48.79	1363.7	2744.6	1380.9	3.2867	5.6820
91	304.10	0.0014213	0.02023	49.44	1368.3	2743.0	1374.7	3.2943	5.6757
92	304.89	0.0014247	0.01996	50.09	1372.8	2741.4	1368.6	3.3018	5.6694
93	305.67	0.0014281	0.01971	50.74	1377.2	2739.7	1362.5	3.3093	5.6631
94	306.44	0.0014315	0.01945	51.40	1381.7	2738.0	1356.3	3.3168	5.6568
95	307.21	0.0014351	0.01921	52.06	1386.1	2736.4	1350.2	3.3242	5.6506
96	307.97	0.0014385	0.01897	52.73	1390.6	2734.7	1344.1	3.3315	5.6444
97	308.73	0.0014420	0.01873	53.40	1395.0	2733.0	1338.0	3.3388	5.6382
98	309.48	0.0014455	0.01849	54.07	1399.3	2731.2	1331.9	3.3461	5.6321
99	310.22	0.0014490	0.01827	54.75	1403.7	2729.5	1325.8	3.3534	5.6259
100	310.96	0.0014526	0.01804	55.43	1408.0	2727.7	1319.7	3.3605	5.6198
102	312.42	0.0014597	0.01760	56.80	1416.7	2724.2	1307.5	3.3748	5.6076
104	313.86	0.0014668	0.01718	58.19	1425.2	2720.6	1295.3	3.3889	5.5955
106	315.27	0.0014741	0.01678	59.60	1433.7	2716.9	1283.1	3.4029	5.5835
108	316.67	0.0014814	0.01639	61.03	1442.2	2713.1	1270.9	3.4167	5.5715

表2 饱和状态(按压力排列)(续)

p	t	v'	v''	q''	h'	h''	r	s'	s''
110	318.05	0.0014887	0.01601	62.48	1450.6	2709.3	1258.7	3.4304	5.5595
112	319.40	0.0014962	0.01564	63.94	1458.9	2705.4	1246.5	3.4440	5.5476
114	320.74	0.0015037	0.01528	65.43	1467.2	2701.5	1234.3	3.4575	5.5358
116	322.06	0.0015113	0.01494	66.93	1475.4	2697.4	1222.0	3.4708	5.5239
118	323.36	0.0015190	0.01461	68.46	1483.6	2693.3	1209.7	3.4840	5.5121
120	324.65	0.0015268	0.01428	70.01	1491.8	2689.2	1197.4	3.4972	5.5002
122	325.91	0.0015346	0.01397	71.59	1499.9	2685.0	1185.0	3.5102	5.4884
124	327.17	0.0015426	0.01366	73.19	1508.0	2680.6	1172.6	3.5232	5.4765
126	328.40	0.0015507	0.01337	74.81	1516.0	2676.1	1160.1	3.5361	5.4646
128	329.62	0.0015589	0.01308	76.46	1524.0	2671.6	1147.6	3.5488	5.4527
130	330.83	0.0015672	0.01280	78.14	1532.0	2667.0	1135.0	3.5616	5.4408
132	332.02	0.0015756	0.01252	79.85	1540.0	2662.3	1122.3	3.5742	5.4288
134	333.19	0.0015842	0.01226	81.59	1547.9	2657.4	1109.5	3.5868	5.4168
136	334.36	0.0015928	0.01200	83.36	1555.8	2652.5	1096.7	3.5993	5.4047
138	335.51	0.0016017	0.01174	85.16	1563.7	2647.5	1083.8	3.6118	5.3925
140	336.64	0.0016106	0.01150	86.99	1571.6	2642.4	1070.7	3.6242	5.3803
142	337.76	0.0016197	0.01125	88.86	1579.5	2637.1	1057.6	3.6366	5.3679
144	338.87	0.0016290	0.01102	90.77	1587.4	2631.8	1044.4	3.6490	5.3555
146	339.97	0.0016385	0.01079	92.71	1595.3	2626.3	1031.0	3.6613	5.3431
148	341.06	0.0016481	0.01056	94.69	1603.1	2620.7	1017.6	3.6736	5.3305
150	342.13	0.0016579	0.01034	96.71	1611.0	2615.0	1004.0	3.6859	5.3178
152	343.19	0.0016679	0.01012	98.77	1618.9	2609.2	990.3	3.6981	5.3051
154	344.24	0.0016782	0.009914	100.9	1626.8	2603.3	976.5	3.7104	5.2922
156	345.28	0.0016886	0.009707	103.0	1634.7	2597.3	962.6	3.7226	5.2793
158	346.31	0.0016993	0.009505	105.2	1642.6	2591.1	948.5	3.7348	5.2663
160	347.33	0.0017103	0.009308	107.4	1650.5	2584.9	934.3	3.7471	5.2531
162	348.34	0.0017216	0.009114	109.7	1658.5	2578.5	920.0	3.7594	5.2399
164	349.33	0.0017331	0.008925	112.0	1666.5	2572.1	905.6	3.7717	5.2267
166	350.32	0.0017447	0.008738	114.4	1674.5	2565.5	891.0	3.7842	5.2132
168	351.30	0.0017570	0.008553	116.9	1683.0	2558.6	875.6	3.7974	5.1994
170	352.26	0.0017696	0.008371	119.5	1691.7	2551.6	859.9	3.8107	5.1855
172	353.22	0.0017826	0.008191	122.1	1700.4	2544.4	844.1	3.8240	5.1713
174	354.17	0.0017961	0.008014	124.8	1709.0	2537.1	828.1	3.8372	5.1570
176	355.11	0.0018101	0.007839	127.6	1717.6	2529.5	811.9	3.8504	5.1425
178	356.04	0.0018247	0.007667	130.4	1726.2	2521.8	795.6	3.8635	5.1278
180	356.96	0.0018399	0.007498	133.4	1734.8	2513.9	779.1	3.8765	5.1128
182	357.87	0.0018556	0.007330	136.4	1743.4	2505.8	762.3	3.8896	5.0975
184	358.77	0.0018721	0.007165	139.6	1752.1	2497.4	745.3	3.9028	5.0820
186	359.67	0.0018893	0.007001	142.8	1760.9	2488.8	727.9	3.9160	5.0661
188	360.55	0.0019072	0.006839	146.2	1769.7	2479.8	710.1	3.9294	5.0498
190	361.43	0.0019260	0.006678	149.8	1778.7	2470.6	692.0	3.9429	5.0332
192	362.30	0.0019458	0.006517	153.4	1787.8	2461.1	673.3	3.9566	5.0160
194	363.16	0.0019666	0.006358	157.3	1797.0	2451.1	654.1	3.9706	4.9983
196	364.02	0.0019886	0.006198	161.3	1806.5	2440.7	634.2	3.9849	4.9801
198	364.86	0.0020120	0.006038	165.6	1816.3	2429.8	613.5	3.9996	4.9610
200	365.70	0.0020370	0.005877	170.2	1826.5	2418.4	591.9	4.0149	4.9412
202	366.53	0.0020639	0.005714	175.0	1837.0	2406.2	569.2	4.0308	4.9204
204	367.36	0.0020931	0.005548	180.2	1848.1	2393.3	545.1	4.0474	4.8984
206	368.17	0.0021252	0.005379	185.9	1859.9	2379.3	519.5	4.0651	4.8750
208	368.98	0.0021610	0.005205	192.1	1872.5	2364.2	491.7	4.0841	4.8498
210	369.78	0.0022015	0.005023	199.1	1886.3	2347.6	461.3	4.1048	4.8223
212	370.58	0.0022488	0.004831	207.0	1901.5	2328.9	427.4	4.1279	4.7917
214	371.37	0.0023061	0.004624	216.3	1919.0	2307.4	388.4	4.1543	4.7599
216	372.15	0.0023793	0.004392	227.7	1940.0	2281.5	341.6	4.1861	4.7154
218	372.92	0.0024832	0.004115	243.0	1967.2	2248.0	280.8	4.2276	4.6622
220	373.69	0.0026714	0.003728	268.3	2011.1	2195.6	184.5	4.2947	4.5799
221,20	374.15	0.00317		315.5	2107.4		0.0	4.4429	

表 3 水和过热蒸汽

 t_s —饱和温度, v'' , h'' , s'' —饱和蒸汽的比容、比焓、熵和比焓

t °C	0.001MPa $t_s = 6.983^\circ\text{C}$			0.004MPa $t_s = 28.98^\circ\text{C}$			0.005MPa $t_s = 32.90^\circ\text{C}$			0.006MPa $t_s = 36.18^\circ\text{C}$		
	v''	h''	s''	v''	h''	s''	v''	h''	s''	v''	h''	s''
	m ³ /kg	kJ/kg	kJ/(kg·K)	m ³ /kg	kJ/kg	kJ/(kg·K)	m ³ /kg	kJ/kg	kJ/(kg·K)	m ³ /kg	kJ/kg	kJ/(kg·K)
0	0.0010002	—0.0	—0.0002	0.0010002	—0.0	—0.0002	0.0010002	—0.0	—0.0002	0.0010002	—0.0	—0.0002
10	130.6	2520.0	8.9966	0.0010003	42.0	0.1510	0.0010003	42.0	0.1510	0.0010003	42.0	0.1510
20	135.2	2538.6	9.0611	0.0010017	83.9	0.2963	0.0010017	83.9	0.2963	0.0010017	83.9	0.2963
30	139.9	2557.2	9.1236	34.92	2556.4	8.4818	0.0010043	125.7	0.4365	0.0010043	125.7	0.4365
40	144.5	2575.9	9.1842	36.08	2575.2	8.5426	28.85	2574.9	8.4390	24.04	2574.7	8.3543
50	149.1	2594.6	9.2430	37.24	2593.9	8.6016	29.78	2593.7	8.4981	24.81	2593.5	8.4135
60	153.7	2613.3	9.3001	38.40	2612.7	8.6589	30.71	2612.6	8.5555	25.59	2612.4	8.4709
70	158.3	2632.1	9.3556	39.56	2631.6	8.7146	31.64	2631.4	8.6113	26.36	2631.2	8.5267
80	163.0	2650.9	9.4096	40.71	2650.4	8.7688	32.56	2650.3	8.6655	27.13	2650.1	8.5810
90	167.6	2669.7	9.4622	41.87	2669.3	8.8216	33.49	2669.2	8.7183	27.90	2669.1	8.6339
100	172.2	2688.6	9.5136	43.03	2688.3	8.8730	34.42	2688.1	8.7698	28.68	2688.0	8.6854
110	176.8	2707.6	9.5636	44.18	2707.2	8.9232	35.34	2707.1	8.8200	29.45	2707.0	8.7356
120	181.4	2726.5	9.6125	45.34	2726.2	8.9721	36.27	2726.1	8.8690	30.22	2726.0	8.7846
130	186.0	2745.6	9.6603	46.50	2745.3	9.0200	37.19	2745.2	8.9168	30.99	2745.1	8.8325
140	190.7	2764.6	9.7070	47.65	2764.4	9.0668	38.12	2764.3	8.9636	31.76	2764.2	8.8793
150	195.3	2783.7	9.7527	48.81	2783.5	9.1125	39.04	2783.4	9.0094	32.53	2783.4	8.9251
160	199.9	2802.9	9.7975	49.96	2802.7	9.1573	39.97	2802.6	9.0542	33.30	2802.6	8.9700
170	204.5	2822.1	9.8413	51.12	2821.9	9.2012	40.89	2821.9	9.0982	34.07	2821.8	9.0139
180	209.1	2841.4	9.8843	52.27	2841.2	9.2443	41.81	2841.2	9.1412	34.84	2841.1	9.0569
190	213.7	2860.7	9.9265	53.43	2860.5	9.2865	42.74	2860.5	9.1834	35.61	2860.4	9.0992
200	218.4	2880.1	9.9679	54.58	2879.9	9.3279	43.66	2879.9	9.2248	36.38	2879.8	9.1406
210	223.0	2899.5	10.0085	55.73	2899.4	9.3685	44.59	2899.3	9.2654	37.15	2899.3	9.1812
220	227.6	2919.0	10.0484	56.89	2918.8	9.4084	45.51	2918.8	9.3054	37.92	2918.8	9.2212
230	232.2	2938.5	10.0876	58.04	2938.4	9.4476	46.43	2938.3	9.3446	38.69	2938.3	9.2604
240	236.8	2958.1	10.1262	59.20	2958.0	9.4862	47.36	2957.9	9.3832	39.46	2957.9	9.2990
250	241.4	2977.7	10.1641	60.35	2977.6	9.5241	48.28	2977.6	9.4211	40.23	2977.6	9.3369
260	246.0	2997.4	10.2014	61.51	2997.3	9.5615	49.20	2997.3	9.4584	41.00	2997.3	9.3742
270	250.7	3017.2	10.2381	62.66	3017.1	9.5982	50.13	3017.1	9.4952	41.77	3017.1	9.4110
280	255.3	3037.0	10.2743	63.81	3036.9	9.6344	51.05	3036.9	9.5313	42.54	3036.9	9.4472
290	259.9	3056.9	10.3099	64.97	3056.8	9.6700	51.97	3056.8	9.5670	43.31	3056.8	9.4828
300	264.5	3076.8	10.3450	66.12	3076.8	9.7051	52.90	3076.7	9.6021	44.08	3076.7	9.5179
310	269.1	3096.8	10.3796	67.28	3096.8	9.7397	53.82	3096.7	9.6367	44.85	3096.7	9.5525
320	273.7	3116.9	10.4137	68.43	3116.8	9.7738	54.74	3116.8	9.6708	45.62	3116.8	9.5866
330	278.4	3137.0	10.4473	69.58	3137.0	9.8075	55.67	3137.0	9.7045	46.39	3136.9	9.6203
340	283.0	3157.2	10.4805	70.74	3157.2	9.8407	56.59	3157.1	9.7377	47.16	3157.1	9.6535
350	287.6	3177.5	10.5133	71.89	3177.4	9.8735	57.51	3177.4	9.7704	47.93	3177.4	9.6863
360	292.2	3197.8	10.5457	73.05	3197.7	9.9058	58.44	3197.7	9.8028	48.70	3197.7	9.7186
370	296.8	3218.2	10.5776	74.20	3218.1	9.9378	59.36	3218.1	9.8347	49.47	3218.1	9.7506
380	301.4	3238.6	10.6091	75.35	3238.6	9.9693	60.28	3238.6	9.8663	50.23	3238.5	9.7821
390	306.0	3259.1	10.6403	76.51	3259.1	10.0005	61.21	3259.1	9.8975	51.00	3259.1	9.8133
400	310.7	3279.7	10.6711	77.66	3279.7	10.0313	62.13	3279.7	9.9283	51.77	3279.6	9.8441
410	315.3	3300.4	10.7016	78.82	3300.3	10.0617	63.05	3300.3	9.9587	52.54	3300.3	9.8746
420	319.9	3321.1	10.7317	79.97	3321.0	10.0918	63.98	3321.0	9.9888	53.31	3321.0	9.9047
430	324.5	3341.9	10.7614	81.12	3341.8	10.1216	64.90	3341.8	10.0186	54.08	3341.8	9.9344
440	329.1	3362.7	10.7909	82.28	3362.7	10.1510	65.82	3362.7	10.0480	54.85	3362.6	9.9639
450	333.7	3383.6	10.8200	83.43	3383.6	10.1802	66.74	3383.6	10.0772	55.62	3383.6	9.9930
460	338.4	3404.6	10.8488	84.59	3404.6	10.2090	67.67	3404.6	10.1060	56.39	3404.5	10.0218
470	343.0	3425.7	10.8773	85.74	3425.6	10.2375	68.59	3425.6	10.1345	57.16	3425.6	10.0504
480	347.6	3446.8	10.9056	86.89	3446.7	10.2657	69.51	3446.7	10.1627	57.93	3446.7	10.0786
490	352.2	3468.0	10.9335	88.05	3467.9	10.2937	70.44	3467.9	10.1907	58.70	3467.9	10.1065
500	356.8	3489.2	10.9612	89.20	3489.2	10.3214	71.36	3489.2	10.2184	59.47	3489.2	10.1342