TABLE 6. PROPERTIES OF SATURATED WATER VAPOR WITH AIR AT LOW TEMPERATURES[a] (PART I)

TEMP, F	PRESSURE OF SATURATED VAPOR × 10⁶		WEIGHT OF SATURATED VAPOR				VOLUME IN CU FT BAROMETER, 29.92 IN. HG.		ENTHALPY PER LB		
			per Cu Ft		per lb of Dry Air						
	In. of Hg.	Lb per Sq In.	Pounds × 10⁶	Grains	Pounds × 10⁶	Grains	of 1 lb of Dry Air	of 1 lb of Dry Air + Vapor to Saturate it	Dry Air 0 F Datum	Vapor 32 F Datum	Dry Air with Vapor to Saturate it
−130	0.276	0.1356	0.000693	0.000049	0.005738	0.00040	8.31	8.31	−31.71	1000.7	−31.71
−129	.306	.1503	.000766	.000054	.006362	.00045	8.33	8.33	−31.46	1001.2	−31.46
−128	.338	.1660	.000843	.000059	.007027	.00049	8.36	8.36	−31.21	1001.6	−31.21
−127	.373	.1832	.000928	.000065	.007755	.00054	8.38	8.38	−30.96	1002.1	−30.96
−126	.411	.2019	.001019	.000071	.008545	.00060	8.41	8.41	−30.71	1002.5	−30.71
−125	0.455	0.2235	0.001125	0.000079	0.009459	0.00066	8.43	8.43	−30.46	1003.0	−30.46
−124	.499	.2451	.001230	.000086	.01037	.00073	8.46	8.46	−30.21	1003.4	−30.21
−123	.542	.2662	.001332	.000093	.01127	.00079	8.48	8.48	−29.96	1003.9	−29.96
−122	.604	.2967	.001480	.00010	.01256	.00088	8.51	8.51	−29.72	1004.3	−29.72
−121	.669	.3286	.001635	.00012	.01391	.00097	8.53	8.53	−29.47	1004.8	−29.47
−120	0.735	0.3610	0.001791	0.00013	0.01528	0.00107	8.56	8.56	−29.22	1005.2	−29.22
−119	.805	.3954	.001956	.00014	.01674	.00117	8.58	8.58	−28.97	1005.7	−28.97
−118	.892	.4382	.002161	.00015	.01854	.00130	8.61	8.61	−28.72	1006.1	−28.72
−117	.989	.4858	.002388	.00017	.02056	.00144	8.63	8.63	−28.47	1006.6	−28.47
−116	1.098	.5393	.002644	.00019	.02283	.00160	8.66	8.66	−28.23	1007.0	−28.23
−115	1.208	0.5934	0.002900	0.00020	0.02511	0.00176	8.68	8.68	−27.98	1007.5	−27.98
−114	1.317	.6469	.003153	.00022	.02738	.00192	8.71	8.71	−27.73	1007.9	−27.73
−113	1.444	.7093	.003447	.00024	.03002	.00210	8.73	8.73	−27.48	1008.4	−27.48
−112	1.575	.7736	.003749	.00026	.03274	.00229	8.76	8.76	−27.23	1008.8	−27.23
−111	1.728	.8488	.004101	.00029	.03593	.00252	8.78	8.78	−26.99	1009.3	−26.99
−110	1.889	0.9279	0.004471	0.00031	0.03927	0.00275	8.81	8.81	−26.74	1009.7	−26.74
−109	2.087	1.0251	.004925	.00035	.04339	.00304	8.83	8.83	−26.49	1010.2	−26.49
−108	2.292	1.1258	.005393	.00038	.04765	.00334	8.86	8.86	−26.24	1010.6	−26.24
−107	2.511	1.2334	.005892	.00041	.05220	.00365	8.89	8.89	−26.00	1011.1	−26.00
−106	2.742	1.3469	.006415	.00045	.05701	.00399	8.91	8.91	−25.75	1011.5	−25.75
−105	2.983	1.4652	0.006960	0.00049	0.06202	0.00434	8.94	8.94	−25.50	1012.0	−25.50
−104	3.258	1.6003	.007580	.00053	.06773	.00474	8.96	8.96	−25.26	1012.4	−25.26
−103	3.543	1.7403	.008219	.00058	.07366	.00516	8.99	8.99	−25.01	1012.9	−25.01
−102	3.872	1.9019	.008958	.00063	.08050	.00564	9.01	9.01	−24.76	1013.3	−24.76
−101	4.213	2.0694	.009719	.00068	.08759	.00613	9.04	9.04	−24.51	1013.8	−24.51
−100	4.607	2.2630	0.010599	0.00074	0.09578	0.00705	9.06	9.06	−24.27	1014.2	−24.27
−99	5.018	2.4637	.011512	.00081	.1043	.00730	9.09	9.09	−24.02	1014.7	−24.02
−98	5.455	2.6784	.012480	.00087	.1134	.00794	9.11	9.11	−23.78	1015.1	−23.78
−97	5.946	2.9196	.013566	.00095	.1236	.00865	9.14	9.14	−23.53	1015.6	−23.53
−96	6.470	3.1781	.014721	.00103	.1345	.00942	9.16	9.16	−23.28	1016.0	−23.28

[a]Compiled by W. M. Sawdon, vapor pressures converted from *International Critical Tables.*

TABLE 6. PROPERTIES OF SATURATED WATER VAPOR WITH AIR AT LOW TEMPERATURES[a] (PART I, CONTINUED)

TEMP, F	PRESSURE OF SATURATED VAPOR × 10⁶		WEIGHT OF SATURATED VAPOR				VOLUME IN CU FT BAROMETER, 29.92 IN. HG.		ENTHALPY PER LB		
			per Cu Ft		per lb of Dry Air						
	In. of Hg.	Lb per Sq In.	Pounds ×10⁶	Grains	Pounds × 10⁶	Grains	of 1 lb of Dry Air	of 1 lb of Dry Air + Vapor to Saturate it	Dry Air 0 F Datum	Vapor 32 F Datum	Dry Air with Vapor to Saturate it
−95	7.047	3.4604	0.015990	0.00112	0.1465	0.01026	9.19	9.19	−23.04	1016.5	−23.04
−94	7.638	3.7507	.017284	.00121	.1588	.01112	9.21	9.21	−22.79	1016.9	−22.79
−93	8.316	4.0837	.018767	.00131	.1729	.01210	9.23	9.23	−22.55	1017.4	−22.55
−92	9.017	4.4281	.020292	.00142	.1875	.01312	9.26	9.26	−22.30	1017.8	−22.30
−91	9.806	4.8156	.022009	.00154	.2039	.01427	9.29	9.29	−22.05	1018.3	−22.05
−90	10.64	5.2264	0.023817	0.00167	0.2212	0.01548	9.31	9.31	−21.81	1018.7	−21.81
−89	11.53	5.6635	.025738	.00180	.2397	.01678	9.34	9.34	−21.56	1019.2	−21.56
−88	12.51	6.1449	.027851	.00195	.2601	.01821	9.36	9.36	−21.32	1019.6	−21.32
−87	13.53	6.6459	.030041	.00210	.2813	.01969	9.39	9.39	−21.07	1020.1	−21.07
−86	14.69	7.2157	.032530	.00228	.3054	.02138	9.41	9.41	−20.83	1020.5	−20.83
−85	15.87	7.7953	0.035049	0.00245	0.3299	0.02309	9.44	9.44	−20.58	1021.0	−20.58
−84	17.20	8.4486	.037885	.00265	.3576	.02503	9.46	9.46	−20.34	1021.4	−20.34
−83	18.58	9.1265	.040817	.00286	.3863	.02704	9.49	9.49	−20.09	1021.9	−20.09
−82	20.10	9.8731	.044037	.00308	.4179	.02925	9.51	9.51	−19.84	1022.3	−19.84
−81	21.72	10.669	.047463	.00332	.4516	.03161	9.54	9.54	−19.60	1022.8	−19.60
−80	23.47	11.517	0.051151	0.00358	0.4879	0.03415	9.56	9.56	−19.36	1023.2	−19.36
−79	25.34	12.436	.055082	.00386	.5268	.03688	9.59	9.59	−19.11	1023.7	−19.10
−78	27.29	13.394	.059165	.00414	.5674	.03972	9.61	9.61	−18.87	1024.1	−18.86
−77	29.52	14.489	.063831	.00447	.6137	.04296	9.64	9.64	−18.62	1024.6	−18.61
−76	31.81	15.614	.068605	.00480	.6613	.04629	9.66	9.66	−18.38	1025.0	−18.37
−75	34.37	16.883	0.073933	0.00518	0.7146	0.05002	9.69	9.69	−18.13	1025.5	−18.12
−74	37.01	18.179	.079405	.00556	.7694	.05386	9.72	9.72	−17.89	1025.9	−17.88
−73	39.96	19.628	.085510	.00599	.8308	.05816	9.74	9.74	−17.64	1026.4	−17.63
−72	43.04	21.141	.091865	.00643	.8948	.06264	9.77	9.77	−17.40	1026.8	−17.39
−71	46.33	22.757	.098632	.00690	.9632	.06742	9.79	9.79	−17.16	1027.3	−17.15
−70	49.87	24.496	0.10590	0.00741	1.037	0.07259	9.82	9.82	−16.91	1027.7	−16.90
−69	53.59	26.323	.11350	.00795	1.114	.07798	9.84	9.84	−16.67	1028.2	−16.66
−68	57.65	28.318	.12179	.00853	1.199	.08393	9.87	9.87	−16.42	1028.6	−16.41
−67	61.81	30.361	.13024	.00911	1.285	.08995	9.89	9.89	−16.18	1029.1	−16.17
−66	66.41	32.621	.13959	.00977	1.381	.09667	9.92	9.92	−15.94	1029.5	−15.93
−65	71.17	34.959	0.14922	0.01044	1.480	0.10360	9.94	9.94	−15.69	1030.0	−15.67
−64	76.64	37.646	.16028	.01122	1.593	.11151	9.97	9.97	−15.45	1030.4	−15.43
−63	82.28	40.416	.17164	.01201	1.711	.11977	9.99	9.99	−15.21	1030.9	−15.19
−62	88.19	43.319	.18350	.01285	1.833	.12831	10.02	10.02	−14.96	1031.3	−14.94
−61	94.62	46.477	.19638	.01375	1.967	.13769	10.04	10.04	−14.72	1031.8	−14.70

[a]Compiled by W. M. Sawdon, vapor pressures converted from *International Critical Tables.*