

Appendix C

Steam Tables

- C.1 SATURATED STEAM
- C.2 SUPERHEATED STEAM
- C.3 SATURATED STEAM–ICE

Table C.1 Saturated Steam*

| Temperature, °F, T | Absolute pressure, lb _f /in ² , P | Specific volume, ft ³ /lb | | | | Enthalpy, Btu/lb | | | | Entropy, Btu/lb · °R | | | |
|-------------------------|--|--------------------------------------|---------------------------|------------------------------|-------------------------------|---------------------------|------------------------------|-------------------------------|---------------------------|------------------------------|--|--|--|
| | | Saturated liquid, v_l | Evaporation difference | Saturated vapor, v_g | Saturated liquid, h_l | Evaporation difference | Saturated vapor, h_g | Saturated liquid, s_l | Evaporation difference | Saturated vapor, s_g | | | |
| 32 | 0.08854 | 0.01602 | 3306 | 3306 | 0.00 | 1075.8 | 1075.8 | 0.0000 | 2.1877 | 2.1877 | | | |
| 35 | 0.09995 | 0.01602 | 2947 | 2947 | 3.02 | 1074.1 | 1077.1 | 0.0061 | 2.1709 | 2.1770 | | | |
| 40 | 0.12170 | 0.01602 | 2444 | 2444 | 8.05 | 1071.3 | 1079.3 | 0.0162 | 2.1435 | 2.1597 | | | |
| 45 | 0.14752 | 0.01602 | 2036.4 | 2036.4 | 13.06 | 1068.4 | 1081.5 | 0.0262 | 2.1167 | 2.1429 | | | |
| 50 | 0.17811 | 0.01603 | 1703.2 | 1703.2 | 18.07 | 1065.6 | 1083.7 | 0.0361 | 2.0903 | 2.1264 | | | |
| 60 | 0.2563 | 0.01604 | 1206.6 | 1206.6 | 28.06 | 1059.9 | 1088.0 | 0.0555 | 2.0393 | 2.0948 | | | |
| 70 | 0.3631 | 0.01606 | 867.8 | 867.8 | 38.04 | 1054.3 | 1092.3 | 0.0745 | 1.9902 | 2.0647 | | | |
| 80 | 0.5069 | 0.01608 | 633.1 | 633.1 | 48.02 | 1048.6 | 1096.6 | 0.0932 | 1.9428 | 2.0360 | | | |
| 90 | 0.6982 | 0.01610 | 468.0 | 468.0 | 57.99 | 1042.9 | 1100.9 | 0.1115 | 1.8972 | 2.0087 | | | |
| 100 | 0.9492 | 0.01613 | 350.3 | 350.3 | 67.97 | 1037.2 | 1105.2 | 0.1295 | 1.8531 | 1.9826 | | | |
| 110 | 1.2748 | 0.01617 | 265.3 | 265.3 | 77.94 | 1031.6 | 1109.5 | 0.1471 | 1.8106 | 1.9577 | | | |
| 120 | 1.6924 | 0.01620 | 203.25 | 203.25 | 87.92 | 1025.8 | 1113.7 | 0.1645 | 1.7694 | 1.9339 | | | |
| 130 | 2.2225 | 0.01625 | 157.32 | 157.32 | 97.90 | 1020.0 | 1117.9 | 0.1816 | 1.7296 | 1.9112 | | | |
| 140 | 2.8886 | 0.01629 | 122.99 | 122.99 | 107.89 | 1014.1 | 1122.0 | 0.1984 | 1.6910 | 1.8894 | | | |
| 150 | 3.718 | 0.01634 | 97.06 | 97.06 | 117.89 | 1008.2 | 1126.1 | 0.2149 | 1.6537 | 1.8685 | | | |
| 160 | 4.741 | 0.01639 | 77.27 | 77.27 | 127.89 | 1002.3 | 1130.2 | 0.2311 | 1.6174 | 1.8485 | | | |
| 170 | 5.992 | 0.01645 | 62.04 | 62.04 | 137.90 | 996.3 | 1134.2 | 0.2472 | 1.5822 | 1.8293 | | | |
| 180 | 7.510 | 0.01651 | 50.21 | 50.21 | 147.92 | 990.2 | 1138.1 | 0.2630 | 1.5480 | 1.8109 | | | |
| 190 | 9.339 | 0.01657 | 40.94 | 40.94 | 157.95 | 984.1 | 1142.0 | 0.2785 | 1.5147 | 1.7932 | | | |
| 200 | 11.526 | 0.01663 | 33.62 | 33.62 | 167.99 | 977.9 | 1145.9 | 0.2938 | 1.4824 | 1.7762 | | | |

(Continued)

TABLE C.1 Saturated Steam*

| | | | | | | | | | | |
|-----|--------|---------|--------|--------|--------|-------|--------|--------|--------|--------|
| 210 | 14.123 | 0.01670 | 27.80 | 27.82 | 178.05 | 971.6 | 1149.7 | 0.3090 | 1.4508 | 1.7598 |
| 212 | 14.696 | 0.01672 | 26.78 | 26.80 | 180.07 | 970.3 | 1150.4 | 0.3120 | 1.4446 | 1.7566 |
| 220 | 17.186 | 0.01677 | 23.13 | 23.15 | 188.13 | 965.2 | 1153.4 | 0.3239 | 1.4201 | 1.7440 |
| 230 | 20.780 | 0.01684 | 19.365 | 19.382 | 198.23 | 958.8 | 1157.0 | 0.3387 | 1.3901 | 1.7288 |
| 240 | 24.969 | 0.01692 | 16.306 | 16.323 | 208.34 | 952.2 | 1160.5 | 0.3531 | 1.3609 | 1.7140 |
| 250 | 29.825 | 0.01700 | 13.804 | 13.821 | 218.48 | 945.5 | 1164.0 | 0.3675 | 1.3323 | 1.6998 |
| 260 | 35.429 | 0.01709 | 11.746 | 11.763 | 228.64 | 938.7 | 1167.3 | 0.3817 | 1.3043 | 1.6860 |
| 270 | 41.858 | 0.01717 | 10.044 | 10.061 | 238.84 | 931.8 | 1170.6 | 0.3958 | 1.2769 | 1.6727 |
| 280 | 49.203 | 0.01726 | 8.628 | 8.645 | 249.06 | 924.7 | 1173.8 | 0.4096 | 1.2501 | 1.6597 |
| 290 | 57.556 | 0.01735 | 7.444 | 7.461 | 259.31 | 917.5 | 1176.8 | 0.4234 | 1.2238 | 1.6472 |
| 300 | 67.013 | 0.01745 | 6.449 | 6.466 | 269.59 | 910.1 | 1179.7 | 0.4369 | 1.1980 | 1.6350 |
| 310 | 77.68 | 0.01755 | 5.609 | 5.626 | 279.92 | 902.6 | 1182.5 | 0.4504 | 1.1727 | 1.6231 |
| 320 | 89.66 | 0.01765 | 4.896 | 4.914 | 290.28 | 894.9 | 1185.2 | 0.4637 | 1.1478 | 1.6115 |
| 330 | 103.06 | 0.01776 | 4.289 | 4.307 | 300.68 | 887.0 | 1187.7 | 0.4769 | 1.1233 | 1.6002 |
| 340 | 118.01 | 0.01787 | 3.770 | 3.788 | 311.13 | 879.0 | 1190.1 | 0.4900 | 1.0992 | 1.5891 |
| 350 | 134.63 | 0.01799 | 3.324 | 3.342 | 321.63 | 870.7 | 1192.3 | 0.5029 | 1.0754 | 1.5783 |
| 360 | 153.04 | 0.01811 | 2.939 | 2.957 | 332.18 | 862.2 | 1194.4 | 0.5158 | 1.0519 | 1.5677 |
| 370 | 173.37 | 0.01823 | 2.606 | 2.625 | 342.79 | 853.5 | 1196.3 | 0.5286 | 1.0287 | 1.5573 |
| 380 | 195.77 | 0.01836 | 2.317 | 2.335 | 353.45 | 844.6 | 1198.1 | 0.5413 | 1.0059 | 1.5471 |
| 390 | 220.37 | 0.01850 | 2.0651 | 2.0836 | 364.17 | 835.4 | 1199.6 | 0.5539 | 0.9832 | 1.5371 |
| 400 | 247.31 | 0.01864 | 1.8447 | 1.8633 | 374.97 | 826.0 | 1201.0 | 0.5664 | 0.9608 | 1.5272 |
| 410 | 276.75 | 0.01878 | 1.6512 | 1.6700 | 385.83 | 816.3 | 1202.1 | 0.5788 | 0.9386 | 1.5174 |
| 420 | 308.83 | 0.01894 | 1.4811 | 1.5000 | 396.77 | 806.3 | 1203.1 | 0.5912 | 0.9166 | 1.5078 |
| 430 | 343.72 | 0.01910 | 1.3308 | 1.3499 | 407.79 | 796.0 | 1203.8 | 0.6035 | 0.8947 | 1.4982 |
| 440 | 381.59 | 0.01926 | 1.1979 | 1.2171 | 418.90 | 785.4 | 1204.3 | 0.6158 | 0.8730 | 1.4887 |
| 450 | 422.6 | 0.0194 | 1.0799 | 1.0993 | 430.1 | 774.5 | 1204.6 | 0.6280 | 0.8513 | 1.4793 |

(Continued)

TABLE C.1 Saturated Steam*

| Temperature, °F, T | Absolute pressure, lb _f /in ² , P | Specific volume, ft ³ /lb | | | | Enthalpy, Btu/lb | | | Entropy, Btu/lb · °R | | |
|-------------------------|--|--------------------------------------|---------------------------|------------------------------|-------------------------------|---------------------------|------------------------------|-------------------------------|---------------------------|------------------------------|--|
| | | Saturated liquid, v_l | Evaporation difference | Saturated vapor, v_g | Saturated liquid, h_l | Evaporation difference | Saturated vapor, h_g | Saturated liquid, s_l | Evaporation difference | Saturated vapor, s_g | |
| 460 | 466.9 | 0.0196 | 0.9748 | 0.9944 | 441.4 | 763.2 | 1204.6 | 0.6402 | 0.8298 | 1.4700 | |
| 470 | 514.7 | 0.0198 | 0.8811 | 0.9009 | 452.8 | 751.5 | 1204.3 | 0.6523 | 0.8083 | 1.4606 | |
| 480 | 566.1 | 0.0200 | 0.7972 | 0.8172 | 464.4 | 739.4 | 1203.7 | 0.6645 | 0.7868 | 1.4513 | |
| 490 | 621.4 | 0.0202 | 0.7221 | 0.7423 | 476.0 | 726.8 | 1202.8 | 0.6766 | 0.7653 | 1.4419 | |
| 500 | 680.8 | 0.0204 | 0.6545 | 0.6749 | 487.8 | 713.9 | 1201.7 | 0.6887 | 0.7438 | 1.4325 | |
| 520 | 812.4 | 0.0209 | 0.5385 | 0.5594 | 511.9 | 686.4 | 1198.2 | 0.7130 | 0.7006 | 1.4136 | |
| 540 | 962.5 | 0.0215 | 0.4434 | 0.4649 | 536.6 | 656.6 | 1193.2 | 0.7374 | 0.6568 | 1.3942 | |
| 560 | 1133.1 | 0.0221 | 0.3647 | 0.3868 | 562.2 | 624.2 | 1186.4 | 0.7621 | 0.6121 | 1.3742 | |
| 580 | 1325.8 | 0.0228 | 0.2989 | 0.3217 | 588.9 | 588.4 | 1177.3 | 0.7872 | 0.5659 | 1.3532 | |
| 600 | 1542.9 | 0.0236 | 0.2432 | 0.2668 | 617.0 | 548.5 | 1165.5 | 0.8131 | 0.5176 | 1.3307 | |
| 620 | 1786.6 | 0.0247 | 0.1955 | 0.2201 | 646.7 | 503.6 | 1150.3 | 0.8398 | 0.4664 | 1.3062 | |
| 640 | 2059.7 | 0.0260 | 0.1538 | 0.1798 | 678.6 | 452.0 | 1130.5 | 0.8679 | 0.4110 | 1.2789 | |
| 660 | 2365.4 | 0.0278 | 0.1165 | 0.1442 | 714.2 | 390.2 | 1104.4 | 0.8987 | 0.3485 | 1.2472 | |
| 680 | 2708.1 | 0.0305 | 0.0810 | 0.1115 | 757.3 | 309.9 | 1067.2 | 0.9351 | 0.2719 | 1.2071 | |
| 700 | 3093.7 | 0.0369 | 0.0392 | 0.0761 | 823.3 | 172.1 | 995.4 | 0.9905 | 0.1484 | 1.1389 | |

*A bridged from *Thermodynamic Properties of Steam*, by Joseph H. Keenan and Frederick G. Keyes. Copyright 1936, by Joseph H. Keenan and Frederick G. Keyes, Published by John Wiley & Sons, Inc., Hoboken, NJ.

Table C.2 Superheated Steam

| Absolute pressure, lb _f /in ² (Saturated temperature) | Temperature, °F | | | | | | | | | | | | | |
|---|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| | 200 | 220 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 700 | 800 | 900 | 1000 | |
| <i>v</i> | 392.6 | 404.5 | 452.3 | 482.2 | 512.0 | 541.8 | 571.6 | 601.4 | 631.2 | 690.8 | 750.4 | 809.9 | 869.5 | |
| <i>h</i> | 1150.4 | 1159.5 | 1195.8 | 1218.7 | 1241.7 | 1264.9 | 1288.3 | 1312.0 | 1335.7 | 1383.8 | 1432.8 | 1482.7 | 1533.5 | |
| <i>s</i> (101.74) | 2.0512 | 2.0647 | 2.1153 | 2.1444 | 2.1720 | 2.1983 | 2.2233 | 2.2468 | 2.2702 | 2.3137 | 2.3542 | 2.3923 | 2.4283 | |
| <i>v</i> | 78.16 | 80.59 | 90.25 | 96.26 | 102.26 | 108.24 | 114.22 | 120.19 | 126.16 | 138.10 | 150.03 | 161.95 | 173.87 | |
| <i>h</i> | 1148.8 | 1158.1 | 1195.0 | 1218.1 | 1241.2 | 1264.5 | 1288.0 | 1311.7 | 1335.4 | 1383.6 | 1432.7 | 1482.6 | 1533.4 | |
| <i>s</i> (162.24) | 1.8718 | 1.8857 | 1.9370 | 1.9664 | 1.9942 | 2.0205 | 2.0456 | 2.0692 | 2.0927 | 2.1361 | 2.1767 | 2.2148 | 2.2509 | |
| <i>v</i> | 38.85 | 40.09 | 45.00 | 48.03 | 51.04 | 54.05 | 57.05 | 60.04 | 63.03 | 69.01 | 74.98 | 80.95 | 86.92 | |
| <i>h</i> | 1146.6 | 1156.2 | 1193.9 | 1217.2 | 1240.6 | 1264.0 | 1287.5 | 1311.3 | 1335.1 | 1383.4 | 1432.5 | 1482.4 | 1533.2 | |
| <i>s</i> (193.21) | 1.7927 | 1.8071 | 1.8595 | 1.8892 | 1.9172 | 1.9436 | 1.9689 | 1.9924 | 2.0160 | 2.0596 | 2.1002 | 2.1383 | 2.1744 | |
| <i>v</i> | 27.15 | 27.15 | 30.53 | 32.62 | 34.68 | 36.73 | 38.78 | 40.82 | 42.86 | 46.94 | 51.00 | 55.07 | 59.13 | |
| <i>h</i> | 1154.4 | 1154.4 | 1192.8 | 1216.4 | 1239.9 | 1263.5 | 1287.1 | 1310.9 | 1334.8 | 1383.2 | 1432.3 | 1482.3 | 1533.1 | |
| <i>s</i> (212.00) | 1.7624 | 1.8160 | 1.8160 | 1.8460 | 1.8743 | 1.9008 | 1.9261 | 1.9498 | 1.9734 | 2.0170 | 2.0576 | 2.0958 | 2.1319 | |
| <i>v</i> | | | 22.36 | 23.91 | 25.43 | 26.95 | 28.46 | 29.97 | 31.47 | 34.47 | 37.46 | 40.45 | 43.44 | |
| <i>h</i> | | | 1191.6 | 1215.6 | 1239.2 | 1262.9 | 1286.6 | 1310.5 | 1334.4 | 1382.9 | 1432.1 | 1482.1 | 1533.0 | |
| <i>s</i> (227.96) | | | 1.7808 | 1.8112 | 1.8396 | 1.8664 | 1.8918 | 1.9160 | 1.9392 | 1.9829 | 2.0235 | 2.0618 | 2.0978 | |
| <i>v</i> | | | 11.040 | 11.843 | 12.628 | 13.401 | 14.168 | 14.93 | 15.688 | 17.198 | 18.702 | 20.20 | 21.70 | |
| <i>h</i> | | | 1186.8 | 1211.9 | 1236.5 | 1260.7 | 1284.8 | 1308.9 | 1333.1 | 1381.9 | 1431.3 | 1481.4 | 1532.4 | |
| <i>s</i> (267.25) | | | 1.6994 | 1.7314 | 1.7608 | 1.7881 | 1.8140 | 1.8384 | 1.8619 | 1.9058 | 1.9467 | 1.9850 | 2.0214 | |
| <i>v</i> | | | 7.259 | 7.818 | 8.357 | 8.884 | 9.403 | 9.916 | 10.427 | 11.441 | 12.449 | 13.452 | 14.454 | |

(Continued)

TABLE C.2 Superheated Steam

| Absolute pressure, lb _f / in ² (Saturated temperature) | Temperature, °F | | | | | | | | | | | | |
|---|-----------------|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 200 | 220 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 700 | 800 | 900 | 1000 |
| 60 (292.71) | <i>h</i> | | 1181.6 | 1208.2 | 1233.6 | 1258.5 | 1283.0 | 1307.4 | 1331.8 | 1380.9 | 1430.5 | 1480.8 | 1531.9 |
| | <i>s</i> | | 1.6492 | 1.6830 | 1.7135 | 1.7416 | 1.7678 | 1.7926 | 1.8162 | 1.8605 | 1.9015 | 1.9400 | 1.9762 |
| | <i>v</i> | | | 5.803 | 6.220 | 6.624 | 7.020 | 7.410 | 7.797 | 8.562 | 9.322 | 10.077 | 10.830 |
| 80 (312.03) | <i>h</i> | | | 1204.3 | 1230.7 | 1256.1 | 1281.1 | 1305.8 | 1330.5 | 1379.9 | 1429.7 | 1480.1 | 1531.3 |
| | <i>s</i> | | | 1.6475 | 1.6791 | 1.7078 | 1.7346 | 1.7598 | 1.7836 | 1.8281 | 1.8694 | 1.9079 | 1.9442 |
| | <i>v</i> | | | 4.592 | 4.937 | 5.268 | 5.589 | 5.905 | 6.218 | 6.835 | 7.446 | 8.052 | 8.656 |
| 100 (327.81) | <i>h</i> | | | 1200.1 | 1227.6 | 1253.7 | 1279.1 | 1304.2 | 1329.1 | 1378.9 | 1428.9 | 1479.5 | 1530.8 |
| | <i>s</i> | | | 1.6188 | 1.6518 | 1.6813 | 1.7085 | 1.7339 | 1.7581 | 1.8029 | 1.8443 | 1.8829 | 1.9193 |
| | <i>v</i> | | | 3.783 | 4.081 | 4.363 | 4.636 | 4.902 | 5.165 | 5.683 | 6.195 | 6.702 | 7.207 |
| 120 (341.25) | <i>h</i> | | | 1195.7 | 1224.4 | 1251.3 | 1277.2 | 1302.5 | 1327.7 | 1377.8 | 1428.1 | 1478.8 | 1530.2 |
| | <i>s</i> | | | 1.5944 | 1.6287 | 1.6591 | 1.6869 | 1.7127 | 1.7370 | 1.7822 | 1.8237 | 1.8625 | 1.8990 |
| | <i>v</i> | | | 3.468 | 3.715 | 3.954 | 4.186 | 4.413 | 4.631 | 4.861 | 5.301 | 5.738 | 6.172 |
| 140 (353.02) | <i>h</i> | | | 1221.1 | 1248.7 | 1275.2 | 1300.9 | 1326.4 | 1352.0 | 1376.8 | 1427.3 | 1478.2 | 1529.7 |
| | <i>s</i> | | | 1.6087 | 1.6399 | 1.6683 | 1.6945 | 1.7190 | 1.7430 | 1.7645 | 1.8063 | 1.8451 | 1.8817 |
| | <i>v</i> | | | 3.008 | 3.230 | 3.443 | 3.648 | 3.849 | 4.044 | 4.244 | 4.631 | 5.015 | 5.396 |
| 160 (363.53) | <i>h</i> | | | 1217.6 | 1246.1 | 1273.1 | 1299.3 | 1325.0 | 1350.7 | 1375.7 | 1426.4 | 1477.5 | 1529.1 |
| | <i>s</i> | | | 1.5908 | 1.6230 | 1.6519 | 1.6785 | 1.7033 | 1.7264 | 1.7491 | 1.7911 | 1.8301 | 1.8667 |
| | <i>v</i> | | | 2.649 | 2.852 | 3.044 | 3.229 | 3.411 | 3.588 | 3.764 | 4.110 | 4.452 | 4.792 |
| 180 (373.06) | <i>h</i> | | | 1214.0 | 1243.5 | 1271.0 | 1297.6 | 1323.5 | 1349.4 | 1374.7 | 1425.6 | 1476.8 | 1528.6 |
| | <i>s</i> | | | 1.5745 | 1.6077 | 1.6373 | 1.6642 | 1.6894 | 1.7135 | 1.7355 | 1.7776 | 1.8167 | 1.8534 |
| | <i>v</i> | | | 2.361 | 2.549 | 2.726 | 2.895 | 3.060 | 3.220 | 3.380 | 3.693 | 4.002 | 4.309 |

(Continued)

TABLE C.2 Superheated Steam

| | | | | | | | | | |
|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| 200 | <i>h</i> | 1240.7 | 1268.9 | 1295.8 | 1322.1 | 1373.6 | 1424.8 | 1476.2 | 1528.0 |
| (381.79) | <i>s</i> | 1.5937 | 1.6240 | 1.6513 | 1.6767 | 1.7232 | 1.7655 | 1.8048 | 1.8415 |
| | <i>v</i> | 2.301 | 2.465 | 2.621 | 2.772 | 3.066 | 3.352 | 3.634 | 3.913 |
| 220 | <i>h</i> | 1237.9 | 1266.7 | 1294.1 | 1320.7 | 1372.6 | 1424.0 | 1475.5 | 1527.5 |
| (389.86) | <i>s</i> | 1.5808 | 1.6117 | 1.6395 | 1.6652 | 1.7120 | 1.7545 | 1.7939 | 1.8308 |
| | <i>v</i> | 2.094 | 2.247 | 2.393 | 2.533 | 2.804 | 3.068 | 3.327 | 3.584 |
| 240 | <i>h</i> | 1234.9 | 1264.5 | 1292.4 | 1319.2 | 1371.5 | 1423.2 | 1474.8 | 1526.9 |
| (397.37) | <i>s</i> | 1.5686 | 1.6003 | 1.6286 | 1.6546 | 1.7017 | 1.7444 | 1.7839 | 1.8209 |
| | <i>v</i> | 1.9183 | 2.063 | 2.199 | 2.330 | 2.582 | 2.827 | 3.067 | 3.305 |
| 260 | <i>h</i> | 1232.0 | 1262.3 | 1290.5 | 1317.7 | 1370.4 | 1422.3 | 1474.2 | 1526.3 |
| (404.42) | <i>s</i> | 1.5573 | 1.5897 | 1.6184 | 1.6447 | 1.6922 | 1.7352 | 1.7748 | 1.8118 |
| | <i>v</i> | 1.7674 | 1.9047 | 2.033 | 2.156 | 2.392 | 2.621 | 2.845 | 3.066 |
| 280 | <i>h</i> | 1228.9 | 1260.0 | 1288.7 | 1316.2 | 1369.4 | 1421.5 | 1473.5 | 1525.8 |
| (411.05) | <i>s</i> | 1.5464 | 1.5796 | 1.6087 | 1.6354 | 1.6834 | 1.7265 | 1.7662 | 1.8033 |
| | <i>v</i> | 1.6364 | 1.7675 | 1.8891 | 2.005 | 2.227 | 2.442 | 2.652 | 2.859 |
| 300 | <i>h</i> | 1225.8 | 1257.6 | 1286.8 | 1314.7 | 1368.3 | 1420.6 | 1472.8 | 1525.2 |
| (417.33) | <i>s</i> | 1.5360 | 1.5701 | 1.5998 | 1.6268 | 1.6751 | 1.7184 | 1.7582 | 1.7954 |
| | <i>v</i> | 1.3734 | 1.4923 | 1.6010 | 1.7036 | 1.8980 | 2.084 | 2.266 | 2.445 |
| 350 | <i>h</i> | 1217.7 | 1251.5 | 1282.1 | 1310.9 | 1365.5 | 1418.5 | 1471.1 | 1523.8 |
| (431.72) | <i>s</i> | 1.5119 | 1.5481 | 1.5792 | 1.6070 | 1.6563 | 1.7002 | 1.7403 | 1.7777 |
| | <i>v</i> | 1.1744 | 1.2851 | 1.3843 | 1.4770 | 1.6508 | 1.8161 | 1.9767 | 2.134 |
| 400 | <i>h</i> | 1208.8 | 1245.1 | 1277.2 | 1306.9 | 1362.7 | 1416.4 | 1469.4 | 1522.4 |
| (444.59) | <i>s</i> | 1.4892 | 1.5281 | 1.5607 | 1.5894 | 1.6398 | 1.6842 | 1.7247 | 1.7623 |

Table C.3 Saturated Steam – Ice

| Temperature, °F, <i>T</i> | Absolute pressure, lb _f /in ² , <i>P</i> | Specific volume, ft ³ /lb | | Enthalpy, Btu/lb | | | Entropy, Btu/lb · °R | | |
|------------------------------|---|--------------------------------------|--|-------------------------------------|------------------------|---------------------------------------|-------------------------------------|------------------------|---------------------------------------|
| | | Saturated ice, <i>v_i</i> | Saturated steam, <i>v_g</i> × 10 ⁻³ | Saturated ice, <i>h_i</i> | Sublimation difference | Saturated steam, <i>h_g</i> | Saturated ice, <i>s_i</i> | Sublimation difference | Saturated steam, <i>s_g</i> |
| 32 | 0.0885 | 0.01747 | 3.306 | -143.35 | 1219.1 | 1075.8 | -0.2916 | 2.4793 | 2.1877 |
| 30 | 0.0808 | 0.01747 | 3.609 | -144.35 | 1219.3 | 1074.9 | -0.2936 | 2.4897 | 2.1961 |
| 20 | 0.0505 | 0.01745 | 5.658 | -149.31 | 1219.9 | 1070.6 | -0.3038 | 2.5425 | 2.2387 |
| 10 | 0.0309 | 0.01744 | 9.05 | -154.17 | 1220.4 | 1066.2 | -0.3141 | 2.5977 | 2.2836 |
| 0 | 0.0185 | 0.01742 | 14.77 | -158.93 | 1220.7 | 1061.8 | -0.3241 | 2.6546 | 2.3305 |
| -10 | 0.0108 | 0.01741 | 24.67 | -163.59 | 1221.0 | 1057.4 | -0.3346 | 2.7143 | 2.3797 |
| -20 | 0.0062 | 0.01739 | 42.2 | -168.16 | 1221.2 | 1053.0 | -0.3448 | 2.7764 | 2.4316 |
| -30 | 0.0035 | 0.01738 | 74.1 | -172.63 | 1221.2 | 1048.6 | -0.3551 | 2.8411 | 2.4860 |