STEAM TABLES

PROPERTIES OF SATURATED AND SUPERHEATED STEAM — FROM 0.08865 TO 15.500 LB PER SQ IN. ABSOLUTE PRESSURE

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Table 1. Saturated Steam: Temperature Table

| | | Ta | able 1. | Satura | ted Steam: | Tempe | rature | Table | | | |
|---|--|--|--|--|--|--|--|--|--------------------------------------|--|---|
| Temp Fahr t | Abs Press. Lb per Sq In. P | Spec Sat. Liquid | ific Volui Evap Vfg | me Sat. Vapor Vg | Sat. Liquid h f | Enthalpy Evap h fg | Sat. Vapor h _g | Sat. Liquid S _f | Entropy Evap Sfg | Sat. Vapor | Temp Fahr t |
| 32.0 * | 0.08859 | 0.016022 | 3304.7 | 3304.7 | -0.0179 | 1075.5 | 1075.5 | 0.0000 | 2.1873 | 2.1873 | 32.0 * |
| 34.0 | 0.09600 | 0.016021 | 3061.9 | 3061.9 | 1.996 | 1074.4 | 1076.4 | 0.0041 | 2.1762 | 2.1802 | 34.0 |
| 36.0 | 0.10395 | 0.016020 | 2839.0 | 2839.0 | 4.008 | 1073.2 | 1077.2 | 0.0081 | 2.1651 | 2.1732 | 36.0 |
| 38.0 | 0.11249 | 0.016019 | 2634.1 | 2634.2 | 6.018 | 1072.1 | 1078.1 | 0.0122 | 2.1541 | 2.1663 | 38.0 |
| 40.0 | 0.12163 | 0.016019 | 2445.8 | 2445.8 | 8.027 | 1071.0 | 1079.0 | 0.0162 | 2.1432 | 2.1594 | 40.0 |
| 42.0 | 0.13143 | 0.016019 | 2272.4 | 2272.4 | 10.035 | 1069.8 | 1079.9 | 0.0202 | 2.1325 | 2.1527 | 42.0 |
| 44.0 | 0.14192 | 0.016019 | 2112.8 | 2112.8 | 12.041 | 1068.7 | 1080.7 | 0.0242 | 2.1217 | 2.1459 | 44.0 |
| 46.0 | 0.15314 | 0.016020 | 1965.7 | 1965.7 | 14.047 | 1067.6 | 1081.6 | 0.0282 | 2.1111 | 2.1393 | 46.0 |
| 48.0 | 0.16514 | 0.016021 | 1830.0 | 1830.0 | 16.051 | 1066.4 | 1082.5 | 0.0321 | 2.1006 | 2.1327 | 48.0 |
| 50.0 | 0.17796 | 0.016023 | 1704.8 | 1704.8 | 18.054 | 1065.3 | 1083.4 | 0.0361 | 2.0901 | 2.1262 | 58.8 |
| 52.0 | 0.19165 | 0.016024 | 1589.2 | 1589.2 | 20.057 | 1064.2 | 1084.2 | 0.0400 | 2.0798 | 2.1197 | 52.0 |
| 54.0 | 0.20625 | 0.016026 | 1482.4 | 1482.4 | 22.058 | 1063.1 | 1085.1 | 0.0439 | 2.0695 | 2.1134 | 54.0 |
| 56.0 | 0.22183 | 0.016028 | 1383.6 | 1383.6 | 24.059 | 1061.9 | 1086.0 | 0.0478 | 2.0593 | 2.1070 | 56.9 |
| 58.0 | 0.23843 | 0.016031 | 1292.2 | 1292.2 | 26.060 | 1060.8 | 1086.9 | 0.0516 | 2.0491 | 2.1008 | 58.8 |
| 60.0 | 0.25611 | 0.016033 | 1207.6 | 1207.6 | 28.060 | 1059.7 | 1087.7 | 0.0555 | 2.0391 | 2.0946 | 60.0 |
| 62.0 | 0.27494 | 0.016036 | 1129.2 | 1129.2 | 30.059 | 1058.5 | 1088.6 | 0.0593 | 2.0291 | 2.0885 | 62.0 |
| 64.0 | 0.29497 | 0.016039 | 1056.5 | 1056.5 | 32.058 | 1057.4 | 1089.5 | 0.0632 | 2.0192 | 2.0824 | 64.0 |
| 66.0 | 0.31626 | 0.016043 | 989.0 | 989.1 | 34.056 | 1056.3 | 1090.4 | 0.0670 | 2.0094 | 2.0764 | 66.8 |
| 68.0 | 0.33889 | 0.016046 | 926.5 | 926.5 | 36.054 | 1055.2 | 1091.2 | 0.0708 | 1.9996 | 2.0704 | 68.0 |
| 70.0 | 0.36292 | 0.016050 | 868.3 | 868.4 | 38.052 | 1054.0 | 1092.1 | 0.0745 | 1.9900 | 2.0645 | 70.0 |
| 72.0 | 0.38844 | 0.016054 | 814.3 | 814.3 | 40.049 | 1052.9 | 1093.0 | 0.0783 | 1.9804 | 2.0587 | 72.0 |
| 74.0 | 0.41550 | 0.016058 | 764.1 | 764.1 | 42.046 | 1051.8 | 1093.8 | 0.0821 | 1.9708 | 2.0529 | 74.0 |
| 76.0 | 0.44420 | 0.016063 | 717.4 | 717.4 | 44.043 | 1050.7 | 1094.7 | 0.0858 | 1.9614 | 2.0472 | 76.8 |
| 78.0 | 0.47461 | 0.016067 | 673.8 | 673.9 | 46.040 | 1049.5 | 1095.6 | 0.0895 | 1.9520 | 2.0415 | 78.8 |
| 80.0 | 0.50683 | 0.016072 | 633.3 | 633.3 | 48.037 | 1048.4 | 1096.4 | 0.0932 | 1.9426 | 2.0359 | 80.8 |
| 82.0 | 0.54093 | 0.016077 | 595.5 | 595.5 | 50.033 | 1047.3 | 1097.3 | 0.0969 | 1.9334 | 2.0303 | 82.9 |
| 84.0 | 0.57702 | 0.016082 | 560.3 | 560.3 | 52.029 | 1046.1 | 1098.2 | 0.1006 | 1.9242 | 2.0248 | 84.0 |
| 86.0 | 0.61518 | 0.016087 | 527.5 | 527.5 | 54.026 | 1045.0 | 1099.0 | 0.1043 | 1.9151 | 2.0193 | 86.8 |
| 88.0 | 0.65551 | 0.016093 | 496.8 | 496.8 | 56.022 | 1043.9 | 1099.9 | 0.1079 | 1.9060 | 2.0139 | 88.8 |
| 90.0 | 0.69813 | 0.016099 | 468.1 | 468.1 | 58.018 | 1042.7 | 1100.8 | 0.1115 | 1.8970 | 2.0086 | 90.0 |
| 92.0 | 0.74313 | 0.016105 | 441.3 | 441.3 | 60.014 | 1041.6 | 1101.6 | 0.1152 | 1.8881 | 2.0033 | 92.0 |
| 94.0 | 0.79062 | 0.016111 | 416.3 | 416.3 | 62.010 | 1040.5 | 1102.5 | 0.1188 | 1.8792 | 1.9980 | 94.0 |
| 96.0 | 0.84072 | 0.016117 | 392.8 | 392.9 | 64.006 | 1039.3 | 1103.3 | 0.1224 | 1.8704 | 1.9928 | 96.8 |
| 98.0 | 0.89356 | 0.016123 | 370.9 | 370.9 | 66.003 | 1038.2 | 1104.2 | 0.1260 | 1.8617 | 1.9876 | 98.0 |
| | | | enegristă. | sterio de la companya della companya della companya de la companya de la companya della companya | | | | • | - | | |
| 100.0 | 0.94924 | 0.016130 | 350.4 | 350.4 | 67.999 | 1037.1 | 1105.1 | 0.1295 | 1.8530 | 1.9825 | 100.0 |
| 102.8 | 1.00789 | 0.016137 | 331.1 | 331.1 | 69.995 | 1035.9 | 1105.9 | 0.1331 | 1.8444 | 1.9775 | 102.0 |
| 194.0 | 1.06965 | 0.016144 | 313.1 | 313.1 | 71.992 | 1034.8 | 1106.8 | 0.1366 | 1.8358 | 1.9725 | 104.0 |
| 106.8 | 1.1347 | 0.016151 | 296.16 | 296.18 | 73.99 | 1033.6 | 1107.6 | 0.1402 | 1.8273 | 1.9675 | 106.0 |
| 108.0 | 1.2030 | 0.016158 | 280.28 | 280.30 | 75.98 | 1032.5 | 1108.5 | 0.1437 | 1.8188 | 1.9626 | 106.0 |
| 110.6 | 1.2750 | 0.016165 | 265.37 | 265.39 | 77.98 | 1031.4 | 1109.3 | 0.1472 | 1.8105 | 1.9577 | 118.8 |
| 112.8 | 1.3505 | 0.016173 | 251.37 | 251.38 | 79.98 | 1030.2 | 1110.2 | 0.1507 | 1.8021 | 1.9528 | 112.8 |
| 114.0 | 1.4299 | 0.016180 | 238.21 | 238.22 | 81.97 | 1029.1 | 1111.0 | 0.1542 | 1.7938 | 1.9480 | 114.8 |
| 116.0 | 1.5133 | 0.016188 | 225.84 | 225.85 | 83.97 | 1027.9 | 1111.9 | 0.1577 | 1.7856 | 1.9433 | 118.0 |
| 118.0 | 1.6009 | 0.016196 | 214.20 | 214.21 | 85.97 | 1026.8 | 1112.7 | 0.1611 | 1.7774 | 1.9386 | 118.8 |
| 128.8 | 1.6927 | 0.016204 | 203.25 | 203.26 | 87.97 | 1025.6 | 1113.6 | 0.1646 | 1.7693 | 1.9339 | 128.8 |
| 122.8 | 1.7891 | 0.016213 | 192.94 | 192.95 | 89.96 | 1024.5 | 1114.4 | 0.1680 | 1.7613 | 1.9293 | 122.8 |
| 124.8 | 1.8901 | 0.016221 | 183.23 | 183.24 | 91.96 | 1023.3 | 1115.3 | 0.1715 | 1.7533 | 1.9247 | 124.8 |
| 126.8 | 1.9959 | 0.016229 | 174.08 | 174.09 | 93.96 | 1022.2 | 1116.1 | 0.1749 | 1.7453 | 1.9202 | 126.8 |
| 128.8 | 2.1068 | 0.016238 | 165.45 | 165.47 | 95.96 | 1021.0 | 1117.0 | 0.1783 | 1.7374 | 1.9157 | 128.8 |
| 130.0 132.0 134.0 136.0 138.0 | 2.2230 2.3445 2.4717 2.6047 2.7438 | 0.016247 0.016256 0.016265 0.016274 0.016284 | 157.32 149.64 142.40 135.55 129.09 | 157.33 149.66 142.41 135.57 129.11 | 97.96 99.95 101.95 103.95 105.95 | 1019.8 1018.7 1017.5 1016.4 1015.2 | 1117.8 1118.6 1119.5 1120.3 1121.1 | 0.1817 0.1851 0.1884 0.1918 0.1951 | 1.7217 1.7140 1.7063 1.6986 | 1.9112 1.9068 1.9024 1.8980 1.8937 | 138.0 132.0 134.0 136.0 138.0 |
| 148.8 142.8 144.8 146.0 148.8 | 2.8892 3.0411 3.1997 3.3653 3.5381 | 0.016293 0.016303 0.016312 0.016322 0.016332 | 122.98 117.21 111.74 106.58 101.68 | 123.00 117.22 111.76 106.59 101.70 | 107.95 109.95 111.95 113.95 115.95 | 1014.0 1012.9 1011.7 1010.5 1009.3 | 1122.0 1122.8 1123.6 1124.5 1125.3 | 0.1985 0.2018 0.2051 0.2084 0.2117 | 1.6684 1.6610 | 1.8895 1.8852 1.8810 1.8769 1.8727 | 140.0 142.0 144.0 146.0 146.0 |
| 150.0 | 3.7184 | 0.016343 | 97.05 | 97.07 | 117.95 | 1008.2 | 1126.1 | 0.2150 | 1.6536 | 1.8686 | 150.0 |
| 152.0 | 3.9065 | 0.016353 | 92.66 | 92.68 | 119.95 | 1007.0 | 1126.9 | 0.2183 | 1.6463 | 1.8646 | 152.0 |
| 154.0 | 4.1025 | 0.016363 | 88.50 | 88.52 | 121.95 | 1005.8 | 1127.7 | 0.2216 | 1.6390 | 1.8606 | 154.0 |
| 156.0 | 4.3068 | 0.016374 | 84.56 | 84.57 | 123.95 | 1004.6 | 1128.6 | 0.2248 | 1.6318 | 1.8566 | 156.8 |
| 158.0 | 4.5197 | 0.016384 | 80.82 | 80.83 | 125.96 | 1003.4 | 1129.4 | 0.2281 | 1.6245 | 1.8526 | 158.0 |
| 160.0 162.0 184.8 166.8 168.8 | 4.7414 4.9722 5.2124 5.4623 5.7223 | 0.016395 0.016406 0.016417 0.016428 0.016440 | 77.27 73.90 70.70 67.67 64.78 | 77.29 73.92 70.72 67.68 64.80 | 127.96 129.96 131.96 133.97 135.97 | 1002.2 1001.0 999.8 998.6 997.4 | 1130.2 1131.0 1131.8 1132.6 1133.4 | 0.2313 0.2345 0.237 0.2409 0.2441 | 1.6032 1.5961 | 1.8487 1.8448 1.8409 1.8371 1.8333 | 180.0 182.0 164.0 186.0 788.0 |
| 170.8 172.0 174.0 176.0 178.0 | 5.9926 6.2736 6.5656 6.8690 7.1840 | 0.016451 0.016463 0.016474 0.016486 0.016498 | 62.04 59.43 56.95 54.59 52.35 | 62.06 59.45 56.97 54.61 52.36 | 137.97 139.98 141.98 143.99 145.99 | 996.2 995.0 993.8 992.6 991.4 | 1134.2 1135.0 1135.8 1136.6 1137.4 | 0.2473 0.2505 0.2537 0.2568 0.2600 | 1.5684 1.5616 | 1.8295 1.8258 1.8221 1.8184 1.8147 | 178.8 172.8 174.8 176.8 178.8 |

Table 1. Saturated Steam: Temperature Table—Continued

| | | | | | n: Tempe | rature 1 | Γable— <i>C</i> | Continued |
|--|---|--|--|---|--|---|--|--|
| Temp Fahr t | Abs Press. Lb per Sq In. p | Spe Sat, Liquid V f | cific Volu Evap V fg | ime Sat. Vapor Vg | Sat. Liquid h f | Enthalpy Evap h fg | Sat. Vapor h g | Entropy Sat. Sat. Temp Liquid Evap Vapor Fahr S _f S _{fg} S _g t |
| 160.0 182.0 184.0 186.0 188.0 | 7.5110 7.850 8.203 8.568 8.947 | 0.016510 0.016522 0.016534 0.016547 0.016559 | 50.21 48.172 46.232 44.383 42.621 | 50.22 48.189 46.249 44.400 42.638 | 148.00 150.01 152.01 154.02 156.03 | 990.2 989.0 987.8 986.5 985.3 | 1138.2 1139.0 1139.8 1140.5 1141.3 | 0.2631 1.5480 1.8111 160.0 0.2662 1.5413 1.8075 182.0 0.2694 1.5346 1.8040 184.0 0.2725 1.5279 1.8004 186.0 0.2756 1.5213 1.7969 188.0 |
| 190.0 192.0 194.0 196.0 198.0 | 9.340 9.747 10.168 10.605 11.058 | 0.016572 0.016585 0.016598 0.016611 0.016624 | 40.941 39.337 37.808 36.348 34.954 | 40.957 39.354 37.824 36.364 34.970 | 158.04 160.05 162.05 164.06 166.08 | 984.1 982.8 981.6 980.4 979.1 | 1142.1 1142.9 1143.7 1144.4 1145.2 | 0.2787 1.5148 1.7934 190.0 0.2818 1.5082 1.7900 192.0 0.2848 1.5017 1.7865 194.0 0.2879 1.4952 1.7831 196.0 0.2910 1.4888 1.7798 198.0 |
| 200.0 204.0 208.0 212.0 216.0 | 11.526 12.512 13.568 14.696 15.901 | 0.016637 0.016664 0.016691 0.016719 0.016747 | 33.622 31.135 28.862 26.782 24.878 | 33.639 31.151 28.878 26.799 24.894 | 168.09 172.11 176.14 180.17 184.20 | 977.9 975.4 972.8 970.3 967.8 | 1146.0 1147.5 1149.0 1150.5 1152.0 | 0.2940 1.4824 1.7764 200.0 0.3001 1.4697 1.7698 204.0 0.3061 1.4571 1.7632 208.0 0.3121 1.4447 1.7568 212.0 0.3181 1.4323 1.7505 216.0 |
| 220.0 224.0 228.0 232.0 236.0 | 17.186 18.556 20.015 21.567 23.216 | 0.016775 0.016805 0.016834 0.016864 0.016895 | 23.131 21.529 20.056 18.701 17.454 | 23.148 21.545 20.073 18.718 17.471 | 188.23 192.27 196.31 200.35 204.40 | 965.2 962.6 960.0 957.4 954.8 | 1153.4 1154.9 1156.3 1157.8 1159.2 | 0.3241 1.4201 1.7442 220.0 0.3300 1.4081 1.7380 224.0 0.3359 1.3961 1.7320 228.0 0.3417 1.3842 1.7260 232.0 0.3476 1.3725 1.7201 236.0 |
| 240.0 244.0 248.0 252.0 256.0 | 24.968 26.826 28.796 30.883 33.091 | 0.016926 0.016958 0.016990 0.017022 0.017055 | 16.304 15.243 14.264 13.358 12.520 | 16.321 15.260 14.281 13.375 12.538 | 208.45 212.50 216.56 220.62 224.69 | 952.1 949.5 946.8 944.1 941.4 | 1160.6 1162.0 1163.4 1164.7 1166.1 | 0.3533 1.3609 1.7142 240.0 0.3591 1.3494 1.7085 244.0 0.3649 1.3379 1.7028 248.8 0.3706 1.3266 1.6972 252.0 0.3763 1.3154 1.6917 256.0 |
| 260.0 264.0 268.8 272.0 276.0 | 35.427 37.894 40.500 43.249 46.147 | 0.017089 0.017123 0.017157 0.017193 0.017228 | 11.745 11.025 10.358 9.738 9.162 | 11.762 11.042 10.375 9.755 9.180 | 228.76 232.83 236.91 240.99 245.08 | 938.6 935.9 933.1 930.3 927.5 | 1167.4 1168.7 1170.0 1171.3 1172.5 | 0.3819 1.3043 1.6862 260.0 0.3876 1.2933 1.6808 264.0 0.3932 1.2823 1.6755 268.0 0.3987 1.2715 1.6702 272.0 0.4043 1.2607 1.6650 276.0 |
| 281.0 284.0 284.0 284.0 282.0 282.0 | 49.200 52.414 55.795 59.350 63.064 | 0.017264 0.01730 0.01734 0.01738 0.01741 | 8.627 8.1280 7.6634 7.2301 6.8259 | 8.644 8.1453 7.6807 7.2475 6.8433 | 249.17 253.3 257.4 261.5 265.6 | 924.6 921.7 918.8 915.9 913.0 | 1173.8 1175.0 1176.2 1177.4 1178.6 | 0.4098 1.2501 1.6599 280.0 0.4154 1.2395 1.6548 284.0 0.4208 1.2290 1.6498 288.8 0.4263 1.2186 1.6449 282.8 0.4317 1.2082 1.6400 286.8 |
| 380,8 384,8 388,0 312,8 316,0 | 67.005 71.119 75.433 79.953 84.688 | 0.01757 | 6.4483 6.0955 5.7655 5.4566 5.1673 | 6.4658 6.1130 5.7830 5.4742 5.1849 | 269.7 273.8 278.0 282.1 286.3 | 901.0 | 1179.7 1180.9 1182.0 1183.1 1184.1 | 0.4372 1.1979 1.6351 300.0 0.4426 1.1877 1.6303 344.0 0.4479 1.1776 1.6256 388.0 0.4533 1.1676 1.6209 312.0 0.4586 1.1576 1.6162 316.0 |
| 32 0.0 324.0 328.0 332.8 336.0 | 89.643 94.826 100.245 105.907 111.820 | 0.01779 | 4.8961 4.6418 4.4030 4.1788 3.9681 | 4.9138 4.6595 4.4208 4.1966 3.9859 | 290.4 294.6 298.7 302.9 307.1 | 888.5 885.3 | 1185.2 1186.2 1187.2 1188.2 1189.1 | 0.4640 1.1477 1.6116 320.0 0.4692 1.1378 1.6071 324.0 0.4745 1.1280 1.6025 328.0 0.4798 1.1183 1.5981 332.0 0.4850 1.1086 1.5936 336.0 |
| 348.8 344.8 348.8 352.8 358.8 | 117.992 124.430 131.142 138.138 145.424 | 0.01792 0.01797 | 3.7699 3.5834 3.4078 3.2423 3.0863 | 3.7878 3.6013 3.4258 3.2603 3.1044 | 311.3 315.5 319.7 323.9 328.1 | 872 2 | 1190.1 1191.0 1191.1 1192.7 1193.6 | 0.4902 1.0990 1.5892 348.0 0.4954 1.0894 1.5849 344.8 0.5006 1.0799 1.5806 348.8 0.5058 1.0705 1.5763 352.0 0.5110 1.0611 1.5721 356.8 |
| 368.0 364.0 368.0 372.9 376.8 | 153.010 160.903 169.113 177.648 186.517 | 0.01821 0.01826 0.01831 | 2.9392 2.8002 2.6691 2.5451 2.4279 | 2.9573 2.8184 2.6873 2.5633 2.4462 | 332.3 336.5 340.8 345.0 349.3 | 855.1 | 1194.4 1195.2 1195.9 1196.7 1197.4 | 0.5161 1.0517 1.5678 380.0 0.5212 1.0424 1.5637 364.0 0.5263 1.0332 1.5559 368.0 0.5314 1.0240 1.5554 372.0 0.5365 1.0148 1.5513 376.0 |
| 380.8 384.8 388.0 392.9 396.8 | 195.729 205.294 215.220 225.516 236.193 | | 2.3170 2.2120 2.1126 2.0184 1.9291 | 2.3353 2.2304 2.1311 2.0369 1.9477 | 353.6 357.9 362.2 366.5 370.8 | 837.2 833.4 829.7 | 1198.0 1198.7 1199.3 1199.9 1200.4 | 0.5416 1.0057 1.5473 380.0 0.5466 0.9966 1.5432 384.0 0.5516 0.9876 1.5392 388.0 0.5567 0.9786 1.5352 382.0 0.5617 0.9696 1.5313 396.0 |
| 400.8 484.8 498.0 412.9 416.0 | 247.259 258.725 270.600 282.894 295.617 | | 1.8444 1.7640 1.6877 1.6152 1.5463 | 1.8630 1.7827 1.7064 1.6340 1.5651 | 375.1 379.4 383.8 388.1 392.5 | 822.0 818.2 814.2 | 1201.0 1201.5 1201.9 1202.4 1202.8 | 0.5667 0.9607 1.5274 400.0 0.5717 0.9518 1.5234 404.0 0.5766 0.9429 1.5195 408.0 0.5816 0.9341 1.5157 412.0 0.5866 0.9253 1.5118 416.0 |
| 429.8 424.8 428.8 432.8 436.0 | 308.780 322.391 336.463 351.00 366.03 | 0.01906 0.01913 1. 0.01919 1. | 1.4808 1.4184 1.3591 .30266 .24887 | 1.4997 1.4374 1.3782 1.32179 1.26806 | 396.9 401.3 405.7 410.1 414.6 | 793.9 789.7 | 1203.1 1203.5 1203.7 1204.0 1204.2 | 0.5915 0.9165 1.5080 420.0 0.5964 0.9077 1.5042 424.0 0.6014 0.8990 1.5004 428.0 0.6063 0.8903 1.4966 432.0 0.6112 0.8816 1.4928 436.0 |
| 448.8 444.8 448.8 452.8 456.8 | 381.54 397.56 414.09 431.14 448.73 | 0.01926 1. 0.01933 1. 0.01940 1. 0.01947 1. 0.01954 1. | .10212 .05764 | 1.21687 1.16806 1.12152 1.07711 1.03472 | 419.0 423.5 428.0 432.5 437.0 | 785.4 781.1 776.7 772.3 767.8 | 1204.4 1204.6 1204.7 1204.8 1204.8 | 0.6161 0.8729 1.4890 440.0 0.6210 0.8543 1.4853 444.0 0.6259 0.8557 1.4815 448.0 0.6308 0.8471 1.4778 452.0 0.6356 0.8385 1.4741 436.0 |

Table 1. Saturated Steam: Temperature Table—Continued

| | | Tab | le 1. Sa | turated St | eam: Tem | | | Continue | | | |
|--|---|---|---|---|--|---|--|--|--|---|---|
| Temp Fahr | Abs Press. Lb per Sq In. | Sp Sat. Liquid | ecific Vol Evap | ume Sat. Vapor | Sat. Liquid | Enthalpy Evap | Sat. Vapor | Sat. Liquid | Entropy | Sat. Vapor | Temp Fahr |
| t 460.0 464.0 468.0 472.0 476.0 | P 466.87 485.56 504.83 524.67 545.11 | 0.01961 0.01969 0.01976 0.01984 0.01992 | 0.97463 0.93588 0.89885 0.86345 0.82958 | 0.99424 0.95557 0.91862 0.88329 0.84950 | h f 441.5 446.1 450.7 455.2 459.9 | 763.2 758.6 754.0 749.3 744.5 | 1204.8 1204.7 1204.6 1204.5 1204.3 | S _f 0.6405 0.6454 0.6502 0,6551 0.6599 | Sfg 0.8299 0.8213 | S g 1.4704 1.4667 1.4629 1.4592 1.4555 | 460.0 464.0 468.0 472.0 476.0 |
| 480.0 484.0 488.0 492.0 496.0 | 566.15 587.81 610.10 633.03 656.61 | 0.02000 0.02009 0.02017 0.02026 0.02034 | 0.79716 0.76613 0.73641 0.70794 0.68065 | 0.81717 0.78622 0.75658 0.72820 0.70100 | 464.5 469.1 473.8 478.5 483.2 | 739.6 734.7 729.7 724.6 719.5 | 1204.1 1203.8 1203.5 1203.1 1202.7 | 0.6648 0.6696 0.6745 0.6793 0.6842 | 0.7871 | 1.4518 1.4481 1.4444 1.4407 1.4370 | 480.0 484.0 488.0 492.0 496.0 |
| 500.0 504.0 508.0 512.0 516.0 | 680.86 705.78 731.40 757.72 784.76 | 0.02043 0.02053 0.02062 0.02072 0.02081 | 0.65448 0.62938 0.60530 0.58218 0.55997 | 0.67492 0.64991 0.62592 0.60289 0.58079 | 487.9 492.7 497.5 502.3 507.1 | 714.3 709.0 703.7 698.2 692.7 | 1202.2 1201.7 1201.1 1200.5 1199.8 | 0.6890 0.6939 0.6987 0.7036 0.7085 | | 1.4333 1.4296 1.4258 1.4221 1.4183 | 500.0 504.0 508.0 512.0 516.0 |
| 520.0 524.0 528.0 532.0 536.0 | 812.53 841.04 870.31 900.34 931.17 | 0.02091 0.02102 0.02112 0.02123 0.02134 | 0.53864 0.51814 0.49843 0.47947 0.46123 | 0.55956 0.53916 0.51955 0.50070 0.48257 | 512.0 516.9 521.8 526.8 531.7 | 687.0 681.3 675.5 669.6 663.6 | 1199.0 1198.2 1197.3 1196.4 1195.4 | 0.7133 0.7182 0.7231 0.7280 0.7329 | | 1.4146 1.4108 1.4070 1.4032 1.3993 | 520.0 524.0 528.0 532.0 536.0 |
| 540.0 544.0 548.0 552.0 556.0 | 962.79 995.22 1028.49 1062.59 1097.55 | 0.02146 0.02157 0.02169 0.02182 0.02194 | 0.44367 0.42677 0.41048 0.39479 0.37966 | 0.46513 0.44834 0.43217 0.41660 0.40160 | 536.8 541.8 546.9 552.0 557.2 | 657.5 651.3 645.0 638.5 632.0 | 1194.3 1193.1 1191.9 1190.6 1189.2 | 0.7378 0.7427 0.7476 0.7525 0.7575 | | 1.3954 1.3915 1.3876 1.3837 1.3797 | 540.0 544.0 548.0 552.0 556.0 |
| 660.0 664.0 668.0 672.0 676.0 | 1133.38 1170.10 1207.72 1246.26 1285.74 | 0.02207 0.02221 0.02235 0.02249 0.02264 | 0.36507 0.35099 0.33741 0.32429 0.31162 | 0.38714 0.37320 0.35975 0.34678 0.33426 | 562.4 567.6 572.9 578.3 583.7 | 625.3 618.5 611.5 604.5 597.2 | 1187.7 1186.1 1184.5 1182.7 1180.9 | 0.7625 0.7674 0.7725 0.7775 0.7825 | | 1.3757 1.3716 1.3675 1.3634 1.3592 | 560.0 564.0 568.0 572.0 576.0 |
| 580.0 584.0 588.0 592.0 596.0 | 1326.17 1367.7 1410.0 1453.3 1497.8 | 0.02279 0.02295 0.02311 0.02328 0.02345 | 0.29937 0.28753 0.27608 0.26499 0.25425 | 0.32216 0.31048 0.29919 0.28827 0.27770 | 589.1 594.6 600.1 605.7 611.4 | 589.9 582.4 574.7 566.8 558.8 | 1179.0 1176.9 1174.8 1172.6 1170.2 | 0.7876 0.7927 0.7978 0.8030 0.8082 | 0.5673 0.5580 0.5485 0.5390 0.5293 | | 580.0 584.0 588.0 592.0 596.0 |
| | | | | | | | | | | | |
| 600.0 604.0 608.0 612.0 616.6 | 1543.2 1589.7 1637.3 1686.1 1735.9 | 0.02364 0.02382 0.02402 0.02422 0.02444 | 0.24384 0.23374 0.22394 0.21442 0.20516 | 0.23865 | 617.1 622.9 628.8 634.8 640.8 | 550.6 542.2 533.6 524.7 515.6 | 1162.4 1159.5 | 0.8134 0.8187 0.8240 0.8294 0.8348 | 0.5097 0.4997 0.4896 | 1.3330 1.3284 1.3238 1.3190 1.3141 | 600.0 604.0 608.0 612.0 616.0 |
| 620.0 624.0 628.0 632.0 636.0 | 1786.9 1839.0 1892.4 1947.0 2002.8 | 0.02466 0.02489 0.02514 0.02539 0.02566 | 0.19615 | 0.20394 0.19583 | 646.9 653.1 659.5 665.9 672.4 | 506.3 496.6 486.7 476.4 465.7 | 1146.1 1142.2 | 0.8403 0.8458 0.8514 0.8571 0.8628 | 0.4474 0.4364 | 1.3092 1.3041 1.2988 1.2934 1.2879 | 620. 624. 628. 632. 636. |
| 640.0 644.0 648.0 652.0 656.0 | 2059.9 2118.3 2178.1 2239.2 2301.7 | 0.02599 0.02629 0.0265 0.0269 0.02720 | 0.15427 0.14644 0.13876 0.13124 0.12387 | 7 0.18021 4 0.17269 6 0.16534 4 0.15816 7 0.15115 | 679.1 685.9 692.9 700.0 707.4 | 454.6 443.1 431.1 418.7 405.7 | 1129.0 1124.0 1118.7 | 0.8686 0.8746 0.8806 0.8868 0.8931 | 0.4134 0.4015 0.3893 0.3767 0.3637 | 1.2761 1.2699 1.2634 | 640. 644. 648. 652. 656. |
| 660.0 664.0 668.0 672.0 676.0 | 2365.7 2431.1 2498.1 2566.6 2636.8 | 0.0276 0.0281 0.0285 0.0291 0.0297 | 8 0.11663 1 0.10947 8 0.10229 1 0.09514 | 0.13087 0.12424 | 714.9 722.9 731.5 740.2 749.2 | 392.1 377.7 362.1 345.7 328.5 | 1107.0 1100.6 1093.5 1085.9 | 0.8995 0.9064 0.9137 0.9212 0.9287 | 0.3054 | 1.2347 1.2266 | 660. 664. 668. 672. 676. |
| 680.0 684.0 688.0 692.0 696.0 | 2708.6 2782.1 2857.4 2934.5 3013.4 | 0.0303 0.0311 0.0320 0.0331 0.0345 | 4 0.07349 4 0.06599 3 0.0579 | 9 0.10463 5 0.09799 7 0.09110 | 758.5 768.2 778.8 790.5 804.4 | 310.1 290.2 268.2 243.1 212.8 | 1058.4 1047.0 1033.6 | 0.9365 0.9447 0.9535 0.9634 0.9749 | 0.2537 0.2337 0.2110 | 1.1984 1.1872 1.1744 | 680. 684. 688. 692. 696. |
| 700.0 702.0 704.0 705.0 705.47* | 3094.3 3135.5 3177.2 3198.3 3208.2 | 0.0366 0.0382 0.0410 0.0442 0.0507 | 4 0.03173 8 0.02193 7 0.01304 | 3 0.06997 2 0.06300 4 0.05730 | 822.4 835.0 854.2 873.0 906.0 | 172.7 144.7 102.0 61.4 0.0 | 979.7 956.2 934.4 | 0.9901 1.0006 1.0169 1.0329 1.0612 | 0.1246 0.0876 0.0527 | 1.1252 1.1046 1.0856 | 700. 702. 704. 705. 705. |

^{*}Critical temperature

Table 2: Saturated Steam: Pressure Table

| | | | Tab | le 2: Sa | turated St | eam: Pro | essure Ta | ıble | | | |
|---|--|---|--|--|--|--|--|--|--|--|--|
| Abs Press. | Temp | Sp Sat. | ecific Valu | ne Sat. | Sat. | Enthalpy | Sat. | Sat. | Entropy | Sat. | Abs Press. |
| Lb/Sq In. P | Fahr t | Liquid V f | Evap ^V fg | Vapor V g | Liquid h _f | Evap h _{fg} | Vapor h g | Liquid S f | Evap ^S fg | Vapor S g | Lb/Sq In. |
| 0.08865 0.25 0.50 1.0 5.0 18.0 14.696 15.0 | 32.018 59.323 79.586 101.74 162.24 193.21 212.00 213.03 | 0.016022 0.016032 0.016071 0.016136 0.016407 0.016592 0.016719 | 3302.4 1235.5 641.5 333.59 73.515 38.404 26.782 26.274 | 3302.4 1235.5 641.5 333.60 73.532 38.420 26.799 26.290 | 0.0003 27.382 47.623 69.73 130.20 161.26 180.17 181.21 | 1075.5 1060.1 1048.6 1036.1 1000.9 982.1 970.3 969.7 | 1075.5 1087.4 1096.3 1105.8 1131.1 1143.3 1150.5 1150.9 | 0.0000 0.0542 0.0925 0.1326 0.2349 0.2836 0.3121 0.3137 | 2.1872 2.0425 1.9446 1.8455 1.6094 1.5043 1.4447 1.4415 | 2.1872 2.0967 2.0370 1.9781 1.8443 1.7879 1.7568 1.7552 | 0.08865 0.25 0.50 1.0 5.0 10.0 14.696 15.0 |
| 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0 | 227.96 250.34 267.25 281.02 292.71 302.93 312.04 320.28 | 0.016834 0.017009 0.017151 0.017274 0.017383 0.017482 0.017573 0.017659 | 20.070 13.7266 10.4794 8.4967 7.1562 6.1875 5.4536 4.8779 | 20.087 13.7436 10.4965 8.5140 7.1736 6.2050 5.4711 4.8953 | 196.27 218.9 236.1 250.2 262.2 272.7 282.1 290.7 | 960.1 945.2 933.6 923.9 915.4 907.8 900.9 894.6 | 1156.3 1164.1 1169.8 1174.1 1177.6 1180.6 1183.1 1185.3 | 0.3358 0.3682 0.3921 0.4112 0.4273 0.4411 0.4534 0.4643 | 1.3962 1.3313 1.2844 1.2474 1.2167 1.1905 1.1675 1.1470 | 1.7320 1.6995 1.6765 1.6586 1.6440 1.6316 1.6208 1.6113 | 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0 |
| 180.0 110.0 120.0 130.0 140.0 150.0 160.0 170.8 180.0 | 327.82 334.79 341.27 347.33 353.04 358.55 368.55 368.42 373.08 377.53 | 0.017740 0.01782 0.01789 0.01796 0.01803 0.01809 0.01815 0.01821 0.01827 0.01833 | 4.4133 4.0306 3.7097 3.4364 3.2010 2.9958 2.8155 2.6556 2.5129 2.3847 | 4.4310 4.0484 3.7275 3.4544 3.2190 3.0139 2.8336 2.6738 2.5312 2.4030 | 298.5 305.8 312.6 319.0 325.0 330.6 336.1 341.2 346.2 350.9 | 888.6 883.1 877.8 872.8 868.0 863.4 859.0 854.8 850.7 846.7 | 1187.2 1188.9 1190.4 1191.7 1193.0 1194.1 1195.1 1196.0 1196.9 1197.6 | 0.4743 0.4834 0.4919 0.4998 0.5071 0.5141 0.5206 0.5269 0.5328 0.5384 | 1.1284 1.1115 1.0960 1.0815 1.0681 1.0554 1.0435 1.0322 1.0215 1.0113 | 1.6027 1.5950 1.5879 1.5813 1.5752 1.5695 1.5641 1.5591 1.5543 1.5438 | 100.0 110.0 120.0 130.0 140.0 150.0 150.0 180.0 190.0 |
| 200.0 210.0 220.0 230.0 240.0 250.0 260.0 270.0 280.0 299.3 | 381.80 385.91 389.88 393.70 397.39 400.97 404.44 407.80 411.07 414.25 | 0.01839 0.01844 0.01850 0.01855 0.01860 0.01865 0.01875 0.01870 0.01880 0.01885 | 2.2689 2.16373 2.06779 1.97991 1.89909 1.82452 1.75548 1.69137 1.63169 1.57597 | 2.2873 2.18217 2.08629 1.99846 1.91769 1.84317 1.77418 1.71013 1.65049 1.59482 | 355.5 359.9 364.2 368.3 372.3 376.1 379.9 383.6 387.1 390.6 | 842.8 839.1 835.4 831.8 828.4 825.0 821.6 818.3 815.1 812.0 | 1198.3 1199.0 1199.6 1200.1 1200.6 1201.1 1201.5 1201.9 1202.3 1202.6 | 0.5438 0.5490 0.5540 0.5588 0.5634 0.5679 0.5722 0.5764 0.5805 0.5844 | 1.0016 0.9923 0.9834 0.9748 0.9665 0.9585 0.9508 0.9433 0.9361 0.9291 | 1.5454 1.5413 1.5374 1.5336 1.5299 1.5264 1.5230 1.5197 1.5166 1.5135 | 200.0 210.0 220.0 230.0 240.0 250.0 260.0 270.0 280.0 290.0 |
| | 417.35 431.73 444.60 | 0.01889 0.01912 0.01934 | 1.52384 1.30642 1.14162 | 1.54274 1.32554 1.1 6095 | 394.0 409.8 424.2 | 808.9 794.2 780.4 | 1202.9 1204.0 12 04.6 | 0.5882 0.6059 0.6217 | 0.9223 0.8909 0.8630 | 1.5105 1.4968 1.4847 | 380.0 358.8 408.8 |
| 450.0 500.0 550.0 600.0 650.0 700.0 | 456.28 467.01 476.94 486.20 494.89 503.08 | 0.01954 0.01975 0.01994 0.02013 0.02032 0.02050 | 1.01224 0.90787 0.82183 0.74962 0.68811 0.63505 | 1.03179 0.92762 0.84177 0.76975 0.70843 0.65556 | 437.3 449.5 460.9 471.7 481.9 491.6 | 767.5 755.1 743.3 732.0 720.9 710.2 | 1204.8 1204.7 1204.3 1203.7 1202.8 1201.8 | 0.6360 0.6490 0.6611 0.6723 0.6828 0.6928 | 0.8378 0.8148 0.7936 0.7738 0.7552 0.7377 | 1.4738 1.4639 1.4547 1.4461 1.4381 1.4304 | 450.0 500.0 550.0 600.0 650.0 700.0 |
| 750.8 800.8 859.0 900.0 950.0 1000.0 1050.0 1158.0 1200.0 | 510.84 518.21 525.24 531.95 538.39 544.58 550.53 556.28 561.82 567.19 | 0.02069 0.02087 0.02105 0.02123 0.02141 0.02159 0.02177 0.02195 0.02214 0.02232 | 0.58880 0.54809 0.51197 0.47968 0.45064 0.42436 0.40047 0.37863 0.35859 0.34013 | 0.60949 0.56896 0.53302 0.50091 0.47205 0.44596 0.42224 0.40058 0.38073 0.36245 | 500.9 509.8 518.4 526.7 534.7 542.6 550.1 557.5 564.8 571.9 | 699.8 689.6 679.5 669.7 660.0 650.4 640.9 631.5 622.2 613.0 | 1200.7 1199.4 1198.0 1196.4 1194.7 1192.9 1191.0 1189.1 1187.0 1184.8 | 0.7022 0.7111 0.7197 0.7279 0.7358 0.7434 0.7507 0.7578 0.7647 0.7714 | 0.7210 0.7051 0.6899 0.6753 0.6612 0.6476 0.6344 0.6216 0.6091 0.5969 | 1.4232 1.4163 1.4096 1.4032 1.3970 1.3910 1.3851 1.3794 1.3738 1.3683 | 750.0 860.0 850.0 960.0 950.0 1000.6 1050.0 1160.0 1200.0 |
| 1250.0 1300.0 1350.0 1400.6 1450.0 1500.0 1550.0 1660.0 1700.6 | 572.38 577.42 582.32 587.07 591.70 596.20 600.59 604.87 609.05 613.13 | 0.02250 0.02269 0.02288 0.02307 0.02327 0.02346 0.02366 0.02387 0.02407 0.02428 | 0.32306 0.30722 0.29250 0.27871 0.26584 0.25372 0.24235 0.23159 0.22143 0.21178 | 0.34556 0.32991 0.31537 0.30178 0.28911 0.27719 0.26601 0.25545 0.24551 0.23607 | 578.8 585.6 592.3 598.8 605.3 611.7 618.0 624.2 630.4 636.5 | 603.8 594.6 585.4 576.5 567.4 558.4 549.4 549.3 531.3 522.2 | 1182.6 1180.2 1177.8 1175.3 1172.8 1170.1 1167.4 1164.5 1161.6 1158.6 | 0.7780 0.7843 0.7906 0.7966 0.8026 0.8085 0.8142 0.8199 0.8254 0.8309 | 0.5850 0.5733 0.5620 0.5507 0.5397 0.5288 0.5182 0.5076 0.4971 0.4867 | 1.3630 1.3577 1.3525 1.3474 1.3423 1.3373 1.3324 1.3274 1.3225 1.3176 | 1250.0 1300.0 1350.0 1400.0 1450.0 1500.0 1550.0 1650.0 1700.0 |
| 1750.0 1800.0 1850.0 1950.0 1950.0 2000.0 2190.0 2290.0 2400.0 | 617.12 621.02 624.83 628.56 632.22 635.80 642.76 649.45 655.89 662.11 | 0.02450 0.02472 0.02495 0.02517 0.02541 0.02565 0.02615 0.02669 0.02727 0.02790 | 0.20263 0.19390 0.18558 0.17761 0.16999 0.16266 0.14885 0.13603 0.12406 0.11287 | 0.22713 0.21861 0.21052 0.20278 0.19540 0.18831 0.17501 0.16272 0.15133 0.14076 | 642.5 648.5 654.5 660.4 666.3 672.1 683.8 695.5 707.2 719.0 | 513.1 503.8 494.6 485.2 475.8 466.2 446.7 426.7 406.0 384.8 | 1155.6 1152.3 1149.0 1145.6 1142.0 1138.3 1130.5 1122.2 1113.2 1103.7 | 0.8363 0.8417 0.8470 0.8522 0.8574 0.8625 0.8727 0.8828 0.8929 0.9031 | 0.4765 0.4662 0.4561 0.4459 0.4358 0.4056 0.4053 0.3848 0.3640 0.3430 | 1.3128 1.3079 1.3030 1.2981 1.2931 1.2881 1.2780 1.2676 1.2569 1.2460 | 1750.0 1800.0 1850.0 1950.0 1950.0 2000.0 2100.0 2300.0 2400.0 |
| 2500.0 2600.0 2700.0 2800.0 2900.0 3000.0 3100.0 3200.9 3208.2* | 668.11 673.91 679.53 684.96 690.22 695.33 700.28 705.08 705.47 | 0.02859 0.02938 0.03029 0.03134 0.03262 0.03428 0.03681 0.04472 0.05078 | 0.10209 0.09172 0.08165 0.07171 0.06158 0.05073 0.0377I 0.01191 0.00000 | 0.13068 0.12110 0.11194 0.10305 0.09420 0.08500 0.07452 0.05663 0.05078 | 731.7 744.5 757.3 770.7 785.1 801.8 824.0 875.5 906.0 | 361.6 337.6 312.3 285.1 254.7 218.4 169.3 56.1 0.0 | 1093.3 1082.0 1069.7 1055.8 1039.8 1020.3 993.3 931.6 906.0 | 0.9139 0.9247 0.9356 0.9468 0.9588 0.9728 0.9914 1.0351 1.0612 | 0.3206 0.2977 0.2741 0.2491 0.2215 0.1891 0.1460 0.0482 0.0000 | 1.2345 1.2225 1.2097 1.1958 1.1803 1.1619 1.1373 1.0832 1.0612 | 2500.0 2600.0 2700.0 2800.0 2900.0 3000.0 3100.0 3200.0 3200.0 |

Table 3. Superheated Steam

| Aba Oreas | | | | | | <u>.</u> | able 3 | . 3 up | - | teu St | calli | | | | | | |
|--|-------------------|------------------------------------|-------------------------------------|------------------------------------|---|-------------------------------------|---|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|
| Abs Press. Lb/Sq In. (Sat. Temp) | | Sat. Water | Sat. Steam | Tempo 200 | erature – 250 | Degrees | Fahren 350 | heit 400 | 450 | 500 | 600 | 700 | 890 | 900 | 1000 | 1100 | 1200 |
| (101.74) | Sh v h s | 0.01614 69.73 0.1326 | 333.6 1105.8 1.9781 | 98.26 392.5 1150.2 2.0509 | 148.26 422.4 1172.9 2.0841 | 198.26 452.3 1195.7 2.1152 | 248.26 482.1 1218.7 2.1445 | 298.26 511.9 1241.8 2.1722 | 348.26 541.7 1265.1 2.1985 | 398.26 571.5 1288.6 2.2237 | 498.26 631.1 1336.1 2.2708 | 598.26 690.7 1384.5 2.3144 | 698.26 750.3 1433.7 2.3551 | 798.26 809.8 1483.8 2.3934 | 898.26 869.4 1534.9 2.4296 | 998.26 929.0 1586.8 2.4640 | 1098.26 988.6 1639.7 2.4969 |
| 5 (162.24) | Sh v h s | 0.01641 130.20 0.2349 | 73.53 1131.1 1.8443 | 37.76 78.14 1148.6 1.8716 | 87.76 84.21 1171.7 1.9054 | 137.76 90.24 1194.8 1.9369 | 187.76 96.25 1218.0 1.9664 | 237.76 102.24 1241.3 1.9943 | 287.76 108.23 1264.7 2.0208 | 337.76 114.21 1288.2 2.0460 | 437.76 126.15 1335.9 2.0932 | 537.76 138.08 1384.3 2.1369 | 637.76 150.01 1433.6 2.1776 | 737.76 161.94 1483.7 2.2159 | 837.76 173.86 1534.7 2.2521 | 937.76 185.78 1586.7 2.2866 | 1037.76 197.70 1639.6 2.3194 |
| 10 (193.21) | Sh V h s | 0.01659 161.26 0.2836 | 38.42 1143.3 1.7879 | 6.79 38.84 1146.6 1.7928 | 56.79 41.93 1170.2 1.8273 | 106.79 44.98 1193.7 1.8593 | 156.79 48.02 1217.1 1.8892 | 206.79 51.03 1240.6 1.9173 | 256.79 54.04 1264.1 1.9439 | 306.79 57.04 1287.8 1.9692 | 406.79 63.03 1335.5 2.0166 | 506.79 69.00 1384.0 2.0603 | 606.79 74.98 1433.4 2.1011 | 706.79 80.94 1483.5 2.1394 | 806.79 86.91 1534.6 2.1757 | 906.79 92.87 1586.6 2.2101 | 1006.79 98.84 1639.5 2.2430 |
| 14.696 (212.00) | Sh V h s | .0167 180.17 .3121 | 26 799 1150.5 1 7568 | | 38.00 28.42 1168.8 1.7833 | 88.00 30.52 1192.6 1.8158 | 138.00 32.60 1216.3 1.8459 | 188.00 34.67 1239.9 1.8743 | 238.00 36.72 1263.6 1.9010 | 288.00 38.77 1287.4 1.9265 | 388.00 42.86 1335.2 1.9739 | 488.00 46.93 1383.8 2.0177 | 588 00 51.00 1433.2 2.0585 | 688.00 55.06 1483.4 2.0969 | 788.00 59.13 1534.5 2.1332 | 888.00 63.19 1586.5 2.1676 | 988.00 67.25 1639.4 2.2005 |
| 15 (213.03) | Sh v h s | 0.01673 181.21 0.3137 | 26 290 1150.9 1.7552 | | 36.97 27.837 1168.7 1.7809 | 86.97 29.899 1192.5 1.8134 | 136.97 31.939 1216.2 1.8437 | 186.97 33.963 1239.9 1.8720 | 236.97 35.977 1263.6 1.8988 | 286.97 37.985 1287.3 1.9242 | 386.97 41.986 1335.2 1.9717 | 486.97 45.978 1383.8 2.0155 | 586.97 49.964 1433.2 2.0563 | 686.97 53.946 1483.4 2.0946 | 786.97 57.926 1534.5 2.1309 | 886.97 61.905 1586.5 2.1653 | 986.97 65.882 1639.4 2.1982 |
| 20 (227.96) | Sh v h s | 0.01683 196.27 0.3358 | 20.087 1156.3 1.7320 | | 22. 04 20.7 88 1167.1 1.7475 | 72.04 22.356 1191.4 1.7805 | 122.04 23.900 1215.4 1.8111 | 172.04 25.428 1239.2 1.8397 | 222.04 26.946 1263.0 1.8666 | 272.04 28.457 1286.9 1.8921 | 372.04 31.466 1334.9 1.9397 | 472.04 34.465 1383.5 1.9836 | 572.04 37.458 1432.9 2.0244 | 672.04 40.447 1483.2 2.0628 | 772.04 43.435 1534.3 2.0991 | 872.04 46.420 1586.3 2.1336 | 972.04 49.405 1639.3 2.1665 |
| 25 (240.07) | Sh h s | 0.01693 208.52 0.3535 | 16.301 11 60.6 1.7141 | | 9.93 16.558 1165.6 1.7212 | 59.93 17.829 1190.2 1.7547 | 109.93 19.076 1214.5 1.7856 | 159.93 20.307 1238.5 1.8145 | 209.93 21.527 1262.5 1.8415 | 259.93 22.740 1286.4 1.8672 | 359.93 25.153 1334.6 1.9149 | 459.93 27.557 1383.3 1.9588 | 559.93 29.954 1432.7 1.9997 | 659.93 32.348 1483.0 2.0381 | 759.93 34.740 1534.2 2.0744 | 859.93 37.130 1586.2 2.1089 | 959.93 39.518 1639.2 2.1418 |
| 38 (250.34) | Sh v h s | 0.01701 218.93 0.3682 | 13.744 1164.1 1. 699 5 | | | 49.66 14.810 1189.0 1.7334 | 99.66 15.859 1213.6 1.7647 | 149.66 16.892 1237.8 1. 7937 | 199.66 17.914 1261.9 1.8210 | 249.66 18.929 1286.0 1.8467 | 349.66 20.945 1334.2 1.8946 | 449.66 22.951 1383.0 1.9386 | 549.66 24.952 1432.5 1.9795 | 649.66 26.949 1482.8 2.0179 | 749.66 28.943 1534.0 2.0543 | 849.66 30.936 1586.1 2.0888 | 949.66 32.927 1639.0 2.1217 |
| Andrew - Alle | | | • | | | | | | | | | | - | | | | |
| 35 (259.29) | Sh V h s | 0.01708 228.03 0.3809 | 11.896 1167.1 1.6872 | | | 40.71 12.654 1187.8 1.7152 | 90.71 13.562 1212.7 1.7468 | 140.71 14.453 1237.1 1.7761 | 190.71 15.334 1261.3 1.8035 | 240.71 16.207 1285.5 1.8294 | 340.71 17.939 1333.9 1.8774 | 440.71 19.662 1382.8 1.9214 | 540.71 21.379 1432.3 1.9624 | 640.71 23.092 1482.7 2.0009 | 740.71 24.803 1533.9 2.0372 | 840.71 26.512 1586.0 2.0717 | 940.71 28.220 1638.9 2.1046 |
| 40 (267.25) | Sh v h s | 0.01715 236.14 0.3921 | 10.497 1169.8 1.6765 | | | 32.75 11.036 1186.6 1.6992 | 82.75 11.838 1211.7 1.7312 | 132.75 12.624 1236.4 1.7608 | 182.75 13.398 1260.8 1.7883 | 232.75 14.165 1285.0 1.8143 | 332 75 15 685 1333 6 1.8624 | 432.75 17.195 1382.5 1.9065 | 532.75 18.699 1432.1 1.9476 | 632.75 20.199 1482.5 1.9860 | 732 75 21 697 1533 7 2 0224 | 832.75 23 194 1585 8 2.0569 | 932.75 24.689 1638.8 2.0899 |
| 45 (274.44) | Sh v h s | 0,01721 243.49 0.4021 | 9.399 1172.1 1.6671 | | | 25.56 9.777 1185.4 1.6849 | 75.56 10.497 1210.4 1.7173 | 125.56 11.201 1235.7 1.7471 | 175.56 11.892 1260.2 1.7748 | 225.56 12.577 1284.6 1.8010 | 325.56 13.932 1333.3 1.8492 | 425,56 15,276 1382,3 1,8934 | 525.56 16.614 1431.9 1.9345 | 625,56 17,950 1482,3 1,9730 | 725.56 19.282 1533.6 2.0093 | 825,56 20,613 1585,7 2,0439 | 925.56 21,943 1638.7 2,0768 |
| 50 (281.02) | Sh V h s | 0.01727 250.21 0.4112 | 8.514 1174.1 1.6586 | | | 18.98 8.769 1184.1 1.6720 | 68.98 9.424 1209.9 1.7048 | 118.98 10.062 1234.9 1.7349 | 168.98 10.688 1259.6 1.7628 | 218.98 11.306 1284.1 1.7890 | 318.98 12.529 1332.9 1.8374 | 418.98 13.741 1382.0 1.8816 | 518.98 14.947 1431.7 1.9227 | 618.98 16.150 1482.2 1.9613 | 718.98 17.350 1533.4 1.9977 | 818.98 18.549 1585 6 2.0322 | 918.98 19.746 1638.6 2.0652 |
| 55 (287.07) | Sh v h s | 0.01733 256.43 0.4196 | 7.787 1176.0 1.6510 | | | 12.93 7.945 1182.9 1.6601 | 62,93 8,546 1208,9 1,6933 | 112.93 9.130 1234.2 1.7237 | 162,93 9,702 1259,1 1,7518 | 212.93 10.267 1283.6 1.7781 | 312.93 11.381 1332.6 1.8266 | 412,93 12,485 1381,8 1,8710 | 512.93 13.583 1431.5 1.9121 | 612,93 14,677 1482.0 1,9507 | 712.93 15.769 1533.3 1.987 | 812.93 16.859 1585.5 2.022 | 912.93 17.948 1638.5 2.055 |
| 50 (292.71) | Sh v h s | 0.01738 262.21 0.4273 | 7.174 1177.6 1.6440 | | | 7.29 7.257 1181.6 1.6492 | 57.29 7.815 1208.0 1.6829 | 107.29 8.354 1233.5 1.7134 | 157.29 8.881 1258.5 1.7417 | 207 29 9.400 1283.2 1.7681 | 307 29 10.425 1332.3 1.8168 | 407.29 11.438 1381.5 1.8612 | 507.29 12.446 1431.3 1.9024 | 607.29 13.450 1481.8 1.9410 | 707.29 14.452 1533.2 1.9774 | 807.29 15.452 1585.3 2.0120 | 907.29 16.450 1638.4 2.0450 |
| 85 (297.98) | Sh v h s | 0.01743 267.63 0.4344 | 6.653 1179.1 1.6375 | | | 2.02 6.675 1180.3 1.6390 | 52.02 7.1 9 5 1207.0 1.6731 | 102.02 7.697 1232.7 1.7040 | 152.02 8.186 1257.9 1.7324 | 202.02 8.667 1282.7 1.7590 | 302.02 9.615 1331.9 1.8077 | 402.02 10.552 1381.3 1.8522 | 502.02 11.484 1431.1 1.8935 | 602.02 12.412 1481.6 1.9321 | 702.02 13.337 1533.0 1.9685 | 802.02 14.261 1585.2 2.0031 | 902.02 15.183 1638.3 2.0361 |
| 7 0 (302.93) | Sh V h s | 0.01748 272.74 0.4411 | 6.205 1180.6 1.6316 | | | | 47.07 6.664 1206.0 1.6640 | 97.07 7.133 1232.0 1.6951 | 147.07 7.590 1257.3 1.7237 | 197.07 8.039 1282.2 1.7504 | 297.07 8.922 1331.6 1.7993 | 397.07 9.793 1381.0 1.8439 | 497.07 10.659 1430.9 1.8852 | 597.07 11.522 1481.5 1.9238 | 697.07 12.382 1532.9 1.9603 | 797.07 13.240 1585.1 1.9949 | 897.07 14.097 1638.2 2.0279 |
| 75 (307.61) | Sh V h s | 0.01753 277.56 0.4474 | 5.814 1181.9 1.6260 | | | | 42.39 6.204 1205.0 1.6554 | 92.39 6.545 1231.2 1.6868 | 142.39 7.074 1256.7 1.7156 | 192.39 7.494 1281.7 1.7424 | 292.39 8.320 1331.3 1.7915 | 392.39 9.135 1380.7 1.8361 | 492.39 9.945 1430.7 1.8774 | 592.39 10.750 1481.3 1.9161 | 692.39 11.553 1532.7 1.9526 | 792.39 12.355 1585.0 1.9872 | 892.39 13.155 1638.1 2.0202 |

Sh = superheat, F v = specific volume, cu ft per lb

h = enthalpy, Btu per lb s = entropy, Btu per R per lb

Table 3. Superheated Steam - Continued

| | | | | | I a U | ie 3. | Juper | heate | u Stea | | ,,,,,,,,, | | | | ·· | | |
|--|-------------------|-----------------------------|----------------------------|------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|
| Abs Press. Lb/Sq In. (Sat. Temp) | | Sat. Water | Sat Steam | Tempe 350 | erature — 400 | Degrees | Fahrent 500 | ert 550 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 |
| 80 (312.04) | Sh v h s | 0.01757 282.15 0.4534 | 5.471 1183.1 1.6208 | 37.96 5.801 1204.0 1.6473 | 87.96 6.218 1230.5 1.6790 | 137.96 6.622 1256.1 1.7080 | 187.96 7.018 1281.3 1.7349 | 237.96 7.408 1306.2 1.7602 | 287.96 7.794 1330.9 1.7842 | 387.96 8.560 1380.5 1.8289 | 487.96 9.319 1430.5 1.8702 | 587.96 10.075 1481.1 1.9089 | 687.96 10.829 1532.6 1.9454 | 787.96 11.581 1584.9 1.9800 | 887.96 12.331 1638.0 2.0131 | 987.96 13.081 1692.0 2.0446 | 1087.96 13.829 1746.8 2.0750 |
| 85 (316.26) | Sh v h s | 0.01762 286.52 0.4590 | 5.167 1184.2 1.6159 | 33.74 5.445 1203.0 1 6396 | 83.74 5.840 1229.7 1.6716 | 133 74 6.223 1255.5 1.7008 | 183.74 6.597 1280.8 1.7279 | 233.74 6.966 1305.8 1.7532 | 283.74 7.330 1330.6 1.7772 | 383.74 8.052 1380.2 1.8220 | 483.74 8.768 1430.3 1.8634 | 583.74 9.480 1481.0 1.9021 | 683.74 10.190 1532.4 1.9386 | 783.74 10.898 1584.7 1.9733 | 883.74 11.604 1637.9 2.0063 | 983.74 12.310 1691.9 2.0379 | 1083.74 13.014 1746.8 2.0682 |
| 90 (320.28) | Sh v h s | 0 01766 290.69 0.4643 | 4.895 1185.3 1.6113 | 29.72 5.128 1202.0 1.6323 | 79.72 5.505 1228.9 1.6646 | 129.72 5.869 1254.9 1.6940 | 179.72 6.223 1280.3 1.7212 | 229.72 6.572 1305.4 1.7467 | 279.72 6.917 1330.2 1.7707 | 379.72 7.600 1380.0 1.8156 | 479.72 8.277 1430.1 1.8570 | 579.72 8.950 1480.8 1.8957 | 679.72 9.621 1532.3 1.9323 | 779.72 10.290 1584.6 1.9669 | 879.72 10.958 1637.8 2.0000 | 979.72 11.625 1691.8 2.0316 | 1079.72 12.290 1746.7 2.0619 |
| 95 (324.13) | Sh v h s | 0.01770 294.70 0.4694 | 4.651 1186.2 1.6069 | 25.87 4.845 1200.9 1.6253 | 75.87 5.205 1228.1 1.6580 | 125.87 5.551 1254.3 1.6876 | 175.87 5.889 1279.8 1.7149 | 225.87 6.221 1305.0 1.7404 | 275.87 6.548 1329.9 1.7645 | 375.87 7.196 1379.7 1.8094 | 475.87 7.838 1429.9 1.8509 | 575.87 8 477 1480.6 1.8897 | 675.87 9.113 1532.1 1.9262 | 775.87 9.747 1584.5 1.9609 | 875.87 10.380 1637.7 1.9940 | 975.87 11.012 1691.7 2 0256 | 1075.87 11.643 1746.6 2.0559 |
| 1 00 (327.82) | Sh v h s | 0.01774 298.54 0.4743 | 4.431 1187.2 1.6027 | 22.18 4.590 1199.9 1.6187 | 72.18 4.935 1227.4 1.6516 | 122.18 5.266 1253.7 1.6814 | 172.18 5.588 1279.3 1.7088 | 222.18 5.904 1304.6 1.7344 | 272.18 6.216 1329.6 1.7586 | 372.18 6.833 1379.5 1.8036 | 472.18 7.443 1429.7 1.8451 | 572.18 8.050 1480.4 1.8839 | 672.18 8.655 1532.0 1.9205 | 772.18 9.258 1584.4 1.9552 | 872.18 9.860 1637.6 1.9883 | 972.18 10.460 1691.6 2.0199 | 1072.18 11.060 1746.5 2.0502 |
| 1 05 (331.37) | Sh V h s | 0.01778 302.24 0.4790 | 4.231 1188.0 1.5988 | 18.63 4.359 1198.8 1.6122 | 68.63 4.690 1226.6 1.6455 | 118.63 5.007 1253.1 1.6755 | 168.63 5.315 1278.8 1.7031 | 218.63 5.617 1304.2 1.7288 | 268.63 5.915 1329.2 1.7530 | 368.63 6.504 1379.2 1.7981 | 468.63 7.086 1429.4 1.8396 | 568.63 7.665 1480.3 1.8785 | 668.63 8.241 1531.8 1.9151 | 768.63 8.816 1584.2 1.9498 | 868.63 9.389 1637.5 1.9828 | 968.63 9.961 1691.5 2.0145 | 1068.63 10.532 1746.4 2.0448 |
| 1 10 (334.79) | Sh v h s | 0.01782 305.80 0.4834 | 4.048 1188.9 1.5950 | 15.21 4.149 1197.7 1 6061 | 65.21 4.468 1225.8 1.6396 | 115.21 4.772 1252.5 1.6698 | 165.21 5.068 1278.3 1.6975 | 215.21 5.357 1303.8 1.7233 | 265.21 5.642 1328.9 1.7476 | 365.21 6.205 1379.0 1.7928 | 465.21 6.761 1429.2 1.8344 | 565.21 7.314 1480.1 1.8732 | 665.21 7.865 1531.7 1.9099 | 765.21 8.413 1584.1 1.9446 | 865.21 8.961 1637.4 1.9777 | 965.21 9.507 1691.4 2.0093 | 1065.21 10.053 1746.4 2.0397 |
| 115 (338.08) | Sh v h s | 0.01785 309.25 0.4877 | 3.881 1189.6 1.5913 | 11.92 3.957 1196.7 1.6001 | 61.92 4.265 1225.0 1.6340 | 111.92 4.558 1251.8 1.6644 | 161.92 4.841 1277.9 1.6922 | 211.92 5.119 1303.3 1.7181 | 261.92 5.392 1328.6 1. 7425 | 361.92 5.932 1378.7 1.7877 | 461.92 6.465 1429.0 1.8294 | 561.92 6.994 1479.9 1.8682 | 661.92 7.521 1531.6 1.9049 | 761.92 8.046 1584.0 1.9396 | 861.92 8.570 1637.2 1.9727 | 961.92 9.093 1691.4 2.0044 | 1061.92 9.615 1746.3 2.0347 |
| 120 (341.27) | Sh v h | 0.01789 312.58 0.4919 | 3.7275 1190.4 1.5879 | 8.73 3.7815 1195.6 1.5943 | 58.73 4.0786 1224.1 1.6286 | 108.73 4.3610 1251.2 1.6592 | 158.73 4.6341 1277.4 1.6872 | 208.73 4.9009 1302.9 1.7132 | 258.73 5.1637 13 2 8.2 1.7376 | 358.73 5.6813 1378.4 1.7829 | 458.73 6.1928 1428.8 1.8246 | 558.73 6.7006 1479.8 1.8635 | 658.73 7.2060 1531.4 1.9001 | 758.73 7.7096 1583.9 1.9349 | 858.73 8.2119 1637.1 1.9680 | 958.73 8.7130 1691.3 1.9996 | 1058.73 9.2134 1746.2 2.0300 |
| 130 (347.33) | Sh V h s | 0.01796 318.95 0.4998 | 3.4544 1191.7 1.5813 | 2.67 3.4699 1193.4 1.5833 | 52.67 3.7489 1222.5 1.6182 | 102.67 4.0129 1249.9 1.6493 | 152.67 4.2672 1276.4 1.6775 | 202.67 4.5151 1302.1 1.7037 | 252.67 4.7589 1327.5 1.7283 | 352.67 5.2384 1377.9 1.7737 | 452.67 5.7118 1428.4 1.8155 | 552.67 6.1814 1479.4 1.8545 | 652.67 6.6486 1531.1 1.8911 | 752.67 7.1140 1583.6 1.9259 | 852.67 7.5781 1636.9 1.9591 | 952.67 8.0411 1691.1 1.9907 | 1052.67 8.5033 1746.1 2.0211 |
| 14 0 (353.04) | Sh v h s | 0.01803 324.96 0.5071 | 3.2190 1193.0 1.5752 | | 46.96 3.4661 1220.8 1.6085 | 96.96 3.7143 1248.7 1.6400 | 146.96 3.9526 1275.3 1.6686 | 196.96 4.1844 1301.3 1.6949 | 246.96 4.4119 1326.8 1.7196 | 346.96 4.8588 1377.4 1.7652 | 446.96 5.2995 1428.0 1.8071 | 546.96 5.7364 1479.1 1.8461 | 646.96 6.1709 1530.8 1.8828 | 746.96 6.6036 1583.4 1.9176 | 846.96 7.0349 1636.7 1.9508 | 946.96 7.4652 1690.9 1.9825 | 1046.96 7.8946 1745.9 2.0129 |
| 150 (358.43) | Sh v h s | 0.01809 330.65 0.5141 | 3.0139 1194.1 1.5695 | | 41.57 3.2208 1219.1 1.5993 | 91.57 3.4555 1247.4 1.6313 | 141.57 3.6799 1274.3 1.6602 | 191.57 3.8978 1300.5 1.6867 | 241.57 4.1112 1326.1 1.7115 | 341.57 4.5298 1376.9 1.7573 | 441.57 4.9421 1427.6 1.7992 | 541.57 5.3507 1478.7 1.8383 | 641.57 5.7568 1530.5 1.8751 | 741.57 6.1612 1583.1 1.9099 | 841.57 6.5642 1636.5 1.9431 | 941.57 6.9661 1690.7 1.9748 | 1041.57 7.3671 1745.7 2.0052 |
| 1 60 (363.55) | Sh v h s | 0.01815 336.07 0.5206 | 2.8336 1195.1 1.5641 | | 36.45 3.0060 1217.4 1.5906 | 86.45 3.2288 1246.0 1.6231 | 136.45 3.4413 1273.3 1.6522 | 186.45 3.6469 1299.6 1.6790 | 236.45 3.8480 1325.4 1.7039 | 336.45 4.2420 1376.4 1.7499 | 436.45 4.6295 1427.2 1.7919 | 536.45 5.0132 1478.4 1.8310 | 636.45 5.3945 1530.3 1.8678 | 736.45 5.7741 1582.9 1.9027 | 836.45 6.1522 1636.3 1.9359 | 936.45 6.5293 1690.5 1.9676 | 1036.45 6.9055 1745.6 1.9980 |
| 17 0 (368.42) | Sh ¥ h s | 0.01821 341.24 0.5269 | 2.6738 1196.0 1.5591 | | 31.58 2.8162 1215.6 1.5823 | 81.58 3.0288 1244.7 1.6152 | 131.58 3.2306 1272.2 1.6447 | 181.58 3.4255 1298.8 1.6717 | 231.58 3.6158 1324.7 1.6968 | 331.58 3.9879 1375.8 1.7428 | 431.58 4.3536 1426.8 1.7850 | 531.58 4.7155 1478.0 1.8241 | 631.58 5.0749 1530.0 1.8610 | 731.58 5.4325 1582.6 1.8959 | 831.58 5.7888 1636.1 1.9291 | 931.58 6.1440 1690.4 1.9608 | 1031.58 6.4983 1745.4 1.9913 |
| 1 80 (373.08) | Sh v h s | 0.01827 346.19 0.5328 | 2.5312 1196.9 1.5543 | | 26.92 2.6474 1213.8 1.5743 | 76.92 2.8508 1243.4 1.6078 | 126.92 3.0433 1271.2 1.6376 | 176.92 3.2286 1297.9 1.6647 | 226.92 3.4093 1324.0 1.6900 | 326.92 3.7621 1375.3 1.7362 | 426.92 4.1084 1426.3 1.7784 | 526.92 4.4508 1477.7 1.8176 | 626.92 4.7907 1529.7 1.8545 | 726.92 5.1289 1582.4 1.8894 | 826.92 5.4657 1635.9 1.9227 | 926.92 5.8014 1690.2 1.9545 | 1026.92 6.1363 1745.3 1.9849 |
| 1 90 (377.53) | Sh v h s | 0.01833 350.94 0.5384 | 2.4030 1197.6 1.5498 | | 22.47 2.4961 1212.0 1.5667 | 72.47 2.6915 1242.0 1.6006 | 122.47 2.8756 1270.1 1.6307 | 172.47 3.0525 1297.1 1.6581 | 222.47 3.2246 1323.3 1.6835 | 322.47 3.5601 1374.8 1.7299 | 422.47 3.8889 1425.9 1.7722 | 522.47 4.2140 1477.4 1.8115 | 622.47 4.5365 1529.4 1.8484 | 722.47 4.8572 1582.1 1.8834 | 822.47 5.1766 1635.7 1.9166 | 922.47 5.4949 1690.0 1.9484 | 1022.47 5.8124 1745.1 1.9789 |
| 200 (381.80) | Sh th s | 0.01839 355.51 0.5438 | 2.2873 1198.3 1.5454 | | 18.20 2.3598 1210.1 1.5593 | 68.20 2.5480 1240.6 1.5938 | 118.20 2.7247 1269.0 1.6242 | 168.20 2.8939 1296.2 1.6518 | 218.20 3.0583 1322.6 1.6773 | 318.20 3.3783 1374.3 1.7239 | 418.20 3.6915 1425.5 1.7663 | 518.20 4.0008 1477.0 1.8057 | 618.20 4.3077 1529.1 1.8426 | 718.20 4.6128 1581.9 1.8776 | 818.20 4.9165 1635.4 1.9109 | 918.20 5.2191 1689.8 1.9427 | 1018.20 5.5209 1745.0 1.9732 |

 $[\]begin{array}{l} Sh \,=\, superheat,\, F \\ v \,=\, specific\ volume,\ cu\ ft\ per\ lb \end{array}$

 $[\]begin{array}{l} h \,=\, enthalpy, \, Btu \,\, per \,\, Ib \\ s \,=\, entropy, \,\, Btu \,\, per \,\, R \,\, per \,\, Ib \end{array}$

Table 3. Superheated Steam - Continued

| AL - P | | | -11 | | - 100 | ie 3. | Super | Heate | u 316a | - CI | ontinu | eu | | | | | |
|--|-------------------|-----------------------------|----------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|
| Abs Press. Lb/Sq In. (Sat. Temp) | | Sat. Water | Sat. Steam | Tempe 400 | erature – 450 | Degrees 500 | Fahrent 550 | neit 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| 210 (385.91) | Sh V h s | 0.01844 359.91 0.5490 | 2.1822 1199.0 1.5413 | 14.09 2.2364 1208.2 1.5522 | 64.09 2.4181 1239.2 1.5872 | 114.09 2.5880 1268.0 1.6180 | 164.09 2.7504 1295.3 1.6458 | 214.09 2.9078 1321.9 1.6715 | 314.09 3.2137 1373.7 1.7182 | 414.09 3.5128 1425.1 1.7607 | 514.09 3.8080 1476.7 1.8001 | 614.09 4.1007 1528.8 1.8371 | 714.09 4.3915 1581.6 1.8721 | 814.09 4.6811 1635.2 1.9054 | 914.09 4.9695 1689.6 1.9372 | 1014.09 5.2571 1744.8 1.9677 | 1114.09 5.5440 1800.8 1.9970 |
| 220 (389.88) | Sh v h s | 0.01850 364.17 0.5540 | 2.0863 1199.6 1.5374 | 10.12 2.1240 1206.3 1.5453 | 60.12 2.2999 1237.8 1.5808 | 110.12 2.4638 1266.9 1.6120 | 160.12 2.6199 1294.5 1.6400 | 210.12 2.7710 1321.2 1.6658 | 310.12 3.0642 1373.2 1.7128 | 410.12 3.3504 1424.7 1.7553 | 510.12 3.6327 1476.3 1.7948 | 610.12 3.9125 1528.5 1.8318 | 710.12 4.1905 1581.4 1.8668 | 810.12 4.4671 1635.0 1.9002 | 910.12 4.7426 1689.4 1.9320 | 1010.12 5.0173 1744.7 1.9625 | 1110.12 5.2913 1800.6 1.9919 |
| 230 (393.70) | Sh V h 5 | 0.01855 368.28 0.5588 | 1.9985 1200.1 1.5336 | 6.30 2.0212 1204.4 1.5385 | 56.30 2.1919 1236.3 1.5747 | 106.30 2.3503 1265.7 1.6062 | 156.30 2.5008 1293.6 1.6344 | 206.30 2.6461 1320.4 1.6604 | 306.30 2.9276 1372.7 1.7075 | 406.30 3.2020 1424.2 1.7502 | 506.30 3.4726 1476.0 1.7897 | 606.30 3.7406 1528.2 1.8268 | 706.30 4.0068 1581.1 1.8618 | 806.30 4.2717 1634.8 1.8952 | 906.30 4.5355 1689.3 1.9270 | 1006.30 4.7984 1744.5 1.9576 | 1106.30 5.0606 1800.5 1.9869 |
| 240 (397.39) | Sh V h s | 0.01860 372.27 0.5634 | 1.9177 1200.6 1.5299 | 2.61 1.9268 1202.4 1.5320 | 52.61 2.0928 1234.9 1.5687 | 102.61 2.2462 1264.6 1.6006 | 152.61 2.3915 1292.7 1.6291 | 202.61 2.5316 1319.7 1.6552 | 302.61 2.8024 1372.1 1.7025 | 402.61 3.0661 1423.8 1.7452 | 502.61 3.3259 1475.6 1.7848 | 602.61 3.5831 1527.9 1.8219 | 702.61 3.8385 1580.9 1.8570 | 802.61 4.0926 1634.6 1.8904 | 902.61 4.3456 1689.1 1.9223 | 1002.61 4.5977 1744.3 1.9528 | 1102.61 4.8492 1800.4 1.9822 |
| 250 (400.97) | Sh v h s | 0.01865 376.14 0.5679 | 1.8432 1201.1 1.5264 | | 49.03 2.0016 1233.4 1.5629 | 99.03 2.1504 1263.5 1.5951 | 149.03 2.2909 1291.8 1.6239 | 199.03 2.4262 1319.0 1.6502 | 299.03 2.6872 1371.6 1.6976 | 399.03 2.9410 1423.4 1.7405 | 499.03 3.1909 1475.3 1.7801 | 599.03 3.4382 1527.6 1.8173 | 699.03 3.6837 1580.6 1.8524 | 799.03 3.9278 1634.4 1.8858 | 899.03 4.1709 1688.9 1.9177 | 999.03 4.4131 1744.2 1.9482 | 1099.03 4.6546 1800.2 1.9776 |
| 260 (404.44) | Sh v h s | 0.01870 379.90 0.5722 | 1.7742 1201.5 1.5230 | | 45.56 1.9173 1231.9 1.5573 | 95.56 2.0619 1262.4 1.5899 | 145.56 2.1981 1290.9 1.6189 | 195.56 2.3289 1318.2 1.6453 | 295.56 2.5808 1371.1 1.6930 | 395.56 2.8256 1423.0 1.7359 | 495.56 3.0663 1474.9 1.7756 | 595.56 3.3044 1527.3 1.8128 | 695.56 3.5408 1580.4 1.8480 | 795.56 3.7758 1634.2 1.8814 | 895.56 4.0097 1688.7 1.9133 | 995.56 4.2427 1744.0 1.9439 | 1095.56 4.4750 1800.1 1.9732 |
| 270 (407.80) | Sh V h s | 0.01875 383.56 0.5764 | 1.7101 1201.9 1.5197 | | 42.20 1.8391 1230.4 1.5518 | 92.20 1.9799 1261.2 1.5848 | 142.20 2.1121 1290.0 1.6140 | 192.20 2.2388 1317.5 1.6406 | 292.20 2.4824 1370.5 1.6885 | 392.20 2.7186 1422.6 1.7315 | 492.20 2.9509 1474.6 1.7713 | 592.20 3.1806 1527.1 1.8085 | 692.20 3.4084 1580.1 1.8437 | 792.20 3.6349 1634.0 1.8771 | 892.20 3.8603 1688.5 1.9090 | 992.20 4.0849 1743.9 1.9396 | 1092.20 4.3087 1800.0 1.9690 |
| 288 (411.07) | Sh V h s | 0.01880 387.12 0.5805 | 1.6505 1202.3 1.5166 | | 38.93 1.7665 1228.8 1.5464 | 88.93 1.9037 1260.0 1.5798 | 138.93 2.0322 1289.1 1.6093 | 188.93 2.1551 1316.8 1.6361 | 288.93 2.3909 1370.0 1.6841 | 388.93 2.6194 1422.1 1.7273 | 488.93 2.8437 1474.2 1.7671 | 588.93 3.0655 1526.8 1.8043 | 688.93 3.2855 1579.9 1.8395 | 788.93 3.5042 1633.8 1.8730 | 888.93 3.7217 1688.4 1.9050 | 988.93 3.9384 1743.7 1.9356 | 1088.93 4.1543 1799.8 1.9649 |
| | | | | رخمست | | | | | | | | | <u></u> | | | | |
| 290 (414.25) | Sh V h s | 0.01885 390.60 0.5844 | 1.5948 1202.6 1.5135 | | 35.75 1.6988 1227.3 1.5412 | 85.75 1.8327 1258.9 1.5750 | 135.75 1.9578 1288.1 1.6048 | 185.75 2.0772 1316.0 1.6317 | 285.75 2.3058 1369.5 1.6799 | 385.75 2.5269 1421.7 1.7232 | 485.75 2.7440 1473.9 1.7630 | 585.75 2.9585 1526.5 1.8003 | 685.75 3.1711 1579.6 1.8356 | 785.75 3.3824 1633.5 1.8690 | 885.75 3.5926 1688.2 1.9010 | 985.75 3.8019 1743.6 1.9316 | 1085.75 4.0106 1799.7 1.9610 |
| 300 (417.35) | Sh v h s | 0.01889 393.99 0.5882 | 1.5427 1202.9 1.5105 | | 32.65 1.6356 1225.7 1.5361 | 82.65 1.7665 1257.7 1.5703 | 132.65 1.8883 1287.2 1.6003 | 182.65 2.0044 1315.2 1.6274 | 282.65 2.2263 1368.9 1.6758 | 382.65 2.4407 1421.3 1.7192 | 482.65 2.6509 1473.6 1.7591 | 582.65 2.8585 1526.2 1.7964 | 682.65 3.0643 1579.4 1.8317 | 782.65 3.2688 1633.3 1.8652 | 882.65 3.4721 1688.0 1.8972 | 982.65 3.6746 1743.4 1.9278 | 1082.65 3.8764 1799.6 1.9572 |
| 310 (420.36) | Sh V h s | 0.01894 397.30 0.5920 | 1.4939 1203.2 1.5076 | | 29.64 1.5763 1224.1 1.5311 | 79.64 1.7044 1256.5 1.5657 | 129.64 1.8233 1286.3 1.5960 | 179.64 1.9363 1314.5 1.6233 | 279.64 2.1520 1368.4 1.6719 | 379.64 2.3600 1420.9 1.7153 | 479.64 2.5638 1473.2 1.7553 | 579.64 2.7650 1525.9 1.7927 | 679.64 2.9644 1579.2 1.8280 | 779.64 3.1625 1633.1 1.8615 | 879.64 3.3594 1687.8 1.8935 | 979.64 3.5555 1743.3 1.9241 | 1079.64 3.7509 1799.4 1.9536 |
| 320 (423.31) | Sh V h s | 0.01899 400.53 0.5956 | 1.4480 1203.4 1.5048 | | 26.69 1.5207 1222.5 1.5261 | 76.69 1.6462 1255.2 1.5612 | 126.69 1.7623 1285.3 1.5918 | 176.69 1.8725 1313.7 1.6192 | 276.69 2.0823 1367.8 1.6680 | 376.69 2.2843 1420.5 1.7116 | 476.69 2.4821 1472.9 1.7516 | 576.69 2.6774 1525.6 1.7890 | 676.69 2.8708 1578.9 1.8243 | 776.69 3.0628 1632.9 1.8579 | 876.69 3.2538 1687.6 1.8899 | 976.69 3.4438 1743.1 1.9206 | 1076.69 3.6332 1799.3 1.9500 |
| 330 (426.18) | Sh V h s | 0.01903 403.70 0.5991 | 1.4048 1203.6 1.5021 | | 23.82 1.4684 1220.9 1.5213 | 73.82 1.5915 1254.0 1.5568 | 123.82 1.7050 1284.4 1.5876 | 173.82 1.8125 1313.0 1.6153 | 273.82 2.0168 1367.3 1.6643 | 373.82 2.2132 1420.0 1.7079 | 473.82 2.4054 1472.5 1.7480 | 573.82 2.5950 1525.3 1.7855 | 673.82 2.7828 1578.7 1.8208 | 773.82 2.9692 1632.7 1.8544 | 873.82 3.1545 1687.5 1.8864 | 973.82 3.3389 1742.9 1.9171 | 1073.82 3.5227 1799.2 1.9466 |
| 340 (428.99) | Sh v h s | 0.01908 406.80 0.6026 | 1.3640 1203.8 1.4994 | | 21.01 1.4191 1219.2 1.5165 | 71.01 1.5399 1252.8 1.5525 | 121.01 1.6511 1283.4 1.5836 | 171.01 1.7561 1312.2 1.6114 | 271.01 1.9552 1366.7 1.6606 | 371.01 2.1463 1419.6 1.7044 | 471.01 2.3333 1472.2 1.7445 | 571.01 2.5175 1525.0 1.7820 | 671.01 2.7000 1578.4 1.8174 | 771.01 2.8811 1632.5 1.8510 | 871.01 3.0611 1687.3 1.8831 | 971.01 3.2402 1742.8 1.9138 | 1071.01 3.4186 1799.0 1.9432 |
| 350 (431.73) | Sh v h s | 0.01912 409.83 0.6059 | 1.3255 1204.0 1.4968 | | 18.27 1.3725 1217.5 1.5119 | 68.27 1.4913 1251.5 1.5483 | 118.27 1.6002 1282.4 1.5797 | 168.27 1.7028 1311.4 1.6077 | 268.27 1.8970 1366.2 1.6571 | 368.27 2.0832 1419.2 1.7009 | 468.27 2.2652 1471.8 1.7411 | 568.27 2.4445 1524.7 1.7787 | 668.27 2.6219 1578.2 1.8141 | 768.27 2.7980 1632.3 1.8477 | 868.27 2.9730 1687.1 1.8798 | 968.27 3.1471 1742.6 1.9105 | 1068.27 3.3205 1798.9 1.9400 |
| 368 (434.41) | Sh V h s | 0.01917 412.81 0.6092 | 1.2891 1204.1 1.4943 | | 15.59 1.3285 1215.8 1.5073 | 65.59 1.4454 1250.3 1.5441 | 115.59 1.5521 1281.5 1.5758 | 165.59 1.6525 1310.6 1.6040 | 265.59 1.8421 1365.6 1.6536 | 365.59 2.0237 1418.7 1.6976 | 465.59 2.2009 1471.5 1.7379 | 565.59 2.3755 1524.4 1.7754 | 665.59 2.5482 1577.9 1.8109 | 765.59 2.7196 1632.1 1.8445 | 865.59 2.8898 1686.9 1.8766 | 965.59 3.0592 1742.5 1.9073 | 1065.59 3.2279 1798.8 1.9368 |
| 380 (439.61) | Sh v h s | 0.01925 418.59 0.6156 | 1.2218 1204.4 1.4894 | | 10.39 1.2472 1212.4 1.4982 | 60.39 1.3606 1247.7 1.5360 | 110.39 1.4635 1279.5 1.5683 | 160.39 1.5598 1309.0 1.5969 | 260.39 1.7410 1364.5 1.6470 | 360.39 1.9139 1417.9 1.6911 | 460.39 2.0825 1470.8 1.7315 | 560.39 2.2484 1523.8 1.7692 | 660.39 2.4124 1577.4 1.8047 | 760.39 2.5750 1631.6 1.8384 | 860.39 2.7366 1686.5 1.8705 | 960.39 2.8973 1742.2 1.9012 | 1060.39 3.0572 1798.5 1.9307 |

Sh = superheat, F v = specific volume, cu ft per Ib

 $[\]begin{array}{l} h = \mbox{ enthalpy, Btu per lb} \\ s = \mbox{ entropy, Btu per R per lb} \end{array}$

Table 3. Superheated Steam - Continued

| Abs Press. | | 0-4 | C - 1 | Tempe | rature | Degrees | Fahrenh | eit | | | | | | | | | |
|-------------------------|-------------------|-----------------------------|----------------------------|------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|
| Lb/Sq In (Sat. Temp) | | Sat. Water | Sat Steam | 450 | 500 | 550 | 600 | 650 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| 400 (444.60) | Sh v h s | 0.01934 424.17 0.6217 | 1.1610 1204.6 1.4847 | 5.40 1.1738 1208.8 1.4894 | 55.40 1.2841 1245.1 1.5282 | 105.40 1.3836 1277.5 1.5611 | 155.40 1.4763 1307.4 1.5901 | 205.40 1.5646 1335.9 1.6163 | 255.40 1.6499 1363.4 1.6406 | 355.40 1.8151 1417.0 1.6850 | 455.40 1.9759 1470.1 1.7255 | 555.40 2.1339 1523.3 1.7632 | 655.40 2.2901 1576.9 1.7988 | 755.40 2.4450 1631.2 1.8325 | 855.40 2.5987 1686.2 1.8647 | 955.40 2.7515 1741.9 1.8955 | 1055.40 2.9037 1798.2 1.9250 |
| 420 (449.40) | Sh V h s | 0.01942 429.56 0.6276 | 1.1057 1204.7 1.4802 | .60 1.1071 1205.2 1.4808 | 50.60 1.2148 1242.4 1.5206 | 100.60 1.3113 1275.4 1.5542 | 150.60 1.4007 1305.8 1.5835 | 200.60 1.4856 1334.5 1.6100 | 250.60 1.5676 1362.3 1.6345 | 350.60 1.7258 1416.2 1.6791 | 450.60 1.8795 1469.4 1.7197 | 550.60 2.0304 1522.7 1.7575 | 650.60 2.1795 1576.4 1.7932 | 750.60 2.3273 1630.8 1.8269 | 850.60 2.4739 1685.8 1.8591 | 950.60 2.6196 1741.6 1.8899 | 1050.60 2.7647 1798.0 1.9195 |
| 440 (454.03) | Sh v h s | 0.01950 434.77 0.6332 | 1.0554 1204.8 1.4759 | | 45.97 1.1517 1239.7 1.5132 | 95.97 1.2454 1273.4 1.5474 | 145.97 1.3319 1304.2 1.5772 | 195.97 1.4138 1333.2 1.6040 | 245.97 1.4926 1361.1 1.6286 | 345.97 1.6445 1415.3 1.6734 | 445.97 1.7918 1468.7 1.7142 | 545.97 1.9363 1522.1 1.7521 | 645.97 2.0790 1575.9 1.7878 | 745.97 2.2203 1630.4 1.8216 | 845.97 2.3605 1685.5 1.8538 | 945.97 2.4998 1741.2 1.8847 | 1045.97 2.6384 1797.7 1.9143 |
| 460 (458.50) | Sh V h s | 0.01959 439.83 0.6387 | 1.0092 1204.8 1.4718 | | 41.50 1.0939 1236.9 1.5060 | 91.50 1.1852 1271.3 1.5409 | 141.50 1.2691 1302.5 1.5711 | 191.50 1.3482 1331.8 1.5982 | 241.50 1.4242 1360.0 1.6230 | 341.50 1.5703 1414.4 1.6680 | 441.50 1.7117 1468.0 1.7089 | 541.50 1.8504 1521.5 1.7469 | 641.50 1.9872 1575.4 1.7826 | 741.50 2.1226 1629.9 1.8165 | 841.50 2.2569 1685.1 1.8488 | 941.50 2.3903 1740.9 1.8797 | 1041.50 2.5230 1797.4 1.9093 |
| 480 (462.82) | Sh ¥ h s | 0.01967 444.75 0.6439 | 0.9668 1204.8 1.4677 | | 37.18 1.0409 1234.1 1.4990 | 87.18 1.1300 1269.1 1.5346 | 137.18 1.2115 1300.8 1.5652 | 187.18 1.2881 1330.5 1.5925 | 237.18 1.3615 1358.8 1.6176 | 337.18 1.5023 1413.6 1.6628 | 437.18 1.6384 1467.3 1.7038 | 537.18 1.7716 1520.9 1.7419 | 637.18 1.9030 1574.9 1.7777 | 737.18 2.0330 1629.5 1.8116 | 837.18 2.1619 1684.7 1.8439 | 937.18 2.2900 1740.6 1.8748 | 1037.18 2.4173 1797.2 1.9045 |
| 500 (467.01) | Sh v h s | 0.01975 449.52 0.6490 | 0.9276 1204.7 1.4639 | | 32.99 0.9919 1231.2 1.4921 | 82.99 1.0791 1267.0 1.5284 | 132.99 1.1584 1299.1 1.5595 | 182.99 1.2327 1329.1 1.5871 | 232.99 1.3037 1357.7 1.6123 | 332.99 1.4397 1412.7 1.6578 | 432.99 1.5708 1466.6 1.6990 | 532.99 1.6992 1520.3 1.7371 | 632.99 1.8256 1574.4 1.7730 | 732.99 1.9507 1629.1 1.8069 | 832.99 2.0746 1684.4 1.8393 | 932.99 2.1977 1740.3 1.8702 | 1032.99 2.3200 1796.9 1.8998 |
| 520 (471.07) | Sh v h s | 0.01982 454.18 0.6540 | 0.8914 1204.5 1.4601 | | 28.93 0.9466 1228.3 1.4853 | 78.93 1.0321 1264.8 1.5223 | 128.93 1.1094 1297.4 1.5539 | 178.93 1.1816 1327.7 1.5818 | 228.93 1.2504 1356.5 1.6072 | 328.93 1.3819 1411.8 1.6530 | 428.93 1.5085 1465.9 1.6943 | 528.93 1.6323 1519.7 1.7325 | 628.93 1.7542 1573.9 1.7684 | 728.93 1.8746 1628.7 1.8024 | 828.93 1.9940 1684.0 1.8348 | 928.93 2.1125 1740.0 1.8657 | 1028.93 2.2302 1796.7 1.8954 |
| 540 (475.01) | Sh v h s | 0.01990 458.71 0.6587 | 0.8577 1204.4 1.4565 | | 24.99 0.9045 1225.3 1.4786 | 74.99 0.9884 1262.5 1.5164 | 124.99 1.0640 1295.7 1.5485 | 174.99 1.1342 1326.3 1.5767 | 224.99 1.2010 1355.3 1.6023 | 324.99 1.3284 1410.9 1.6483 | 424.99 1.4508 1465.1 1.6897 | 524.99 1.5704 1519.1 1.7280 | 624.99 1.6880 1573.4 1.7640 | 724.99 1.8042 1628.2 1.7981 | 824.99 1.9193 1683.6 1.8305 | 924.99 2.0336 1739.7 1.8615 | 1024.99 2.1471 1796.4 1.8911 |
| | ludy's | · | - | | والمتابعة أوالمتابعة | | <u></u> | · · · · · · · · · · · · · · · · · · · | | | | | | | <u>-</u> | | |
| 560 (478.84) | Sh v h s | 0.01998 463.14 0.6634 | 0.8264 1204.2 1.4529 | | 21 16 0.8653 1222.2 1.4720 | 71.16 0.9479 1260.3 1.5106 | 121.16 1.0217 1293.9 1.5431 | 171.16 1.0902 1324.9 1.5717 | 221.16 1.1552 1354.2 1.5975 | 321.16 1.2787 1410.0 1.6438 | 421.16 1.3972 1464.4 1.6853 | 521.16 1.5129 1518.6 1.7237 | 621.16 1.6266 1572.9 1.7598 | 721.16 1.7388 1627.8 1.7939 | 821.16 1.8500 1683.3 1.8263 | 921.16 1.9603 1739.4 1.8573 | 2.0699 1796.1 |
| 580 (482.57) | Sh V h s | 0.02006 467.47 0.6679 | 0.7971 1203.9 1.4495 | | 17.43 0.8287 1219.1 1.4654 | 67.43 0.9100 1258.0 1.5049 | 117.43 0.9824 1292.1 1.5380 | 167.43 1.0492 1323.4 1.5668 | 217.43 1.1125 1353.0 1.5929 | 317.43 1.2324 1409.2 1.6394 | 417.43 1.3473 1463.7 1.6811 | 517.43 1.4593 1518.0 1.7196 | 617.43 1.5693 1572.4 1.7556 | 717.43 1.6780 1627.4 1.7898 | 817.43 1.7855 1682.9 1.8223 | 917.43 1.8921 1739.1 1.8533 | 1.9980 1.795.9 |
| 600 (486.20) | Sh V h s | 0.02013 471.70 0.6723 | 0.7697 1203.7 1.4461 | | 13.80 0.7944 1215.9 1.4590 | 63.80 0.8746 1255.6 1.4993 | 113.80 0.9456 1290.3 1.5329 | 163.80 1.0109 1322.0 1.5621 | 213.80 1.0726 1351.8 1.5884 | 313.80 1.1892 1408.3 1.6351 | 413.80 1.3008 1463.0 1.6769 | 513.80 1.4093 1517.4 1.7155 | 613.80 1.5160 1571.9 1.7517 | 713.80 1.6211 1627.0 1.7859 | 813.80 1.7252 1682.6 1.8184 | 913.80 1.8284 1738.8 1.8494 | 1.9309 1.795.6 |
| 650 (494.89) | Sh v h s | 0.02032 481.89 1.6828 | 0.7084 1202.8 1.4381 | | 5.11 0.7173 1207.6 1.4430 | 55.11 0.7954 1249.6 1.4858 | 105.11 0.8634 1285.7 1.5207 | 155.11 0.9254 1318.3 1.5507 | 205.11 0.9835 1348.7 1.5775 | 305.11 1.0929 1406.0 1.6249 | 405.11 1.1969 1461.2 1.6671 | 505.11 1.2979 1515.9 1.7059 | 605.11 1.3969 1570.7 1.7422 | 705.11 1.4944 1625.9 1.7765 | 805.11 1.5909 1681.6 1.8092 | 905.11 1.6864 1738.0 1.8403 | 1.7813 1.794.9 |
| 700 (503.08) | Sh v h s | 0.02050 491.60 0.6928 | | | | 46.92 0.7271 1243.4 1.4726 | 96.92 0.7928 1281.0 1.5090 | 146.92 0.8520 1314.6 1.5399 | 196.92 0.9072 1345.6 1.5673 | 296.92 1.0102 1403.7 1.6154 | 396.92 1.1078 1459.4 1.6580 | 496.92 1.2023 1514.4 1.6970 | 596.92 1.2948 1569.4 1.7335 | 696.92 1.3858 1624.8 1.7679 | 796.92 1.4757 1680.7 1.8006 | 896.92 1.5647 1737.2 1.8318 | 1.6530 1794.3 |
| 750 (510.84) | Sh v h s | 0.02069 500.89 0.7022 | 0.6095 1200.7 1.4232 | | | 39.16 0.6676 1236.9 1.4598 | 89.16 0.7313 1276.1 1.4977 | 139.16 0.7882 1310.7 1.5296 | 189.16 0.8409 1342.5 1.5577 | 289.16 0.9386 1401.5 1.6065 | 389.16 1.0306 1457.6 1.6494 | 489.16 1.1195 1512.9 1.6886 | 589.16 1.2063 1568.2 1.7252 | 689.16 1.2916 1623.8 1.7598 | 789.16 1.3759 1679.8 1.7926 | 889.16 1.4592 1736.4 1.8239 | 1.5419 1793.6 |
| 800 (518.21) | Sh V h S | 0.02087 509.81 0.7111 | 0.5690 1199.4 1.4163 | | | 31.79 0.6151 1230.1 1.4472 | 81.79 0.6774 1271.1 1.4869 | 131.79 0.7323 1306.8 1.5198 | 181.79 0.7828 1339.3 1.5484 | 281.79 0.8759 1399.1 1.5980 | 381.79 0.9631 1455.8 1.6413 | 481.79 1.0470 1511.4 1.6807 | 581.79 1.1289 1566.9 1.7175 | 681.79 1.2093 1622.7 1.7522 | 781.79 1.2885 1678.9 1.7851 | 881.79 1.3669 1735.7 1.8164 | 1792.9 |
| 850 (525.24) | Sh v h s | 0.02105 518.40 0.7197 | 0.5330 1198.0 1.4096 | | | 24.76 0.5683 1223.0 1.4347 | 74.76 0.6296 1265.9 1.4763 | 124.76 0.6829 1302.8 1.5102 | 174.76 0.7315 1336.0 1.5396 | 274.76 0.8205 1396.8 1.5899 | 374.76 0.9034 1454.0 1.6336 | 474.76 0.9830 1510.0 1.6733 | 574.76 1.0606 1565.7 1.7102 | 674.76 1.1366 1621.6 1.7450 | 774.76 1.2115 1678.0 1.7780 | 874.76 1.2855 1734.9 1.8094 | 1.3588 1792.3 |
| 900 (531.95) | Sh v h s | 0.02123 526.70 0.7279 | 0.5009 1196.4 1.4032 | | | 18.05 0.5263 1215.5 1.4223 | 68.05 0.5869 1260.6 1.4659 | 118.05 0.6388 1298.6 1.5010 | 168.05 0.6858 1332.7 1.5311 | 268.05 0.7713 1394.4 1.5822 | 368.05 0.8504 1452.2 1.6263 | 468.05 0.9262 1508.5 1.6662 | 568.05 0.9998 1564.4 1.7033 | 668.05 1.0720 1620.6 1.7382 | 768.05 1.1430 1677.1 1.7713 | 868.05 1.2131 1734.1 1.8028 | 1.2825 1791.6 |

Sh = superheat, F v = specific volume, cu ft per lb

 $[\]begin{array}{l} h \,=\, \text{enthalpy, Btu per Ib} \\ s \,=\, \text{entropy, Btu per R per Ib} \end{array}$

Table 3. Superheated Steam - Continued

| | | | | | ıaı | ne s. | Supe | rneate | o Ste | am – C | ontinu | ea | | | | | |
|---------------------------------------|-------------------|-----------------------------|----------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Abs Press Lb/Sq In. (Sat. Temp) | | Sat. Water | Sat. Steam | Temp 550 | erature - 600 | - Degree 650 | s Fahren 700 | heit 750 | 800 | 850 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| 950 (538.39) | Sh V h s | 0.02141 534.74 0.7358 | 0.4721 1194.7 1.3970 | 11.61 0.4883 1207.6 1.4098 | 61.61 0.5485 1255.1 1.4557 | 111.61 0.5993 1294.4 1.4921 | 161.61 0.6449 1329.3 1.5228 | 211.61 0.6871 1361.5 1.5500 | 261.61 0.7272 1392.0 1.5748 | 311.61 0.7656 1421.5 1.5977 | 361.61 0.8030 1450.3 1.6193 | 461.61 0.8753 1507.0 1.6595 | 561.61 0.9455 1563.2 1.6967 | 561.61 1.0142 1619.5 1.7317 | 761.61 1.0817 1676.2 1.7649 | 861.61 1.1484 1733.3 1.7965 | 961.61 1.2143 1791.0 1.8267 |
| 1000 (544.58) | Sh V h s | 0.02159 542.55 0.7434 | 0.4460 1192.9 1.3910 | 5.42 0.4535 1199.3 1.3973 | 55.42 0.5137 1249.3 1.4457 | 105.42 0.5636 1290.1 1.4833 | 155.42 0.6080 1325.9 1.5149 | 205.42 0.6489 1358.7 1.5426 | 255.42 0.6875 1389.6 1.5677 | 305.42 0.7245 1419.4 1.5908 | 355.42 0.7603 1448.5 1.6126 | 455.42 0.8295 1505.4 1.6530 | 555.42 0.8966 1561.9 1.6905 | 655.42 0.9622 1618.4 1.7256 | 755.42 1.0266 1675.3 1.7589 | 855.42 1.0901 1732.5 1.7905 | 955.42 1.1529 1790.3 1.8207 |
| 1050 (550.53) | Sh v h s | 0.02177 550.15 0.7507 | 0.4222 1191.0 1.3851 | | 49.47 0.4821 1243.4 1.4358 | 99.47 0.5312 1285.7 1.4748 | 149.47 0.5745 1322.4 1.5072 | 199.47 0.6142 1355.8 1.5354 | 249.47 0.6515 1387.2 1.5608 | 299.47 0.6872 1417.3 1.5842 | 349.47 0.7216 1446.6 1.6062 | 449.47 0.7881 1503.9 1.6469 | 549.47 0.8524 1560.7 1.6845 | 649.47 0.9151 1617.4 1.7197 | 749.47 0.9767 1674.4 1.7531 | 849.47 1.0373 1731.8 1.7848 | 949.47 1.0973 1789.6 1.8151 |
| 1 100 (556.28) | \$h h s | 0.02195 557.55 0.7578 | 0.4006 1189.1 1.3794 | | 43.72 0.4531 1237.3 1.4259 | 93.72 0.5017 1281.2 1.4664 | 143.72 0.5440 1318.8 1.4996 | 193.72 0.5826 1352.9 1.5284 | 243.72 0.6188 1384.7 1.5542 | 293.72 0.6533 1415.2 1.5779 | 343.72 0.6865 1444.7 1.6000 | 443.72 0.7505 1502.4 1.6410 | 543.72 0.8121 1559.4 1.6787 | 643.72 0.8723 1616.3 1.7141 | 743.72 0.9313 1673.5 1.7475 | 843.72 0.9894 1731.0 1.7793 | 943.72 1.0468 1789.0 1.8097 |
| 1150 (561.82) | Sh Y h s | 0.02214 564.78 0.7647 | 0.3807 1187.0 1.3738 | | 39.18 0.4263 1230.9 1.4160 | 89.18 0.4746 1276.6 1.4582 | 139.18 0.5162 1315.2 1.4923 | 189.18 0.5538 1349.9 1.5216 | 239.18 0.5889 1382.2 1.5478 | 289.18 0.6223 1413.0 1.5717 | 339.18 0.6544 1442.8 1.5941 | 439.18 0.7161 1500.9 1.6353 | 539.18 0.7754 1558.1 1.6732 | 639.18 0.8332 1615.2 1.7087 | 739.18 0.8899 1672.6 1.7422 | 839.18 0.9456 1730.2 1.7741 | 939.18 1.0007 1788.3 1.8045 |
| 1200 (567.19) | Sh h s | 0.02232 571.85 0.7714 | 0.3624 1184.8 1.3683 | | 32.81 0.4016 1224.2 1.4061 | 82.81 0.4497 1271.8 1.4501 | 132.81 0.4905 1311.5 1.4851 | 182.81 0.5273 1346.9 1.5150 | 232.81 0.5615 1379.7 1.5415 | 282.81 0.5939 1410.8 1.5658 | 332.81 0.6250 1440.9 1.5883 | 432.81 0.6845 1499.4 1.6298 | 532.81 0.7418 1556.9 1.6679 | 632.81 0.7974 1614.2 1.7035 | 732.81 0.8519 1671.6 1.7371 | 832.81 0.9055 1729.4 1.7691 | 932.81 0.9584 1787.6 1.7996 |
| 1300 (577.42) | Sh V h s | 0.02269 585.58 0.7843 | 0.3299 1180.2 1.3577 | | 22.58 0.3570 1209.9 1.3860 | 72.58 0.4052 1261.9 1.4340 | 122.58 0.4451 1303.9 1.4711 | 0.4804 | 222.58 0.5129 1374.6 1.5296 | 272.58 0.5436 1406.4 1.5544 | 322.58 0.5729 1437.1 1.5773 | 422.58 0.6287 1496.3 1.6194 | 522.58 0.6822 1554.3 1.6578 | 622.58 0.7341 1612.0 1.6937 | 722.58 0.7847 1669.8 1.7275 | 822.58 0.8345 1727.9 1.7596 | 922.58 0.8836 1786.3 1.7902 |
| 1 400 (587.07) | Sh v h s | 0.02307 598.83 0.7966 | 0.3018 1175.3 1.3474 | | 12.93 0.3176 1194.1 1.3652 | 62.93 0.3667 1251.4 1.4181 | 112.93 0.4059 1296.1 1.4575 | 162.93 0.4400 1334.5 1.4900 | 212.93 0.4712 1369.3 1.5182 | 262.93 0.5004 1402.0 1.5436 | 0.5282 | 412.93 0.5809 1493.2 1.6096 | 512.93 0.6311 1551.8 1.6484 | 612.93 0.6798 1609.9 1.6845 | 712.93 0.7272 1668.0 1.7185 | 812.93 0.7737 1726.3 1.7508 | 912.93 0.8195 1785.0 1.7815 |
| | | - | | | | | | · | | | | | <u></u> | | | | |
| 1500 (596.20) | Sh v h s | 0.02346 611.68 0.8085 | 0.2772 1170.1 1.3373 | | 3.80 0.2820 1176.3 1.3431 | 53.80 0.3328 1240.2 1.4022 | 103.80 0.3717 1287.9 1.4443 | 153.80 0.4049 1328.0 1.4782 | 203.80 0.4350 1364.0 1.5073 | 253.80 0.4629 1397.4 1.5333 | 303.80 0.4894 1429.2 1.5572 | 403.80 0.5394 1490.1 1.6004 | 503.80 0.5869 1549.2 1.6395 | 603.80 0.6327 1607.7 1.6759 | 703.80 0.6773 1666.2 1.7101 | 803.80 0.7210 1724.8 1.7425 | 903.80 0.7639 1783.7 1.7734 |
| 1 600 (604.87) | Sh V h s | 0.02387 624.20 0.8199 | 0.2555 1164.5 1.3274 | | | 45.13 0.3026 1228.3 1.3861 | 95.13 0.3415 1279.4 1.4312 | 145.13 0.3741 1321.4 1.4667 | 195.13 0.4032 1358.5 1.4968 | 245.13 0.4301 1392.8 1.5235 | 295.13 0.4555 1425.2 1.5478 | 395.13 0.5031 1486.9 1.5916 | 495.13 0.5482 1546.6 1.6312 | 595.13 0.5915 1605.6 1.6678 | 695.13 0.6336 1664.3 1.7022 | 795.13 0.6748 1723.2 1.7347 | 895.13 0.7153 1782.3 1.7657 |
| 1 700 613.13) | Sh v h s | 0 02428 636.45 0.8309 | 0.2361 1158.6 1.3176 | | | 36.87 0.2754 1215.3 1.3697 | 86.87 0.3147 1270.5 1.4183 | 136.87 0.3468 1314.5 1.4555 | 186.87 0.3751 1352.9 1.4867 | 236.87 0.4011 1388.1 1.5140 | 286.87 0.4255 1421.2 1.5388 | 386.87 0.4711 1483.8 1.5833 | 486.87 0.5140 1544.0 1.6232 | 586.87 0.5552 1603.4 1.6601 | 686.87 0.5951 1662.5 1.6947 | 786.87 0.6341 1721.7 1.7274 | 886.87 0.6724 1781.0 1.7585 |
| 1 890 621.02) | Sh v h s | 0.02472 648.49 0.8417 | 0.2186 1152.3 1.3079 | | | 28.98 0.2505 1201.2 1 3526 | 78.98 0.2906 1261.1 1.4054 | 128.98 0.3223 1307.4 1.4446 | 178.98 0.3500 1347.2 1.4768 | 228 98 0.3752 1383.3 1.5049 | 278.98 0.3988 1417.1 1.5302 | 378.98 0.4426 1480.6 1.5753 | 478.98 0.4836 1541.4 1.6156 | 578.98 0.5229 1601.2 1.6528 | 678.98 0.5609 1660.7 1.6876 | 778.98 0.5980 1720.1 1.7204 | 878.98 0.6343 1779.7 1.7516 |
| 1 900 628.56) | Sh v h s | 0 02517 660.36 0.8522 | 0.2028 1145.6 1.2981 | | | 21.44 0.2274 1185.7 1.3346 | 71.44 0.2687 1251.3 1.3925 | 121.44 0.3004 1300.2 1.4338 | 171.44 0.3275 1341.4 1.4672 | 221.44 0.3521 1378.4 1.4960 | 271.44 0.3749 1412.9 1.5219 | 371.44 0.4171 1477.4 1.5677 | 471.44 0.4565 1538.8 1.6084 | 571.44 0.4940 1599.1 1.6458 | 671.44 0.5303 1658.8 1.6808 | 771.44 0.5656 1718.6 1.7138 | 871.44 0.6002 1778.4 1.7451 |
| 2000 635.80) | Sh v h s | 0.02565 672.11 0.8625 | 0.1883 1138.3 1.2881 | | | 14.20 0.2056 1168.3 1 3154 | 64.20 0.2488 1240.9 1.3794 | 114.20 0.2805 1292.6 1.4231 | 164.20 0.3072 1335.4 1.4578 | 214.20 0.3312 1373.5 1.4874 | 264.20 0.3534 1408.7 1.5138 | 364.20 0.3942 1474.1 1.5603 | 464.20 0.4320 1536.2 1.6014 | 564.20 0.4680 1596.9 1.6391 | 664.20 0.5027 1657.0 1.6743 | 764.20 0.5365 1717.0 1.7075 | 864.20 0.5695 1771.1 1.7389 |
| 2100 642.76) | Sh h s | 0.02615 683.79 0.8727 | 0.1750 1130.5 1.2780 | | | 7.24 0.1847 1148.5 1.2942 | 57.24 0.2304 1229.8 1.3661 | 107.24 0.2624 1284.9 1.4125 | 157.24 0.2888 1329.3 1.4486 | 207.24 0.3123 1368.4 1.4790 | 257.24 0.3339 1404.4 1.5060 | 357.24 0.3734 1470.9 1.5532 | 457.24 0.4099 1533.6 1.5948 | 557.24 0.4445 1594.7 1.6327 | 657.24 0.4778 1655.2 1.6681 | 757.24 0.5101 1715.4 1.7014 | 857.24 0.5418 1775.7 1.7330 |
| 2200 549.45) | Sh V h s | 0.02669 695.46 0.8828 | 0.1627 1122.2 1.2676 | | | .55 0.1636 1123.9 1.2691 | 50.55 0.2134 1218.0 1.3523 | 100.55 0.2458 1276.8 1.4020 | 150.55 0.2720 1323.1 1.4395 | 200.55 0.2950 1363.3 1.4708 | 250.55 0.3161 1400.0 1.4984 | 350.55 0.3545 1467.6 1.5463 | 450.55 0.3897 1530.9 1.5883 | 550.55 0.4231 1592.5 1.6266 | 650.55 0.4551 1653.3 1.6622 | 750.55 0.4862 1713.9 1.6956 | 850.55 0.5165 1774.4 1.7273 |
| 2300 655.89) | Sh v h 5 | 0.02727 707.18 0.8929 | 0.1513 1113.2 1.2569 | | | | 44.11 0.1975 1205 3 1.3381 | 94.11 0.2305 1268.4 1.3914 | 144.11 0.2566 1316.7 | 194.11 0.2793 | 244.11 0.2999 1395.7 | 344.11 0.3372 1464.2 1.5397 | 444.11 0.3714 1528.3 1.5821 | 544.11 0.4035 1590.3 | 644.11 0.4344 1651.5 1.6565 | 744.11 0.4643 1712.3 1.6901 | 844.11 0.4935 1773.1 1.7219 |

 $[\]begin{array}{l} Sh \ = \ superheat, \ F \\ v \ = \ specific \ volume, \ cu \ ft \ per \ lb \end{array}$

h = enthalpy, Btu per Ib s = entropy, Btu per R per Ib

Table 3. Superheated Steam - Continued

| _ | | | | | lab | le 3. | Super | neate | Stea | m – Co | ontinue | 20 | | | | | |
|---------------------------------------|--------------------|-----------------------------|----------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|----------------------------------|
| Abs Press. Lb/Sq In. Sat. Temp) | <u>-</u> | Sat. Water | Sat. Steam | Temp 700 | erature — 750 | Degrees 800 | Fahrenh 850 | ert 900 | 9 50 | 1000 | 1050 | 1100 | 1150 | 1200 | 1300 | 1400 | 1500 |
| 2400 (662.11) | Sh v h s | 0.02790 718.95 0.9031 | 0.1408 1103.7 1.2460 | 37 89 0.1824 1191.6 1.3232 | 87.89 0.2164 1259.7 1.3808 | 137.89 0.2424 1310.1 1.4217 | 187.89 0.2648 1352.8 1.4549 | 237.89 0.2850 1391.2 1.4837 | 287.89 0.3037 1426.9 1.5095 | 337.89 0.3214 1460.9 1.5332 | 387.89 0.3382 1493.7 1.5553 | 437.89 0.3545 1525.6 1.5761 | 487.89 0.3703 1557.0 1.5959 | 537.89 0.3856 1588.1 1.6149 | 637.89 0.4155 1649.6 1.6509 | 737.89 0 4443 1710.8 1.6847 | 837.8 0.472 1771. 1.716 |
| 2500 (668.11) | \$h v h s | 0.02859 731.71 0.9139 | 0.1307 1093.3 1.2345 | 31 89 0.1681 1176.7 1.3076 | 81.89 0.2032 1250.6 1.3701 | 131.89 0.2293 1303.4 1.4129 | 181 89 0.2514 1347.4 1.4472 | 231.89 0.2712 1386.7 1.4766 | 281.89 0.2896 1423.1 1.5029 | 331.89 0.3068 1457.5 1.5269 | 381.89 0.3232 1490.7 1.5492 | 431.89 0.3390 1522.9 1.5703 | 481.89 0.3543 1554.6 1.5903 | 531.89 0.3692 1585.9 1.6094 | 631.89 0.3980 1647.8 1.6456 | 731.89 0.4259 1709.2 1.6796 | 831.8 0.452 1770 1.711 |
| 2600 (673.91) | Sh v h s | 0.02938 744.47 0.9247 | 0.1211 1082.0 1.2225 | 26.09 0.1544 1160.2 1.2908 | 76.09 0.1909 1241 1 1.3592 | 126.09 0.2171 1296.5 1.4042 | 176.09 0.2390 1341.9 1.4395 | 226.09 0.2585 1382.1 1.4696 | 276.09 0.2765 1419.2 1.4964 | 326.09 0.2933 1454.1 1.5208 | 376.09 0.3093 1487.7 1.5434 | 426.09 0.3247 1520.2 1.5646 | 476.09 0.3395 1552.2 1.5848 | 526.09 0.3540 1583.7 1.6040 | 626.09 0.3819 1646.0 1.6405 | 726.09 0.4088 1707.7 1.6746 | 826.0 0.435 1769 1.706 |
| 2700 (679.53) | Sh v h s | 0.03029 757.34 0.9356 | 0.1119 1069.7 1.2097 | 20.47 0.1411 1142.0 1.2727 | 70.47 0.1794 1231.1 1.3481 | 120.47 0.2058 1289.5 1.3954 | 170.47 0.2275 1336.3 1.4319 | 220.47 0.2468 1377.5 1.4628 | 270.47 0.2644 1415.2 1.4900 | 320.47 0.2809 1450.7 1.5148 | 370.47 0.2965 1484.6 1.5376 | 420.47 0.3114 1517.5 1 5591 | 470.47 0.3259 1549.8 1.5794 | 520.47 0.3399 1581.5 1.5988 | 620.47 0.3670 1644.1 1.6355 | 720.47 0.3931 1706.1 1.6697 | 820.4 0 418 1767 1.702 |
| 2800 (684.96) | Sh V h s | 0.03134 770.69 0.9468 | 0.1030 1055.8 1.1958 | 15 04 0.1278 1121.2 1.2527 | 65.04 0.1685 1220.6 1.3368 | 115.04 0.1952 1282.2 1.3867 | 165.04 0.2168 1330.7 1.4245 | 215.04 0.2358 1372.8 1.4561 | 265.04 0.2531 1411.2 1.4838 | 315.04 0.2693 1447.2 1.5089 | 365.04 0.2845 1481.6 1.5321 | 415.04 0.2991 1514.8 1.5537 | 465.04 0.3132 1547.3 1.5742 | 515.04 0.3268 1579.3 1.5938 | 615.04 0.3532 1642.2 1.6306 | 715.04 0.3785 1704.5 1.6651 | 815.0 0.403 1766 1.693 |
| 2900 (690.22) | Sh ₩ h s | 0.03262 785.13 0.9588 | 0.0942 1039.8 1.1803 | 9.78 0.1138 1095.3 1.2283 | 59.78 0.1581 1209.6 1.3251 | 109.78 0.1853 1274.7 1.3780 | 159.78 0.2068 1324.9 1.4171 | 209.78 0.2256 1368.0 1.4494 | 259.78 0.2427 1407.2 1.4777 | 309.78 0.2585 1443.7 1.5032 | 359.78 0.2734 1478.5 1.5266 | 409.78 0.2877 1512.1 1.5485 | 459.78 0.3014 1544.9 1.5692 | 509.78 0.3147 1577.0 1.5889 | 609.78 0.3403 1640.4 1.6259 | 709.78 0.3649 1703.0 1.6605 | 809.1 0.388 1765 1.693 |
| 3000 (695.33) | Sh v h s | 0.03428 801.84 0.9728 | 0.0850 1020.3 1.1619 | 4.67 0.0982 1060.5 1.1966 | 54.67 0.1483 1197.9 1.3131 | 104.67 0.1759 1267.0 1.3692 | 154.67 0.1975 1319.0 1.4097 | 204.67 0.2161 1363.2 1.4429 | 254.67 0.2329 1403.1 1.4717 | 304.67 0.2484 1440.2 1.4976 | 354.67 0.2630 1475.4 1.5213 | 404.67 0.2770 1509.4 1.5434 | 454.67 0.2904 1542.4 1.5642 | 504.67 0.3033 1574.8 1.5841 | 604.67 0.3282 1638.5 1.6214 | 704.67 0.3522 1701.4 1.6561 | 804.6 0.375 1763 1.688 |
| 3100 (700.28) | Sh v h s | 0.03681 823.97 0.9914 | 0.0745 993.3 1.1373 | | 49.72 0.1389 1185.4 1.3007 | 99.72 0.1671 1259.1 1.3604 | 149.72 0.1887 1313.0 1.4024 | 199.72 0.2071 1358.4 1.4364 | 249.72 0.2237 1399.0 1.4658 | 299.72 0.2390 1436.7 1.4920 | 349.72 0.2533 1472.3 1.5161 | 399.72 0.2670 1506.6 1.5384 | 449.72 0.2800 1539.9 1.5594 | 499.72 0.2927 1572.6 1.5794 | 599.72 0.3170 1636.7 1.6169 | 699.72 0.3403 1699.8 1.6518 | 799.7 0.362 1762 1.684 |
| 3200 (705.08) | v h s | 0.04472 875.54 1.0351 | 0.0566 931.6 1.0832 | | 44 92 0.1300 1172.3 1.2877 | 94.92 0.1588 1250.9 1.3515 | 144.92 0.1804 1306.9 1.3951 | 194.92 0.1987 1353.4 1.4300 | 244.92 0.2151 1394.9 1.4600 | 294.92 0.2301 1433.1 1.4866 | 344.92 0.2442 1469.2 1.5110 | 394.92 0.2576 1503.8 1.5335 | 444.92 0.2704 1537.4 1.5547 | 494.92 0.2827 1570.3 1.5749 | 594.92 0.3065 1634.8 1.6126 | 694.92 0.3291 1698.3 1.6477 | 794. 0.35 176 1.68 |
| 3390 | h s | | | | 0.1213 1158.2 1.2742 | 0.1510 1242.5 1.3425 | 0.1727 1300.7 1.3879 | 0.1908 1348.4 1.4237 | 0.2070 1390.7 1.4542 | 0.2218 1429.5 1.4813 | 0.2357 1466.1 1.5059 | 0.2488 1501.0 1.5287 | 0.2613 1534.9 1.5501 | 0.2734 1568.1 1.5704 | 0.2966 1632.9 1.6084 | 0.3187 1696.7 1.6436 | 0.34 175 1.67 |
| 3400 | h s | | | | 0.1129 1143.2 1.2600 | 0.1435 1233.7 1.3334 | 0.1653 1294.3 1.3807 | 0.1834 1343.4 1.4174 | 0.1994 1386.4 1.4486 | 0.2140 1425.9 1.4761 | 0.2276 1462.9 1.5010 | 0.2405 1498.3 1.5240 | 0.252 8 1532.4 1.5456 | 0.2646 1565.8 1.5660 | 0.2872 1631.1 1.6042 | 0.3088 1695.1 1.6396 | 0.32 175 1.67 |
| 3500 | h s | | | | 0.1048 1127.1 1.2450 | 0.1364 1224.6 1.32 4 2 | 0.1583 1287.8 1.3734 | 0.1764 1338.2 1.4112 | 0.1922 1382.2 1.4430 | 0.2066 1422.2 1.4/09 | 0.2200 1459.7 1.4962 | 0.2326 1495.5 1.5194 | 0.2447 1529.9 1.5412 | 0.2563 1563.6 1.5618 | 0.2784 1629.2 1.6002 | 0.2995 1693.6 1.6358 | 0.31 175 1.66 |
| 3600 | h s | | | | 0.0966 1108.6 1.2281 | 0.1296 1215.3 1.3148 | 0.1517 1281.2 1.3662 | 0.1697 1333.0 1.4050 | 0.1854 1377.9 1.4374 | 0.1996 1418.6 1.4658 | 0.2128 1456.5 1.4914 | 0.2252 1492.6 1.5149 | 0.2371 1527.4 1.5369 | 0.2485 1561.3 1.5576 | 0.2702 1627.3 1.5962 | 0.2908 1692.0 1.6320 | 0.31 1755 1.66 |
| 3800 | h s | | | | 0.0799 1064.2 1.1888 | 0.1169 1195.5 1.2955 | 0.1395 1267.6 1.3517 | 0.1574 1322.4 1.3928 | 0.1729 1369.1 1.4265 | 0.1868 1411.2 1.4558 | 0.1996 1450.1 1.4821 | 0.2116 1487.0 1.5061 | 0.2231 1522.4 1.5284 | 0.2340 1556.8 1.5495 | 0.2549 1623.6 1.5886 | 0.2746 1688.9 1.6247 | 0.29 1753 1.65 |
| 4000 | h s | | | | 0.0631 1007.4 1.1396 | 0.1052 1174.3 1.2754 | 0.1284 1253.4 1.3371 | 0.1463 1311.6 1.3807 | 0.1616 1360.2 1.4158 | 0.1752 1403.6 1.4461 | 0.1877 1443.6 1.4730 | 0.1994 1481.3 1.4976 | 0.2105 1517.3 1.5203 | 0.2210 1552.2 1.5417 | 0.2411 1619.8 1.5812 | 0.2601 1685.7 1.6177 | 0.27 175(1.65 |
| 4200 | v h s | | | | 0.0498 950.1 1.0905 | 0.0945 1151.6 1.2544 | 0.1183 1238.6 1.3223 | 0.1362 1300.4 1.3686 | 0.1513 1351.2 1.4053 | 0.1647 1396.0 1.4366 | 0.1769 1437.1 1.4642 | 0.1883 1475.5 1.4893 | 0.1991 1512.2 1.5124 | 0.2093 1547.6 1.5341 | 0.2287 1616.1 1.5742 | 0.2470 1682.6 1.6109 | 0.26 1748 1.64 |
| 4400 | h s | | | | 0.0421 909.5 1.0556 | 0.0846 1127.3 1.2325 | 0.1090 1223.3 1.3073 | 0.1270 1289.0 1.3566 | 0.1420 1342.0 1.3949 | 0.1552 1388.3 1.4272 | 0.1671 1430.4 1.4556 | 0.1782 1469.7 1.4812 | 0.1887 1507.1 1.5048 | 0.1986 1543.0 1.5268 | 0.2174 1612.3 1.5673 | 0.2351 1679.4 1.6044 | 0.25 1745 1.63 |
| | | | | | | | | | | | | | | | | | |

 $[\]begin{array}{ll} Sh &=& superheat, \, F \\ v &=& specific \, volume, \, cu \, \, ft \, \, per \, \, lb \end{array}$

 $h = {enthalpy, Btu per lb} \atop s = {entropy, Btu per R per lb}$

Table 3. Superheated Steam - Continued

| | | | | 18 | ble 3. | Supe | rheate | ea Ste | am – C | ontinu | ea | | | | | |
|---------------------------------------|-------------|---------------|----------------------------|------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--|
| Abs Press. Lb/Sq In. Sat. Temp) | | Sat. Water | Sat. Te Steam 75 | mperature 0 800 | — Degree 850 | es Fahren 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1400 | 1500 |
| 4600 | y h s | | 0.038 883 1 033 | .8 1100.0 | 1207.3 | 0.1186 1277.2 1.3446 | 1332.6 | 0.1465 1380.5 1.4181 | 0.1582 1423.7 1.4472 | 0.1691 1463.9 1.4734 | 0.1792 1501.9 1.4974 | 0.1889 1538.4 1.5197 | 0.1982 1573.8 1.5407 | 0.2071 1608.5 1.5607 | 0.2242 1676.3 1.5982 | 0.240 1742. 1.633 |
| 4800 | y h s | | 0.035 866 1.018 | 55 0.0665 9 1071.2 30 1.1835 | 1190.7 | 0.1109 1265.2 1.3327 | 0.1257 1323.1 1.3745 | 0.1385 1372.6 1.4090 | 0.1500 1417.0 1.4390 | 0.1606 1458.0 1.4657 | 0.1706 1496.7 1.4901 | 0.1800 1533.8 1.5128 | 0.1890 1569.7 1.5341 | 0.1977 1604.7 1.5543 | 0 2142 1673.1 1.5921 | 0.229 1740 1.627 |
| 5000 | h s | | 0.033 854 1.003 | .9 1042.9 | 1173.6 | 0.1038 1252.9 1.3207 | 1313.5 | 1364.6 | 0.1425 1410.2 1.4309 | 0.1529 1452.1 1.4582 | 0.1626 1491.5 1.4831 | 0.1718 1529.1 1.5061 | 0.1806 1565.5 1.5277 | 0.1890 1600.9 1.5481 | 0.2050 1670.0 1.5863 | 0.220 1737 1.621 |
| 5200 | h S | | 0.033 845 0.998 | .8 1016.9 | 1156.0 | 0.0973 1240.4 1.3088 | 1303.7 | 1356.6 | 1403.4 | 0.1458 1446.2 1.4509 | 0.1553 1486.3 1.4762 | 0.1642 1524.5 1.4995 | 0.1728 1561.3 1.5214 | 0.1810 1597.2 1.5420 | 0.1966 1666.8 1.5806 | 0.21 1734 1.610 |
| 5400 | y h s | | 0.03 838 0.99 | .5 994.3 | 1138.1 | 0.0912 1227.7 1.2969 | 1293.7 | 1348.4 | 1396.5 | 1440.3 | 0.1485 1481.1 1.4694 | 0.1572 1519.8 1.4931 | 0.1656 1557.1 1.5153 | 0.1736 1593.4 1.5362 | 0.1888 1663.7 1.5750 | 0.20: 1732 1.610 |
| 5680 | h s | | 0.036 832 0.98 | .4 975.0 | 1119.9 | 0.0856 1214.8 1.2850 | 1283.7 | 0.1124 1340.2 1.3742 | 1389.6 | | 0.1422 1475.9 1.4628 | 0.1508 1515.2 1.4869 | 0.1589 1552.9 1.5093 | 0.1667 1589.6 1.5304 | 0.1815 1660.5 1.5697 | 0.19 1729 1.60 |
| 5880 | h s | | 0.031 827 0.986 | .3 958.8 | 1101.8 | 0.0805 1201.8 1.2732 | 1273.6 | 1332.0 | | 1428.3 | 0.1363 1470.6 1.4564 | 0.1447 1510.5 1.4808 | 0.1527 1548.7 1.5035 | 0.1603 1585.8 1.5248 | 0.1747 1657.4 1.5644 | 0.18 1726 1.60 |
| 6808 | v h s | M. S | 0.025 822 0.975 | 0.0397 .9 945.1 58 1.0746 | 1084.6 | 0.0757 1188.8 1.2615 | 12634 | 1323.6 | 1375.7 | 1422.3 | 0.1309 1465.4 1.4500 | 0.1391 1505.9 1.4748 | 0.1469 1544.6 1.4978 | 0.1544 1582.0 1.5194 | 0.1684 1654.2 1.5593 | 0.18 1724 1.59 |
| 6500 | ν h s | | 0.0287 813.9 0.9661 | 0.0358 919.5 1.0515 | 0.0495 1046.7 1.1506 | 0.0655 1156.3 1.2328 | 0.0793 1237.8 1.2917 | 0.0909 1302.7 1.3370 | 0.1012 1358.1 1.3743 | 0.1104 1407.3 1.4064 | 0.1188 1452.2 1.4347 | 0.1266 1494.2 1.4604 | 0.1340 1534.1 1.4841 | 0.1411 1572.5 1.5062 | 0.1544 1646.4 1.5471 | 0.1669 1717. € 1.5844 |
| 7906 | y h s | | 0.0279 806.9 0.9582 | 0.0334 901.8 1.0350 | 0.0438 1016.5 1.1243 | 0.0573 1124.9 1.2055 | 0.0704 1212.6 1.2689 | 0.0816 1281.7 1.3171 | 0.0915 1340.5 1.3567 | 0.1004 1392.2 1.3904 | 0.1085 1439.1 1.4200 | 0.1160 1482.6 1.4466 | 0.1231 1523.7 1.4710 | 0.1298 1563.1 1.4938 | 0.1424 1638.6 1.5355 | 0.1542 1711.1 1.5735 |
| 7500 | v h s | | 0.0272 801.3 0.9514 | 0.0318 889.0 1.0224 | 0.0399 992.9 1.1033 | 0.0512 1097.7 1.1818 | 0.0631 1188.3 1.2473 | 0.0737 1261.0 1.2980 | 0.0833 1322.9 1.3397 | 0.0918 1377.2 1.3751 | 0.0996 1426.0 1.4059 | 0.1068 1471.0 1.4335 | 0.1136 1513.3 1.4586 | 0.1200 1553.7 1.4819 | 0.1321 1630.8 1.5245 | 0.1433 1704.6 1.5632 |
| 8900 | v h s | | 0.0267 796.6 0.9455 | 0.0306 879.1 1.0122 | 0.0371 974.4 1.0864 | 1074.3 | 0.0571 1165.4 1.2271 | 0.0671 1241.0 1.2798 | 0.0762 1305.5 1.3233 | 0.0845 1362.2 1.3603 | 0.0920 1413.0 1.3924 | 0.0989 1459.6 1.4208 | 0.1054 1503.1 1.4467 | 0.1115 1544.5 1.4705 | 0.1230 1623.1 1.5140 | 0.1338 1698.1 1.5533 |
| 8500 | y h s | | 0.0262 792.7 0.9402 | 0.0296 871.2 1.0037 | 0.0350 959.8 1.0727 | 0.0429 1054.5 1.1437 | 0.0522 1144.0 1.2084 | 0.0615 1221.9 1.2627 | 0.0701 1288.5 1.3076 | 0.0780 1347.5 1.3460 | 0.0853 1400.2 1.3793 | 0.0919 1448.2 1.4087 | 0.0982 1492.9 1.4352 | 0.1041 1535.3 1.4597 | 0.1151 1615.4 1.5040 | 0.1254 1691.7 1.5439 |
| | h s | | 0.0258 789.3 0.9354 | 0.0288 864.7 0.9964 | 0.0335 948.0 1.0613 | 0.0402 1037.6 1.1285 | 1125.4 | 0.0568 1204.1 1.2468 | 0.0649 1272.1 1.2926 | 0.0724 1333.0 1.3323 | 0.0794 1387.5 1.3667 | 0.0858 1437.1 1.3970 | 0.0918 1482.9 1.4243 | 0.0975 1526.3 1.4492 | 0.1081 1607.9 1.4944 | 0.1179 1685.3 1.5349 |
| | v h s | | 0.0254 786.4 0.9310 | 0.0282 859.2 0.9900 | 0.0322 938.3 1.0516 | 1023.4 | 0.0451 1108.9 1.1771 | 0.0528 1187.7 1.2320 | | 1318.9 | 0.0742 1375.1 1.3546 | 0.0804 1426.1 1.3858 | 1473.1 | 0.0917 1517.3 1.4392 | 0.1019 1600.4 1.4851 | 0.1113 1679.0 1.5263 |
| | v h s | | 0.0251 783.8 0.9270 | 0.0276 854.5 0.9842 | 0.0312 930.2 1.0432 | 1011.3 | 1094.2 | 0.0495 1172.6 1.2185 | 1242.0 | 1305.3 | 0.0697 1362.9 1.3429 | 0.0757 1415.3 1.3749 | 1463.4 | 1508.6 | 0.0963 1593.1 | 0.1054 1672.8 1.5180 |
| 0588 | v h s | | 0.0248 781.5 0.9232 | 850.5 | 923.4 | 1001.0 | | | | 1292.4 | | 0.0714 1404.7 1.3644 | 0.0768 1453.9 | 0.0818 1500.0 | 0.0913 1585.8 | 0.1001 1666.7 1.5100 |
| · . | | | | | | - | | | | | | | | <u> </u> | - | |

 $\begin{array}{l} Sh = \text{ superheat, F} \\ v = \text{ specific volume, cu ft per Ib} \end{array}$

 $[\]begin{array}{l} h \,=\, enthalpy, \, Btu \,\, per \,\, Ib \\ s \,=\, entropy, \,\, Btu \,\, per \,\, R \,\, per \,\, Ib \end{array}$