

TABLE 8. PROPERTIES OF SATURATED STEAM: PRESSURE TABLE<sup>a</sup>

| ABS.<br>PRESS.<br>IN. HG.<br>p | TEMP<br>F<br>t | SPECIFIC VOLUME                  |                                 | ENTHALPY                         |                          |                                 | ENTROPY                          |                          |                                 | ABS.<br>PRESS.<br>IN. HG.<br>p |
|--------------------------------|----------------|----------------------------------|---------------------------------|----------------------------------|--------------------------|---------------------------------|----------------------------------|--------------------------|---------------------------------|--------------------------------|
|                                |                | Sat.<br>Liquid<br>v <sub>f</sub> | Sat.<br>Vapor<br>v <sub>g</sub> | Sat.<br>Liquid<br>h <sub>f</sub> | Evap.<br>h <sub>fg</sub> | Sat.<br>Vapor<br>h <sub>g</sub> | Sat.<br>Liquid<br>s <sub>f</sub> | Evap.<br>s <sub>fg</sub> | Sat.<br>Vapor<br>s <sub>g</sub> |                                |
| 0.25                           | 40.23          | 0.01602                          | 2423.7                          | 8.28                             | 1071.1                   | 1079.4                          | 0.0166                           | 2.1423                   | 2.1589                          | 0.25                           |
| 0.50                           | 58.80          | 0.01604                          | 1256.4                          | 26.86                            | 1060.6                   | 1087.5                          | 0.0332                           | 2.0453                   | 2.0985                          | 0.50                           |
| 0.75                           | 70.43          | 0.01606                          | 856.1                           | 38.47                            | 1054.0                   | 1092.5                          | 0.0532                           | 1.9835                   | 2.0355                          | 0.75                           |
| 1.00                           | 79.03          | 0.01608                          | 652.3                           | 47.05                            | 1049.2                   | 1096.3                          | 0.0732                           | 1.9373                   | 2.0035                          | 1.00                           |
| 1.5                            | 91.72          | 0.01611                          | 444.9                           | 59.71                            | 1042.0                   | 1101.7                          | 0.1147                           | 1.8894                   | 2.0041                          | 1.5                            |
| 2                              | 101.14         | 0.01614                          | 339.2                           | 69.10                            | 1036.6                   | 1105.7                          | 0.1316                           | 1.8481                   | 1.9797                          | 2                              |
| 4                              | 125.43         | 0.01622                          | 176.7                           | 93.34                            | 1022.7                   | 1116.0                          | 0.1738                           | 1.7476                   | 1.9214                          | 4                              |
| 6                              | 140.78         | 0.01630                          | 120.72                          | 108.67                           | 1013.6                   | 1122.3                          | 0.1996                           | 1.6881                   | 1.8877                          | 6                              |
| 8                              | 152.24         | 0.01635                          | 92.16                           | 120.13                           | 1006.9                   | 1127.0                          | 0.2186                           | 1.6454                   | 1.8640                          | 8                              |
| 10                             | 161.49         | 0.01640                          | 74.76                           | 129.38                           | 1001.4                   | 1130.8                          | 0.2335                           | 1.6121                   | 1.8456                          | 10                             |
| 12                             | 169.28         | 0.01644                          | 63.03                           | 137.18                           | 996.7                    | 1133.9                          | 0.2460                           | 1.5847                   | 1.8307                          | 12                             |
| 14                             | 176.05         | 0.01648                          | 54.55                           | 143.98                           | 992.6                    | 1136.6                          | 0.2568                           | 1.5613                   | 1.8181                          | 14                             |
| 16                             | 182.05         | 0.01652                          | 48.14                           | 149.98                           | 988.9                    | 1138.9                          | 0.2662                           | 1.5410                   | 1.8072                          | 16                             |
| 18                             | 187.45         | 0.01655                          | 43.11                           | 155.39                           | 985.7                    | 1141.1                          | 0.2746                           | 1.5231                   | 1.7977                          | 18                             |
| 20                             | 192.37         | 0.01658                          | 39.07                           | 160.33                           | 982.7                    | 1143.0                          | 0.2822                           | 1.5069                   | 1.7891                          | 20                             |
| 22                             | 196.90         | 0.01661                          | 35.73                           | 164.87                           | 979.8                    | 1144.7                          | 0.2891                           | 1.4923                   | 1.7814                          | 22                             |
| 24                             | 201.09         | 0.01664                          | 32.94                           | 169.09                           | 977.2                    | 1146.3                          | 0.2955                           | 1.4789                   | 1.7744                          | 24                             |
| 26                             | 205.00         | 0.01667                          | 30.56                           | 173.02                           | 974.8                    | 1147.8                          | 0.3014                           | 1.4665                   | 1.7679                          | 26                             |
| 28                             | 208.67         | 0.01669                          | 28.52                           | 176.72                           | 972.5                    | 1149.2                          | 0.3069                           | 1.4550                   | 1.7619                          | 28                             |
| 30                             | 212.13         | 0.01672                          | 26.74                           | 180.19                           | 970.3                    | 1150.5                          | 0.3122                           | 1.4442                   | 1.7564                          | 30                             |
| Lb/Sq In. 14.696               |                |                                  |                                 |                                  |                          |                                 |                                  |                          |                                 |                                |
| 16                             | 212.00         | 0.01672                          | 26.80                           | 180.07                           | 970.3                    | 1150.4                          | 0.3120                           | 1.4446                   | 1.7566                          | 16                             |
| 18                             | 216.32         | 0.01674                          | 24.75                           | 184.42                           | 967.6                    | 1152.0                          | 0.3184                           | 1.4313                   | 1.7497                          | 18                             |
| 20                             | 222.41         | 0.01679                          | 22.17                           | 190.56                           | 963.6                    | 1154.2                          | 0.3275                           | 1.4128                   | 1.7403                          | 20                             |
| 22                             | 227.96         | 0.01683                          | 20.089                          | 196.16                           | 960.1                    | 1156.3                          | 0.3356                           | 1.3962                   | 1.7319                          | 22                             |
| 24                             | 233.07         | 0.01687                          | 18.375                          | 201.33                           | 956.8                    | 1158.1                          | 0.3431                           | 1.3811                   | 1.7242                          | 24                             |
| 26                             | 237.82         | 0.01691                          | 16.938                          | 206.14                           | 953.7                    | 1159.8                          | 0.3500                           | 1.3672                   | 1.7172                          | 26                             |
| 28                             | 242.25         | 0.01694                          | 15.715                          | 210.62                           | 950.7                    | 1161.3                          | 0.3564                           | 1.3544                   | 1.7108                          | 28                             |
| 30                             | 246.41         | 0.01698                          | 14.663                          | 214.83                           | 947.9                    | 1162.7                          | 0.3623                           | 1.3425                   | 1.7048                          | 30                             |
| 32                             | 250.33         | 0.01701                          | 13.746                          | 218.82                           | 945.3                    | 1164.1                          | 0.3680                           | 1.3313                   | 1.6993                          | 32                             |
| 34                             | 254.05         | 0.01704                          | 12.940                          | 222.59                           | 942.8                    | 1165.4                          | 0.3733                           | 1.3209                   | 1.6941                          | 34                             |
| 36                             | 257.58         | 0.01707                          | 12.226                          | 226.18                           | 940.3                    | 1166.5                          | 0.3783                           | 1.3110                   | 1.6893                          | 36                             |
| 38                             | 260.95         | 0.01709                          | 11.588                          | 229.60                           | 938.0                    | 1167.6                          | 0.3831                           | 1.3017                   | 1.6848                          | 38                             |
| 40                             | 264.16         | 0.01712                          | 11.015                          | 232.89                           | 935.8                    | 1168.7                          | 0.3876                           | 1.2929                   | 1.6805                          | 40                             |
| 42                             | 267.25         | 0.01715                          | 10.498                          | 236.03                           | 933.7                    | 1169.7                          | 0.3919                           | 1.2844                   | 1.6763                          | 42                             |
| 44                             | 270.21         | 0.01717                          | 10.029                          | 239.04                           | 931.6                    | 1170.7                          | 0.3960                           | 1.2764                   | 1.6724                          | 44                             |
| 46                             | 273.05         | 0.01720                          | 9.601                           | 241.95                           | 929.6                    | 1171.6                          | 0.4000                           | 1.2687                   | 1.6687                          | 46                             |
| 48                             | 275.80         | 0.01722                          | 9.209                           | 244.75                           | 927.7                    | 1172.4                          | 0.4038                           | 1.2613                   | 1.6652                          | 48                             |
| 50                             | 278.45         | 0.01725                          | 8.848                           | 247.47                           | 925.8                    | 1173.3                          | 0.4075                           | 1.2542                   | 1.6617                          | 50                             |
| 52                             | 281.01         | 0.01727                          | 8.515                           | 250.09                           | 924.0                    | 1174.1                          | 0.4110                           | 1.2474                   | 1.6585                          | 52                             |
| 54                             | 283.49         | 0.01729                          | 8.208                           | 252.63                           | 922.2                    | 1174.8                          | 0.4144                           | 1.2409                   | 1.6553                          | 54                             |
| 56                             | 285.90         | 0.01731                          | 7.922                           | 255.09                           | 920.5                    | 1175.6                          | 0.4177                           | 1.2346                   | 1.6523                          | 56                             |
| 58                             | 288.23         | 0.01733                          | 7.656                           | 257.50                           | 918.8                    | 1176.3                          | 0.4209                           | 1.2285                   | 1.6494                          | 58                             |
| 60                             | 290.50         | 0.01736                          | 7.407                           | 259.82                           | 917.1                    | 1176.9                          | 0.4240                           | 1.2228                   | 1.6466                          | 60                             |
| 62                             | 292.71         | 0.01738                          | 7.175                           | 262.09                           | 915.5                    | 1177.6                          | 0.4270                           | 1.2168                   | 1.6438                          | 62                             |
| 64                             | 294.85         | 0.01740                          | 6.957                           | 264.30                           | 913.9                    | 1178.2                          | 0.4300                           | 1.2112                   | 1.6412                          | 64                             |
| 66                             | 296.94         | 0.01742                          | 6.752                           | 266.45                           | 912.3                    | 1178.8                          | 0.4328                           | 1.2059                   | 1.6387                          | 66                             |
| 68                             | 298.99         | 0.01744                          | 6.560                           | 268.55                           | 910.8                    | 1179.4                          | 0.4356                           | 1.2006                   | 1.6362                          | 68                             |
| 70                             | 300.98         | 0.01746                          | 6.378                           | 270.60                           | 909.4                    | 1180.0                          | 0.4383                           | 1.1955                   | 1.6338                          | 70                             |
| 72                             | 302.92         | 0.01748                          | 6.206                           | 272.61                           | 907.9                    | 1180.6                          | 0.4409                           | 1.1906                   | 1.6315                          | 72                             |
| 74                             | 304.83         | 0.01750                          | 6.044                           | 274.57                           | 906.5                    | 1181.1                          | 0.4435                           | 1.1857                   | 1.6292                          | 74                             |
| 76                             | 306.68         | 0.01752                          | 5.890                           | 276.49                           | 905.1                    | 1181.6                          | 0.4460                           | 1.1810                   | 1.6270                          | 76                             |
| 78                             | 308.50         | 0.01754                          | 5.743                           | 278.37                           | 903.7                    | 1182.1                          | 0.4484                           | 1.1764                   | 1.6248                          | 78                             |
| 80                             | 310.29         | 0.01756                          | 5.604                           | 280.21                           | 902.4                    | 1182.6                          | 0.4508                           | 1.1720                   | 1.6228                          | 80                             |
| 82                             | 312.03         | 0.01757                          | 5.472                           | 282.02                           | 901.1                    | 1183.1                          | 0.4531                           | 1.1676                   | 1.6207                          | 82                             |
| 84                             | 313.74         | 0.01759                          | 5.346                           | 283.79                           | 899.7                    | 1183.5                          | 0.4554                           | 1.1633                   | 1.6187                          | 84                             |
| 86                             | 315.42         | 0.01761                          | 5.228                           | 285.53                           | 898.5                    | 1184.0                          | 0.4576                           | 1.1592                   | 1.6168                          | 86                             |
| 88                             | 317.07         | 0.01762                          | 5.111                           | 287.24                           | 897.2                    | 1184.4                          | 0.4598                           | 1.1551                   | 1.6149                          | 88                             |
| 90                             | 318.68         | 0.01764                          | 5.001                           | 288.91                           | 895.9                    | 1184.8                          | 0.4620                           | 1.1510                   | 1.6130                          | 90                             |
| 92                             | 320.27         | 0.01766                          | 4.896                           | 290.56                           | 894.7                    | 1185.3                          | 0.4641                           | 1.1471                   | 1.6112                          | 92                             |
| 94                             | 321.83         | 0.01768                          | 4.796                           | 292.18                           | 893.5                    | 1185.7                          | 0.4661                           | 1.1433                   | 1.6094                          | 94                             |
| 96                             | 323.36         | 0.01769                          | 4.699                           | 293.78                           | 892.3                    | 1186.1                          | 0.4682                           | 1.1394                   | 1.6076                          | 96                             |
| 98                             | 324.87         | 0.01771                          | 4.606                           | 295.34                           | 891.1                    | 1186.4                          | 0.4702                           | 1.1358                   | 1.6058                          | 98                             |
| 100                            | 326.35         | 0.01772                          | 4.517                           | 296.89                           | 889.9                    | 1186.8                          | 0.4721                           | 1.1322                   | 1.6043                          | 100                            |
| 102                            | 327.81         | 0.01774                          | 4.432                           | 298.40                           | 888.6                    | 1187.2                          | 0.4740                           | 1.1286                   | 1.6026                          | 102                            |
| 104                            | 329.24         | 0.01775                          | 4.351                           | 299.87                           | 887.3                    | 1187.6                          | 0.4758                           | 1.1251                   | 1.6010                          | 104                            |
| 106                            | 330.65         | 0.01776                          | 4.272                           | 301.31                           | 886.0                    | 1188.0                          | 0.4776                           | 1.1216                   | 1.5994                          | 106                            |
| 108                            | 332.04         | 0.01777                          | 4.196                           | 302.72                           | 884.7                    | 1188.3                          | 0.4794                           | 1.1181                   | 1.5978                          | 108                            |
| 110                            | 333.41         | 0.01778                          | 4.122                           | 304.10                           | 883.4                    | 1188.6                          | 0.4811                           | 1.1146                   | 1.5962                          | 110                            |
| 112                            | 334.76         | 0.01779                          | 4.050                           | 305.45                           | 882.1                    | 1188.9                          | 0.4828                           | 1.1111                   | 1.5946                          | 112                            |
| 114                            | 336.09         | 0.01780                          | 3.980                           | 306.78                           | 880.8                    | 1189.1                          | 0.4844                           | 1.1076                   | 1.5930                          | 114                            |
| 116                            | 337.41         | 0.01781                          | 3.911                           | 308.09                           | 879.5                    | 1189.4                          | 0.4860                           | 1.1041                   | 1.5914                          | 116                            |
| 118                            | 338.71         | 0.01782                          | 3.844                           | 309.38                           | 878.2                    | 1189.6                          | 0.4876                           | 1.1006                   | 1.5898                          | 118                            |
| 120                            | 340.00         | 0.01783                          | 3.778                           | 310.65                           | 876.9                    | 1189.8                          | 0.4891                           | 1.0971                   | 1.5882                          | 120                            |
| 122                            | 341.27         | 0.01784                          | 3.714                           | 311.90                           | 875.6                    | 1190.0                          | 0.4906                           | 1.0936                   | 1.5866                          | 122                            |
| 124                            | 342.52         | 0.01785                          | 3.651                           | 313.13                           | 874.3                    | 1190.2                          | 0.4921                           | 1.0901                   | 1.5850                          | 124                            |
| 126                            | 343.76         | 0.01786                          | 3.589                           | 314.34                           | 873.0                    | 1190.4                          | 0.4935                           | 1.0866                   | 1.5834                          | 126                            |
| 128                            | 344.98         | 0.01787                          | 3.528                           | 315.54                           | 871.7                    | 1190.6                          | 0.4949                           | 1.0831                   | 1.5818                          | 128                            |
| 130                            | 346.19         | 0.01788                          | 3.468                           | 316.72                           | 870.4                    | 1190.8                          | 0.4963                           | 1.0796                   | 1.5802                          | 130                            |
| 132                            | 347.39         | 0.01789                          | 3.409                           | 317.89                           | 869.1                    | 1190.9                          | 0.4977                           | 1.0761                   | 1.5786                          | 132                            |
| 134                            | 348.57         | 0.01790                          | 3.351                           | 319.04                           | 867.8                    | 1191.1                          | 0.4990                           | 1.0726                   | 1.5770                          | 134                            |
| 136                            | 349.74         | 0.01791                          | 3.294                           | 320.18                           | 866.5                    | 1191.2                          | 0.5004                           | 1.0691                   | 1.5754                          | 136                            |
| 138                            | 350.89         | 0.01792                          | 3.238                           | 321.30                           | 865.2                    | 1191.4                          | 0.5017                           | 1.0656                   | 1.5738                          | 138                            |
| 140                            | 352.03         | 0.01793                          | 3.183                           | 322.41                           | 863.9                    | 1191.5                          | 0.5030                           | 1.0621                   | 1.5722                          | 140                            |
| 142                            | 353.15         | 0.01794                          | 3.129                           | 323.50                           | 862.6                    | 1191.6                          | 0.5043                           | 1.0586                   | 1.5706                          | 142                            |
| 144                            | 354.26         | 0.01795                          | 3.076                           | 324.58                           | 861.3                    | 1191.7                          | 0.5056                           | 1.0551                   | 1.5690                          | 144                            |
| 146                            | 355.36         | 0.01796                          | 3.024                           | 325.64                           | 860.0                    | 1191.8                          | 0.5068                           | 1.0516                   | 1.5674                          | 146                            |
| 148                            | 356.45         | 0.01797                          | 2.972                           | 326.69                           | 858.7                    | 1191.9                          | 0.5081                           | 1.0481                   | 1.5658                          | 148                            |
| 150                            | 357.53         | 0.01798                          | 2.921                           | 327.72                           | 857.4                    | 1192.0                          | 0.5093                           | 1.0446                   | 1.5642                          | 150                            |
| 152                            | 358.60         | 0.01799                          | 2.871                           | 328.74                           | 856.1                    | 1192.1                          | 0.5105                           | 1.0411                   | 1.5626                          | 152                            |
| 154                            | 359.66         | 0.01800                          | 2.821                           | 329.75                           | 854.8                    | 1192.2                          | 0.5117                           | 1.0376                   | 1.5610                          | 154                            |
| 156                            | 360.71         | 0.01801                          | 2.772                           | 330.75                           | 853.5                    | 1192.3                          | 0.5129                           | 1.0341                   | 1.5594                          | 156                            |
| 158                            | 361.75         | 0.01802                          | 2.723                           | 331.74                           | 852.2                    | 1192.4                          | 0.5141                           | 1.0306                   | 1.5578                          | 158                            |
| 160                            | 362.78         | 0.01803                          | 2.675                           | 332.72                           | 850.9                    | 1192.5                          | 0.5153                           | 1.0271                   | 1.5562                          | 160                            |
| 162                            | 363.80         | 0.01804                          | 2.627                           | 333.69                           | 849.6                    | 1192.6                          | 0.5164                           | 1.0236                   | 1.5546                          | 162                            |
| 164                            | 364.81         | 0.01805                          | 2.580                           | 334.65                           | 848.3                    | 1192.7                          | 0.5176                           | 1.0201                   | 1.5530                          | 164                            |
| 166                            | 365.81         | 0.01806                          | 2.533                           | 335.60                           | 847.0                    | 1191                            |                                  |                          |                                 |                                |