PROPERTIES OF SATURATED STEAM

Vacuum in ins. of Mercury or Gage Pres. in lbs.	Absolute Pressure in lbs. per sq. in.	Temperature in Deg. fahr.	Total Heat above 32° fahr. B.t.u. in the Water	Total Heat above 32° fahr. B.t.u. in the Steam	Latent Heat of the Steam in B.t.u.	Volume in cu. ft. of 1 lb. of Steam
27.88	1.	101.83	69.8	1104.4	1034.6	333.0
25.85	2.	126.15	94.0	1115.0	1021.0	173.5
23.81	3.	141.52	109.4	1121.6	1012.3	118.5
21.78	4.	153.01	120.9	1126.5	1005.7	90.5
19.74	5.	162.28	130.1	1130.5	1000.3	73.33
17.70	6.	170.06	137.9	1133.7	995.8	61.89
15.67	7.	176.85	144.7	1136.5	991.8	53.56
13.63	8.	182.86	150.8	1139.0	988.2	47.27
11.60	9.	188.27	156.2	1141.1	985.0	42.36
9.56	10.	193.22	161.1	1143.1	982.0	38.38
7.52	11.	197.75	165.7	1144.9	979.2	35.10
5.49	12.	201.96	169.9	1146.5	976.6	32.36
3.45	13.	205.87	173.8	1148.0	974.2	30.03
1.42	14.	209.55	177.5	1149.4	971.9	28.02
0.00	14.70	212.00	180.0	1150.4	970.4	26.79
0.3	15.	213.00	181.0	1150.7	969.7	26.27
1.3	16.	216.3	184.4	1152.0	967.6	24.79
2.3	17.	219.4	187.5	1153.1	965.6	23.38
3.3	18.	222.4	190.5	1154.2	963.7	22.16
4.3	19.	225.2	193.4	1155.2	961.8	21.07
5.3	20.	228.0	196.1	1156.2	960.0	20.08
6.3	21.	230.6	198.8	1157.1	958.3	19.18
7.3	22.	233.1	201.3	1158.0	956.7	18.37
8.3	23.	235.5	203.8	1158.8	955.1	17.62
9.3	24.	237.8	206.1	1159.6	953.5	16.93
10.3	25.	240.1	208.4	1160.4	952.0	16.30
15.3	30.	250.3	218.8	1163.9	945.1	13.74
20.3	35.	259.3	227.3	1166.8	938.9	11.89
25.3	40.	267.3	236.1	1169.4	933.3	10.49
31.3	46.	275.8	244.8	1172.0	927.2	9.20
35.3	50.	281.0	250.1	1173.6	923.5	8.51
41.3	56.	288.2	257.5	1175.7	918.2	7.65
45.3	60.	292.7	262.1	1177.0	914.9	7.17
51.3	66.	299.0	268.5	1178.8	910.2	6.56
61.3	76.	308.5	278.3	1181.4	903.0	5.74
71.3	86.	317.1	287.2	1183.6	896.4	5.10
81.3	96.	324.9	295.3	1185.6	890.3	4.60
90.3	105.	331.4	302.0	1187.2	885.2	4.23
100.3	115.	338.1	309.0	1188.8	879.8	3.88
125.3	140.	353.1	324.6	1192.2	867.6	3.219
140.3	155.	361.1	332.9	1194.0	861.0	2.920
150.3	165.	366.1	338.2	1195.0	856.8	2.753
165.3	180.	373.1	345.6	1196.4	850.8	2.533
175.3	190.	377.6	350.4	1197.3	846.9	2.406
200.3	215.	388.0	361.4	1199.2	837.9	2.138

USEFUL DATA

Diameter	×	3.1416	= Circumference
Circumference	×	.3183	= Diameter
Diameter^2	×	.7854	= Area of circle
Area of Circle	×	1.2732	= Area of circumscribed square
Area of Circle	×	.63662	= Area of inscribed square
Dia. of circle	×	.88623	= Side of equal square
Dia. of circle	×	.7071	= Side of inscribed square
Circumference of circle	×	1.1284	= Perimeter of equal square
Side of square	×	1.4142	= Dia. of circumscribed circle
Side of square	×	1.1284	= Dia. of equal circle
Perimeter of square	×	.88623	= Circumference of equal circle
Diameter^2	×	3.1416	= Surface of sphere
Diameter^3	×	.5236	= Volume of sphere
Dia. of sphere	×	.806	= Dimensions of equal cube
Dia. of sphere	×	.6667	= Length of equal cylinder
Area of base	×	⅓ height	= Volume of pyramid or cone
Base	×	½ height	= Area of triangle
Radius	×	1.1547	= Side of inscribed cube
Sq. ins.	×	1.2732	= Circular inches
Sq. ins.	×	.00695	= Sq. ft.
Sq. ft.	×	.111	= Sq. yd.
Sq. yds.	×	.0002066	= Acres
Cu. in.	×	.00058	= Cu. ft.
Cu. ft.	×	.03704	= Cu. yd.
Cu. in.	×	.004329	= U. S. gal.
Cu. ft.	×	7.4805	= U. S. gal.
Cu. in.	×	.000466	= U. S. bu.
Cu. ft.	×	.8036	= U. S. bu.
U. S. bu.	×	2150.42	= Cu. in .
U. S. bu.	×	1.242	= Cu. ft.
U. S. bu.	×	.046	= Cu. yd.
U. S. gal.	×	231.	= Cu. in.
U. S. gal.	×	.13368	= Cu. ft.
Cu. in. water	×	.36127	= Pounds (avoirdupois)
Cu. ft. water	×	62.4283	= Pounds (avoirdupois)
U. S. gals. water	÷	268.8	= Tons
Column of water 1" dia. x 12" high			= .34 lb. (avoirdupois)
Cu. in.	×	.263	= Lb. Av. Cast Iron
Cu. in.	×	.281	= Lb. Av. Wrought Iron
Cu. in.	×	.283	= Lb. Av. Cast Steel
Cu. in.	×	.3225	= Lb. Av. Copper
Cu. in.	×	.3037	= Lb. Av. Brass
Cu. in.	×	.26	= Lb. Av. Zinc
Cu. in.	×	.4103	= Lb. Av. Lead
Cu. in.	×	.2636	= Lb. Av. Tin
Cu. in.	×	.4908	= Lb. Av. Mercury
12 × weight of pine pattern			= Iron casting
13 × weight of pine pattern			= Brass casting
14 × weight of pine pattern			= Lead casting

VELOCITY OF STEAM

To find the velocity of steam multiply the condensation in pounds by the volume in cu. ft. corresponding to the pressure, which gives volume of steam passing through the pipe per hour. Dividing this product by 3600 times the area of the pipe in sq. ft. gives velocity in ft. per second.