

Specific density, 3
 Specific gravity, 2, 843
 of fuel gas, 182
 Specific heat, 3, 843
 of air, 5
 mean, of water vapor, 3
 of water, 31
 Specific humidity, 8
 Specific volume, 3, 843
 of saturated steam, 31
 Split phase motor, 723
 Split system, 843
 air conditioning equipment, 416
 automatic control of, 705
 central fan, 416
 unit ventilators, 442
 Spray,
 booths for painting, 658
 cooling,
 ponds, 531
 efficiency of, 530
 towers, 532
 distribution of, 522
 generation of, 522
 humidifiers, 523
 type of central station system, 415
 water coolers, 476
 Square foot of heating surface, 843
 Squirrel cage motors, 723
 Stack, stacks, 384
 effect, 688
 height, 843
 size of, 386, 395, 692
 wall, 386
 Stairways, 127
 Standards,
 air, 843
 air conditioning, 49
 A.S.H.V.E. codes and standards, 254, 277, 854
 for fuel oil, 179
 for pipe, 362
 for radiators, 277
 for welding, 374
 Static pressure, 426, 843
 Steam, 843
 coils, 493
 condensing rates, 273
 consumption for buildings, 246
 flow, Babcock's formula, 308
 heat content of, 23
 heating systems, 281, 843
 air-vent, 282, 285, 315, 318
 atmospheric, 291, 295, 328
 classification, 281
 condensation return pumps, 299
 connections, (see *Connections, Fittings*)
 corrosion of, 380
 design of, 281, 307
 dirt pockets, 334
 district heating, 781
 dripping of, 333
 electric, 761
 equivalent length of run, 312
 gravity systems, 276
 one-pipe, 275, 285, 315, 328
 two-pipe, 285, 318, 328
 with high-pressure steam, 323
 mechanical, 281
 orifice, 297, 310, 319, 328
 pipe, 307, (see also *Pipe*)
 capacity, 314, 315
 sizes, 310, 315
 sub-atmospheric, 295, 302, 319, 328
 types of, 281
 vacuum, 293, 300, 302, 319, 845
 vapor, 328, 845
 one-pipe, 287, 841
 two-pipe, 287, 289, 319, 844
 water hammer in, 310
 zone control, 298
 high pressure, 323
 jet apparatus, 471
 meters for, 790
 pressure, 323

Steam (continued)
 properties of, 28
 requirements of buildings, 240, 792
 saturated, properties of, 31
 superheated, 271, 844
 supply mains, 844
 tables, 8, 28
 trap, 843
 tunnels, 786
 underground, 783
 in unit heaters, 436
 Sterilization of air, 618
 Stokers,
 apartment house, 212
 automatic control of, 404, 715
 classes of, 204
 combustion process, 215
 adjustments, 217
 efficiency, 218
 commercial, 212, 213, 214
 controls, 218
 design of, 207
 economy, 207
 household, 210
 mechanical, 207
 operating requirements, 211
 overfeed flat grate, 207
 overfeed inclined grate, 208
 types of, 207
 underfeed, 207, 844
 underfeed rear cleaning, 209
 underfeed side cleaning, 208
 Storage,
 of hot water, 814, 818
 temperatures and humidities for, 640
 Storm sash, 123
 Streptococcus, 49
 Stroke, heat, 617
 Sub-atmospheric systems, (see also *Steam Heating Systems*)
 Suction,
 static in exhaust systems, 653
 Summer,
 care of heating boilers, 267
 comfort zone, 62, 64
 conditioning, apparatus for, 415, 448, 517
 desirable indoor conditions in, 64
 temperatures, 146
 wind velocities and directions, 146
 Sun,
 effect on heating requirements, 298
 factor of cooling load, 149
 Supply outlets,
 selection of, 387
 types of, 395
 Surface,
 conductance, 844
 cooling, 493
 equipment, 493
 air conditioning, 415
 ratings, 493
 extended, gravity-indirect heating systems, 279
 heating, 844
 square foot of, 843
 radiant heating, 775
 sweating of pipe, 750
 swimming pool, 820
 Symbols,
 for drawings, 851
 for heat transmission formulae, 87
 Synchronous motor, 727
 Systems of control, 702

T

Tank, tanks,
 for domestic water supply, 814, 818
 expansion, 355
 flush, 806

Tees, dimensions of, 373
 Temperature,
 absolute, 835
 of air leaving outlets, 421, 422, 567
 apparatus sensitive to, 700
 atmospheric, 190
 base, for degree-day, 239, 240
 basic, 3
 body, 51, 52, 770
 changes, effect on human beings, 53
 of chimney gases, 190
 in cities, 136, 146, 242
 of city water main, maximum, 526
 control of, 218, 225, 229, 700, 766
 railway air conditioning, 631
 of cooling water, 476
 dew-point, 3, 838
 difference,
 between floor and ceiling, 134, 435
 in stacks and leaders, 384, 691
 dry-bulb, 2, 66, 838
 maximum design, 146
 specified in winter, 132
 for drying, 670
 effect on moisture regain, 640
 effective, 56, 66, 133, 145, 838
 chart, 56, 58, 59, 60, 62
 for maximum comfort, 62
 optimum, 60
 scale, 57
 of gas flame, 182
 in industrial processing, 740, 741
 inside, 61, 62, 132
 low, insulation for, 741
 mean radiant, 770, 774
 measurement of, 825
 in occupied space, 66
 outside, 134, 146
 range of cooling equipment, 529
 records of cities, 136, 146
 at registers, 567
 room, 10, 132
 sensations, 55
 surface,
 of man, 771
 mean interior, 774
 systems for control of, 218, 225, 229, 699, 766
 thermo-equivalent conditions, 57
 water main, maximum, 526
 of well water, 524
 wet-bulb, 2, 11, 830, 845
 average, 529
 design, 145, 529
 as index of air distribution, 70
 maximum, 529
 Terminology, 835
 Test codes, 254
 Test instruments, 823
 Test methods, 823
 Textile, textiles,
 fibers, regain of moisture, 639
 temperatures and humidities for processing, 641
 Theaters, temperatures of, 65, 132
 Therm, 844
 Thermal resistance, 844
 Thermal resistivity, 844
 Thermocouples, 825
 Thermodynamics, 844
 of air conditioning, 1
 laws of, 841
 Thermo-equivalent conditions, 57
 Thermocouple, 825
 Thermometer, 825, 826, 827
 Thermopile, 826
 Thermostat, thermostats, 699, 844
 differential, 10, 699
 with gas-fired furnaces, 229
 immersion, 700
 insertion, 700
 location of, 405
 with oil burners, 225
 pilot, 706

Thermostat (continued)
 with radiant heaters, 766
 room, 700
 surface, 700
 types of, 700
 Time lag, 153
 Tobacco smoke, 68
 Ton of refrigeration, 469, 844
 Ton-day of refrigeration, 844
 Total heat, 844
 Total pressure, 844
 Towers, cooling, 476, 513, 532, 533
 Traps,
 with steam heating systems, 303
 types of, 303
 Tube,
 Bourdon, 824
 Pitot, 827
 shell and tube heat exchanger, 477
 Tuberculosis, 81, 625
 Tubing, copper or brass, 371
 Tunnels, for steam pipe, 786
 Turbines, with unit heaters, 440
 Two-pipe steam heating systems, (see also *Steam Heating Systems*)
 Two position controls, 702
 Typhoid, 50

U

Ultra-violet light, 73, 82
 Underfeed distribution system, 844
 Underfeed stoker, 844
 Underground piping, 783
 Underwriters' loop, 322
 Unit air conditioners, 431, 448, 844
 Unit coolers, 431, 445
 Unit equipment, 431
 Unit heaters, 433, 759, 844
 Unit ventilators, 431, 441, 844
 Unwin pressure drop formula, 782
 Up-feed piping systems, 845, (see also *Steam Heating Systems*)

V

Vacuum gage, 824
 Vacuum pumps, 293
 Vacuum refrigeration, 471
 control of, 717
 Vacuum system of steam heating, (see also *Steam Heating Systems*)
 Valve, valves, 376
 apparatus which operates, 699
 on boilers, 264, 321
 connections for, 786
 control, 326
 with steam heating systems, 326, 376
 with high pressure steam, 323
 pressure-reducing, 324, 786
 ratings of, 323
 for radiators, 384
 relief, 356
 roughing-in dimensions, 379
 solenoid, 701
 sub-atmospheric system, 295
 types of, 376
 for water supply, 804
 Velocity, 845
 air,
 in ducts of buildings, 407, 587, 597
 in exhaust systems, 653, 660
 chimney gas, 193
 draft loss, 198
 contours, 655
 in ducts, 407, 653, 660, 827
 of fans, 657
 head, of fluids, 581