

INDEX

HEATING VENTILATING AIR CONDITIONING GUIDE 1942

Technical Data Section
Chapters 1-47 and Pages 1-855

A

Abatement, smoke, 566
Abbreviations, 844
Absolute
 humidity, 837
 pressure, 837
 temperature, 4, 837
 zero, 837
Absorbents, 463, 466
 process, 466
 temperature, pressure, concentration, 467
Absorbers
 duct sound, 636
 outlet, 641
 plate cells, 638
 plenum, 637
Absorption systems, 490
Acceleration, 837
Acclimatization, 52
Activated carbon, 578
Adiabatic, 837
 mixing,
 injected water, 30
 two air streams, 29
 saturation, 33
Adjustable speed motors, 684
Adsorbents, 463
 process, 464
 temperature, pressure, concentration, 464
Agitated drier, 742
Air
 change measurements, 676
 chemical vitiation of, 37
 circulation in drying, 747
 classification of impurities, 561
 cleaner, 837
 cleaning devices, 572
 classification of, 572
 requirements, 570
 testing, 571
 combustion, 160
 conditioners, 443
 conditioning processes, 28
 cooled condensers, 493
 currents, 677
 dehumidification, 524, 542
 distribution, 383, 595
 balancing system, 608

Air, distribution (continued)
 definitions, 595
 factors in room cooling, 600
 factors in room heating, 602
 furnace systems, 383
 railway car, 710
 standards for, 597
 duct design, 609
 dust concentrations, 564
 excess, 161
 filter, railway car, 711
 flow resistance of coils, 519
 friction chart, 612
 impurities, 561
 infiltration, 115
 nature of, 115
 through walls, 116
 leakage, 115
 line heating systems, 271
 moist, 8
 movement, influence of, 64
 movement, measurement of, 675
 outdoor, 399
 physical impurities in, 41
 pollution, 561, 564
 abatement, 566
 quantity, 408
 saturated, 9, 842
 secondary, 162
 space conductance, 87
 standard, 842
 sterilization of, 700
 supply opening noise, 603
 temperature, 65
 theoretical requirements, 161
 thermodynamics of, 1
 washers, 501, 537, 575, 837

Air conditioning, 837
 automobiles in summer, 714
 central system, 393, 792
 comfort, 838
 industrial, 717
 atmospheric conditions required, 717
 calculations, 726
 classification of problems, 720
 general requirements, 720
 hospitals, 708
 metabolism, 49
 passenger bus in summer, 713
 railway passenger car, 711
 relation to metabolism, 49

ALPHABETICAL INDEX TO TECHNICAL DATA SECTION

Air conditioning (continued)
 stoker-fired, unit, 202
 transportation, 709
 treatment of disease, 697
 high temperature hazards, 704
 unit, 443
Airfoil fan, 581
Allergic disorders, 705
 apparatus, 705
 asthma symptoms, 705
 hay fever symptoms, 705
 limitations of air conditioning methods, 706
Alternating current motors, 685
Aluminum oxide, 463
Ammonia, 480
Anemometer, 837
 deflecting vane, 677
 propelling, 678
 revolving vane, 678
Anesthetics, 698
Angle factors, 79
Anthracite coal, 167
 firing methods, 168
Apparatus dew-point, 403
Areas of circles, 855
Aspect ratio, 596
Asthma symptoms, 705
Atomizing oil burner, 207
Atmospheric
 conditions for industrial processes, 717
 pressure, 837
 water cooling equipment, 543
 make-up water, 559
 sizes, 547
 winter freezing, 560
Atomizing humidifiers, 541
Attenuation
 ducts, 635
 elbows, 635
 grilles to room, 636
Attic
 fans, 459
 costs, 460
 location, 460
 types, 460
 ventilation, 112
Automatic
 controls, 385, 647 (*see Controls*)
 purpose of, 647
 types of, 648
 fuel burning equipment, 197
Automobile air conditioning, 714
Axial flow fans, 581

B

Baffle, 837
Bare pipe heat loss, 771
Barometer, 673
Basement heat loss, 112
Biochemical reactions,
 control of rate of, 724
Bin-feed stoker, 200
Bituminous coal, 168
 firing methods, 170
Blast, 837
Body,
 adaptation to hot conditions, 46
 heat loss, 50, 800
 odor, 38
 surface area, 52
 thermal interchanges, 42
Boiler, boilers, 837
 capacity for unit heaters, 429
 cast-iron, 235
 cleaning steam, 250
 connections, 248, 298
 Harford return, 298
 return, 298

Boiler, connections (continued)
 sizing, 299
 steam, 298
 efficiency, 242
 electric, 793
 erection, 249
 fittings, 248
 furnace design, 238
 gas-fired, 213, 237
 selection of, 246
 gas-fired units, 213
 conversions, 247
 selection of, 246
 heating, 235
 heat transfer rates, 240
 hot water supply, 238
 insulation, 252
 maintenance, 249
 oil-fired units, 209
 operation, 249
 output, 241
 physical limitations of, 247
 rating codes, 240
 selection of, 242
 based on heating surface and grate area, 245
 estimated design load, 242
 estimated maximum load, 242
 gas-fired, 246
 hot water supply load, 243
 performance curves for, 244
 piping tax, 243
 radiation load, 243
 warming up allowance, 244
 soot, 177
 space limitations, 247
 special heating, 237
 steel, 236
 stoker-fired units, 201
 testing codes, 240
 troubles, 250
Booster fan, 378
Boyle's law, 4
British:
 equivalent temperature, 802
 thermal unit, 837
Building, buildings, 121
 condensation, 112
 materials, heat transfer through, 91, 681
 multi-story, air leakage, 121
Bucket trap, 283
Burner, oil, 206
Bus air conditioning, 713
By-pass, 410, 838

C

Calcium chloride, 466
Calculated heat loss method, 220
Calorie, 838
Calorific value, 159
Capacitor motors, 686
Carbon
 activated, 578
 dioxide, 162, 484
 monoxide, 682
Cast-iron boilers, 235
Ceilings,
 high, 128
 control, 652
 cooling unit, 457
 unit heater, 427, 791
Central air conditioning systems, 393
 air quantity, 408
 apparatus dew-point, 403
 by-pass, 410
 classification, 393
 design, 398
 design procedure, 424
 equipment arrangement, 421
 equipment selection, 419
 evaporative cooling, 416