Split System: A system in which the heating and ventilating are accomplished by means of radiators or convectors supplemented by mechanical circulation of air (heated or unheated) from a central point.

Square Foot of Heating Surface (*equivalent*)*:* Equivalent direct *radiation* (EDR). By definition, that amount of heating surface which will give off 240 Btu per hour. The *equivalent* square feet of heating surface may have no direct relation to the actual surface area.

Stack Height: The height of a gravity convector between the bottom of the heating unit and the top of the outlet opening.

Standard Air: As defined by A.S.H.V.E. codes, *standard air* is air weighing 0.07488 lb per cubic foot, which is air at 68 F dry-bulb and 50 per cent relative humidity with a barometric pressure of 29.92 in. of mercury. (Most engineering tables and formulae involving the weight of air are based on air weighing 0.07495 lb per cubic foot, which is dry air at 70 F dry-bulb with a barometric pressure of 29.92 in. of mercury. The error involved in disregarding the difference between the above two weights is very slight and in most instances may be neglected.)

Static Pressure: The compressive pressure existing in a fluid. It is a measure of the potential energy of the fluid.

Steam: Steam is water vapor which exists in the vaporous condition because sufficient heat has been added to the water to supply the latent heat of evaporation and change the liquid into vapor. Steam in contact with the water from which it has been generated may be *dry saturated* steam or *wet saturated* steam. The latter contains more or less actual water in the form of mist. If steam is heated, and the pressure maintained the same as when it was vaporized, its temperature will increase and it will become *superheated.*

Steam Heating System: A heating system in which heat is transferred from the boiler or other source of steam to the heating units by means of steam at, above, or below atmospheric pressure.

Steam Trap: A device for allowing the passage of condensate and preventing the passage of steam, or for allowing the passage of air as well as condensate.

Superheated Steam: See *Steam.*

Supply Mains (*steam*)*:* The pipes through which the steam flows from the boiler or source of supply to the run-outs and risers leading to the heating units.

Surface Conductance: The amount of heat (Btu) transmitted by radiation, conduction, and convection *from a surface to the air or liquid surrounding it*, or vice versa, in one hour per square foot of the surface for a difference in temperature of 1 deg between the surface and the surrounding air or liquid.

Synthetic Air Chart: A chart for evaluating the air conditions maintained in a room.

Therm: Symbol used in the gas industry representing 100,000 Btu.

Thermal Resistance: The reciprocal of *conductance.*

Thermal Resistivity: The reciprocal of *conductivity.*

Thermodynamics: The science which treats of the mechanical actions or relations of heat.

Thermostat: An instrument which responds to changes in temperature and which directly or indirectly controls the source of heat supply.

Ton of Refrigeration: The extraction of 12,000 Btu per hour.

Ton Day of Refrigeration: The heat removed by a ton of refrigeration operating for one day; 288,000 Btu.

Total Heat: A thermodynamic quantity, variously called heat content, thermal potential, enthalpy. It is the heat required per unit mass (Btu per lb) to raise a given substance to a given point from an arbitrary datum point. It is the sum of the heat of the liquid, the latent heat, and any miscellaneous heat which may be present.

Total Pressure: The sum of the static and velocity pressures in a fluid. It is a measure of the total energy of the fluid.

Tube (or Tubular) Radiator: A cast-iron heating unit used as a radiator and having small vertical tubes.

Two-Pipe System (*steam or water*)*:* A heating system in which one pipe is used for the supply of the heating medium to the heating unit and another for the return of the heating medium to the source of heat supply. The essential feature of a two-pipe system is that each heating unit receives a direct supply of the heating medium which medium cannot have served a preceding heating unit.

Underfeed Distribution System (*hot water*)*:* A hot water heating system in which the main flow pipe is below the heating units.

Underfeed Stoker: A stoker which feeds the coal underneath the fuel bed.

Unit Air Conditioner: A piece of equipment designed to provide simutaneous control of at least four of the seven functions (page 237) involved in summer and winter air conditioning. The apparatus is compactly housed in a cabinet placed within or immediately adjacent to the rooms served. The parts comprising a unit air conditioner are assembled at the point of manufacture, and the performance of the assembly is the responsibility of the manufacturer. See Chapter 12.

Unit Cooler: A cooling device, usually comprising an extended-surface element and a motor-driven fan mounted integrally in a housing, located within or adjacent to the room served. Generally no ducts are attached to inlet or outlet. The refrigerant is brought to the unit from an outside source, and the fan drives air over the cooling element.

Unit Heater: A heating device, usually comprising an extended-surface element or a gas burner, mounted with a motor-driven fan in a housing, located within or adjacent to the room served. Generally, no ducts are attached to inlet or outlet. The fluid for heating is brought to the unit from an outside source, and the fan drives air over the heating element. Unit heaters are used primarily in industrial applications.

Unit Ventilating-Heater: A ventilating and heating device comprising a motor-driven fan, an extended-surface heating element and usually a filter, mounted in a housing, located within or adjacent to the room served. Outdoor air is obtained through a dampered direct connection or a short duct from a nearby wall or window opening. Provision