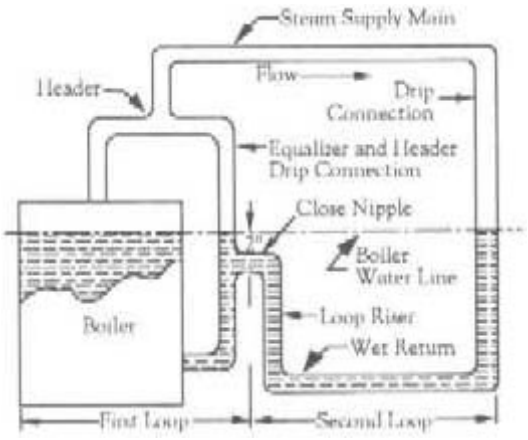
POWER PLANT DICTIONARY

CREATED BY AKMAL RIZAYEV

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HAC - Hydrogen- assist cracking.
HALIDE LEAK DETECTOR - A device used to detect vapor leaks of halogen refrigerants. It uses acetylene as its base.
HALIDE REFRIGERANTS - Family of refrigerants containing halogen chemicals.
HALIDE TORCH - Type of torch used to safely detect halogen refrigerant leaks in system.
HALOGENS - Substance containing fluorine, chlorine, bromine and iodine.
HARD WATER - Water that contains dissolved compounds of calcium, magnesium or both.
HARDNESS - Are generally referred to the presence of calcium and magnesium content of the water.
HARDNESS - The scale-forming and lather-inhibiting qualities which water, high in calcium and magnesium ions, possesses.
HARDNESS CONTROL - An action designed to remove hardness and at the same time to produce an equivalent amount of suspended solids.
HARDNESS OF CALCIUM CARBONATE - The expression ascribed to the value obtained when the hardness-forming salts are calculated in terms of equivalent quantities of calcium carbonate; a convenient method of reducing all salts to a common basic for comparison.
Hartford Loop - What you should know about the Hartford Loop



HEAD - The measure of the pressure of water expressed in feet of height of water: 1 psi = 2.31 feet of water.

HEAD DYNAMIC OR TOTAL - In flowing fluid, the sum of the static and velocity heads at the point of measurement.
HEAD PRESSURE - Pressure which exists in condensing side of refrigerating system.
HEAD PRESSURE CONTROL - Pressure-operated control which opens electrical circuit if high-side pressure becomes too high.
HEAD STATIC - The static pressure of fluid expressed in terms of the height of a column of the fluid, or of some manometric fluid, which it would support.
HEAD VELOCITY - Height of fluid equivalent to its velocity pressure in flowing fluid.
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HEADER - Length of pipe or vessel to which two or more pipe lines are joined carries fluid from a common source to various points of use.
HEAD LOSS - The loss of energy as a result of friction; commonly expressed in feet.
HEAT - Form of energy which acts on substances to raise their temperature; energy associated with random motion of molecules.
HEAT CAPACITY - The amount of heat necessary to raise the temperature of a given mass one degree. Numerically, the mass multiplied by the specific heat.
HEAT CONDUCTOR - A material capable of readily conducting heat. The opposite of an insulator or insulation.
HEAT ENGINE - Mechanical devices which convert heat to work, such as the steam boiler, gas turbine, solar energy, refrigerators, steam engines, steam turbines.
HEAT EXCHANGER - Device used to transfer heat from a warm or hot surface to a cold or cooler surface. (Evaporators and condensers are heat exchangers.)
HEAT LAG - The time it takes for heat to travel through a substance heated on one side.
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HEAT LEAKAGE - Flow of heat through a substance.
HEAT OF COMPRESSION - Mechanical energy of pressure changed into energy of heat.
HEAT OF CONDENSATION - The latent heat given up by a substance as it changes from a gas to a liquid.
HEAT OF FUSION - The latent heat absorbed when a substance changes from a solid state to a liquid state.
HEAT OF RESPIRATION - Process by which oxygen and carbohydrates are assimilated by a substance; also when carbon dioxide and water are given off by a substance.
HEAT OF VAPORIZATION - The latent heat absorbed by a substance as it changes from a liquid to a vapor.
HEAT PIPE - A refrigeration device with no moving parts, but containing a refrigerants.

HEAT PUMP - A device used to transfer heat from a low temperature to a high temperature medium also a reversed cycle in which work is the input and heat is rejected to a sink at a higher temperature than the source.
HEAT PUMP - A refrigerating system employed to transfer heat into a space or substance. The condenser provides the heat while the evaporator is arranged to pick up heat from air, water, etc. By shifting the flow of air or other fluid, a heat pump system may also be used to cool the space.
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HEAT SINK - Relatively cold surface capable of absorbing heat.
HEAT TRANSFER - Flow of heat by conduction, convection and radiation.
HEAT TRANSFER - Movement of heat from one body or substance to another. Heat may be transferred by radiation, conduction, convection or a combination of these three methods.
HEAT, SENSIBLE - Heat which is associated with a change in temperature; specific heat exchange of temperature; in contrast to a heat interchange in which a change of state (latent heat) occurs.
Heat, Specific- The ratio of the quantity of heat required to raise the temperature of a given mass of any substance one degree to the quantity required to raise the temperature of an equal mass of a standard substance (usually water at 59 F) one degree.
Heat, Total (Enthalpy) - The sum of sensible heat and latent heat between an arbitrary datum point and the temperature and state under consideration.
HEAT-EXCHANGER MATERIALS - The metals or materials of construction of a heat exchanger.
HEAT-TRANSFER MEDIUM - The fluid, often water, which acts as the agent or medium in a heat exchanger through which heat is exchanged from one side to the other.
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HEATING COIL - Heat transfer device consisting of a coil of piping, which releases heat.
HEATING CONTROL - Device which controls temperature of a heat transfer unit which releases heat.
HEATING SURFACE - That surface which is exposed to the heating medium for absorption and transfer of heat to the medium.
HENRY'S LAW - An expression for calculating the solubility of a gas in a fluid based on temperature and partial pressure.
HENRY - The unit of self-inductance or mutual inductance in the metric system. Its symbol is
*H.*HERMETIC - Sealed so that the object is gas tight.
HERMETIC COMPRESSOR - Compressor which has the driving motor sealed inside the compressor housing. The motor operates in an atmosphere of the refrigerant.

HERMETIC MOTOR - Compressor drive motor sealed within same casing which contains compressor.
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HERMETIC SYSTEM - Refrigeration system which has a compressor driven by a motor contained in compressor dome or housing.
HERTZ - A unit in the metric system used to measure frequency in cycles per second. Its symbol is
Hz.HIC - Hydrogen-induced cracking. (Same as hydrogen embrittlement)
HIDDEN DEMAND CHARGE - Electric bill charges that are based on cents per kWh per kW demand contain a hidden demand charge. A low load factor for a building then penalizes the energy user through this "hidden" charge.
HIDEOUT - Is the accumulation of chemicals on surfaces, in crevices or in deposits within the system during normal operation.
HIGH LIMIT CONTROL - A device which normally monitors the condition of the controlled medium and interrupts system operation if the monitored condition be comes excessive, for example a high level of fluid in a storage tank.
HIGH SIDE - Parts of the refrigerating system subjected to condenser pressure or higher; the system from the compression side of the compressor through the condenser to the expansion point of the evaporator. HIGH-PRESSURE CUT-OUT - Electrical control switch operated by the high-side pressure which automatically opens electrical circuit if too high pressure is reached.
HIGH-SIDE FLOAT - Refrigerant control mechanism which controls the level of the liquid refrigerant in the high-pressure side of mechanism.
HIGH-VACUUM PUMP - Mechanism which can create a vacuum in the 1000 to 1 micron range.
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HOT DECK - The heating section of a multizone system. HOT GAS BYPASS - Piping system in refrigerating unit which moves hot refrigerant gas from condenser into low-pressure side.
HOT GAS DEFROST - Defrosting system in which hot refrigerant gas from the high side is directed through evaporator for short period of time and at predetermined intervals in order to remove frost from evaporator.
HOT JUNCTION - That part of thermoelectric circuit which releases heat.
HOT PROCESS - A water treatment process, when the water is heated above the room temperature.
HOT PROCESS PHOSPHATE SOFTENING - A process whereby the calcium and magnesium salts containing, constituting the hardness of water, are chemically precipitated and removed with phosphate in conjunction with caustic soda.
HOT WELL - A tank used to receive condensate from various sources on its passage back to the boiler through a feed water system.

HOT-WATER HEATING BOILER - A boiler in which no steam is generated and from which hot water is circulated for heating purposes and then returned to the boiler.

HOT-WATER RE-CIRCULATING SYSTEM - A heating system using water as a heat-transfer medium through a heat exchanger or boiler to terminal heating unit.
HSC - Hydrogen stress cracking.
HSCC - Hydrogen- assisted stress-corrosion cracking.
HUMIDIFIER - A device to add moisture to air.
HUMIDIFYING - Adding of moisture to the air.
HUMIDIFYING EFFECT - The latent heat of vaporization of water at the average evaporating temperature times the weight of water evaporated per unit of time.
HUMIDISTAT - A regulatory device, actuated by changes in humidity, used for the automatic control of relative humidity.
HUMIDITY - Dampness of air.
HUMIDITY RATIO - The ratio of the mass of the water vapor to the mass of dry air contained in the sample.
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HUMIDITY, ABSOLUTE - The weight of water vapor per unit volume.
HUMIDITY, PERCENTAGE - The ratio of the specific humidity.
HUMIDITY, RELATIVE - The ratio of the mol fraction of water vapor present in the air, to the mol fraction of water vapor present in saturated air at the same temperature and barometric pressure; approximately, it equals the ratio of the partial pressure or density of the water vapor in the air, to the saturation pressure or density, respectively, of water vapor at the same temperature.
HUNTING - A surge of engine speed to higher number of revolutions per minute, followed by a drop to normal engines speed without manual movement of the throttle. Is often caused by a faulty or improperly adjusted governor.
HVAC - Heating, Ventilating, and Air Conditioning.
HVAC BOILER - Boiler for heating or air conditioning (Absorption Refrigeration)
HVAC EQUIPMENT - Apparatus or equipment used in heating, ventilating, and air conditioning.
HYDRATION - Absorption of water by a mineral that results in a change in the nature of the mineral.
HYDRAULIC CLASSIFICATION - The rearrangement of resin particles in an ion-exchange unit. As the backwash water flows up through the resin bed, the particles are placed in a mobile condition wherein the larger particles settle and the smaller particles rise to the top of the bed.
HYDRAULIC COUPLING - A fluid connection between a prime mover and the machine it drives. It uses the action of liquid moving against blades to drive the machine.
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HYDRAULIC HEAD - The force exerted by a column of liquid expressed by the height of the liquid above the point at which the pressure is measured. Although head refers to a distance or height, it is used to express pressure, since the force of the liquid column is directly proportional to its height. Also called head or hydrostatic head.

HYDROCARBONS - Organic compounds containing only hydrogen and carbon atoms in various combinations.
HYDROGEN COOLED GENERATOR - High performance is provided by effective cooling and loss reduction.
HYDROGEN CYCLE - A complete course of cation-exchange operation in which the adsorbent is employed in the hydrogen or free acid form.
HYDROGEN DAMAGE - A type of corrosion occurring beneath a relative dense deposit. This type of damage can only occur if hydrogen was present in the metal. Failure takes place at thick edges in the form of fracture, rather then thinning. Hydrogen produces the corrosion reaction, moving into underlying metal, causing decarburization and intergranular fissuring of the structure. Damages usually result in larger pieces of metal being blown away, rather then just bursting.
HYDROGEN INDUCED CRACKING - Caused by the introduction of hydrogen during the welding process.
HYDROGEN ION - A portion of the molecule of water containing one atom of hydrogen which has a positive electric charge.
HYDROGEN-ION CONCENTRATION - The degree or quantity of hydrogen ions in a water solution.

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HYDROLOGIC CYCLE - The cycle of water from evaporation through condensation to precipitation.
HYDROLYSIS - A chemical reaction between a mineral and water that results in dissolution of the mineral.
HYDROMETER - Floating instrument used to measure specific gravity of a liquid.
HYDRONIC SYSTEM - A re-circulating water system used for heating and/or comfort cooling.
HYDROPHILIC - Having an affinity for water.
HYDROSTATIC PRESSURE - The pressure at any point in a liquid at rest; equal to the depth of the liquid multiplied by its density.
Hydroxyl - The term used to describe the anionic radical (OH-) which is responsible for the alkalinity of a solution.
HYGROMETER - Instrument used to measure degree of moisture in the atmosphere.
HYGROSCOPIC - Ability of a substance to absorb and release moisture and change physical dimensions as its moisture content changes.



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