Pump glossary

Air Bound - A condition occurring when a centrifugal pump body is filled with air and a vacuum can no longer be formed allowing water to flow into the pump.

Capacity is the water handling capability of a pump commonly expressed as either gallons per minute (GPM) or gallons per hour (GPH).

Cavitations are a phenomenon causing vacuum pockets to form within the pump that eventually implode under pressure pitting the impeller and volute surfaces.

Cleanout Covers - On trash pumps a removable cover that allows easy access to the interior of the pump casing for removal of any debris.

Dewatering - The removal of unwanted water (clear or dirty) but free from hazardous materials.

Diffuser - A stationary housing similar to a volute in which the impeller rotates. Compact in design, it enables the pump to produce higher heads/pressures.

Discharge Hose - A collapsible hose used to move the water discharged from the pump.

Discharge Port - Same as the outlet. The point where the discharge hose or pipe is connected to the pump.

Drain Plugs - Removable plugs used to drain water from the pump during periods of inactivity.

Dynamic takes into account motion, as opposed to static.

Flapper Valve - Rubber molded around a steel weight that seals off the inlet or outlet preventing water from either entering or exiting the pump at the wrong time of the cycle.

Frame - A wraparound tubular frame provides protection for the casing and engine. These frames can simplify storage (stacking) and lifting.

Friction Loss refers to reductions in flow due to turbulence as water passes through hoses, pipes, fittings and elbows.

Hazardous Material - Any volatile, explosive or flammable liquid that requires special handling and should not be used with a dewatering pump.

Head - A measurement of pressure typically expressed in feet/head or lb/in^2.

Impeller - A disk with multiple vanes. It is attached to the pump engine or motor and is used to create the centrifugal force necessary for moving water through the pump casing.

Mechanical Seal - A common wear part that forms a seal between the pump and the engine or motor. Also prevents water from seeping into the engine or motor.

Net Positive Suction Head (NPSH) - Positive flow of water to the suction port of the pump.

Performance Curves - Chart water flow by comparing total head to flow rate.

Prime - The creation of a vacuum inside the pump casing.

Pump Housing - The pump body or casing. Depending on the design may be made of plastic, aluminum, cast-iron or stainless steel.

Self Priming - The ability of a pump to purge air from inside its system and creating an area of low pressure that permits water to flow into the pump casing.

Shock Mounts - Rubber mounts used to dampen vibration from the engine and help prevent the pump from "walking away".

Skid Mount - Pump and engine mounting mounted on a base.

Slow Seepage - Water that drains slowly into a trench or work area from the surrounding area. Possibly caused from run off or high water tables.

Solids - Any particulate that passes through the pump: mud, sand, rock or other debris.

Static acting by weight not motion, as opposed to dynamic.

Strainer - A fitting at the end of the suction hose that prevents solids larger than the pump is capable of passing from entering.

Strain Relief Protector - A support that prevents the electrical cord of a submersible pump from being accidentally pulled out of the casing.

Suction Hose - A reinforced hose through which water flows into the suction end of a pump.

Suction Port - Same as the inlet. The point where the suction hose or pipe is connected to the pump.

System - the network of hoses, pipes and valves linked to the pump.

Thermal Overload Sensors - A feature built into the motor of a submersible pump that shuts it down should the operating temperature become too high.

Viscosity - The resistance to flow of a liquid at a given temperature. High viscosity liquids such as motor oil are more resistant to flow than water.

Volute - A stationary housing inside the pump housing in which the impeller rotates. It is used to separate air and water.

Water Hammer - Energy transmitted from a sudden stoppage in the flow of water out of the

pump.

Wear Plate - A replaceable steel insert that fits inside the volute or suction cover of a pump. Helps to form a vacuum with the impeller and reduce the cost of replacement parts.

Weep Hole - A small opening on the underside of the pump where it is joined to the engine. Allows quick detection of a leak before water seeps into the oil sump of the engine.