

## TWO-WAY MOVEMENT OF LIQUID FLOW

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### ABSTRACT

A liquid is one of the states of matter in which volume is conserved but shape changes. A liquid consists of atoms and molecules that are chemically bonded to each other. The most common liquid on Earth is water. A liquid is fluid like a gas and takes the shape of a container. Some liquids are compressible, while others are incompressible. Unlike a gas, a liquid does not expand and fill the entire container, but maintains a constant density. A different property of liquid is surface tension, which causes the phenomenon of wetting. The density of a liquid is close to that of a solid, and much higher than that of a gas.

**Keywords:** liquid, liquid flow, hydraulics, properties of liquids, movement of liquids, development of our country.

A liquid is an aggregate state between the solid and gaseous states of matter. Some properties of a liquid are similar to those of a gas, and some properties are similar to those of a solid. Like a solid, it occupies a certain volume, and when poured into a container, like a gas, it takes the shape of a container. According to the chemical composition, liquid is divided into 1-component (pure), 2-component (binary), 3-component and multi-component (4 or more components) liquid mixtures (solutions). According to its physical nature, liquid is divided into normal (ordinary), liquid crystals and quantum liquids (liquid  $^4\text{Ne}$ ,  $^3\text{He}$  and their solutions). Normal liquids have only one phase. Helium Ne can exist in two liquid phases - normal and superfluid phases, and liquid, crystalline substances can exist in normal and one or even several anisotropic phases. A normal fluid is macroscopically homogeneous and isotropic in the absence of external influences. With the same properties, a liquid is similar to a gas, but anisotropic crystals are very different from solids. Amorphous solids (e.g., glass) are supercooled liquids, whose kinetic characteristics differ from normal S by

numerical values. If the liquid is heated, its properties such as thermal conductivity, viscosity, diffusion become closer to those of gases. When approaching the crystallization temperature, the properties of most ordinary liquids, such as density, compressibility, heat capacity, electrical conductivity, approach such properties of the corresponding solids.

During laminar movement, the particles of the liquid are arranged in layers and they do not move from one layer to another. Flow particles in the motion space move along a straight line. Laminar motion is the motion of a current in a parallel or straight line. In order to demonstrate laminar motion in an experiment, if we add a colored liquid through a glass tube to the initial section of the flowing glass tube, the color will flow in a straight line without mixing with the liquid. If we increase the flow rate, the flow particles will pass from one layer to another layer, lose some of their energy and return to their own layer. is called turbulent motion.

In liquids, molecules are close to each other. Therefore, each molecule interacte with neighboring molecules around it. Liquid molecules do not move freely like gas molecules, but they oscillate around an equilibrium state in a so-called steady state over a period of time. Over time, the S molecule moves from the previous equilibrium state to a distance close to its size, and occupies a new equilibrium state. In this way, C molecules begin to move randomly through the volume of the liquid. Although C has a definite volume, it cannot retain a definite shape and takes the shape of the part of the container it occupies. Free evaporation of a liquid at a given temperature vapors to saturate the space in a closed container and its the required pressure is called the saturated vapor pressure of the liquid.

Based on this, the pressure of the saturated vapor of the liquid is closed refers to the state of equilibrium with the liquid in the vessel is a stabilized pressure. These pressure fluids are at a higher temperature different hydraulic devices that can be used and connected, used to determine the cavitation property in hydrosystems. Evaporation of the liquid is both on the surface and on its entire volume It can also occur by the formation (boiling) of steam bubbles possible In this case, the second hoi is the surface at the desired temperature unlike evaporation, only at a certain temperature, saturated vapor pressure is equal to the pressure at the surface of the liquid occurs at temp. As the pressure increases, the boiling point increases,decreases as it decreases. Saturated vapor pressure of homogeneous liquids at each temperature will have the same amount for liquid and vapor will not depend on the ratio. In liquid mixtures, the composition of the liquid is different the interaction of molecules makes evaporation difficult. In this case the ratio of light vapor to liquid vapor in mixture vapors, more than its vapors in certain states. In this case total vapor pressure is equal to the sum of partial vapor pressures.Thus, the compounds are lighter in the liquid phase when evaporated

component decreases, that is, the light component is in the liquid phase in comparison, it is more in the vapor phase.

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