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**THE HISTORY OF THE DEVELOPMENT OF THE RESEARCH OF
EXPERIENCE OF THE CREATION OF MECHANICS OF THE LIQUID
FROM ANTIQUITY UP TO THE XVIII CENTURY**

Summary

It is determined that in ancient times hydraulics was only a craft without any scientific basis. For 250 years BC treatises began to appear in which theoretical enough generalizations of certain questions of fluid mechanics were already being carried out.

Archimedes (287–212 BC) left behind an analysis of hydrostatics and navigation. Since then, little has been added to the work of Archimedes devoted to hydrostatics. The regression in the field of fluid mechanics continued until the second half of the 15th century. In the XVI century, experimental research began to develop, namely, Leonardo da Vinci studied the principle of the hydraulic press, aerodynamics of aircraft, flow through the holes. He invented a centrifugal pump, a parachute, an anemometer. Da Vinci is the founder of fluid mechanics. By the period of the Renaissance are the works of Simon Stevin, which determined the magnitude of hydrostatic pressure on a flat figure, explained the «hydrostatic paradox». During this

period, Galileo Galilei showed that hydraulic resistances increase with increasing speed and with increasing density of the liquid medium; he also explained the issue of the vacuum. The period of the 17th century and the beginning of the 18th century, the mechanics of the fluid was still in its infancy. However, here it is possible to note the names of the following students, which contributed to its development: Castelli, who clearly stated the principle of continuity – Torricelli gave a formula for calculating the velocity of fluid outflow from the aperture and invented a mercury barometer; Pascal – found that the value of hydrostatic pressure does not depend on the orientation of the action area, in addition, he finally decided and justified the issue of vacuum; Newton gave an approximate description of the laws of internal friction of a liquid, due to universal gravitation. By the middle of the 18th century, the modern scientific schools on fluid mechanics were rapidly being created by the works of a number of scientists (Galileo, Copernicus, Kepler, Pascal, Descartes, Hooke, Newton, Leibniz, Clairaut and many others), which were laid by three scientists of the 18th century: Bernoulli, Euler and d'Alembert.

Key words: *fluid mechanics, scientific school, scientists, laws.*