

Development and Application of Thermodynamics in the Field of Energy Technology, from History to the Future

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Abstract

The development of today's energy technologies is very fast and is related to the development of a scientific discipline such as thermodynamics. As the name thermodynamics suggests, thermodynamics is the study of heat dynamics and their dynamics and energy transformation. It is one of the newest classical scientific disciplines, which began to develop only at the end of the 19th century. However, the beginnings of thermodynamics go back over two thousand years. Democritus and his mentor Leucippus may be regarded as the first serious researchers in the field of thermodynamics, in the 4th century B.C. Thermodynamics is developing today in many areas like classical thermodynamics, statistical thermodynamics, irreversible thermodynamics, nonequilibrium thermodynamics...

The development of thermodynamics takes place today in the so-called classical world, as well as in the world of quantum influences and, of course, also in the area where the theory of relativity must be taken into account. The presented article will show the historical outline of the development of thermodynamics in the field of energy technology, show the current state of development in the field of thermodynamics and indicate possible further paths of development of thermodynamics in the field of energy technology.