

Estimation of power expenditures for flow motion in vortex devices

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Abstract

A version is considered of calculations of the total head and its components, expended for motion of twisted ideal flow along a cylindrical tube, with following correction of obtained results in reference to designing an optimal vortex device and taking into account the friction force effect in real conditions. It is shown that the developed method for calculation of the head at the input of a vortex device provides the results with the accuracy sufficient for carrying out the engineering calculations of vortex devices of different types in a wide range of variation of the flow twisting degree.
