

PHYSICAL PRINCIPLES OF HYDRODYNAMIC NON-STATIONARITY EFFECT ON TURBULENT FLOW

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The paper presents the analysis of the effect produced by non-isothermicity and hydrodynamic non-stationarity on the initiation and development of turbulence. A physical model of a hydrodynamically non-stationary turbulent flow is proposed, based on the previously conducted experimental investigations into the structure of non-stationary turbulent flow that takes place when gas is flowing in the duct.

Turbulence, pulsations, hydrodynamic non-stationarity, flow structure, heat exchange and pressure loss.

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