

## Local pressure distribution on sphere in high turbulent flow

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### ABSTRACT

Influence of the external flow turbulence on momentum and heat transfer processes in boundary layer is noticeable. The flow turbulence modify local transport characteristics on surface. To describe this process the investigations of the influence of external flow turbulence on local pressure distributions on sphere have been performed. Using pressure difference manometers and digital data acquisition system distributions of local static pressure and its turbulent fluctuations on sphere were measured. The data for the some velocity but different level of turbulence were collected and two distributions for different inflow turbulence, as an example, are presented in Figure1 . The influence of the external flow turbulence on pressure and its fluctuations distribution is visible. Distributions for different level of turbulence will be presented and analyzed. For such conditions only influence of turbulence and its structure is indicated. Analysis of power spectrum of turbulent fluctuations will be presented too.

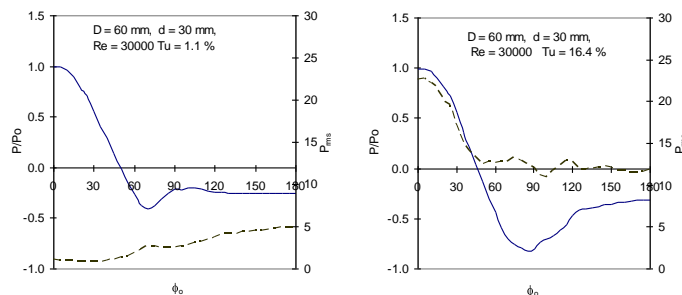


Figure 1. Distribution of local pressure and its fluctuations on sphere surface for two inflow turbulence level.

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