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EXPERIMENTAL INVESTIGATION OF TURBULENT STRUCTURES OF FLOW AROUND A SPHERE

ABSTRACT

This paper presents the experimental investigation of turbulent structures of flow around a sphere. The mean velocity field and the turbulence quantities are obtained in a small low speed wind tunnel using, laser-Doppler anemometry, for the flow around a sphere at subcritical Reynolds number of 50,000. The results of laser-Doppler measurements are compared with results obtained by large eddy simulation. In this paper also flow visualization around sphere in the bigger wind tunnel and water channel for Reynolds numbers between 22,000 and 400,000 have been done.

KEYWORDS

sphere, turbulence, flow visualisation, LDA, LES

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