

عنوان مقاله:

Experimental study of parameters and high-order values of velocity in the behind wake of a vehicle model

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خلاصه مقاله:

In this study an experimental analysis is conducted to explore the effects of the distance placement of a trailer model on the dynamic of flow and the higher-order parameters of velocity like flatness and skewness in the wake of a Notch back car model. In addition, the changing trends of Strouhal number and the mixed length scale are depicted. All the experiments are conducted in the aerodynamic laboratory of Hakim Sabzevari University. In order to measure the property of flow, the researchers have made use of the wind tunnel device and hot wire anemometer produced by Farasanjesh-e-Saba Company. The results indicated that the values of skewness in the lower heights (near to ground) are less than their values in the upper heights (near to roof of model) and this issue is in contrast as the distance from the car increases. The values of flatness also gradually decrease by an increase in the distance from the car. The Strouhal number often reduces by increase in the distance of car from trailer and the mixed length scale in the width of trailer often has one or two maximum peaks. The wake of trailer in positions near the car is not effective in the formation of maximum peaks of mixed length scale sites.

کلمات کلیدی:

Car model, wake flow, skewness and flatness, hot wire anemometer

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