عنوان مقاله:

Numerical Investigation of Heat Removal from an Eye by Surrounding Air

محل انتشار:

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خلاصه مقاله:

This work presents a numerical investigation of airflow near an eye and the associated heat transfer. A manikin model is used and airflow field is simulated around it for various air velocity. It is assumed that air approaches the manikin with a uniform velocity and a constant temperature of ۲۳°C. The computational domain consists of a box around the manikin with sufficient spacing. For forced convection heat transfer mass, momentum, energy and turbulence equations are solved to find the airflow field and the temperature distribution around the manikin head. Particular attention is given to the heat flux distribution from the face of the manikin model. The numerical results are used to find the heat transfer coefficient over the eye surface for different ambient air velocity around the human body.

کلمات کلیدی:

convection, modeling CFD, heat transfer,eye

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