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عنوان مقاله:

Experimental study of thermal and hydrodynamic characteristics of cross flow heat exchangers

محل انتشار:

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نویسنده:

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خلاصه مقاله:

Heat transfer and pressure drop characteristics of flow were studied with the bank of smooth tubes placed in the air stream, where the air velocity was in the range of 2-25 m/s. The data of rate of cooling were obtained when the pre-heated copper element transferred heat to the air stream by forced convection mechanism. These data together with the knowledge of thermal capacity and surface area of the copper element permit a direct calculation of the convective heat transfer coefficient between the element and the air flowing past it. Pressure differences and velocity heads upstream and downstream of the elements are measured, the drag coefficient is calculated, representing the pressure drop imposed on the flow by each successive row of tubes expressed as a proportion of the velocity head.

کلمات کلیدی:

Pressure drop; Heat transfer; Cross flow; Heat exchangers

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