Air curtain temperature measurement in an open refrigerated display cabinet by IR thermography

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Abstract

IR Thermography has been widely used to measure air temperature in many application fields. Usually screens or targets are located in the region of interest in such a way to minimize the perturbation of the flow under investigation. In this work, this technique is applied to map the air distribution inside the cold curtain of an open refrigerated display cabinet (ORDC). The performances of the commonly used black cardboard and a net-screen are studied in different conditions by a CFD analysis. Experimental measurements are carried out on the cold curtain, both with the cardboard and the net-screen. The comparison of results is reported.

This paper was published in the QIRT Journal 12.1