Accepted Manuscript

Research on improving thermal and humidity conditions in a ventilated ice rink arena using a validated CFD model

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 PII:
 S0140-7007(17)30459-0

 DOI:
 10.1016/j.ijrefrig.2017.11.016

 Reference:
 JIJR 3823

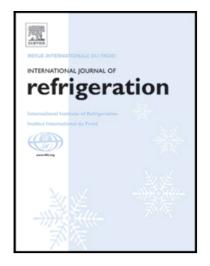
To appear in:

International Journal of Refrigeration

Received date:13 August 2017Revised date:7 November 2017Accepted date:14 November 2017

Please cite this article as: Agnieszka Palmowska, Barbara Lipska, Research on improving thermal and humidity conditions in a ventilated ice rink arena using a validated CFD model, *International Journal of Refrigeration* (2017), doi: 10.1016/j.ijrefrig.2017.11.016

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Highlights

- CFD ice rink model which includes humidity ratio effects is presented.
- CFD ice rink model was previously validated using the measurements data.
- Paper investigates the effect of several air handling methods.
- The purpose was to prevent fogging and ceiling condensation using CFD.
- Influence of five factors on thermal and humidity conditions was assessed.
- Guidelines for ice rink ventilation systems design and operation were indicated.

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