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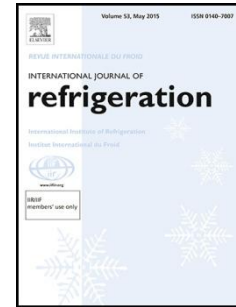
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Modeling and performance study of a Water-injected Twin-screw Water Vapor Compressor

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Highlight:

- A thermodynamic model of water injected twin screw watervapor compressor is proposed.
- Mass and heat transfer between water liquid and vapor are considered.
- The model was validated by experimental recorded p - V indicator diagrams.
- Influence of key operating parameters on the compressor performance is studied.
- Volume flow rate of injected water should be adjusted with rotor speed regulation.

Abstract

Due to the reason of water injection, twin screw water vapor compressor can realize higher pressure ratio and saturated temperature lift of compressed vapor. Its application in mechanical vapor

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