TECHNOLOGY

Sensible and Latent Cooling

OVERVIEW

This invention provides an improved energy efficiency and better thermal comfort for cooling systems via an automatic adaptation of operating modes according to the sensible and latent load ratio. Conventional air conditioning systems are designed to simultaneously meet sensible and latent loads in order to meet a typical sensible heat factor (SHF) range, the sensible heat factor being a ratio of sensible load to the sum of sensible and latent loads. However, the conventional air conditioning systems cannot handle cooling and dehumidifying loads when the SHF is out of its typical range.

Researchers at the University of Maryland have developed methods of meeting varying sensible and latent cooling loads dynamically by using a novel compressor and evaporator configuration that treats the sensible and latent loads with differing evaporating temperature levels. This arrangement includes an improved sensible and latent cycle design. As a result, the system is operated with much higher efficiencies.

For additional information, please contact the Office of Technology Commercialization, University of Maryland College Park, via phone at (301) 405 -3947 or e-mail at otc@umd.edu.

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Additional Information

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LICENSE STATUS

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CATEGORIES

- Industrial Processing
- Engineering
- Chemical

EXTERNAL RESOURCES

PS-2007-112