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Sorption and Non-Traditional Technologies Sessions

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In four sessions on this theme a wide range of presentations delved into diverse topics, highlighting innovative applications and performance improvements. Here are some of the key presentations that caught attendees' attention:

Thermally driven industrial ionic liquid absorption heat pump dryer: This presentation by Michael Schmid et al. focused on a novel thermally driven industrial ionic liquid absorption heat pumpdryer. The study explored the dynamic behavior and steady-state measurements of an absorption heat tran former operating in an industrial environment, offering insights into its operational efficiency.

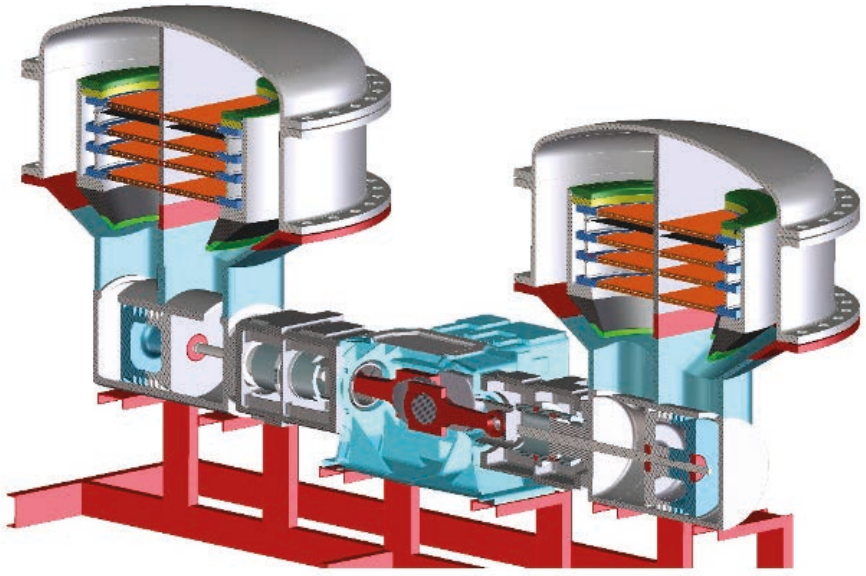
Ionic liquid absorption system for dehumidification and IAQ enhancement: Rohit Bhagwat et al. presented an ionic liquid absorption system designed to enhance dehumidification and indoor air quality in built environments. The study showcased the potential of this technology in improving comfort and energy efficiency.

Performance of a state-of-the-art packaged heat pump for residential space conditioning and hot water: Navin Kumar et al. shared insights into the performance of a state-of-the-art packaged heat pump designed for residential space conditioning and hot water. The study demonstrated the efficiency and reliability of the system in meeting the heating and cooling demands of residential buildings.

Boiling heat transfer of ammonia in a flooded evaporator of adsorption heat pumps: Jin Sub Kim et al. presented research on the boiling heat transfer of ammonia in a flooded evaporator of adsorption heat pumps. The study investigated the heat transfer characteristics of ammonia and its implications for improving the efficiency of adsorption heat pumps.

Study on a hybrid refrigeration cycle combining an absorption process with a compression process: Tsutomu Wakabayashi et al. discussed a study on a hybrid refrigeration cycle that combined an absorption process with a compression process using a low-GWP refrigerant. The presentation highlighted the potential for achieving improved energy efficiency and reduced environmental impact through such hybrid cycles.

These presentations, along with others from the conference, showcased the latest advancements in heat pump technology, including thermally driven systems, ionic liquid absorption, hybrid cycles, and high-efficiency applications. The insights gained from these studies contribute to the ongoing efforts to develop more sustainable and energy-efficient heating and cooling solutions for various applications.



Thermoacoustic heat pump technology, taken from the presention given by M.E.H. Tijani.

All papers from the 14th IEA Heat Pump Conference can be downloaded for free from the HPT TCP database: https://heatpumpingtechnologies.org/publications