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Automated Charge Testing

Automated charge monitoring and administration system for vapor compression equipment precisely disperses refrigerant in small pulses until optimal levels are reached, enabling faster operation and resource conservation.

Researchers at Purdue University have developed an automated approach to monitoring and administering charge for refrigerant systems in vapor compression equipment. Currently, these systems are not able to automatically dose charge or collect real-time data to determine how much to disperse. Furthermore, current dosing methods do not provide small enough measurements to match the real need of refrigerants. Purdue researcher's approach involves automatically dispersing as little as two cubic centimeters of refrigerant in pulses throughout operation. This new system features a software program to detect equipment performance on-demand. The cyclization of charge is designed to stop once optimal levels are reached, unlike alternative practices.

Advantages:

-Faster operation

-Conservation of resources

-Automation

Potential Applications:

-Building management

-Vapor compression equipment

-Mechanical engineering applications

TRL: 2

Intellectual Property:

Technology ID
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Category
Buildings, Infrastructure, & Construction/Smart Building Systems & Automation
Robotics & Automation/Automation & Control

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