

KLATU Granted its 5th U.S. Patent for Predicting Failures in Laboratory Cold Storage Systems

Patent describes the use of machine learning algorithms to detect temperature stability and sensor calibration errors in laboratory refrigeration systems.

SAN DIEGO, CALIFORNIA, USA, November 14, 2022 /EINPresswire.com/ -- The US Patent and

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It's game-changing—it uses an array of permanently installed low-cost temperature sensors & real-time machine learning algorithms to detect changes in temperature stability & sensor calibration errors”

Rick Kriss, KLATU's President

Trademark Office has recently awarded KLATU Networks™ patent 11,402,279 that describes the use of machine learning algorithms to detect temperature stability and sensor calibration errors in laboratory freezer and refrigeration systems. The patent builds on technology previously patented by KLATU for predicting compressor failures and wasted energy using a novel benchmark scoring technique similar to FICO® scoring in the credit industry.

KLATU's President, Rick Kriss, describes the invention as game-changing—referring to the use of an array of permanently installed low-cost temperature sensors and

real-time machine learning algorithms to detect changes in temperature stability and sensor calibration errors. The system is designed to replace expensive scheduled temperature mapping qualification and validation protocols with a software solution that continuously monitors the validation status of a freezer, refrigerator, or cold room.

The design goal of the system, according to Kriss, is the elimination of “Never Events”—the loss of high-value products or research when temperature stability or calibration issues go undetected for months before they are discovered at a scheduled validation cycle.

The software will be priced with a payback measured in months, based on the savings from reduced labor and product losses, as well as fewer events that require compliance reporting.

APPLICABILITY

KLATU will initially target two million controlled-temperature storage systems used throughout

the Life Science and Biopharma industries—applications such as Ultra-Low Temperature (ULT) freezers, refrigerators, liquid nitrogen storage tanks and environmental chambers. Kriss also noted that the machine learning models are equally effective managing incubators, shaker-tables, and other applications in commercial refrigeration and Heating, Cooling and Ventilation systems (HVAC).

INDUSTRY PERSPECTIVE: DIGITAL TRANSFORMATION

KLATU's research estimates that Life Science and Biopharma companies spend more than \$400 million per year executing temperature mapping, calibration and validation protocols for cold-storage and cell-growth systems. KLATU's software solution will be marketed as a new tool that replaces labor with technology, providing KLATU customers with the means to achieve higher levels of quality control at lower cost.

TRAXX is a platform technology that supports multiple applications and features. The latest feature for continuous monitoring of stability and calibration will soon be added to the TRAXX/EKG™ application suite. The suite already includes predictive failure analytics, repair, and energy management.

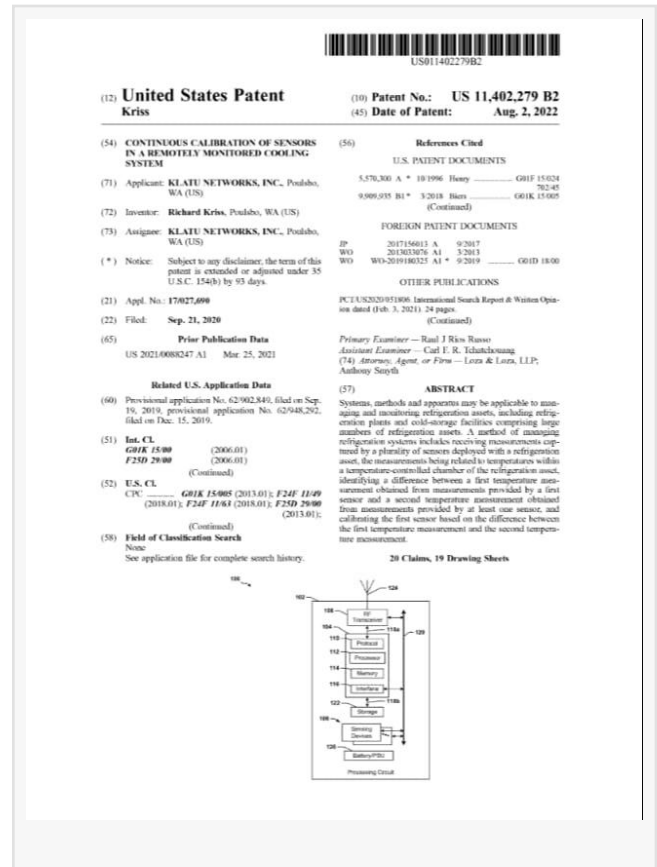
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