PATENT #8,427,192

Proposal for Sale of Patent

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- U.S. Patent #8,427,192: System, apparatuses, methods, and computer program products for electric motor testing and analysis was awarded 23 April 2013.
- The intellectual property of this patent is currently for sale with the target purchaser being a developer in the industrial software or hardware markets.
- Problem: The identified problem was with inconsistent electric motor winding insulation resistance data taken by maintenance employees in industrial settings. These tests are traditionally viewed as “good” or “bad” without any trending data over time. Also, insulation resistance tests vary greatly with fluctuations in temperature so it’s difficult for maintenance personnel to graph degradation trends with meaningful data.
- Solution: My patented product normalizes resistance values to a common temperature and plots a true resistance curve over time. The sharper the slope, the sooner a motor will fail. This information is useful in predicting time of failure and would be a valuable tool for budgeting maintenance dollars and scheduling production downtime.

Product Characteristics

- Facilitates preventative maintenance of electric motors
- Allows the user to keep an easily accessible database of electric motors
- Aids in justification of budgeting maintenance costs
- Provides advance warning for workload preparation and production downtime scheduling.
- Helps the user predict an estimated time of failure based on historical data.

Additional Information from the Developer

- I was a field engineer when I conceived the idea for this patent and I believe this product would sell very well. It’s a simple idea that would require very little cost to create a polished product.
- I created a very rough version of the software to ensure it works but I do not have a final version of the software available.

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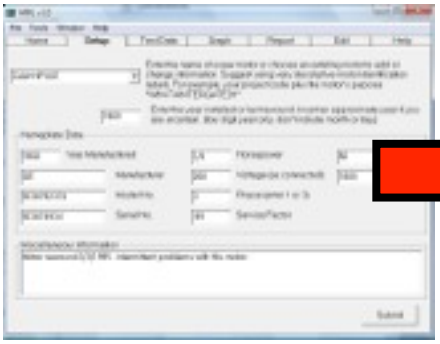
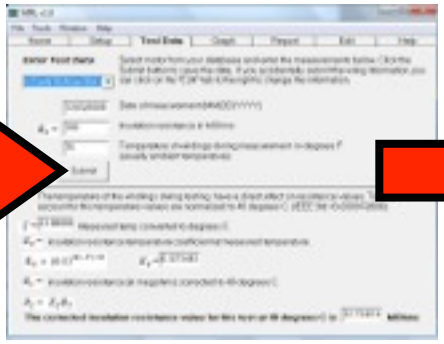
Summary:

Electric Motor Database



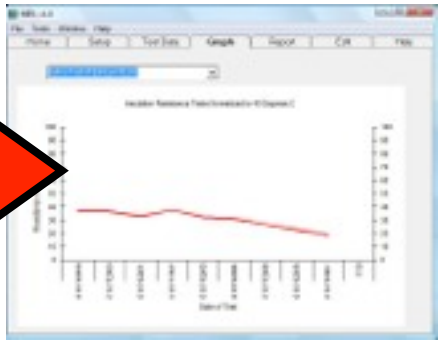
The product stores a database of electrical motors which will quickly tell the user nameplate information (manufacture date, brand, model no., serial no., hp, voltage) as well as user created notes such as date last serviced, abnormal sound, hot to the touch. etc.

Data Input and Normalization



Information gathering could be acquired by real time data monitoring or periodically by a qualified person. The three pieces of data required are Date, Insulation Resistance Value and Temperature.

Data Comparison and Results



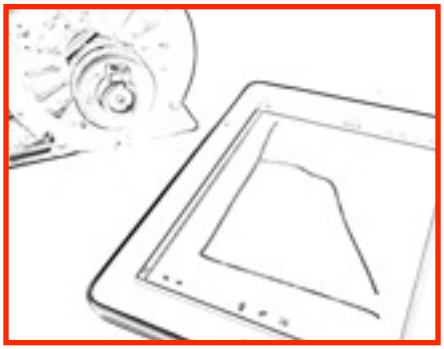
The product automatically normalizes the resistance value to 40 degrees C for consistency.
Data is compared to that previously collected for the same motor. A sharp decrease in resistance over time will trigger a need for rehab or replacement.

Adaptable to Multiple Platforms:

Handheld Measuring Device

A handheld measuring device could store the motor database and process data as it is recorded using internal memory. The device could dump the database and reports to software on a PC.

Mobile Application



A mobile device such as a smart phone or tablet could be used to store and process data but a separate insulation resistance meter and temperature gauge would be necessary to collect data.

Standalone Software Package

Similarly, a PC could be used to store and process data in a software package. Again, separate metering equipment would have to be used.

DAVID M. BARBOUR, II This patent was conceived and is owned by David Barbour. He has seventeen years of experience as an electrical engineer for Huntington District U.S. Army Corps of Engineers. He specializes in power and communications distribution design, industrial testing and preventative maintenance measures, electronic surveillance systems, CCTV systems, arc flash analyses, disaster response and coordinates an electrical safety program. He applies engineering knowledge to “real world” applications and seeks alternative, modern solutions to problem solving. David, his wife, daughter and two cats live in Ona, WV.

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