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Meidensha Corporation

To members of the media

Meiden receives first order for its IoT-based motor analysis/remote monitoring system from Mitsui Sumitomo Insurance

~One-stop service also to be provided on a subscription basis~

Meidensha Corporation (Meiden) has received the first order for its IoT-based motor analysis/remote monitoring system, which recently went on sale, from Mitsui Sumitomo Insurance Co., Ltd. Meiden will provide a remote monitoring system for a cooling water circulation pump.

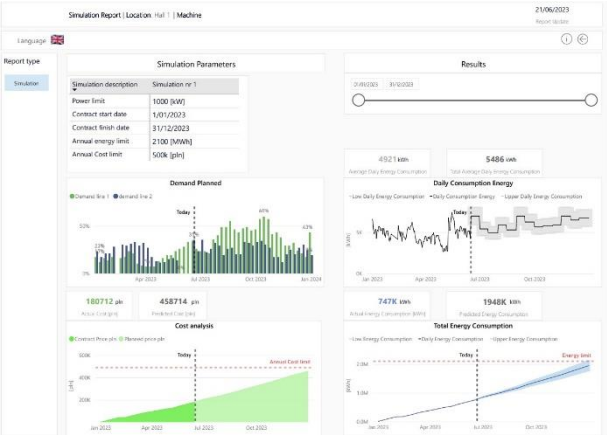
The system was jointly developed by Meiden and Elmodis Sp.zo.o., a Polish startup in which Meiden holds a minority stake. By merging the startup's analytical and monitoring technologies that are being used in European and American pumping facilities and Meiden's knowhow in the motor business, Meiden has been able to customize the new service for use by Japanese clients.

The system enables Meiden to offer an excellent service that combines the two functions of "facility analysis" and "carbon dioxide (CO₂)/energy management." It is capable of monitoring electrical signals (current and voltage) of motors; oscillation of motors and machines; and various process data to quantify the health of a facility (the diagram on the left below shows an example of the circuit structure in a remote monitoring system). Since it monitors three-phase electrical current and voltage, the system is capable of monitoring power consumption and CO₂ emissions in real time and more accurately than systems that monitor only one-phase electrical current. It can also inform conditions for operating machines at high efficiency and make simulations on how much power consumption and CO₂ emissions can be reduced if the machine is operated under the suggested conditions. Meiden will offer a one-stop service on a subscription basis to provide analyses and remote monitoring to ensure operational optimization and make CO₂ emission calculations at clients' facilities after the system is installed.

Technologies related to reducing CO₂ emissions and more effective use of energy have attracted attention in recent years against the backdrop of companies' growing need to reduce the environmental impact of their activities. Mitsui Sumitomo Insurance's new headquarters building in Surugadai, where the system will be installed, has received high marks as one of the nation's top eco-friendly structures, thanks to its introduction of solar power generation and energy-saving designs. The company decided to install Meiden's system with the aim of further promoting environmentally conscious management.

<Highly evaluated functions and services>

1. Visualization of power consumption and CO₂ emissions of a single motor in the past, present and future



Trends in the total power consumption of the devices being measured.
Possible to predict and display future power consumption trends based on past trends.



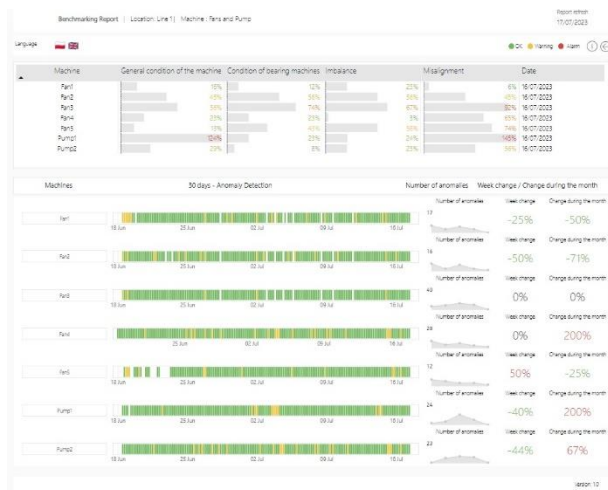
Trend of power consumption by device being measured.
Representation of which devices are consuming how much power.

2. Making suggestions to realize effective operations by analyzing the difference between the efficiency curve of a pump and the measured data



Expresses the correlation between the design values of the pump pressure and flow curves and plots the actual measured values on top of them. Visualization of the difference between the pump's highest efficiency operating point and the actual measured value announces inefficient operation.

3. Quantification of the health of the facility



By comparing with a preset threshold (danger level), Visualize the degree of health of current pumps and motors.

Meiden plans to provide services to clients for various applications using motors in addition to pumping facilities, while improving the accuracy of the function to quantify the health of a facility in order to provide higher-quality function to predict malfunctions.

The Meiden Group will take on the challenge of create new value in order to help make a future society more affluent and a better place to live.

Press release dated February 18, 2021, titled "Meiden collaborates with a Polish Startup company in IoT remote monitoring and asset optimization"

https://www.meidensha.com/news/news_03/news_03_01/1235810_3190.html