Debut at EMO 2017

New concept in robotics for predictive maintenance

EMO Hannover 2017, 18th – 23rd September 2017, Hannover,
Hall 13 / Stand C85 and Hall 25 / Stand B94

Mitsubishi Electric is using EMO 2017 to demonstrate innovative predictive maintenance possibilities for robots that can reduce operational costs, increase asset productivity and improve process efficiency. The cloud-based solution is based on the AI platform within IBM Watson, which enables the smart analysis of operational data to highlight maintenance requirements. In addition, to increase the speed and efficiency of any necessary maintenance activities voice control and augmented reality have been implemented, providing opportunities for significant reductions in downtime.

Today many companies are still caught by surprise when machine failures occur. They tend to fix problems during unplanned downtime, or implement preventative maintenance based on set schedules or numbers of operational hours. However, with predictive maintenance, production problems can be highlighted long before they result in unplanned downtime or impact on yield. Maintenance operators can take corrective action before failure or before degraded machine performance results in faulty products being manufactured.

This latest solution from Mitsubishi Electric for predictive maintenance with robots utilises the AI platform within IBM Watson. The platform uses predictive maintenance models, digital simulation and extrapolation of trends to provide maintenance information based on actual usage and wear characteristics. This is

particularly pertinent to robots, where users don't always appreciate that periodic maintenance is required.

Voice commands for Mitsubishi Electric robots

To increase the efficiency of maintenance operations, the demonstration at EMO 2017 highlights the implementation of hands-free operation of the robot. Communications between the robot and the user via the cloud are two-way providing the basis for voice control of the robot. The demonstration also shows how additional support for maintenance activities can be provided, through a series of voice commands.

Augmented reality provides additional support for maintenance

Maintenance activities are optimised through the use of smart glasses, where the operator receives guidance on what tasks need to be performed. The glasses can show CAD drawings of the various robot parts, superimposed over the robot itself. The glasses can also show the maintenance manual and individual instructions.

As well as highlighting predictive maintenance, the demonstration on the Mitsubishi Electric stand at EMO 2017 also shows how integrated safety can help manufacturers to optimise floor space, boost productivity and reduce downtime while maintaining a safe environment for operators.

Predictive maintenance and improved robot efficiency are parts of the key aspects for the digital transformation in manufacturing, and are some of the important themes of the Mitsubishi Electric stand at EMO 2017. Visitors to the stand can find out more about how digital transformation holds the key to optimising productivity, increasing flexibility, improving product quality, reducing the costs of maintenance and downtime across all areas of manufacturing activity.

Note:
Learn more about Mitsubishi Electric's presence at EMO:
eu3a.mitsubishielectric.com/emo2017

See how Mitsubishi Electric is able to respond to today's automation demands:
eu3a.mitsubishielectric.com/fa/en/solutions

Image captions:

Image 1: A new cloud-based solution from Mitsubishi Electric in robotics uses predictive maintenance models, digital simulation and extrapolation of trends to provide maintenance information based on actual usage and wear characteristics.

[Source: Mitsubishi Electric Europe B.V., Getty Images]

Note to Editor: if you would like the text in another language please contact our PR agency: DMA Europa Ltd., Philip Howe, +44 (0)1562 748315, philip@dmaeuropa.com.

About Mitsubishi Electric

With over 95 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation is a recognised world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, as well as in products for the energy sector, transportation and building equipment.

With around 138,700 employees the company recorded consolidated group sales of Yen 4,238.6 billion ($ 37.8 billion*) in the fiscal year that ended on March 31, 2017.

Our sales offices, research & development centres and manufacturing plants are located in over 30 countries.

Factory Automation – European Business Group

Mitsubishi Electric Europe B.V., Factory Automation - European Business Group (FA-EBG) has its European headquarters in Ratingen near Dusseldorf, Germany. It is a part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan.

The role of FA-EBG is to manage sales, service and support across its network of local branches and distributors throughout the EMEA region.

**Exchange rate 112 Yen = 1 US Dollars, last updated 31.03.2017 (Source: Tokyo Foreign Exchange Market)*

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