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**Mitsubishi Electric introduces e-F@ctory concept and demonstrates its 6-axis robot in Win EURASIA Metalworking Exhibition**

## **FACTORIES OF THE DIGITAL AGE TO CUSTOMIZE PRODUCTION**

**Mitsubishi Electric Turkey Factory Automation Systems Business Development Manager Tolga Bizel uttered a speech in WIN EURASIA Metalworking Exhibition, a worldwide meeting platform for leading machine manufacturers and exporters combining Metal Processing and Surface Processing exhibitions. Lecturing at the exhibition comprised of conferences and forums organized for discussing popular agenda items and innovative solutions, Tolga Bizel provided information about e-F@ctory concept, Mitsubishi Electric's response to the new industry phase, pointing out the innovative solutions provided by Mitsubishi Electric which offers sales and after-sales services for robot technologies.**

WIN EURASIA Metalworking Exhibition was organized in Tüyap Exposition and Congress Centre on 11-14 February with the participation of the leading manufacturers in the industry. Mitsubishi Electric Turkey Factory Automation Systems Business Development Manager Tolga Bizel attended the exhibition to introduce Mitsubishi Electric's e-F@ctory concept and advanced robot technologies. As part of the introduction, Mitsubishi Electric's 6-axis robot simulated a metal shining process normally performed by human beings.

### **Modern life requires e-F@ctory**

Underlining that the new industrial phase was introduced owing to the current technological developments and changes brought by modern life, Mitsubishi Electric Turkey Factory Automation Systems Business Development Manager

Tolga Bizel said: “Our life changes rapidly. Everything has to be faster and more practical than before. Therefore, we have to plan manufacturing processes responding to human needs, undertake manufacturing operations them and market those products faster and more smoothly than ever. The new industrial phase was brought about in response to this requirement. We have added cyber physics systems to the technological innovations we attained in the previous industrial phase. Mitsubishi Electric has given the name e-F@ctory to its response to this new industrial phase. Mitsubishi Electric has been employing e-F@ctory concept in its own production lines since 2003. Therefore, it is able to reflect its expertise and know-how to its products and services.”

### **It is essential to meet personal requirements**

Referring to the increasing variety and difference of human needs in the modern world, Bizel underlined that everyone wishes to find a personal industrial solution to those needs. Bizel explained that industrial automation systems are now expected to design coke cans in different colours, produce milk with distinct tastes or unique robots which are endowed with distinct features as would be imagined and required by individual customers.

### **Automation processes are integrated**

Expressing that Mitsubishi Electric performs processes that shall make it possible to respond to those new industrial requirements, Bizel made the following explanation: “The most important one of them is the integration of the entire automation family which implies all of the processes from the lowest section of the factory to the senior management level. In addition, it is essential to make sure that all of the automation products included in those processes have their own internet connection. That is because there is hardly anyone who does not have access to internet in our modern world. Therefore, this new trend is expected to become prevalent among machines in the future. In that regard, this new era is distinguished with the integration of cyber physics into those processes. In other words, the new era applies to the whole range of processes from the raw source provided to a production line to the manufacturing of the product for being supplied to the customer and being consumed by the end-user meaning an end to the useful life as well as monitoring, assessing and optimizing all those phases in cyber physics platforms so as to adapt to the competition conditions that shall be dominating the industry for the next 50 years.”

### **A powerful manufacturing country**

Indicating that e-F@ctory concept is especially important for factories undertaking mass production in especially long production lines, Bizel told that: “Our customers expect us to ensure that the plans prepared by the planning divisions at their factories are processed simultaneously at production divisions and the reactions occurring during the production processes are evaluated by the planning division or resource management division. All of our products come with the capacity and features to meet those expectations. Therefore, Turkey is a powerful manufacturing in its geographical territory. In that respect, products incorporating our e-F@ctory concepts are highly popular with Turkish industrial actors who intend to further their production power by using fast, high quality and efficient solutions.”

### **Robots will promote human comfort**

Expressing that robots have become proliferated and turned into a regular work force for various industries in Turkey thanks to their speed and other advantages, Bizel referred to the fact that robots are critical for manufacturing processes of factories. Bizel pointed out that robots shall enable human beings to work more effectively by promoting the comfort of people who have to work in challenging conditions.

Bizel made the following explanation: “It is anticipated that the new generation robot systems of the future will be multi-robot mechanisms with parallel structure, multi-fingered hands and walking mechanisms. Indeed, there may even be semi-humanoid robots or robotic forms of human organs. In that respect, it is quite appropriate for Mitsubishi Electric Robot System to control larger and more complex programmes as Robot CPU. Mitsubishi Electric robots make it possible to monitor the errors, variable values, programme data, condition of the robot (speed, position etc.), maintenance details (remaining battery life, lubrication life etc.), servo data (load factor, current values etc.). It is possible to control multiple robots collectively. A PC connected to the main CPU is able to have access to the robots in the controller network. This feature facilitates the control of the robots in a given line. Direct communication between

CPU's ensure that the memory of robot CPU's is duly shared to make it possible to read and write data. As the data transfer between the robots becomes accelerated, robots are able to exert self-control processes in a more detailed and coordinated manner. They are even quite ready to share the data between themselves and with the main system controlling the factory independent from human control so as to increase efficiency." Bizer also reminded that Mitsubishi Electric Turkey Factory Automation Systems shall take part in WIN EURASIA Automation Exhibition which shall be organized in Tüyap Exhibition and Congress on 17-20 March.

### **Changes for a greener future**

Referring to the fact that Mitsubishi Electric acts with "Changes for the Better" mission, Bizer said: "Mitsubishi Electric is recognized for not only the high technology, reliability and quality of its products but also its environmental awareness. Based on "Environmental Vision 2021", our long-term environmental vision that shall culminate in 2021, Mitsubishi Electric's centenary, we prioritize encouraging environmental awareness and contributing to the awareness on the importance of creating a recycling based society and reducing carbon emissions in line with its environmental statement, 'Eco Changes'."

### **About Mitsubishi Electric Factory Automation Business Group**

Offering a vast range of automation and processing technologies, including controllers, drive products, power distribution and control products, electrical discharge machines, electron beam machines, laser processing machines, computerized numerical controllers, and industrial robots, Mitsubishi Electric helps bring higher productivity – and quality – to the factory floor. In addition, our extensive service networks around the globe provide direct communication and comprehensive support to customers.

### **About e-F@ctory**

e-F@ctory is Mitsubishi Electric's integrated concept to build reliable and flexible manufacturing systems that enable users to achieve many of their high speed, information driven manufacturing aspirations. Through its partner solution activity, the e-F@ctory Alliance, and its work with open network associations such as The CC-Link Partners Association (CLPA), users can build comprehensive solutions based on a wide ranging "best in class" principle. In summary, e-F@ctory and the e-F@ctory Alliance enable customers to achieve integrated manufacturing but still retain the ability to choose the most optimal suppliers and solutions.