

**EMO 2019, Hall 9, Booth H50**

## Siemens extends Sinumerik Edge to include more applications, bringing artificial intelligence to machine tools

- **New Edge applications for workpiece and process quality, machine availability and process optimization**
- **Analyze MyWorkpiece /Vision and Optimize MyMachining /Magazine based on artificial intelligence**
- **Manage MySinumerik Edge for the central control and condition monitoring of Edge devices**

Siemens has extended its Industrial Edge offerings for the machine-oriented Sinumerik Edge to include more new applications. With the new software, the company is helping machine tool users to improve workpiece and process quality, increase machine availability, and further optimize machine processes. With Edge Computing, large volumes of data can be processed locally on the machine tool. This also reduces storage and transmission costs for users, as large data volumes can be preprocessed and only the relevant data then transferred to a cloud or IT infrastructure.

### **Using Analyze MyWorkpiece /Vision to reduce downtimes based on artificial intelligence**

At EMO 2019, Siemens will present the Analyze MyWorkpiece /Vision Edge application for the first time. The software works with image recognition and is based on artificial intelligence. It detects whether the right workpiece is in the correct position in the machine room– and it works better than the human eye. If the workpiece is positioned correctly, processing can be started. The application can also detect wear on the tool. In addition, the application transmits the work process live via camera from the machine room and documents all image data. Analyze MyWorkpiece/Vision ensures preparation and process quality for users. By detecting tool wear, resources can be

used efficiently. The application configuration is tailored to the machine operator, meaning that users can benefit from artificial intelligence without a great deal of expert knowledge. Job setup using the application is also very easy, so an easy integration into the manufacturing process is possible. Analyze MyWorkpiece /Vision joins the portfolio of existing applications such as Analyze MyWorkpiece /Toolpath, Analyze MyWorkpiece /Capture and Analyze MyWorkpiece /Monitor, all of which contribute to better workpiece and process quality, helping to increase the productivity of machine tools and to reduce costs.

### **Increased machine productivity using artificial intelligence with Optimize MyMachining /Magazine**

In the field of performance enhancement, Siemens is also presenting a new Edge application at this year's EMO. Part of the performance increase results from an optimal arrangement of tools in the magazine. The optimization algorithm of Optimize MyMachining /Magazine is based on artificial intelligence and runs on Sinumerik Edge. It calculates the tool arrangement in order to minimize manufacturing time. In the field of improved machine productivity, the new application adds to the Optimize MyMachining /Trochoidal Edge application presented at last year's AMB.

### **Protect MyMachine /3D Twin for Sinumerik One**

The Sinumerik Collision Avoidance application will be presented at this year's EMO as an Edge-based application especially for Sinumerik One. Protect MyMachine /3D Twin includes comprehensive protection of the machine and tools in terms of the current setup situation, including dynamic observation of workpiece protection. By using Sinumerik Edge the performance and productivity of the NCU is not adversely affected by additional computing performance. With Create MyVirtual Machine and Run MyVirtual Machine – both software applications for Sinumerik One for creating digital twins – computational models created in this context can be used to include in Protect MyMachine /3D Twin. Protect MyMachine /3D Twin joins the existing AnalyzeMyMachine /Condition Edge application in the field of digitalization solutions for machine tool condition monitoring.

### **Edge Management as a control center**

With Manage MySinumerik Edge, Siemens is presenting its Industrial Edge Management solution to manage Edge applications for machine tools for the first time at EMO 2019. With Manage MySinumerik Edge, all connected Edge devices can be

administered, monitored and updated centrally. In addition, Edge applications are always distributed in the latest version efficiently and securely to Sinumerik Edge devices. Applications can be installed on Sinumerik Edge devices without adverse effects, regardless of the machine tool operating state. Edge applications for Sinumerik Edge can be provided both by Siemens and by third-party suppliers. Thus, users and machine builders can develop own applications, which are tailored to the individual requirements of their machines. In the future, Edge applications can be offered via a marketplace in MindSphere. The operating system of the Sinumerik Edge is integrated in a holistic security concept. It enables the stable operation of one or more applications in parallel and provides a secure software environment for the execution of applications on Edge devices.



Siemens has extended its machine-oriented Sinumerik Edge to include new applications. At EMO 2019, Siemens is presenting the Analyze MyWorkpiece /Vision Edge application. The software is based on artificial intelligence and detects whether the right workpiece is in the correct position.

This press release and a press picture are available at <https://sie.ag/2kNWmxx>

For further information regarding Siemens at the EMO 2019, please see [www.siemens.com/press/emo2019](http://www.siemens.com/press/emo2019) and [www.siemens.com/emo](http://www.siemens.com/emo)

For further information regarding Sinumerik Edge, please see [www.siemens.com/industrial-edge](http://www.siemens.com/industrial-edge)

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