Pilz GmbH & Co. KG
Felix-Wankel-Straße 2
73760 Ostfildern
Germany
http://www.pilz.com

Press Message

Pilz on the Automatica 2016 in Munich (21.-24. June), hall B4, stand 500 - With safety man and robot come closer

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On the Automatica fair, Pilz puts the focus on the safe human-robot-collaboration (HRC). Based on two model plants, the automation company shows the practicable ways today to safe HRC and it also gives an outlook on future safety technologies. For the first time, Pilz presents its collision measurement device for standard-compliant validation of HRC in accordance with the new ISO/TS 15066.

"There are no safe robots, there are only safe robot applications. Safety results from the interaction of normative framework conditions, the risk analysis that is based on it, the selection of a robot with the relevant safety functions and the matching additional safety components, and finally the validation", explains Thomas Pilz, managing partner of Pilz GmbH & Co. KG.

Pilz as a solution supplier provides the relevant services and products and systems for safe robot applications. The company supports users with a services portfolio tailored to the individual life cycle phases of a robot system: From process analysis to risk assessment and beyond to CE marking. A specific range of training courses on robot safety completes the range of services.

For validation, Pilz has developed a handy collision measurement device equipped with springs and the relevant sensors. Thereby,

forces acting on the human body can be exactly recorded during a collision with a robot and compared with the limit values from the new ISO/TS 15066. Pilz will introduce the collision measurement device and its application for the first time at Automatica.

HRC without pre-conceived fears

Visitors to the Pilz fair stand in Munich will experience how man and machine can cooperate safely without separating safety fences: Firstly, Pilz shows an HRC application for feature control which is secured according to the principle of power and force limiting. The application consists of an industrial robot with sensitive functions and Pilz products: This includes control systems PSS and PNOZmulti, the operation mode selector switch PITmode and the safe 3D camera system SafetyEYE that monitors the work area of the robot. When there is no man in the robot's operating range, the working speed of the robot and therefore the process productivity is increased. This application is CE certified, and it can therefore be implemented in practice today.

Safe sensor technology for the future

With the second robot demonstrator, Pilz gives a glimpse into the future and it introduces various technologies from research projects of the company. For one thing, the prototype of a tactile fabric developed by Pilz is laid in front of the robot as a pressure-sensitive mat. This tactile sensor technology offers support during visualisation and position identification of man and robot, and this is a promising way to more dynamics with HRC.

On the other hand, Pilz presents an internally developed, compact stereo camera. With this, path planning in real-time is possible to avoid collisions between man and robot. For the control system, Pilz has developed software blocks that work on the basis of the robot

operating system (ROS). Based on this, the automation company shows that the programming environment previously known form the research environment can also be applied in industrial applications.

"With our research work in the safe robotics range, we emphasize our role as a pioneer in safe automation technology", explains Thomas Pilz. "The aim is to make new technologies marketable and industry-capable. With these innovations we want to resolve safety tasks that result from the closer cooperation between man and machine."

Pilz is exhibiting in Hall B4, Stand 500.
Further information at: https://www.pilz.com/de-DE/automatica

Caption:

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Contact for journalists

Tony Catterson
Press contact
+64 9 6345350
office@pilz.co.nz