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## ABB Ability Smart Sensor now also monitors pumps

The ABB Ability™ Smart Sensor provides data for the predictive maintenance of low voltage motors. In partnership with Emile Egger, a Swiss producer of pumps, ABB has now developed the solution to remotely monitor pumps.

The pump manufacturer Emile Egger is constantly on the look-out for ways to improve its products and processes. Michel Grimm, Egger's chief business development officer and grandson of company founder Emile Egger, became aware of the ABB Ability Smart Sensor in early 2017. This solution, developed by ABB in 2016, revolutionised the maintenance logistics of motors by enabling the owners to detect problems early due to remote monitoring. This meant that maintenance work could be carried out preventively for the first time and, thus, downtime could be drastically reduced.

"Pumps, such as those in wastewater plants, usually fail without warning. In order to prevent typical problems such as blockages, it is necessary to undertake time-consuming maintenance several times a week, "explains Grimm.

Egger considered that if smart sensors can monitor motors predictively, why shouldn't they be able to provide the same valuable services for pumps? It then contacted ABB, which gladly took up the challenge. The two companies decided jointly to develop a new smart sensor tailored to the specific needs of pumps.

The combined experience of the engineers and scientists of ABB and Egger quickly led to success. In less than a year, the sensor solution has been successfully developed. Using their reliable hardware, the motor sensors were adapted such that they now can also provide readout values on pump speed, overall vibrations, unbalance, cavitation (formation of vapour bubbles in fluids), and clogging. To achieve this, ABB used the scientific expertise of employees in Germany, India, the USA, and Switzerland. In return, Egger provided access to German and Swiss end customers, whose input helped to develop data analytics that meet the requirements.

The first tests were carried out at Egger's test facilities in Cressier at the end of July 2017 and proved satisfactory. Meanwhile, ABB has delivered the first prototypes to enable testing in a real-world environment. In these pilot installations, the whole digital background of the ABB Ability Smart Sensor technology is used: health indicators and key performance indicators are not only gathered but also sent to the ABB Ability Cloud through a gateway. The pump operators can read the data via an app on their smartphone or in a browser. ABB and specialised partner companies will carry out further analyses in the cloud to detect tendencies and to be able to run cloud-based services in the future.

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## **Emile Egger & Cie SA**

Cressier-based family business Emile Egger produces between 2000 and 3000 pumps a year in Switzerland. One quarter is used by domestic customers and three quarters are exported. Emile Egger operates two further production plants abroad.



**Caption:** The collaboration between ABB and Egger is bringing predictive maintence within reach of pump operators

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