

Prognostics provides a precise time frame

Cassantec offers a highly developed Internet of Things solution to avoid production downtimes

Almost every company knows what it is like when there is an unplanned outage of equipment. One reason for such an outage can be a maintenance schedule that has not been optimally adapted to the equipment. Maintenance is often carried out either too early or too late – after a malfunction has already occurred at the equipment. Consequently, an outage of individual components often causes a standstill of the entire production. Spare parts may need to be ordered. It can take days before the equipment can be returned to full working order. This can result in substantial economic damage to the company. “The enormous costs which can be the result of such a standstill can be avoided“, says Moritz von Plate, CEO of the Cassantec AG.

Individual prognostic approach

In order to avoid such equipment outages the company offers condition-based prognoses. Cassantec Prognostics forecasts time windows in which equipment malfunctions can occur. Using the Prognostics approach, Cassantec compiles an individual report for the respective piece of equipment in order to determine when and with what probability a particular type of malfunction is to be expected. This enables the operator to identify the time frame for necessary maintenance. In cooperation with the customer Cassantec determines what the most critical potential malfunctions are; yet there is no need for a malfunction history as Cassantec can also forecast malfunctions that have not yet occurred in the equipment at hand. To compile the report the company uses a unique combination of mathematical methods. This way future condition trends, risk profiles of malfunctions and the remaining useful life (RUL) of equipment is determined. The prognosis is updated in periodical intervals by using historical and current condition data as well as process data such as temperature, vibration and lubricant analyses. The results of the analysis are presented in a decision orientated format such that the schedule for necessary maintenance interventions can be optimised. Cassantec offers the prognostic report on a subscription basis (Software as a Service – SaaS) and in certain cases it is possible to acquire a software licence.

The asset operator profits from such a prognostic solution in a number of areas. By changing from reactive, or as the case may be, preventive maintenance cycles, to condition based maintenance, costs can be cut. Prognostic reports can be used to precisely justify maintenance decisions and plan them long-term.

This way, maintenance interventions can be bundled or avoided altogether with the aim to minimise the overall downtime. Additionally, Cassantec Prognostics enables comprehensive fleet-wide learning.

Expand the preventive diagnostics

The prognostic solution broadens the customer's planning horizon. The customer can assess transparently when particular equipment needs to be maintained. "Our prognostic report reaches further than equipment condition monitoring. With our approach we also expand predictive diagnostics. The latter gives a signal at the moment when a time window, for a potential malfunction opens. Cassantec Prognostics calculates when in the future such a time window will open, when it will close again and how the risk is distributed within that time window", says von Plate.

You can find more information at www.cassantec.com

About Cassantec

Founded as a public limited company in Zurich in 2007, Cassantec and its German subsidiary are specialised in providing customers with highly advanced prognostic solutions. With offices in Zurich, Berlin and Cleveland/USA the company delivers precise forecasts about the condition of equipment and components. Based on such forecasts the operators can derive optimal courses of action. With its prognostic approach the company distinguishes itself from other established monitoring and diagnostic service providers. Cassantec Prognostics is based on new and unique combinations of mathematical methods. They determine condition trends, risk profiles of malfunctions and the remaining useful life of a broad range of machines and equipment. The company can provide references from the power, oil and gas, and process industries and the transport sector. Cassantec is promoted by the Swiss Commission for Technology and Innovation (CTI) for its innovative prognostic solution and cooperates with leading universities and industry partners. The name Cassantec (which is an abbreviation of Cassandra Technologies) refers to the figure of Cassandra in Greek mythology who warns of impending dangers.