

Reliable Forecasts for Machine Servicing Needs

Based on his profound experience and expertise drawn from many years of working in the manufacturing industry, Dr. Rolf Ruthenberg has developed a unique and highly efficient methodology for making machine maintenance needs more predictable. This knowledge is reflected in the ZUWIS-IT software solution, marketed by *Ruthenberg GmbH*, based in Düsseldorf, Germany.

Having university degrees in machine engineering and economics, Dr. Rolf Ruthenberg had gained a wealth of experience before setting up his company. For example, after working in the printing plants of Axel Springer Verlag AG, Berlin and Hamburg, he was assistant managing director at Standard Kessel GmbH of Duisburg, a leading steam boiler manufacturer, and then managing director of Gustav Pegel & Sohn GmbH, a Berlin-based construction company. During his time at these companies, he developed a special interest in machine maintenance, a fact that led to the formation of his own maintenance service venture for industrial production facilities with branches in Hanover and Ratingen in 1979. Such practical experience eventually prompted the entrepreneur to develop his unique ZUWIS methodology.

At present, Ruthenberg GmbH is firmly focussed on implementing the ZUWIS

method with clients in the manufacturing and, increasingly, plant construction industries. In a nutshell, the complex methodology aims at making costly



Machine maintenance expert and ZUWIS developer, Dr. Rolf Ruthenberg

downtime predictable by continuous monitoring of the current state of repair of all machine components in order to determine servicing needs before an unintended disruption brings a facility to a standstill. All wearing components, whether subject to scheduled wear or not, are monitored by defined observations of the operators, by drifting data in controls, by inspec-

tions or by means of suitable measuring instrumentation for the prediction: The part will or will not endure the time until to the next check. Dr. Ruthenberg found a special algorithm for this judgement. In this way, reliable servicing and maintenance forecasts can be made. However, the failures of unrecognizably degrading parts are neutralized by redundancy.

The ZUWIS methodology is mirrored in the ZUWIS-IT software solution, co-developed by Dr. Rolf Ruthenberg and his team, and Mr. Frank Gondrum, Managing Director of EDV-Büro Gondrum, an external IT specialist and consultant. Aimed at machine operators and maintenance personnel, the software administrates, prints and adjusts inspection lists, stores diagnostic results,

events and measures in specific machine histories, and automatically analyses such results, both backward and forward in time, i.e. taking into account past events and analyses, as well as future predictions as regards possible alerts. The system is fully compatible with IPS solutions, for example SAP.

Our interview partners for this feature is Dr. Rolf Ruthenberg: *“Technology and capital generate production potential. The operators of such production technology determine the efficiency of the machinery. ZUWIS helps to make the reserves in existing resources active, be they human or technical, to the maximum.”*

Thanks to this innovative approach to anticipatory plant condition analysis, Ruthenberg GmbH provides manufacturing and plant construction operations with a highly effective tool for reducing downtime and related costs. Results achieved by the ZUWIS method: Increasing reliability and output of production while cost per unit are decreasing.

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