

Power-OM Exploitable Results



Local CbM + Fleet-wide management

The objective of this product is to improve the availability of Goratu milling machines by means of improving maintenance strategies.

The solution consist in an embedded software in the NC control that monitor the working conditions of the machine. These data are transfer to the machine tool builder maintenance platform where they are analyzed to reach the next profits to the end customer:

- **Main maintenance operation reminders based on the use of the machine**

This will avoid unnecessary maintenance operations increasing the total availability of the machine.

Improve the resources required for maintenance, reducing the cost of unnecessary elements (replacement done based on the use of the machine and not based in standard hours).

- **Early warning of main components performances**

Based on the continuous monitoring of operational data, the customer will receive periodical information (monthly) of the machine main components performance. Also early warning about changes of this performance.

For example abnormal increase of motor temperatures, abnormal increase of motor power consumption, etc.

- **Customized reports availability**

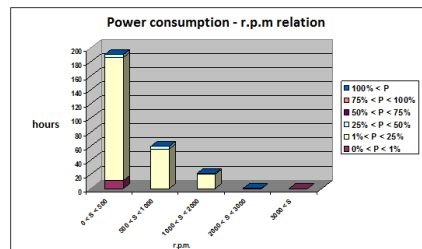
It's possible to customize reports with customer needs to meet the highest demands.

The maintenance platform used by Goratu for the analysis of the data is the KASEM platform of the company Predict.

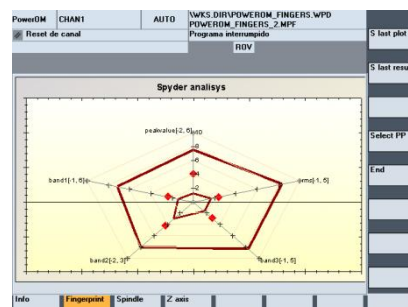
This platform together with Goratu expertise in maintenance guaranties the best know-how available to improve the maintenance strategies of every Goratu customer.

The data protection has been taken into account during all the solution development to guaranty that customer's know-how is fully protected.

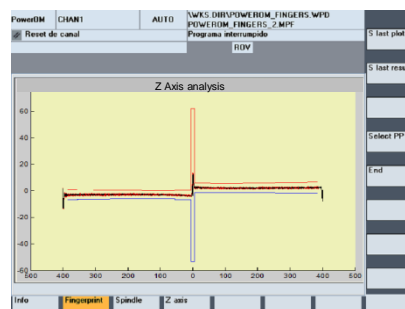
The solution is already available for Siemens and Fagor NC and under request in other NC.



1) Embedded solution integrated in the CNC



2) Machine component (spindle) health assessment



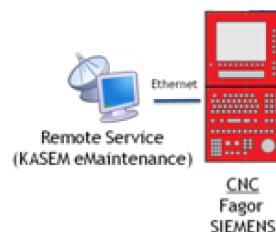
3) Machine component (axis) health assessment

Hardware and software architecture

The proposed solution can be embedded into different CNC controls as FAGOR CNC (8070) and SIEMENS (840D with Power Line and Solution Line).

Requirements:

- SIEMENS configuration: CNC with PC based Operator Panel on Windows OS
- Access to internal CNC data option available/active:
 - FAGOR: configuration: Api8070.dll / Datalogger
 - SIEMENS configuration: OPC server / MyHMI .Net
- Recommended: Internet connection.



4) Architecture: Solution based on SIEMENS or FAGOR CNC



Power consumption driven reliability, Operation and Maintenance Optimization

