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Date de rendu : 19 février 1999

Development of a new CAQ-software in a industrial environment

SCHULER GmbH & Co KG is a manufacturing company of precision mechanical parts. The business linked to the automotive industry represents more than 60% of their yearly turnover.

Last year SCHULER GmbH & Co KG already installed a PPS software (ISSOS) and would like now to acquire a suitable CAQ-software in order to improve their performance. After having conducted a market survey, the program RQM (Rechnergestütztes Qualitäts-Managementsystem) was highlighted as the most suitable software.

The goal of this practical diploma work was, therefore, to assess in-depth the suitability, compatibility and user friendly operation of this tool in order to fulfil the company's expectation and needs, to fit the structure and working environment as well as methodology in place.

Therefore, after having assessed the working environment, production management and QA structure, a list of requirements covering from the elementary till the "nice to have" things has been established and discussed in details with the supplier in order to have a tailor-cut version for the SCHULER company. This list was established using a test installation of the program and two products of the enterprise. Two major problems have been encountered, namely:

1. Differentiate the plans of tests when a piece is produced either with a CNC or with a multi-spindle (one plane pro machine) since they required different tests.
2. Introduce the data of the tests in the best way to obtain documents as similar as possible to the existing one.

The first problem has been solved by fine-tuning the new version of the program RQM, taking into account the possibility to introduce now two different plans for the same piece number because this number and the one of the plan of tests will be different (a new level).

The second problem was solved by modifying the program in order to better fit the present working procedures in the SCHULER company. Unfortunately, these modifications required enlargement of some existing fields as well as additional ones for some specific key data input.

This list of problems has been completed by a study of various questions from the "QM-Systemaudit" of the norms VDA 6.1 (Verband der Automobilindustrie). These two documents represent the list of requirements of the installation of program RQM.

After completion of this practical diploma work, we can conclude that the program RQM can fulfil all requirements and expectations of the SCHULER company, while the implementation of this software could easily be accomplished without major difficulties. The SCHULER company will undoubtedly derive substantial benefit from this program in terms of efficiency, follow-up and tracking of data concerning their QA system.

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