

DIAGNOSIS AND SERVICE CONCEPT FOR TEXTILE MACHINES HAVING PLC SYSTEMS

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Initial situation

It was, in particular, owing to the rapid development of information and telecommunication technologies and world-wide networking that the scope of the CEMDIA service support system software developed within the joint project of 1993 to 1995 had to be extended. Furthermore, Windows 95, the new Microsoft operating system, became available in the second half of 1995 and was used to an ever increasing extent as newly purchased PC equipment, in most cases, has this operating system installed.

Research target

The research target is to extend the scope of the diagnosis and service concept developed by some of these additional functions and to create interfaces for use-specific functions. In this respect, it is important to offer the totality of functions of the system under one surface, Windows95.

Research result

On the basis of the development project of the "Diagnosis and Service Concept for Saxon Machine Construction", the diagnosis system was further developed with due consideration of the requirements arising from the trial run of the diagnosis system and of new technological findings. Owing to problems in the maintenance of ONLINE modem connections that sometimes occurred over a considerable period of time, it was necessary to investigate into other possibilities of data transfer. An alternative offered for the transfer of diagnosis data was transfer via Internet or mail boxes which gained more and more importance in the transfer of data world-wide. In detail, the diagnosis system was extended by the following:

- Creation of a DBASE database interface as well as implementation of the MS-ACCESS database program
- Extension of the help system by context-sensitive hyper text functions of ONLINE document incorporation according to data given by the Microsoft Word text processing system
- Integration of a profibus interface similar to the V.24 interface for diagnosis data access
- Recording and systematization of service jobs performed
- Adjustment of the service support system to a new generation of ring spinning machines
- Possibilities of history data storage and transfer via Internet.

Application and economic advantages

Cetex gGmbH presented the CEMDIA remote diagnosis system at the October 95 International Textile Machine Fair in Milan. The exhibit met with great interest, especially on the part of textile machine manufacturers. Up to now, the possibilities of electronic information and documentation offered in the field of textile machine engineering were lacking behind those for, e.g., machine tool and plant construction. The trend towards computer- assisted machine servicing as well as machine and technology information is gaining more and more in importance also in the field of textile machine engineering. At ITMA, for instance, a series of contacts were established with persons interested in the use of an adapted service support system. The modular structure of the program allows machine manufacturers to deliberately modify the diagnosis system so that it meets their requirements of application. Thus, they are able at any time to respond to specific requirements of the respective customer and to present to him a specific program. This has the advantage that customers, on the one hand, are not embarrassed by a large unused variety of programs and, on the other hand, financial possibilities for options are reserved. The system developed is applicable not only to textile machine engineering but also to all processing machines featuring PLC systems.