**Diagnostics and Process Control Symposium - PCTL'96**
***Texas Instruments Inc., Dallas, USA, March, 1996***

**Title:**

*PLink*: An Industrial Architecture for Diagnostic and Process Control.

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**Abstract:**

The *PLink* system was conceived to monitor on-line the mold process and to allow the control of the press parameters in a central computer. In this way the total molding process control system enables engineers to collect and analyse data for capability studies of the process parameters. It will also be possible to obtain production parameters and maintenance indexes, such as OEE, if manufacturing procedures change accordingly to give the system the necessary information for the required calculations.

The implementation of the system involved the installation of a computer network with a star topology (PNet) linking all the machine computers (MPCs) to the central supervisor computer using a polling protocol. This supervisor computer is responsible for the control of the network communications and for the interneting with the PCAM system, that collects and centralizes all data from the finish and test area of the factory site. In terms of software it was necessary to develop communications, data base and data processing modules.

This system is an approach to establish level 0 (machinery/process), level 1 (unit control) and level 2 (area control) of the mold process area as an FMS island to be integrated in the CIM policy of the local factory site.

*PLink* constitutes a powerful tool for mold diagnoses in process control as well as for production feedback and for equipment maintenance support.