

# MCL Control

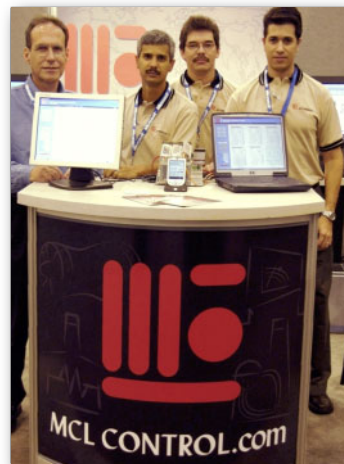
## Power Plant Systems Use InduSoft for Desktop and PDA Interfaces



MCL Control used the InduSoft CEView software to build graphics that display key information from the Sentinel systems on operator PDAs. Roving operators can check critical values and alarms for turbines and furnaces via wireless connection using special displays optimized for their PDAs.

- MCL Control selected InduSoft for an HMI solution that would integrate its control and safety systems for energy generation applications.
- CEView support for specialized displays that can run on wireless PDAs increases the attractiveness of an MCL Control solution for operators.
- Comparison with leading HMI software convinced MCL Control applications engineers that InduSoft would meet all their development requirements.
- InduSoft's OEM licensing agreement met MCL Control commercial requirements for price stability. Responsive technical support by InduSoft supported rapid, rock-solid development of the final solutions.

MCL Controls applications engineering team built an entire series of Sentinel safety and control packages for energy applications. Left to right, they are: Nelson Mata, president; Juan Calderon, engineering manager; Miguel Pena, project engineer; Jonathan Jaramillo, application manager.



Jonathan Jaramillo  
Applications Manager  
MCL Control USA Inc.

### Background

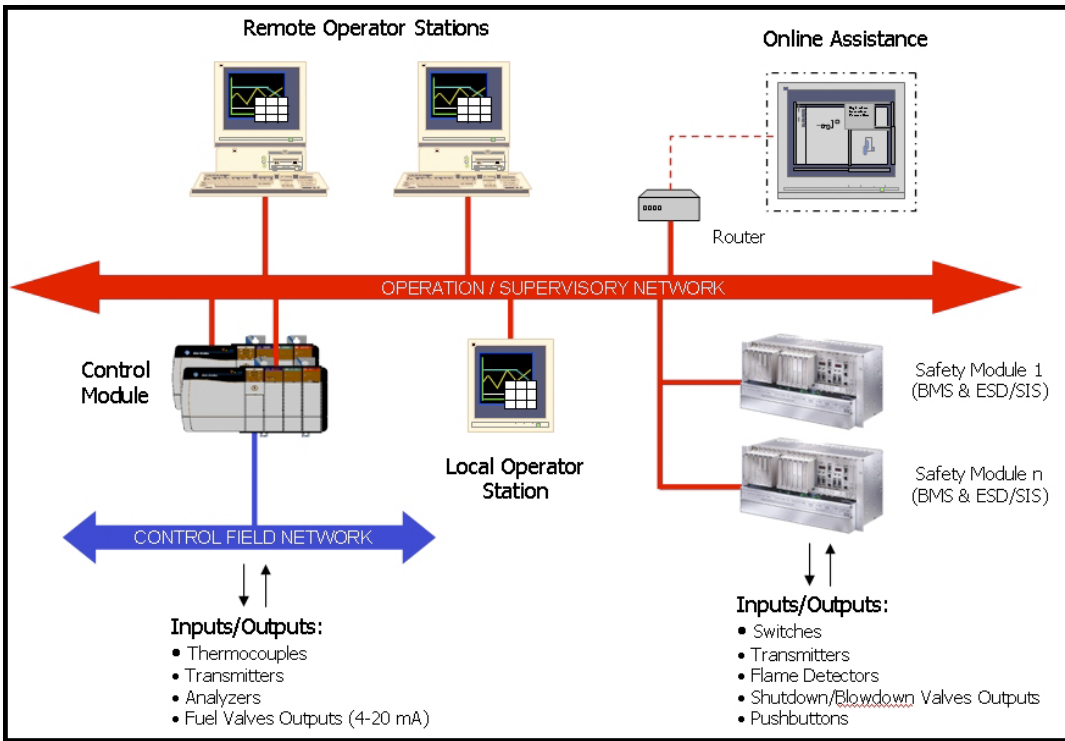
MCL Control has been a provider of highly engineered safety and control solutions for the oil and gas industry since 1989. It specializes in combustion-related processes such as steam generation and heating processes, turbo-machinery, plus safety systems for emergency shutdowns and fire and gas applications.

### InduSoft used as part of product strategy

As part of its long term strategy for growth, MCL Control recently began to migrate from custom integration to incorporating its expertise in a series of products which provide pre-integrated solutions. It has standardized on InduSoft as its preferred operator interface as part of this move



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and uses both the InduSoft Web Studio and CEView.

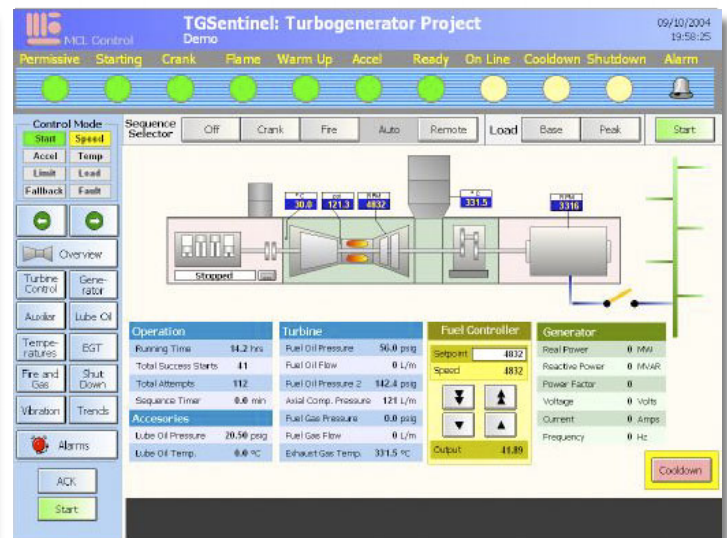
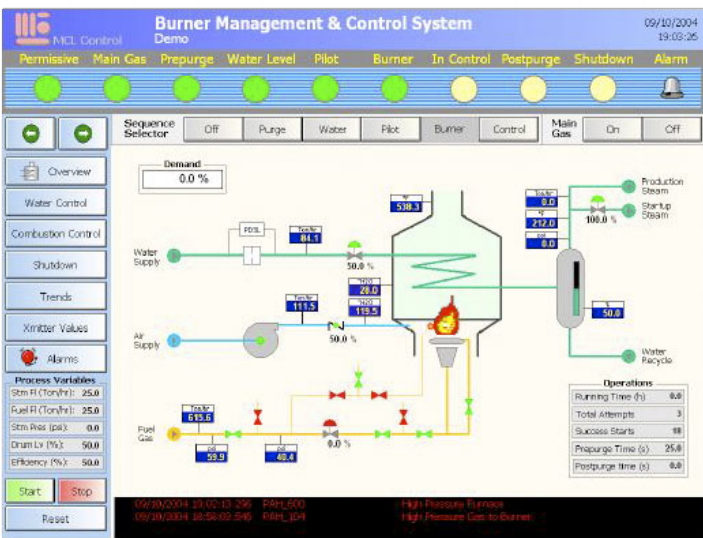
Under the Sentinel brand name MCL Control now offers a line of standard systems that give users access to their years of engineering experience. Their Sentinel line includes:

- **BoilerSentinel & FurnaceSentinel:** (a) a global solution for protection (usually called a Burner Management System or BMS) for safe startup and shutdown as well as emergency shutdown for furnaces or boilers and (b) a solution for continuous control, monitoring, and thermal integration of steam networks by means of optimal load distribution algorithms,

Top:  
The architecture of an MCL Control boiler system includes both local and remote operator stations running InduSoft interfaces, as well as safety modules and online assistance.

Bottom Left:  
Operators use this display to monitor steam generation in the BoilerSentinel package.

Bottom Right:  
Monitoring and control of a power turbo generator can be performed from this screen in the TGSentinel package.





plus automation of water treatment plants.

• **TurbineSentinel:** a system for protection and control of gas turbines. This system not only handles production requirements in operation, maintenance, supervision, management and administration; it has independent modules for Safety and Control; it can also be adjusted for compliance with the Safety Integrity Level (SIL) and availability requirements.

• **CompressorSentinel:** a solution for protection and control of centrifugal and axial compressors, either alone or in networks; meets user requirements

for safety, high speed control strategies, and sequencing of each compression train

• **TGSentinel:** provides protection and control of turbo-generators driven by gas turbines, combining specific needs for safety, monitoring, sequencing of the turbine, high speed control strategies and automatic synchronization.

• **SentinelToolbox:** configuration software running on portable computers in order to configure control and safety strategies and tune up process units independently of Centralized HMI.

• **SafeHMI:** a configurable Human Machine Interface product oriented to Safety Applications that supports integrating a PLC or PES application easily to a proven PC based interface.

• Additional Sentinel systems from MCL Control include the **F&GSentinel** (fire and gas), the **FlowSentinel** (flow and level monitoring); and the **SafetySentinel** (safety system conformity to appropriate standards).

The MCL Control systems run on networked industrial controllers and PCs in a control room. In addition, separate graphics which display critical information have been developed which run on PDA's. Operators can use these to access vital parameters from anywhere in plant via a Wi-Fi network.

Bottom Left:

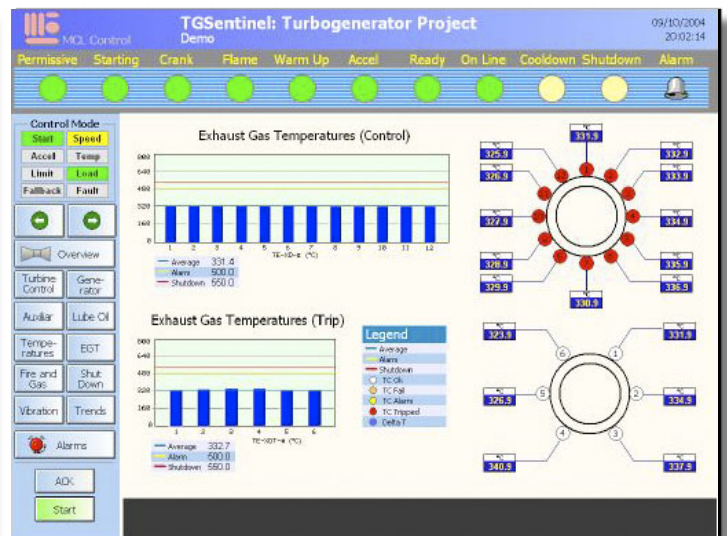
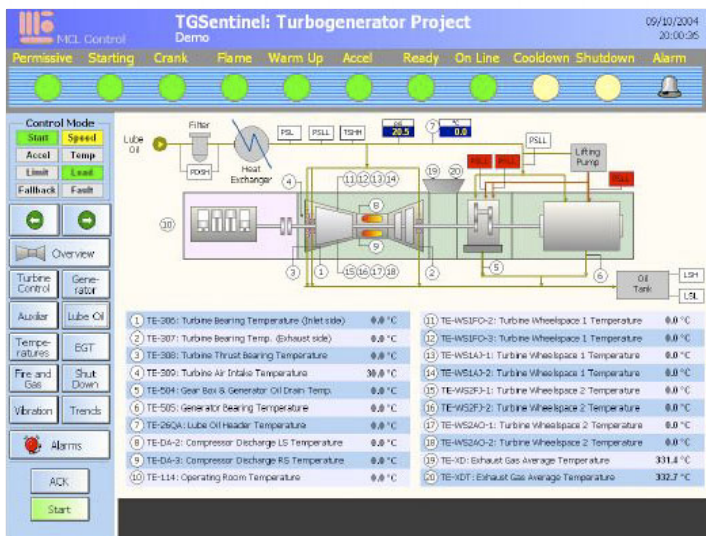
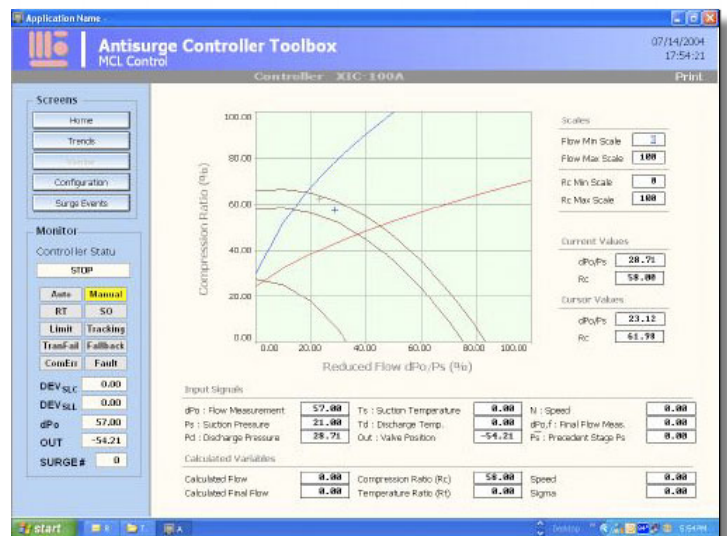
In a TurbineSentinel application, this single display shows the status of most key operating parameters in an easy to read format.

Bottom Right:

This display shows key temperature profiles on a turbine being monitored by the TurbineSentinel package.

Right:

This advanced compressor anti-surge application is a vital operator tool in the CompressorSentinel package



## Selection of InduSoft

Three factors were behind the choice of InduSoft as the standard interface for the Sentinel line.

### • *Technical Excellence*

Application engineers at MCL Control have extensive experience with the HMI and SCADA software on the market today, including some highly stable dual- and triple-modular redundant systems. Both the feature set and the ease of integration of the InduSoft software convinced them that it was the best available.

### • *Commercial*

MCL Control not only aims at providing engineering excellence but also works at being a cost leader in a field where complex processes, high engineering costs and liability issues drive up the cost of solutions. The MCL strategy of using its standard-

ized product solutions helps in containing total cost of ownership. The company is also highly price sensitive when purchasing software components because the initial licensing cost is amplified during the integration process. Because of InduSoft's extensive experience in dealing with the licensing needs of OEMs the company was able to arrive at a business arrangement that meets its commercial requirements.

### • *Support*

During development of the Sentinel products, frequent contact with the InduSoft support engineers in the Austin office was required. The answers provided were both timely and precise and ensured that MCL Control engineers were able to meet all their technical requirements in a timely fashion.



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*Right:*

MCL Control handles all phases of a highly complex monitoring and control installation, from advanced control and safety algorithms to installation of the hardware panels.



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