



# Movicon supervision system of Heat Treatment processes

**The best solution for production management of one of leading supplier of thermal processing plants for automotive and wind power industries.**

Aichelin Unitherm Heat Treatment Systems India Private Limited, headquartered in Talegaon, Pune India, has been established in 2010. They are the resulted incorporated Joint Venture Company of two leading manufacturers of heat treatment furnaces: Unitherm Engineers Limited (India) and Aichelin Holding GmbH (Austria).

Aichelin Unitherm is a leading heat treatment furnace manufacturer in India and it collects the vast industrial heat treatment experience. It is a highly reputed manufacturer of industrial heat treatment furnaces in sectors such as automotive and aluminium melting. It is a leading global supplier of thermal processing plants for the automotive, gearing, fasteners, bearings and

wind power industries. Beyond it is a sophisticated and well reputed manufacturer of mesh belt furnaces for small precision parts used in the bearing, automotive and fastener industries.

Product range includes gas and electrically heated furnaces such as Sealed Quench Furnace, Pusher type furnace, Mesh belt furnace, Ring hearth, Rotary hearth or Roller hearth furnaces. With more than 300 furnace installations with leading OEMs and tier-1 automotive companies in India and Europe, Aichelin Unitherm is the leading brand for Sealed Quench Furnaces.

## How was the application and what Aichelin Unitherm was looking for?

The R&D team of Aichelin Unitherm, after a careful research in the SCADA solutions market, chose Movicon by Progea for an important and huge project of control and analysis of Sealed Quench Furnaces.

The application that Aichelin Unitherm implemented consists in monitoring different parameters in furnaces. Successful heat treatment requires close control over all factors affecting the heating and cooling of a metal. This best quality is possible only when the proper data is available for analysis. The furnace parameters must be of the proper controlled & monitored, so the temperatures are kept within the prescribed limits for each operation. Even the furnace atmosphere affects the condition of the metal being heat-treated.

Monitoring and recording of historical trends are fundamental functionalities in automotive industry, because in this industry every process is subjected to strict checks.

In addition, in this application, there has been the necessity to monitor and check the gas flow rate that powers different furnaces, promptly checking aluminium smelting temperature.

All these monitored data are consequently historized in historical trends so that they can be analysed with Data Analysis tools. Thanks to the powerful Report Designer, it was given the possibility to create reports for each production batch.

## What is particularly appreciated of Movicon?

Aichelin Unitherm appreciated several features of Movicon, in particular:

- The variety of communication drivers available, Movicon communicates with several Siemens S7 300 PLCs, using drivers both serial such as MPI and Profibus, and Ethernet such as S7 Industrial Ethernet.
- Movicon connectivity that allowed to communicate with different devices, using TCP Modbus protocol, thanks to data monitoring and recording tools.
- The import of PLC variables directly from Siemens development environment.



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**S. Shankar**

*Mentor and Design Chief Manager*

### The adopted customer solution

Aichelin Unitherm chose **Movicon Scada Pro Runtime licence**, running on a virtual machine equipped with Microsoft Windows Server 2016 Operating System.

The system has been set up with the access options thanks to **Web Client connectivity**. Furthermore there is the possibility to send by chat SMS and messages regarding alarms occurring in the system.

In addition, they also implemented 2 development stations using **Movicon Scada Editor licence**.

### Which are the reasons of Aichelin Unitherm choice?

As Mr S. Shankar (Mentor and Design Chief Manager di Aichelin Unitherm) declared “Movicon Scada has been chosen for Editor ease of use and for its flexibility of integration with different existing systems.” Mr Shankar pointed out that another important feature that led Aichelin Unitherm to choose Movicon has been the huge capability of communication drivers. This allows to make new devices implementations without any implementation limitation about communication protocols.

The ability of integration of different types of database has been helpful, because it allows to aggregate a big amount of available information and make them uniform.

A relevant feature of Movicon SCADA is its reliability, that makes it a solid platform, thanks also to its stability, being a well spread and known SCADA on the market.

### Progea Team: “Always at our disposal”

As the R&D team of Aichelin Unitherm (consisting of Mr. S Shankar-Mentor and Design Chief Manager, Mr. Prashant Bonde -Sr. Engineer, Mr. Mohan More -Sr. Engineer, Mr. Dhananjay -Application Engineer) confirmed the customer was satisfied by Progea staff who met customer’s demands and needs. In particular the pre-sales service that helps Aichelin Unitherm to choose the correct solutions and the prompt and active after sales service that support customer during the development.

