

Process Supervisory System FOCOS-I

Kammerofen 1

	Temp. [°C]	C-PotL [%C]	Öelbad [°C]
Sollwert:	887	1,00	80
Istwert:	886	1,00	79

Kettenstatus FOCOS-BETRIEB AUTO

Restzeit: 0 : 10 (std. min)

Uebersichtsbild KO 1

Buttons: Passwort-Verwaltung, Anmelden, Abmelden, Hard copy, Exit



Precede
Supervisory
System for
Batch Type
Heat
Treatment
Plants

▶ FOCOS-I Process Supervisory System

The basic version of FOCOS-1 contains the following program sections:

OFF-LINE diffusion program

For the simulation and optimization of carburizing programs.

Program management

Input of different heat treatment programs. The program itself can be separated by up to ten sections with the possibility to select either a time-based or a target-based control.

Work piece based file system

Different heat treatment programs can be assigned to special work pieces.

Program control

The temperature and carbon potential set points are determined based on the data contained in the heat treatment program and are displayed graphically.

ON-LINE diffusion program

During the carburizing process it is possible to display the actual carburizing profile via carbon content in real time. This information can be saved, downloaded or printed. For the application of programs with target-value based control, the ability to document carbon content thickness over the work piece by calculated and measurable variables can be achieved. The selected target value determines the control characteristics for the carbon content enrichment.

Service programs

Included in the service programs are the calculations of the alloy factor based on material composition and also conversion functions such as carbon potential to oxygen probe voltage, carbon monoxide content, etc.

Heat treatment certificate

A certificate of heat treatment is available for every charge. The process data is stored on the hard drive and can be displayed on the screen upon request. The printed certificate contains the heat treatment program in a tabled format. All relevant work piece data, set points and actual values for temperature and carbon potential are shown for the entire process time. Additionally, a table and chart is used to display the computed function of the carbon content of the work pieces.

Display of alarm messages

Alarm occurrence is displayed for the furnace or furnaces in text format. The event occurrence is tracked from start (initial alarm) to finish (fault acknowledge and reset).

Help-texts

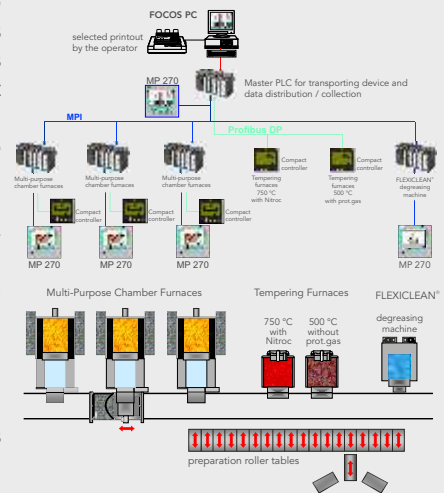
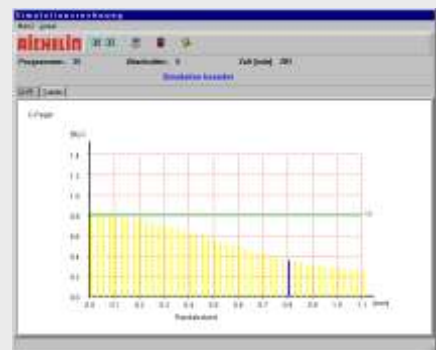
The included "Help" text sections provide relevant and valuable support information to most heat treatment operational inquiries.

Multiple batch-type furnace control with one FOCOS-1 system

During the start of a heat treatment program all required process information is sent to the programmable logic control (PLC) of the respective batch type furnace. From this point forward, the FOCOS-1 system controls the program execution and communicates the set points to the PLC for each respective batch furnace. The PLC transfers the set points to the assigned discreet controllers. The actual temperature and carbon potential values are communicated back to the FOCOS-1 system. It is possible to monitor the program execution on-line from one centralized operator panel. If the FOCOS-1 fails during the heat treatment program, the PLC's on each respective batch furnace system immediately take over the control functions to allow a continuous, non-interrupted execution of the heat treatment programs.

Expanding Multi Purpose Batch Type Furnace Line with multiple supporting ancillary equipment

As a variety of extension modules exist for the process supervisory system. The combination of a FOCOS-1 basic system and various extension modules can provide all supervisory and control functions for a fully automated Multi Purpose Batch Furnace Line. The modular design enables the FOCOS-1 system to control auxiliary systems (washers, tempering furnace, transfer systems) and permits the communication necessary to operate a fully automated heat treatment process. This allows for minimal operator actions, loading, order entry/verification and unloading. Additionally, a variety of different software modules are available for customization depending on customer requests.



AICHELIN Ges.m.b.H.
 Fabriksgasse 3
 A - 2340 Mödling
 Phone: +43 (2236) 23 646
 Telefax: +43 (2236) 22 229
 E-Mail: marketing@aichelin.at

AICHELIN Service GmbH
 Schultheiß-Köhle-Strasse 7
 D - 71636 Ludwigsburg
 Phone: +49 (7141) 6437 - 0
 Telefax: +49 (7141) 6437 - 100
 E-Mail: info@aichelin.de

NOXMAT GmbH
 Ringstraße 7
 D - 09569 Oederan
 Phone: +49 (37292) 65 03-0
 Fax: +49 (37292) 65 03-29
 E-Mail: info@noxmat.de

EMA Indutec GmbH
 Petersbergstraße 9
 D - 74909 Meckesheim
 Phone: +49 (6226) 788 - 0
 Telefax: +49 (6226) 788 -100
 E-Mail: info@ema-indutec.de