P-NET

New P-NET Applications in Textiles, Steel & Food

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I. Overview

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Some new P-NET Applications in Germany within the last 12 months

- Textiles: Yarn finishing at HOERAUF (monitoring, controlling)
- Steel: Manufacturing of flanges at ZAPP (monitoring, controlling)
- Food: Nuts roasting at KRAFT JACOBS SUCHARD (monitoring, controlling)
- Ships: Ship automation at TILSE (controlling)
- Domestic appliances: Manufacturing of dish washers at BOSCH-SIEMENS (monitoring)

plus further installations of well-known applications like milk/oil trucks, tank monitoring, climate control etc. (part of them with modified system structures and/or components)

Tasks of the Local Society related to new P-NET Applications

free (= primary task of Local Society):
- first contact (conferences, web site, mailings)
- general information about P-NET (info package, phone/fax, E-mail)
- first assistance in planning the system (phone/fax, E-mail, at office)

at cost (sponsored by b-plus):
- 1- or 2-day P-NET training courses
- 1- or 2-day P-NET implementation courses

II. First Application Example: Yarn finishing at HOERAUF

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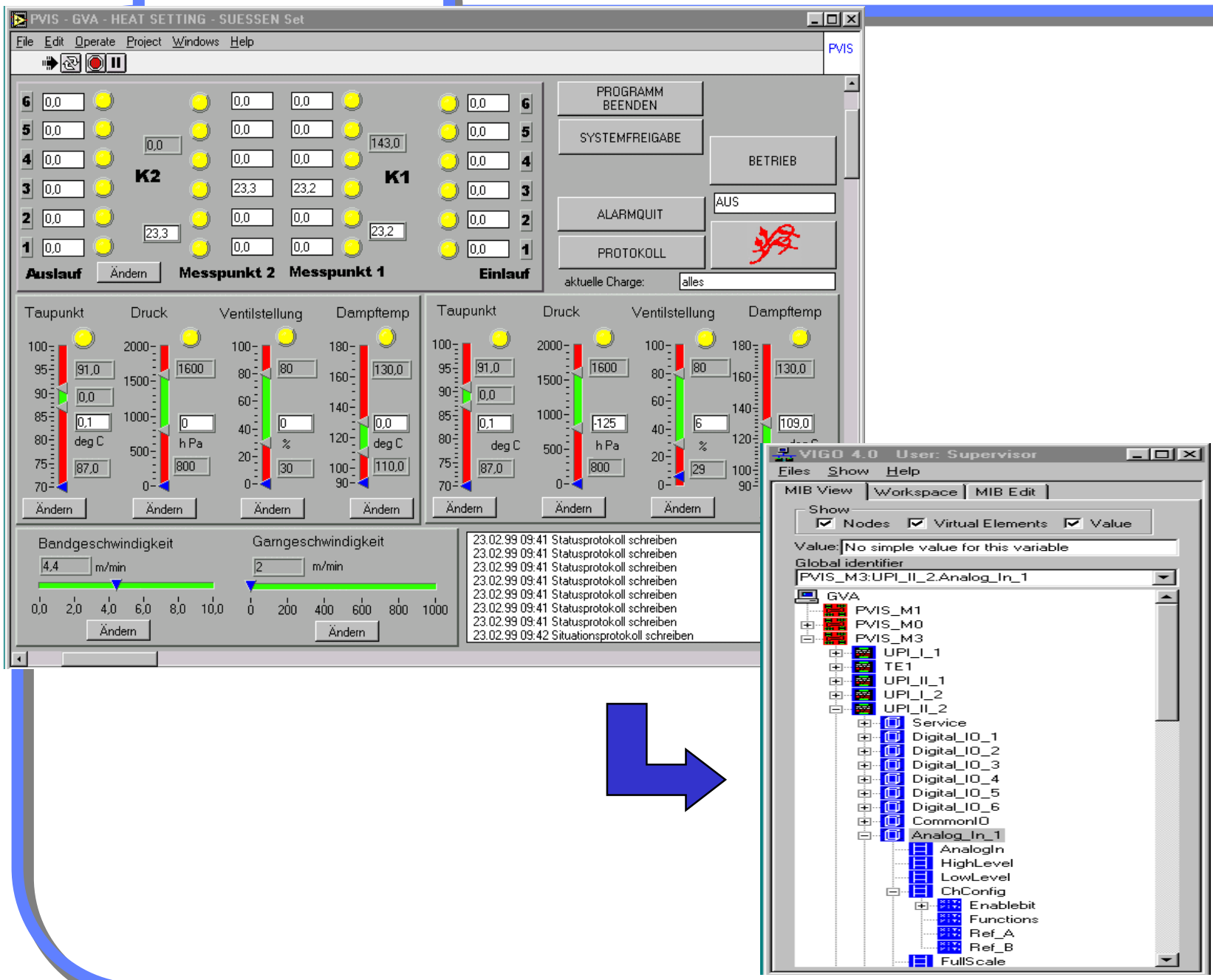
Process:
Finishing of yarns for carpets by heating and moistening

Task:
Monitoring temperatures, humidities, machine data
& controlling elementary machine cycles & data base management

P-NET Solution:
- Pt-100 with P-NET interface (Bartec)
- PD 3221, PD 3240, PD 3920/VIGO (PD)
- Software: PC under Windows-NT, within PD 3221 (b-plus)

Software Structure on PC:
- VIGO
- LabVIEW (HMI, graphics, controlling)


PVIS - GVA - HEAT SETTING - SUESSEN Set
File Edit Operate Project Windows Help
PVIS
PROGRAMM BEENDEN
SYSTEMFREIGABE
BETRIEB
ALARMQUIT
AUS
PROTOKOLL
aktuelle Charge:
alles
K2
K1
Auslauf
Ändern
Messpunkt 2
Messpunkt 1
Einlauf
Taupunkt
Druck
Ventilstellung
Dampftemp
deg C
h Pa
%
Bandgeschwindigkeit
m/min
Garngeschwindigkeit
23.02.99 09:41 Statusprotokoll schreiben
23.02.99 09:42 Situationsprotokoll schreiben
VIGO 4.0 User: Supervisor
Files Show Help
MIB View
Workspace
MIB Edit
Show
Nodes
Virtual Elements
Value
Value: No simple value for this variable
Global identifier
PVIS_M3:UPI_II_2.Analog_In_1
GVA
PVIS_M1
PVIS_M0
PVIS_M3
UPI_I_1
TE1
UPI_II_1
UPI_I_2
UPI_II_2
Service
Digital_IO_1
Digital_IO_2
Digital_IO_3
Digital_IO_4
Digital_IO_5
Digital_IO_6
CommonIO
Analog_In_1
AnalogIn
HighLevel
LowLevel
ChConfig
Enablebit
Functions
Ref_A
Ref_B
FullScale

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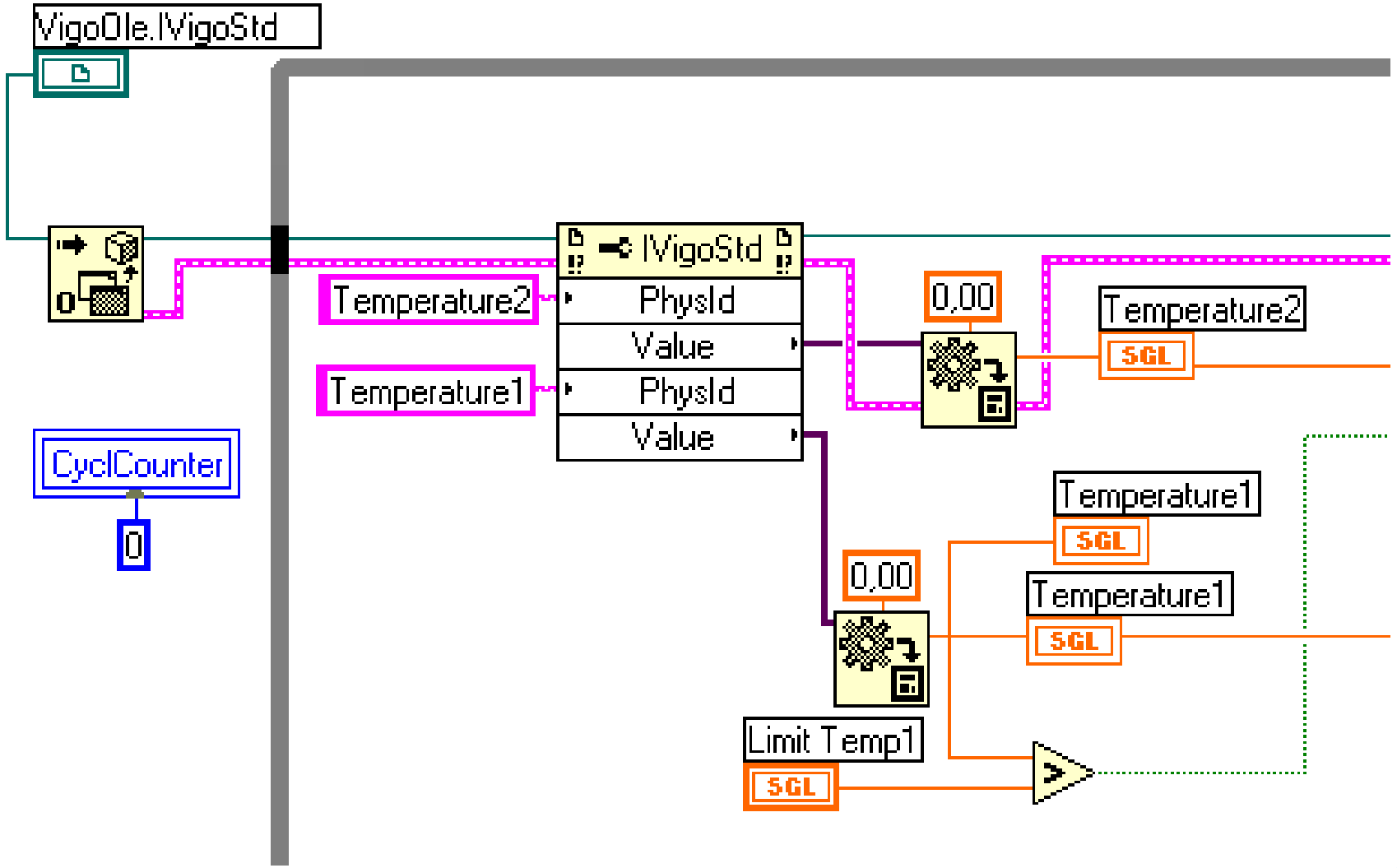
VigoOle.IVigoStd
IVigoStd
PhysId
Value
PhysId
Value
Temperature2
Temperature1
CyclCounter
0
0,00
0,00
Temperature2
Temperature1
Temperature1
Limit Temp1
SGL

III. Second Application Example: Manufacturing of flanges at ZAPP

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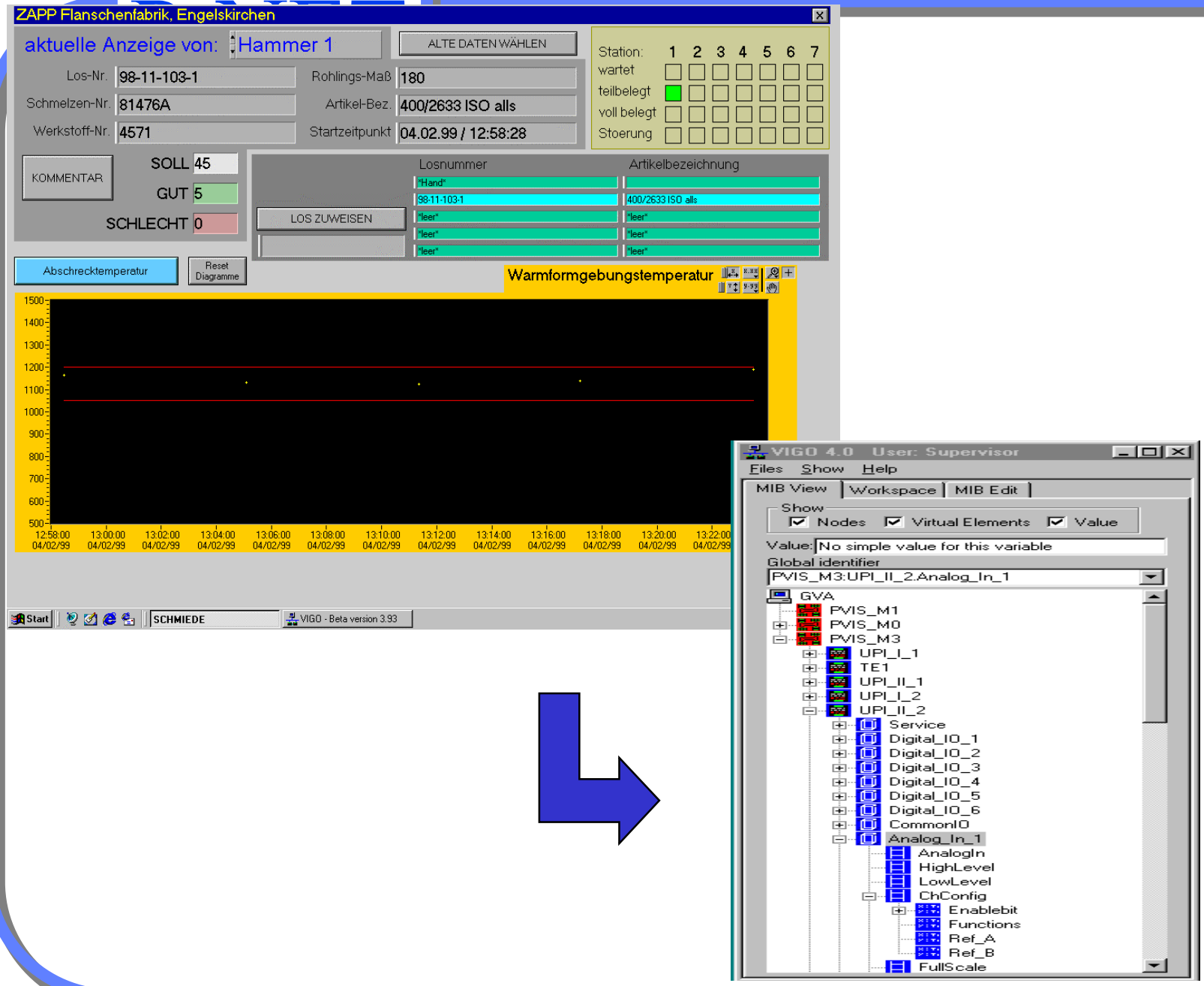
Process:
Forging flanges by melting steel, founding into forms and cooling

Task:
Monitoring temperatures during melting, founding and after cooling & data base management

P-NET Solution:
- IR-pyrometers with P-NET interface (Bartec)
- PD 3221, PD 3120, PD 3920/VIGO (PD)
- Software: PC under Windows-NT, within PD 3221 (b-plus)

Software Structure on PC:
- VIGO
- MS-Access including VBA (data base, configuration forms)
- LabVIEW (HMI, graphics)
- MS-C++ (special subroutines)


ZAPP Flanschenfabrik, Engelskirchen
aktuelle Anzeige von:
Hammer 1
ALTE DATEN WÄHLEN
Los-Nr.
98-11-103-1
Rohlings-Maß
180
Schmelzen-Nr.
81476A
Artikel-Bez.
400/2633 ISO alls
Werkstoff-Nr.
4571
Startzeitpunkt
04.02.99 / 12:58:28
Station:
1 2 3 4 5 6 7
wartet
teilbelegt
voll belegt
Stoerung
KOMMENTAR
SOLL 45
GUT 5
SCHLECHT 0
Losnummer
Artikelbezeichnung
LOS ZUWEISEN
Abschrecktemperatur
Reset Diagramme
Warmformgebungstemperatur
SCHMIEDE
VIGO - Beta version 3.93
VIGO 4.0 User: Supervisor
Files Show Help
MIB View
Workspace
MIB Edit
Show
Nodes
Virtual Elements
Value
Value: No simple value for this variable
Global identifier
PVIS_M3:UPI_II_2.Analog_In_1
GVA
PVIS_M1
PVIS_M0
PVIS_M3
UPI_I_1
TE1
UPI_II_1
UPI_I_2
UPI_II_2
Service
Digital_IO_1
Digital_IO_2
Digital_IO_3
Digital_IO_4
Digital_IO_5
Digital_IO_6
CommonIO
Analog_In_1
AnalogIn
HighLevel
LowLevel
ChConfig
Enablebit
Functions
Ref_A
Ref_B
FullScale

IV. Third Application Example:
Nuts roasting at KRAFT JACOBS SUCHARD

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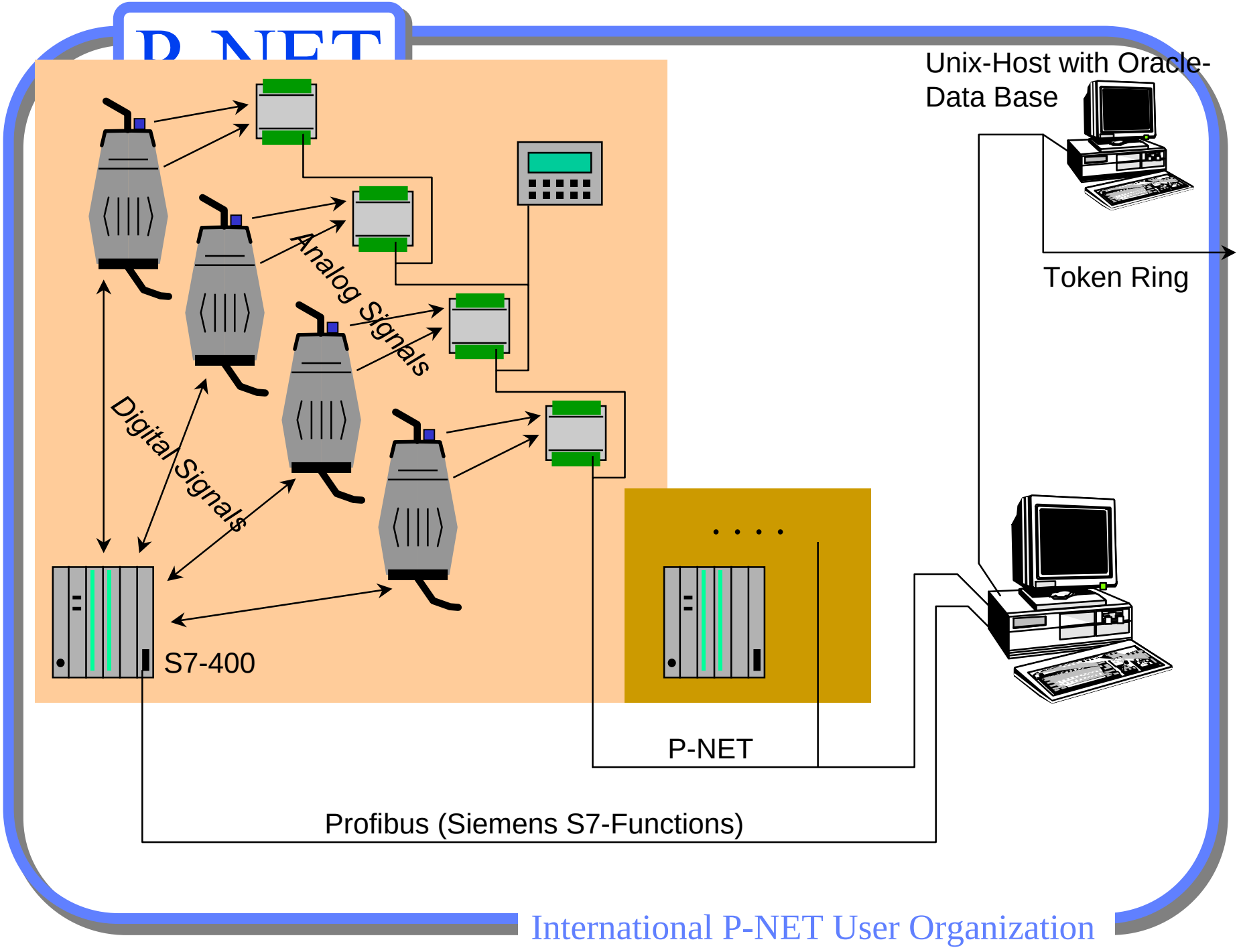
Process:
Nuts roasting for chocolate production by heating

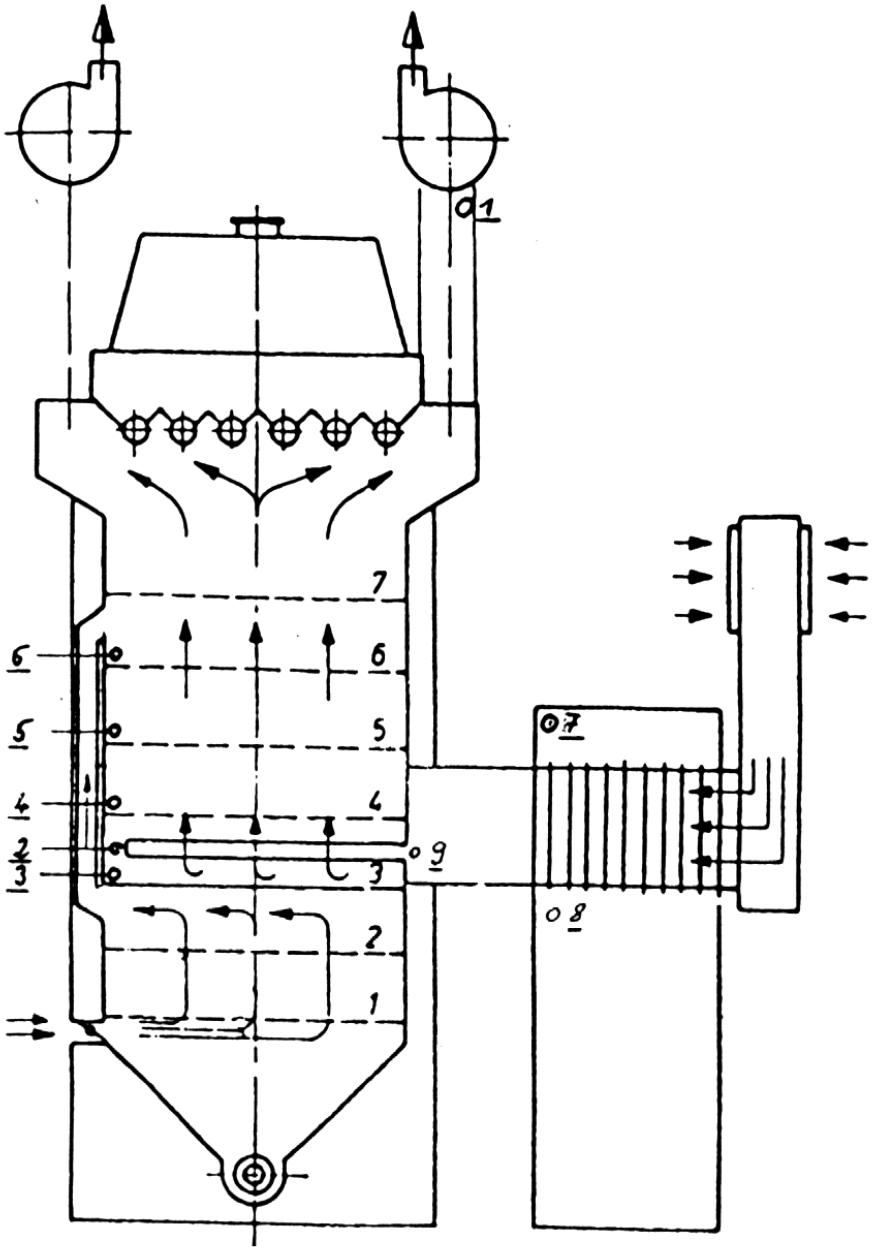
Task:
Monitoring temperatures and CO_2 & controlling automatic nuts transport & storaging of quality data (sterilization data)

P-NET Solution:
- PD 3240, PD 3920/VIGO (PD)
- Software: PC under Windows-NT (b-plus)

Software Structure on PC:
- VIGO
- Siemens-S7 functions together with Windows-NT-driver from b-plus
- InTouch (HMI, graphics, storaging); older version with LabVIEW/Excel
- MS-C++ (special subroutines for controlling)


P-NET
Unix-Host with Oracle-
Data Base
Token Ring
Analog Signals
Digital Signals
S7-400
P-NET
Profibus (Siemens S7-Functions)

Roasting Machine:



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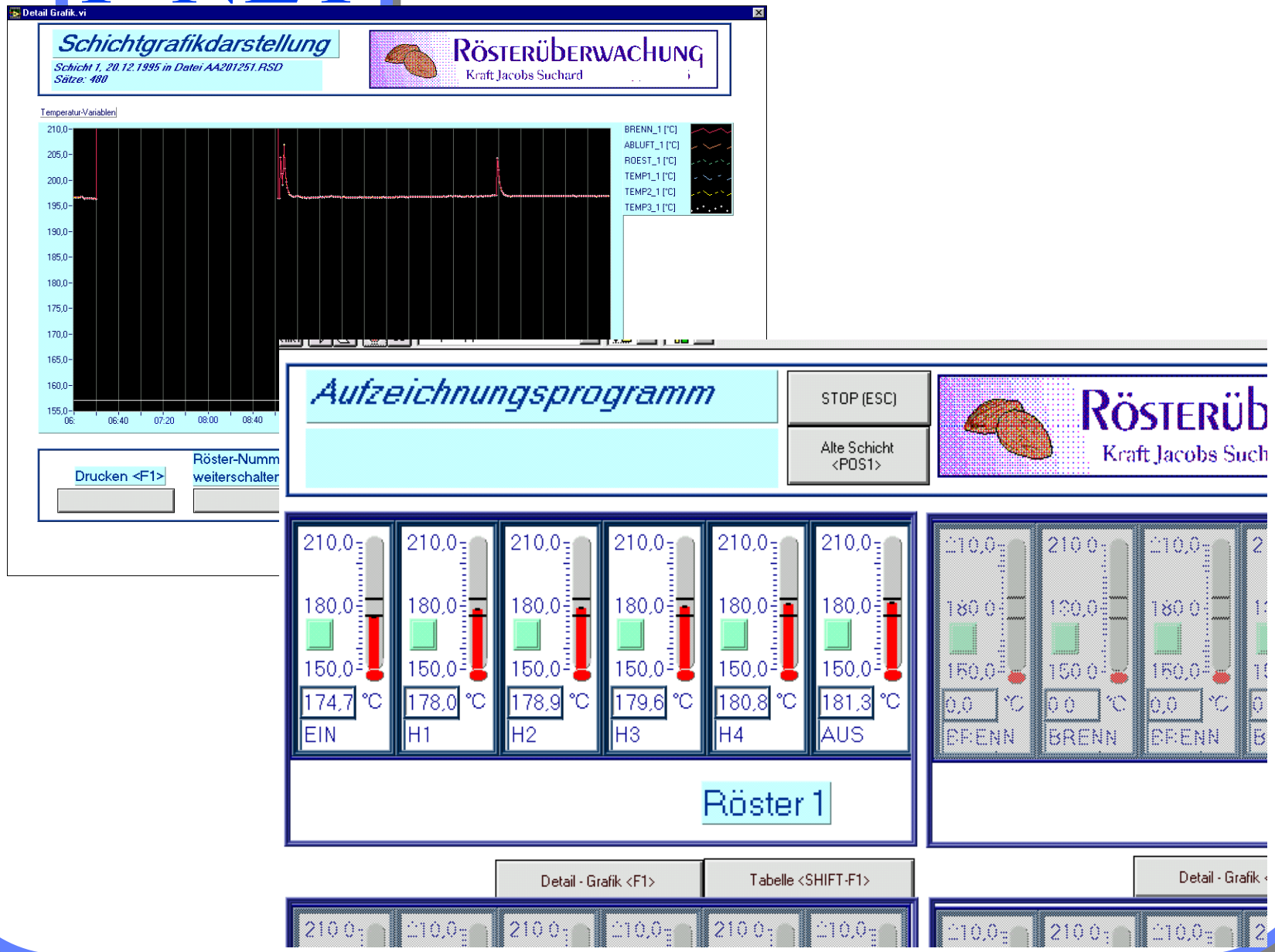

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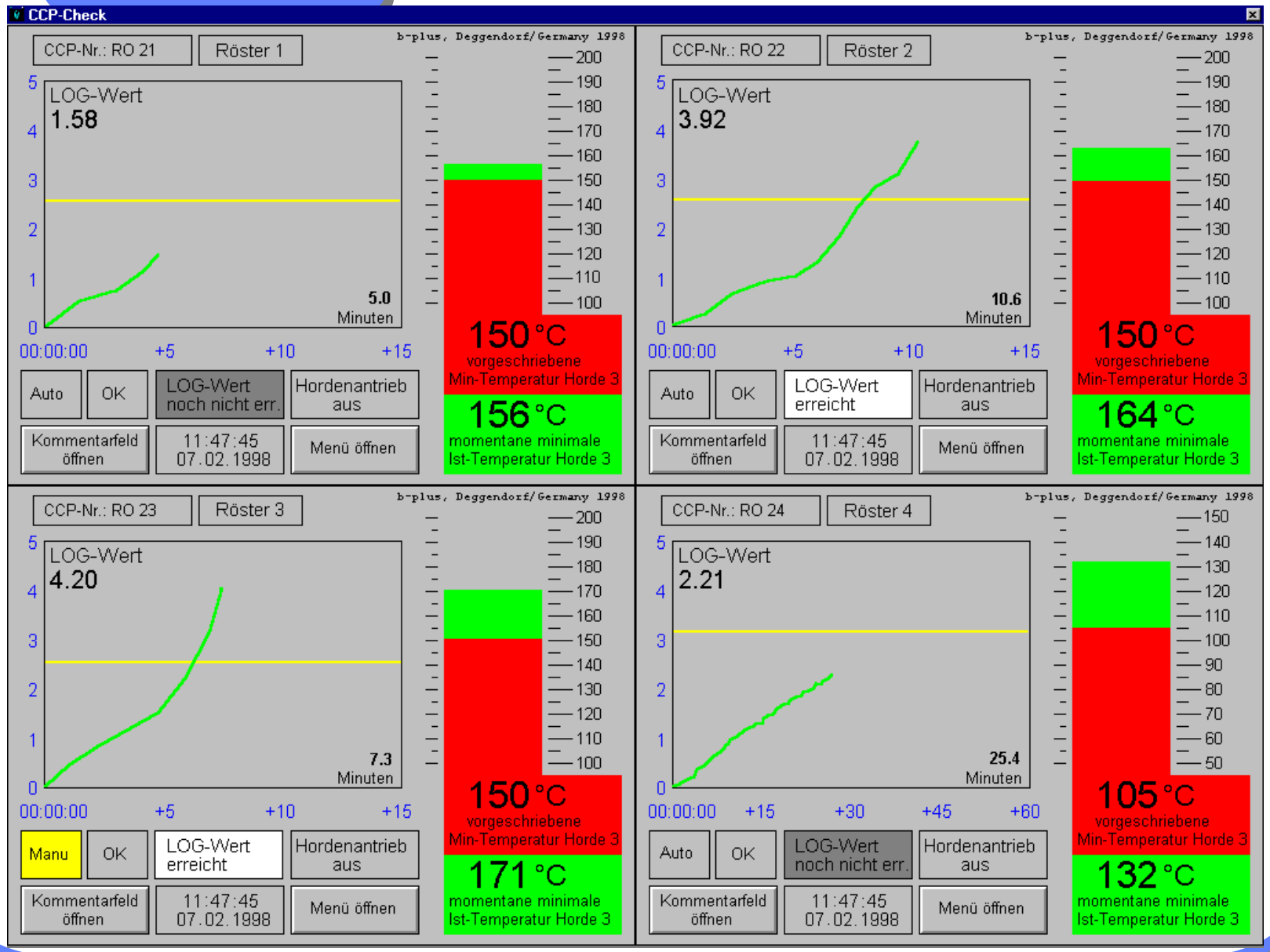

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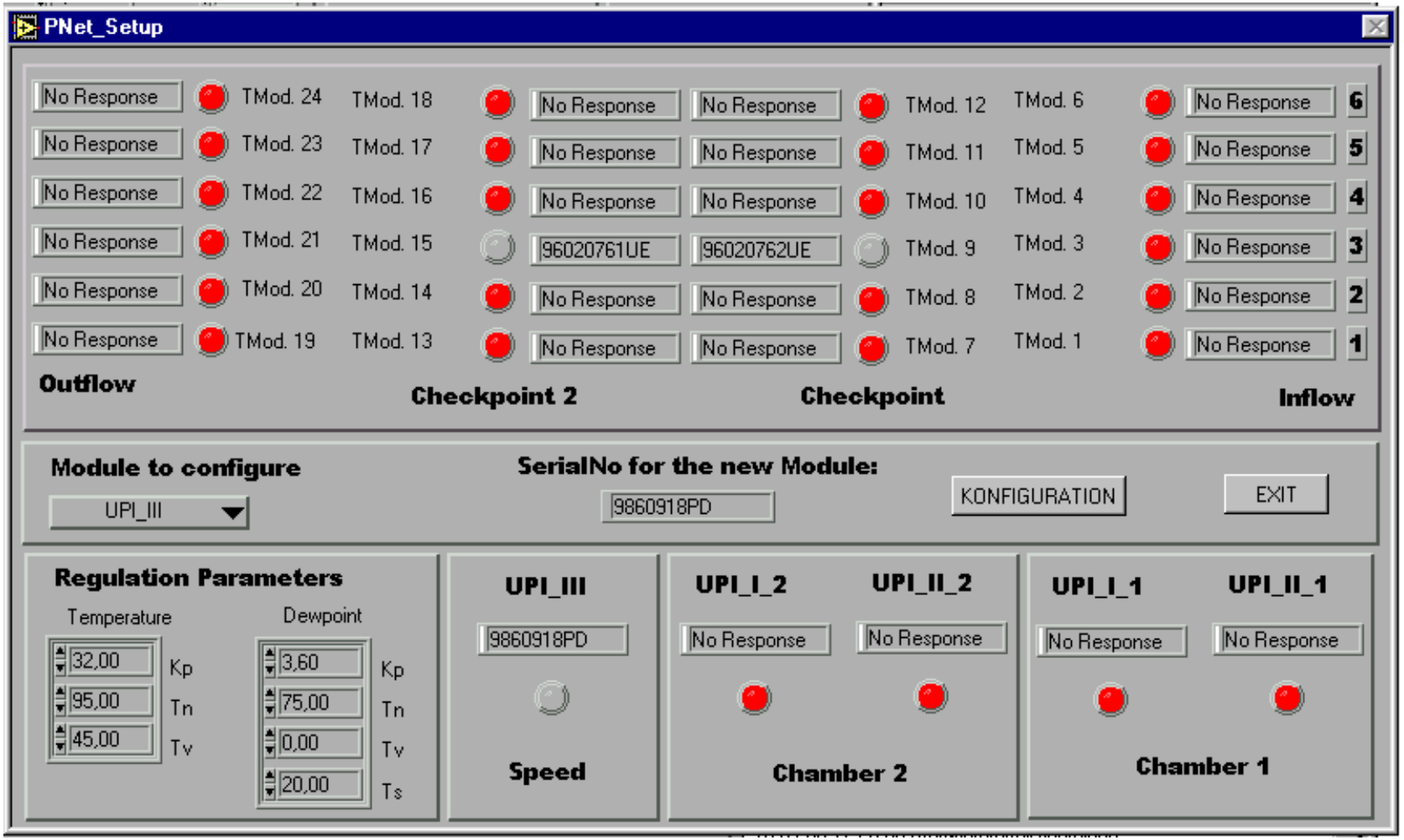
PNet_Setup
No Response
TMod. 24
TMod. 18
No Response
No Response
TMod. 12
TMod. 6
No Response
6
No Response
TMod. 23
TMod. 17
No Response
No Response
TMod. 11
TMod. 5
No Response
5
No Response
TMod. 22
TMod. 16
No Response
No Response
TMod. 10
TMod. 4
No Response
4
No Response
TMod. 21
TMod. 15
96020761UE
96020762UE
TMod. 9
TMod. 3
No Response
3
No Response
TMod. 20
TMod. 14
No Response
No Response
TMod. 8
TMod. 2
No Response
2
No Response
TMod. 19
TMod. 13
No Response
No Response
TMod. 7
TMod. 1
No Response
1
Outflow
Checkpoint 2
Checkpoint
Inflow
Module to configure
UPI_III
SerialNo for the new Module:
9860918PD
KONFIGURATION
EXIT
Regulation Parameters
Temperature
Dewpoint
32,00
Kp
95,00
Tn
45,00
Tv
3,60
Kp
75,00
Tn
0,00
Tv
20,00
Ts
UPI_III
9860918PD
Speed
UPI_I_2
UPI_II_2
No Response
No Response
Chamber 2
UPI_I_1
UPI_II_1
No Response
No Response
Chamber 1

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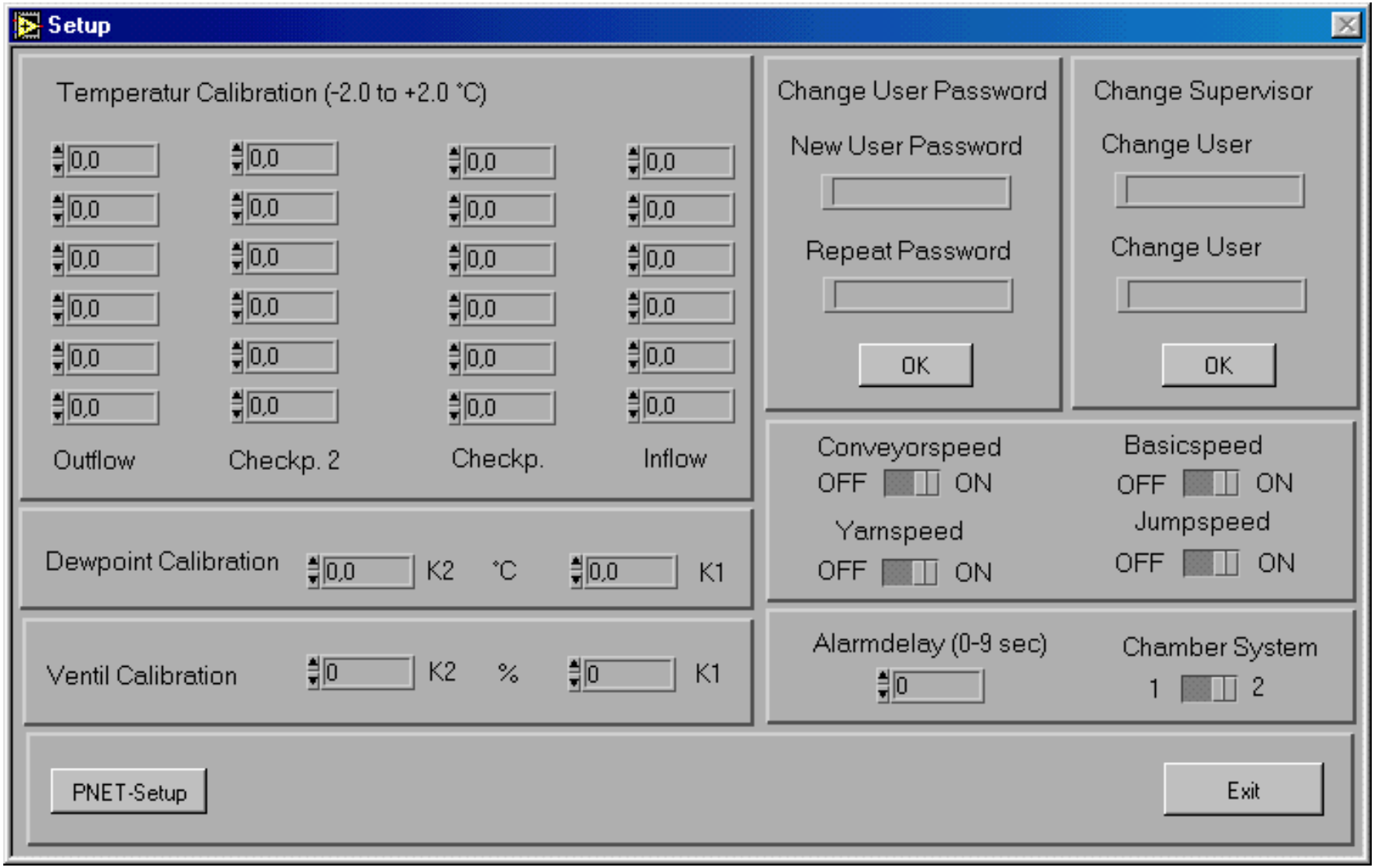

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