saia-burgess

Smart solutions for comfort and safety

Special edition

This time we wanted to do something different. Instead of writing about new products and technologies, we have dedicated this edition of Controls News entirely to the work of our customers. We want to document, in 5 languages, the wonderful and exciting things, which our customers are achieving through our PLC based Saia®PCD technology. This has produced a panorama of applications, which show just, which market sectors, we as a company are focussing on.

We have written about our market focus in many publications since the end of 2002. We have talked about „Processing Controls“, and use this term to describe controls used for series production machines and devices in industrial production processes. We have introduced the term „Infrastructure Automation“ because this is something which is not covered by the traditional terms used in industrial and building automation. It covers parts of both these traditional worlds of automation, and much more which lies between them.

The precise centre of the Saia®PCD product range lies at this point in the transition from the terms traditionally used in automation. Our strength lies where there would otherwise be a gap. From this position we can grow in both directions, and - particularly in industrial automation – we are very successful in winning selected interesting projects even against the local large players in the market.

Our PLC based technology is innovative and future-oriented – and so is our market position. The renowned market research institute ARC Advisory Group (www.arcweb.com) certainly shares this opinion. What is written there is described, as put into practice in many applications, in the following 15 pages. ●

Jürgen Lauber, Divisional Manager

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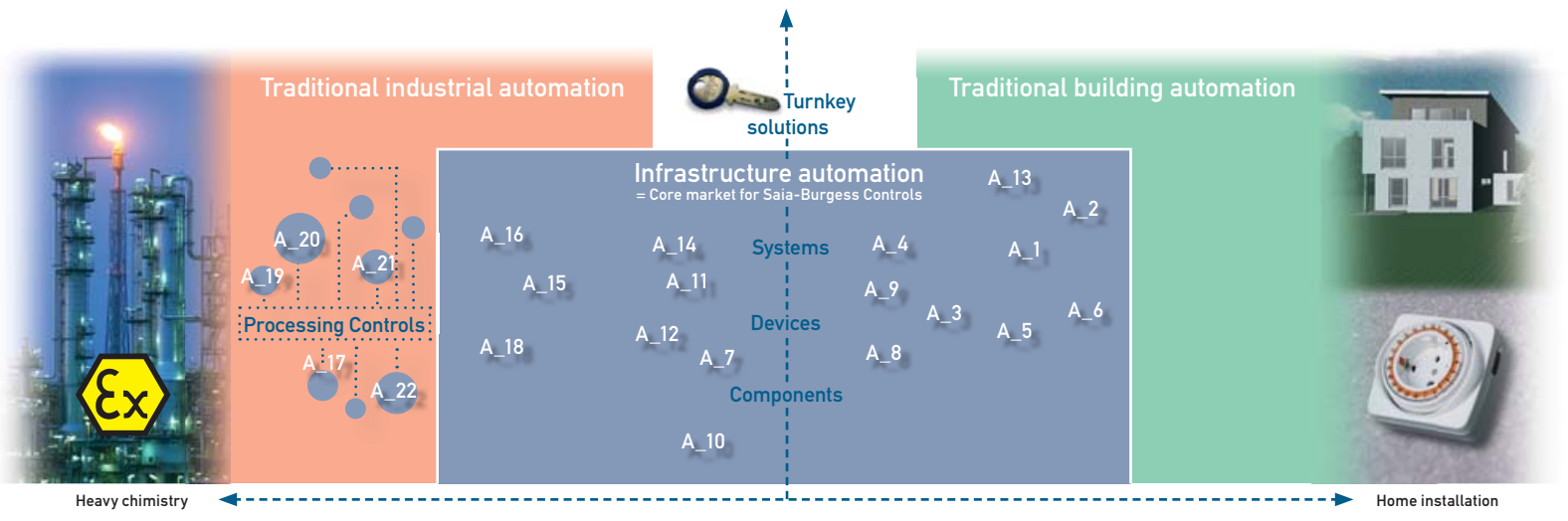


A_XY = number of the application in this edition

A_1

Smart HVAC technology in the Sälipark 2000 complex thanks to powerful communications offered by Saia®PCD2

The Sälipark 2000 centre in Olten has 18 shops, a doctor's surgery and premises for schools and offices. The key idea was to provide „consumer stores, services, education and health under one roof".

Renergy AG's motto when designing the building technology was for maximum energy efficiency combined with minimum overall costs. Both these aims were substantially achieved: for example the building automation means that operation is low-cost and done largely without the involvement of operating staff.

Saia®PCD2 forms the heart of the automation technology, networked via Saia®S-Bus and Ethernet-TCP/IP with the building management system. MP bus technology with interfaces to the Saia®PCD2 was used for all Belimo drives.

The opportunity for complete remote control via Ethernet-TCP/IP up to the field bus, together with the choice of ribbon cable installation, led to significantly reduced investment in installation and testing, and a much shorter commissioning time than would normally be expected ●

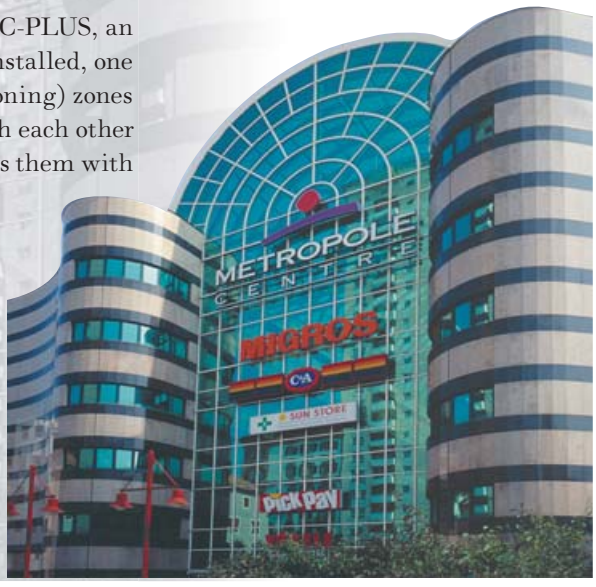
A_2

Saia®DDC-PLUS optimises energy consumption at the "Metropole Centre"

MIGROS AG opened the "Metropole" shopping centre in La Chaux-de-Fonds, Switzerland in 1993. The centre was conceived on a grand scale and has a gigantic central hall, 4 basement levels and 6 upper floors.

As early as 1998 Commande SA was awarded the contract to renew the out-of-date building automation, the main aim being to substantially reduce the high energy demand.

The solution for this challenging project was called Saia®DDC-PLUS, an integrated control system. Altogether 46 Saia®PCD2's were installed, one for each of the 45 HVAC (heating, ventilation and air-conditioning) zones and 1 for use as a master gateway station. They are linked with each other via the Saia®S-Bus, whilst the master gateway station connects them with the COVISION 2.1 guidance system.



The most important argument in favour of choosing Saia®DDC-PLUS was the significantly greater accuracy in regulating the heating and cooling temperatures, leading to the achievement of the required energy savings and associated cost reduction. The modernisation was successfully completed at the end of 1999. Thanks to the high degree of reliability of the Saia®PCD-controls, there have been no technical disruptions of any kind since then ●

Hospital „Clinique des cèdres à Brive", France

Responding to very strong market demand, the company ATYS Concept has developed a standard solution for the HEAVAC field (heating, ventilation, air conditioning).

Under the name of «ATYS BAT», it controls and regulates small to medium-sized HEAVAC installations. The solution integrates products from different manufacturers. Communication is possible between them. Implementation is quick and easy. ATYS chose BELIMO (actuators and valve motors) and Saia-Burgess (Saia® PCD programmable controllers, which have very powerful communications capabilities). The MP bus network enables products from these two companies to communicate with each other.

Application: Management and control of air-conditioning in 13 operational blocks. Each block is independent and equipped with an interactive terminal, which displays temperatures, humidity and any faults. Each controller is fitted with four MP bus couplers, allowing 4 × 8 regulating devices. This simplifies implementation and maintenance, because each element is permanently self-regulating.

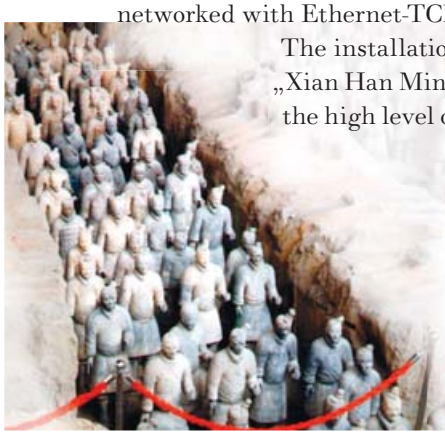
The controllers themselves are in a network, enabling us to check errors throughout the installation from any of its stations. This is the first time that architecture of this type has been used in France ●

A_4

Saia®PCD serving the terracotta army of Qin Shi Huang Di

Often called the eighth wonder of the world, the terracotta army of Quin Shi Huang Di is one of the most-visited tourist attractions in China. The army, which consists of more than 8,000 life-sized terracotta figures (warriors, horses, chariots etc.), today attracts tens of thousands of visitors from all over the world each year. The tourist infrastructure must therefore offer the best possible level of comfort.

Saia®PCDs play an important role in this, since they control the ventilation and air conditioning installations and thus the whole energy management system in the visitor centre. This modern control system consists of several Saia®PCD2.M170 units networked with Ethernet-TCP/IP co-processor modules.



The installation was entirely engineered and installed by our local partner company „Xian Han Ming M&E Equipments Ltd“. This is just one of many examples which show the high level of competence of our partners and systems integrators around the world.

Saia-Burgess Controls greatly values its international presence. Our partners operate in more than 40 countries in all 5 continents. Their ability to provide training, technical support and service, plus the rapid availability of replacement parts, are of great importance to companies who include Saia® products in their machinery and equipment which they export throughout the world ●

A_5

PCD2.M250 BACnet for optimum communications

At the end of 1991 Berlin became the capital of the Federal Republic of Germany and seat of the country's national parliament. In order to create optimum working conditions for the party groups and members of the federal parliament, a number of new buildings were needed (one example is the new office of the federal chancellor). Conversion work also had to be carried out on several government and ministry buildings which dated from the period of the DDR rule in eastern Germany.

The control and regulation of the technical plant used for the heating, ventilation and cooling of these properties is made using DDC systems from a number of different manufacturers. A neutral bus system was needed for networking and for connecting to the central building control services. Practical considerations led to the selection of BACnet.

As part of this, „Dieter Hein GmbH & Co. Regelungstechnik-Service KG“ a Berlin company, carried out the connection of the heating installation in Dorotheenstrasse. 93 to the central control system in the Reichstag (home of the federal parliament) with a sub-station and using Saia®PCD2.M250 BACnet/IP with up to 500 BACnet data points.

The PCD2.M250 was selected because of its modular system structure and its open programmability, since this keeps open the possibility of adding further connections later on. The problem-free commissioning and fault-free operation up till today emphasise the fact that a control system from Saia-Burgess means that you always have an excellent service, even in the most difficult situations ●

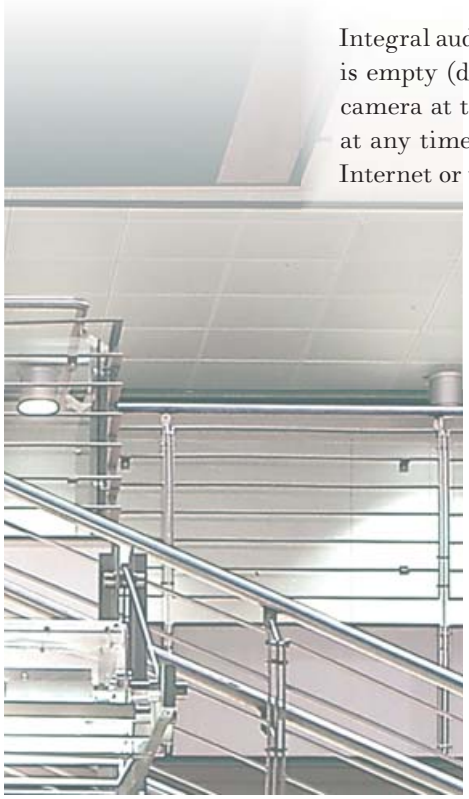
Intellihome®
based on the Saia®PCD

Intellihome® constructed a show home in Graz which has comprehensive building automation. Every conceivable function in the 900 m², 3-storey building is controlled by a PCD2.M487 - via decentralised remote I/Os PCD3.T765 - from Saia-Burgess.

Particularly worth mentioning is the fact that the lighting, roller blind and Venetian blinds can all be adjusted to a percent of accuracy and the heating control offers every conceivable comfort, with individual temperature control for each room and swimming pool control.

Even the basic version of Intellihome® includes an alarm system with 4 alarm zones and up to 100 detector groups. Any attempted break-in is recorded and stored together with the precise date and time. Entry to the building is only possible with a special card. The house control sends a report of any attempted misuse to the responsible person. by SMS.

Integral audio and video is also possible with Intellihome®. If the house is empty (during vacations for example) the recordings made by the camera at the entrance are stored on the server and can be called up at any time. All the functions can be called up and operated via the Internet or via GSM.



The 182 switched outputs and 352 digital inputs required for this show property were installed using standard material, combined via Intellihome® multisensors to PCD3.T765 remote I/Os from Saia-Burgess and connected via PROFIBUS to a Saia® PCD2.M487. The remote I/O can be programmed via plug-ins, and is able to process the data from up to 32 Intellihome® multisensors. The multisensors each have a high-precision temperature sensor, a brightness sensor and an infrared input for remote control. These allow individual and group switching functions to be activated either by control buttons or by remote control. The installation can be operated from a graphical display terminal or through the visualisation. These allow any necessary adjustments to be made to the switch logic ●

A_7

HANSA uses Saia®PCD to provide a good climate

Air is our most important basic need. In 60 years we consume „only" around 90 tonnes of food and drink, but more than 300 tonnes of air. We choose our food and drink ourselves, but we have to breath in the air as it is.

We spend the greater part of our lives in enclosed spaces. Whether we feel comfortable in these depends mainly on the quality of the air. This is determined by factors such as temperature, humidity, air pressure, air currents, and the amount of oxygen and pollutants in the air. Ventilation and air-conditioning installations have to reconcile all these factors on our sense of well-being.

HANSA has a broad range of modular-based products for ventilation and air-conditioning installations. This allows it to offer the optimum solution for each room, both economically and in terms of air technology. This is achieved by means of flexible control systems with open interfaces for integration with the local building management systems.

HANSA has been using Saia®PCD1 and Saia®PCD2 to control its installations for many years. The current high point is an OEM customer version („Customised Solution") for compact air conditioning units which is based on the PCD1. These air conditioning units are being supplied in large numbers for example to the Deutsche Telekom, where they are used to cool the computer rooms of their telephone

„Customised Solutions" involve the use of standard PCD know-how, packaged and reduced to the maximum essential, customer-specific level.

HANSA uses the proven standard Saia®PCD for complex installations such as those used to dehumidify swimming baths or in the air-conditioning of operating theatres in hospitals ●

Wir nennen dies Smartcontrols The Ultimate with PLC based Control

A_8

Saia® PCS1 now also used in KWT standard heat pumps

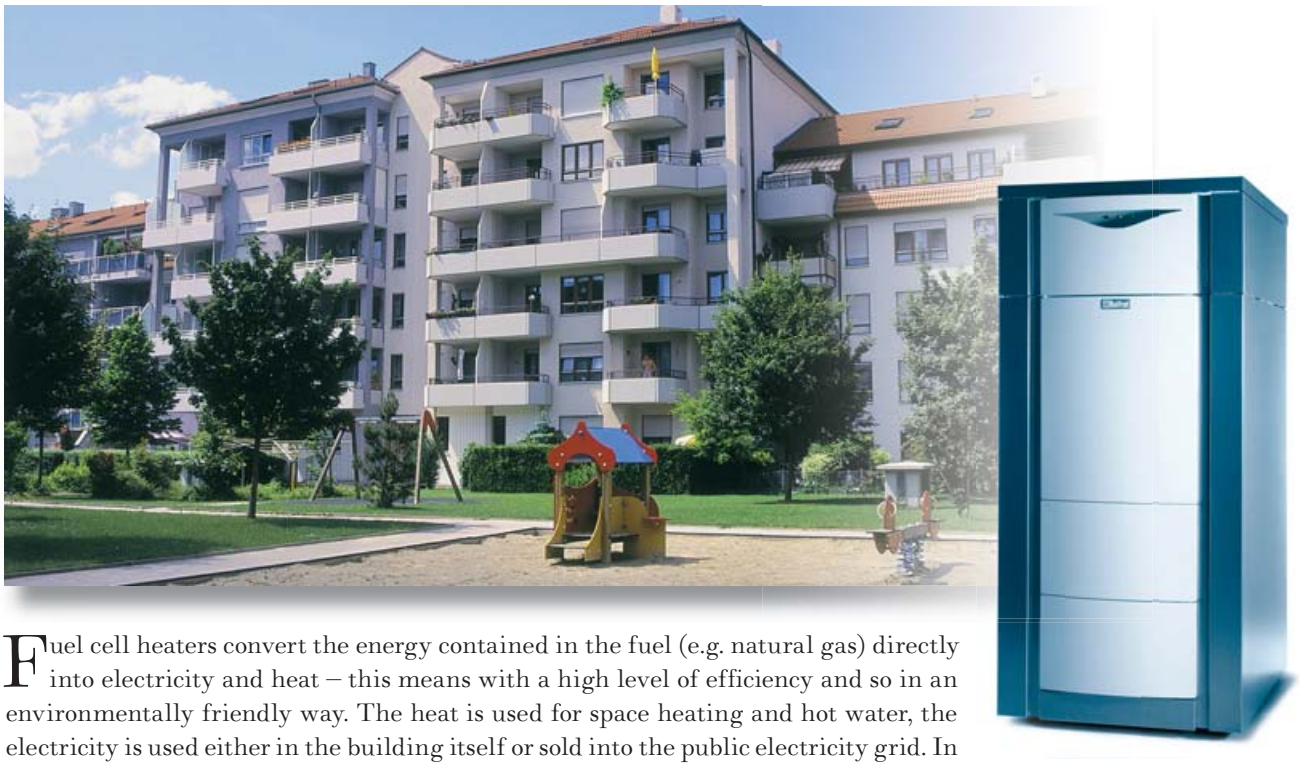
Heat pump controls developed by KWT have a long tradition. They have been used up till now in KWT's standard heat pumps. Whilst KWT has been using Saia®PCD in larger installations for some time.

Around the middle of 2002, KWT decided to develop the new controller generation „KWT Matic4000" for standard heat pumps, basing it on the Saia®PCS1. Important factors in this decision were the substantially reduced development costs, time savings, the standardisation of the development environment, remote access and remote maintenance for the installations, and – last but not least – the good level of support.

The initial experience with the Saia®PCS1 exceeded all expectations. At first it was a difficult decision for KWT to abandon their own successful development in favour of a production model. However the flexibility and user-friendliness of the Saia®PCS1 means that the „KWT Matic4000" controller has become a more than worthy successor ●

Saia®PCD controls the power station in the cellar

There are considerable market opportunities for heat and electricity from fuel cells. Their development is being pushed ahead by almost all manufacturers of heating systems. Fuel cell technology is expected to become ready for the market by the middle of this decade. It will lead to permanent changes in the heating and electricity markets.



Fuel cell heaters convert the energy contained in the fuel (e.g. natural gas) directly into electricity and heat – this means with a high level of efficiency and so in an environmentally friendly way. The heat is used for space heating and hot water, the electricity is used either in the building itself or sold into the public electricity grid. In this sense, every home owner will operate his or her own power station.

Photo: Vaillant GmbH

Photo: Vaillant GmbH
fuel cell heater in a field test under normal working conditions

Saia®PCD are already being successfully used in these innovative devices. The „Customised Solutions“ concept based on the PCD standard technology has more than proved its worth in ongoing field tests. It has also allowed sensitive cost and quality targets to be met for the expected high unit volumes ●

Networkability plays a deciding role here:

- integration with the local building automation
- remote access by the energy supply company
- remote access by the manufacturer to allow for maintenance and servicing

A_10

Saia®Smart7 in drinking water-purification plants from Alldos

Drinking water purification plants from the German company Alldos are available in a range of sizes and variations. They are used in larger building complexes such as hotels, and in industry. For larger installations Alldos uses SPS controllers. Up till now, for reasons of cost, in small installations they used a controller which they had developed themselves.

As part of a product redesign, Alldos decided to use an SPS for small installations.

By using a Saia®Smart7 SPS kernel, Alldos was able to substantially reduce development time and minimise costs and risks. Of particular importance was the fact that Alldos was able to concentrate on its own extensive know-how in process and measurement technology, and to bring this into play in an optimal way.

Saia®Smart7 has really paid off for Alldos:

- no cost-intensive development of a new CPU board with communications firmware and no maintenance costs for it
- shorter development time, quicker time-to-market
- permanent control over deadlines, costs, risks and quality
- concentration of resources on the company's own know-how in process and measurement technology and thus on the competitiveness of the solution
- standardised solutions for all drinking water purification plants with flexible software tools ●

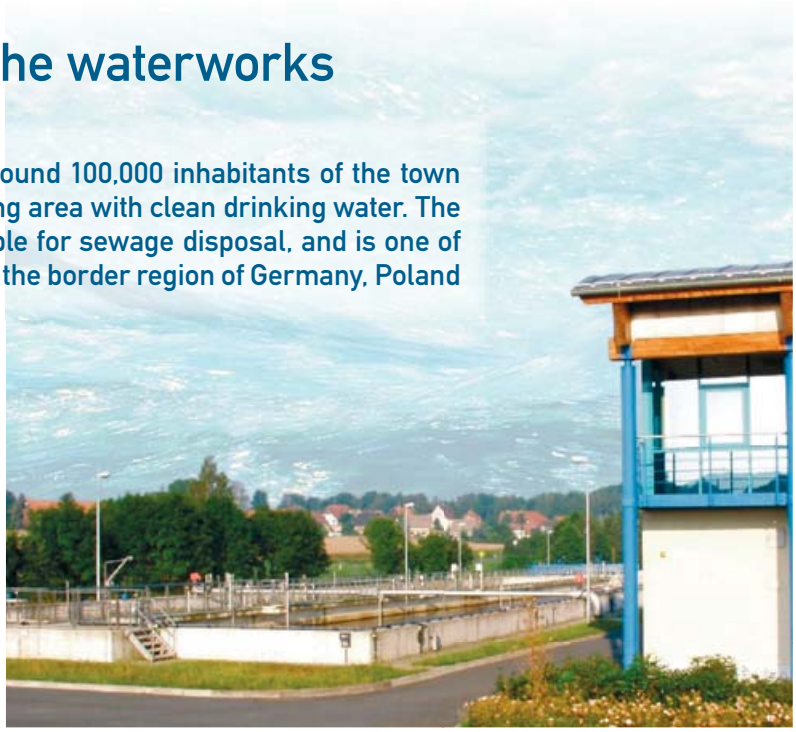
That is what we mean by Smartcontrols – The Ultimate with PLC based Control

A_11

Saia®PCD in the waterworks

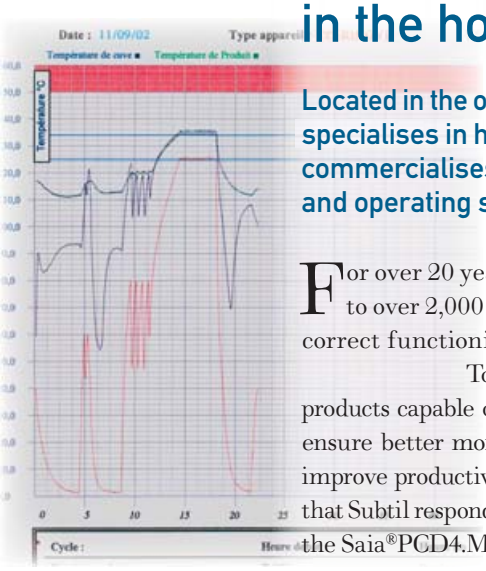
„SOWAG mbH" supplies around 100,000 inhabitants of the town of Zittau and its surrounding area with clean drinking water. The company is also responsible for sewage disposal, and is one of the largest waterworks in the border region of Germany, Poland and the Czech Republic.

The drainage system includes a 631 km long sewer network with 18 treatment plants and 82 sewage pumping stations. Saia®PCDs are used in the works as self-contained controllers. They are mostly connected to the higher-level control system via Ethernet-TCP/IP. Due to infrastructural conditions, some use is also made of GSM modems ●



A_12

Subtil-Crépieux, the specialist in hygiene in the hospital environment



Located in the outer suburbs of Lyon, this company, created in 1929, specialises in hygiene in the hospital environment. It designs and commercialises sterilisation materials, stainless steel furniture and operating suite equipment.

For over 20 years now, this company has entrusted part of its prestige to over 2,000 Saia®PCA and Saia®PCD controllers, which ensure the correct functioning of its sterilizers in clinics and hospitals worldwide.

Today, demand is moving towards increasingly sophisticated products capable of communicating with hospital management systems, to ensure better monitoring of the sterilisation phases and at the same time improve productivity and safety. And once again, it is with Saia® controllers that Subtil responds to this demand, by means of a new product equipped with the Saia®PCD4.M170 with an Ethernet-TCP/IP interface called Sterninove.

The flexibility of the automatons has made it possible to satisfy, without supplementary material, another important demand made by operators: the printing of curves of the sterilisation process monitoring on A4-size sheets with greater precision and no longer on paper strip.

Printing must be carried out in the background without interfering with the sterilisation process and in less than 4 minutes. Our engineers, in collaboration with the specialist from Subtil, have developed a curve print-out program in C language for an inkjet printer using the PCL3+ standard, which they have directly integrated into the firmware of the automaton ●

A_13

Multi-protocol communication: Saia®PCD2.M170 in a high-tech centre

Saia-Burgess Controls provides the management for the air conditioning installations in the „Biopolis“ data centre in Singapore - the leading research and development centre (R&D) for bio medicine in Asia. Biopolis is located close to the „National University of Singapore“, the „National University Clinic“ and the „Singapore Research Park“.

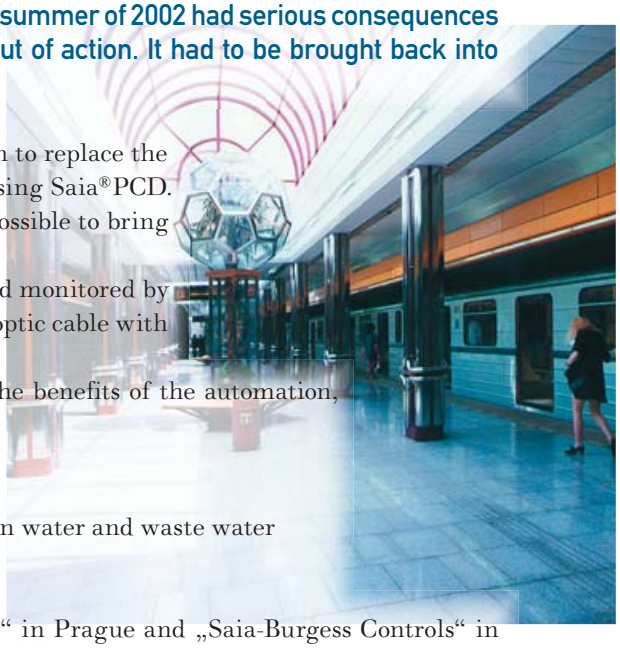
The computers in the data centre need stable environmental conditions. These are provided by 34 air conditioning units with integrated ventilator motor controls. The higher-level control is made using 5 Saia®PCD2.M170 units, which communicate with each other using a proprietary protocol. The Saia®PCD2 communicate with the ventilator controls using the Modbus protocol.

To allow remote control, all the PCD2.M170 units are connected via LONWorks to the estate management system. A touch screen terminal type PCD7.D771 is connected to each PCD2.M170 to allow local operation. The executing company, C&I Technologies (S) Pte Ltd. decided to select the Saia®PCD2, because of its excellent ability to handle multiple protocols ●

A_14

Saia®PCD controllers help the Prague Metro beat floods

The catastrophic floods which affected much of central Europe in the summer of 2002 had serious consequences for the Prague Metro. Almost the whole control system was put out of action. It had to be brought back into operation as quickly as possible.



Fortunately in 1992 Prague's „Metro Railway company" had begun to replace the old control system with a state-of-the-art, decentralised system using Saia®PCD. Once the flooding was over, with the help of these controllers it was possible to bring the system back into operation relatively quickly.

Today the Metro's 51 km track network is controlled and monitored by more than 100 Saia®PCDs. These communicate by modem and fibre-optic cable with an operational and control centre.

Now more than 2 million passengers each day enjoy the benefits of the automation, through:

- guaranteed fresh air supply in stations and tunnels
- ventilation and air conditioning
- automatic control of pumps which remove infiltration water and waste water
- monitoring of passenger escalators and lifts

During the flooding the two companies „Industrial Control Services" in Prague and „Saia-Burgess Controls" in Switzerland gave a convincing performance, not only through their professional work but also through a real spirit of solidarity. Excellent international cooperation and the flexibility of a modern control system saved the day in this „race against time". The comfort and safety of the Prague Metro are once again back at a top level ●

A_15

Saia®PCD for Web based control and maintenance of 750 kW generators

From its very beginnings, the company AUTOMAZIONI ELETTRICHE has been noted for its engagement and research into advanced systems in the field of control and automation.

This spirit of continuing research, the know-how of its technical experts, the long and extensive experience gained in a wide range of applications, and in close cooperation with Saia-Burgess, whose PLC we have been widely using for many years, have given rise to one of the first web server applications for the control and management of a co-generation group of 750 kW.

All the web pages, which relate to the management, command, fault detection and formulation of operational data can be called up from any PC which has a standard browser such as Internet Explorer, Netscape Navigator or other. In consequence there is no need for the on the spot presence of an operator to allow operation and interaction act with the installation ●

Safety system for travelling cranes with Saia®PCD2.M170

In response to the decree of 2.12.1998, the company Paradia has perfected an anti-collision system to ensure the safety of automotive mobile equipment on rails. The development of this system, based on the calculation and communication performances of the Saia®PCD2.M170, aims to reduce and even eliminate the risk of serious accidents suffered by people working in the environment of this type of mobile equipment.

The anti-collision system is designed to authorise, limit or prohibit the movement of the crane, the direction of the carriage and the elevation height, depending on the situation and the obstacles present.

Thanks to Paradia's experience in this area, it was possible to integrate functions improving the input of the data necessary to ensure the safety of crane movements in industrial buildings. For example, prohibited or protected areas (such as pedestrian corridors) can be entered manually or by learning. In the future, the possibility of extending classic mimic displays by means of graphic display will undoubtedly give the crane operator a better overall view of the movements of cranes.

By basing the system on the knowledge of the position of the cranes in an autonomous manner (each crane has its own incremental sensor on the engine shaft) as well as on radio communication, Paradia has designed a highly-evolutionary product capable of offering multiple possibilities in the future.

For example, it will be possible for the systems to dialogue with each other, by connecting them to the company's intranet connection, thanks to the Ethernet-TCP/IP options of the PCD2. M170 controller and the OPC server for the computer part. It will be possible to configure and supervise all the cranes from a remote command post. And, finally, it will be possible to perfectly integrate the system into the automatic production management ●

A_17

Dynamism and precision with Saia®PCD controlled vertical presses

This, in brief, is the approach which makes OMF Turra stand out. The company is a specialist in the production of vertical presses intended for the injection printing of thermoplastic technopolymers using inserts.

The company is based in Bergamo (Grumello del Monte- BG), and is characterised primarily by its ability to respond to special and complex requirements, through skilled and focussed solutions developed in partnership with its customers. A know-how which is based on long and extensive experience.

O.M.F. Turra has been controlling its own machines using Saia®PCD since 1984. These units were selected for their reliability and for the advanced solutions which they offer: characteristics which, combined with considerable experience in programming, have led to excellent results ●

A_18

Saia®PCD controls the KUPA short rod feeder

KUPA's „SERVO FEED" is the leader in short rod feeders. This is the first time that a 3-axis servo drive has been used for this purpose. This new KUPA product guarantees uncompromisingly accurate control, and a new, low-noise rod separation.

The „SERVO FEED" can be easily integrated into the materials logistics of the production process. The control and regulation technology in this new generation of feeders was developed using the PCD2.M127 from Saia® and with Stöber's FAS 4008 (frequency converter).

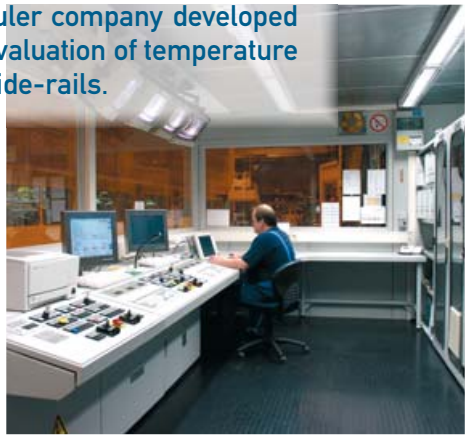
In order to reduce downtime the new „SERVO FEED" is offered with optional visualisation of the error and diagnostic data information via an Intranet or Internet (web server), and with error messages transmitted via SMS.

The main factors influencing the decision to choose the Saia®PCD2.M127 were KUPA's available STEP®7 know-how, the link to Sinumerik via MPI and the professional support provided through Saia-Burgess during the pilot phase ●

Saia®PCD for the preventive monitoring of Schuler Presses

A_19

Seeking a substantial increase press operating times and to prevent machine breakdowns, the Schuler company developed a procedure for the rapid capture and evaluation of temperature rises in big-end bearings and tappet guide-rails.



The first version made use of a Saia®PCD4 with W500 analogue modules, a data logger from Uhlemann Software Engineering and an EXOR terminal with integrated IPC.

Altogether 16 envelope curves were programmed. These monitor, independently of the absolute temperature (gradient) the increase in value of all 16 individually adjustable sensors and the current maximum value of each data point (between 45° und 65°C).

The operator is immediately informed if a limiting value is exceeded. This means that a mechanical overloading of the tappet guide-rails can be avoided. The entire temperature process is documented in two databases, which allow the program to evaluate the preceding twenty minutes.

Systems with the Saia®PCD4 have been successfully used e.g. in a well-known company in Brazil and in an automotive plant in Germany.

Development work on a system based on the Saia®PCD2.M480 is currently under way. The new system will additionally monitor the pressure forces and, should mechanical overload occur (e.g. tool knock-outs, big-end bearings from tappets) will switch off the press within a few ms ●

IDEA: Machines for diamond tools with Saia®PCD

A_20

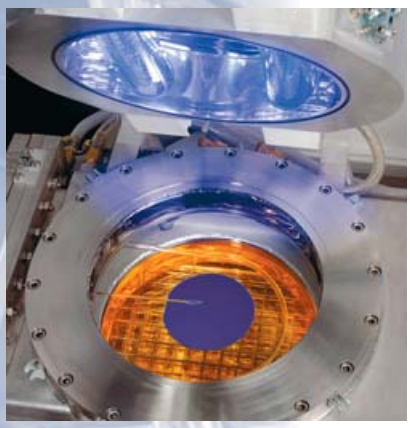
„IDEA" is a company which grew from the enthusiasm of a group of experts, whose aim was to construct high-quality machines, technologically up-to-date, with outstanding performance levels and with a user-friendly and logical man/machine interface which uses touch screen operating terminals.

After a careful analysis of the market for PLCs, IDEA decided to select the Saia®PCD2 series for its undoubted qualities, the efficient technical support, and last but not least, for the price: a combination which is not found elsewhere. The company logo, Machines & Maintenance, accurately reflects its aims: the construction of top-quality machines and a rapid response, anywhere in the world, immediately problems or difficulties arise, thanks to standard modem connections for tele-support ●

A_21

Manufacture of semi-conductors with Saia®PCD

JIPELEC is an SME with 50 employees, based in Grenoble. It has over 15 years experience in the construction of RTP and RTCVD machines (Rapid Thermal Processing or Rapid Thermal Chemical Vapour Deposition) for the manufacture of semi-conductors.



With turnover of over 4 M Euros, a rapidly expanding activity and cutting-edge know-how, it faces the future with optimism. Since its origins, Saia-Burgess has been the privileged supplier of JIPELEC. From the PCA to the PCD2.M170, Saia-Burgess has always anticipated and responded to the required technical developments. (Memories, cycle times and communication capacity) For example, the JetStar, which is equipped with 3 PCD2s linked by S-Bus and to a PC.

1 × PCD2.M150 with analogue I/O modules controls and commands the temperature sensors via a serial link.

2 × PCD2.M170 with digital and analogue I/O modules. They control and command the gas sensor, the turbo-pump, the regulator, the pressure sensors and the rotation of the motors via serial links with a proprietary protocol ●

A_22

Saia®PCD for the production of electric motors

Since 1989 CO.MA.S. has been a leading company in the design and production of a wide range of machines suitable for the construction of electric motors.

CO.MA.S. has always installed Saia®PCD on its own machines, a solution chosen to obtain the maximum level of reliability and performance over time. Particularly valued are the significant communications abilities of the PCD2 series. Their ease of use and the large number of serial ports present on the CPU allow a secure and dependable interface to be made with the instruments on board the machine ●

Exhibitions

31.8.-03.9.04
go automation days
Basel, Switzerland

14.9.-17.9.04
Bias
Milano, Italy

28.10.04
Fieldbus & Networks
Centro Congressi
Fiera di Vicenza, Italy

04.11.04
Fieldbus & Networks
Ancona Congressi
Fiera di Ancona, Italy

1.-5.11.04
Het Instrument
Utrecht, Netherlands

23.-25.11.04
SPS/IPC Drives
Nürnberg, Germany

6.-10.12.04
elec life
Paris, France

Workshops Hungary

22.-23.9.04
The subjects depend on the interests of the participants
Budaörs (in their office), Hungary

20.-21.10.04
The subjects depend on the interests of the participants
Budaörs (in their office), Hungary

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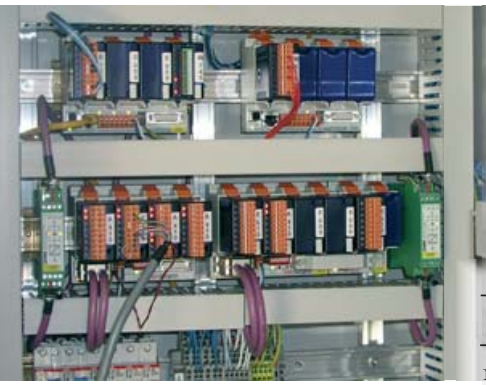
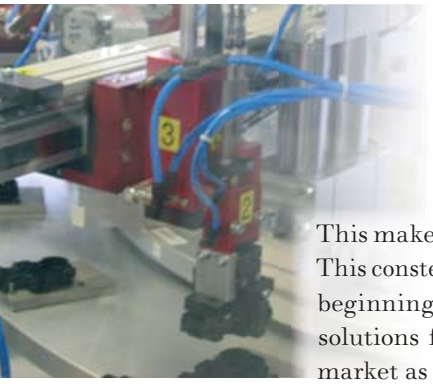
Own **experience**

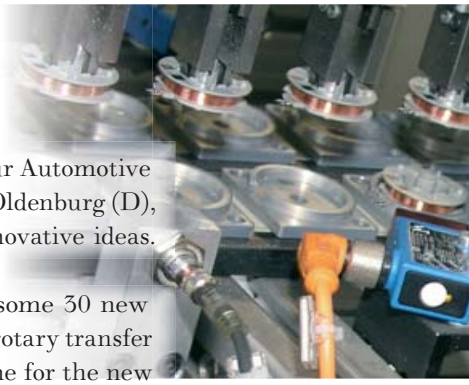


The Saia-Burgess Group produces 165 million switches and 30 million drives each year. Saia-Burgess has 13 production sites, which together have more than 3000 employees.

In this business it is no longer possible to be successful unless you have a high degree of automation. The rapidly operating production machines need effective controls, particularly for the assembly and testing processes, and this calls for an automated production infrastructure. Our employees want to feel comfortable at their work, and they appreciate a good building automation.



This makes Saia-Burgess itself a large customer for Saia®PCD products. This constellation has been very useful and important to us since the very beginning of Saia® control technology. We can try out the automation solutions for ourselves, although we do not present ourselves to the market as a solutions provider.



In the pilot testing for new products and technologies, our Automotive Division in particular, with its factories at Murten (CH), Oldenburg (D), Oszd (Hu) and Hatvan (Hu), is always very open to innovative ideas.

For example, at the beginning of 2003 some 30 new PCD3.Txxx remote I/O headstations were used for a new rotary transfer machine. The Automotive Division was again first in line for the new Saia®PCD3.Txxx CPU. As early as 6 months before sales release the production of micro-switches in Hatvan (HU) was already being controlled by 8 Saia®PCD3.Mxxxx without any disruption.

We want to use this page of Controls News to thank those of our colleagues in the Saia-Burgess Group who help us to test and continue to improve Saia®PCD products and technologies in practice for our customers ●

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