

SIDAT

AUTOMATION —
— INFORMATICS

COMPREHENSIVE AUTOMATION

COMPREHENSIVE AUTOMATION

PRODUCTION INFORMATICS

INTEGRATION PROJECTS
AND INDUSTRY 4.0

CUSTOMER CARE

SIDAT spol. s r.o. (Ltd.) was established in the spring of 1990. To this day, it is fully owned by Czech nationals. **In 2020**, the company commemorates **30 years of its existence**. It employs almost 100 people and reaches a turnover of a quarter billion Czech crowns.

Over the past **3 decades**, we automated processes and supplied informatics projects for production technologies exceeding **CZK 30 billion** in the Czech Republic alone. Today we have **300 current customers** and the total number of implemented projects **exceeds 3,000**.

Many of these projects represent top achievements in terms of the desired effects, scope or speed of implementation and represent **the best in the given field**, even at the **international level**.

Branches in **Prague** and **Brno** currently provide services and deliveries in four main areas, which are mutually interconnected:

COMPREHENSIVE AUTOMATION

PRODUCTION INFORMATICS

INTEGRATION PROJECTS AND INDUSTRY 4.0

CUSTOMER CARE

COMPREHENSIVE AUTOMATION

The focus of activities in this area is mainly in the production of food and beverages, production of building materials, in chemical and pharmaceutical industries, in machine building, in the automotive and wastewater treatment.

The comprehensive automation projects comprise in the full scope:

SUPPLIES

- ▶ electrical supplies including switchboards and cabling systems
- ▶ measurement and control components
- ▶ computer and communication hardware
- ▶ application software for process and HMI/SCADA visualisation level

ENGINEERING SERVICES

- ▶ assembly and installation works
- ▶ commissioning performed in the end-user environment
- ▶ staff training
- ▶ after sale 24/7 maintenance and other support within our CUSTOMER CARE programme
- ▶ project management

In the following text we present in brief the characteristics of some solutions for selected production branches.

On page 11 you will find the summarized information concerning the customer support which we, within the scope of our CUSTOMER CARE programme, provide in connection with the implementation of automation projects.

BEVERAGES PRODUCTION

Production of beverages represents one of the main segments of our market activities.

We have been dealing with the control and monitoring of the alcoholic as well as non-alcoholic beverages production, from the production start up to filling. In beer production we solve raw material preparation, automation of boiling process as well as complex control of the cold block incl. filtration, BBT's and HGB. We manage also the pasteurization and filling of beer and non-alcoholic beverages into bottles, barrels or tins. We monitor the quality parameters of single machines and trace the production lines effectiveness incl. calculations of OEE and energy consumption.

We solve control tasks using **Siemens SIMATIC** or **ProLeit Brewmaxx** platforms, monitor the production data using time-proven platforms **AspenTech IP 21** or **GE** combined with **SIDAS® RT/OEE/IEM add-on**.

Among our customers belong the most noted domestic breweries of **ASAHI** (breweries in Pilsen, Popovice, Nošovice), **Heineken** (breweries Krušovice and Starobrnno), **MolsonCoors** (Staropramen, Ostravar), **Breweries Lobkowicz**, foreign breweries **Šariš** (Slovakia), **Bialystok** (Poland), producers of non-alcoholic beverages **Coca-Cola HBC**, **FonteaMattoni** and **PepsiCo** in their factories in the Czech Republic and/or abroad.

FOOD PRODUCTION AND MILK PROCESSING

The raw material receipt and preparation, transport, pasteurization, dosing and mixing, and automated expedition, which includes filling processes, packing, pallets assembling, labelling and handover to the purchaser - these are the basic tasks we deal with in the field of food production and milk processing.

We manage to control the production of the majority of commodities, from solid products as e. g. pastes, biscuits, chips, bread, egg semi-products, across hardened fat and oil up to various milk products.

An obviousity is a tracing option, evaluating the production effectiveness and energy consumption, which might be available as an integral part of all projects.

The used platforms for automation tasks are **Siemens SIMATIC PLC/SCADA** and **Wonderware SCADA**, for production informatics tasks, then **AspenTech IP21** and **GE** platforms with by **SIDAT** developed and in many applications time-proven **SIDAS® OEE/RT/IEM add-on**.

Among our customers belong the most noted foreign and domestic companies and producers, as e.g. **Europasta EU**, **Mondeléz International CR**, **Intersnack**, **Unilever CR**, **Setuza**, **United Bakeries**, **Papei**, **Kostelecké uzeniny**, **Nestlé Česko**, **La Loraine**, **Schreiber Foods/DANONE**, **Madeta** and others.

STONE MINING AND BUILDING MATERIALS PRODUCTION

We have been concerning in the automation of building materials production for almost 30 years. In the course of such time we learned almost all the processes which in this technological branch occur.

In the field of stone and sand processing we control the mining, stone crushers, the belt conveying, sorting according to individual fractions, we store and file the produced products. We take care of complex process control of the entire cement works and lime kilns from raw material transport, across the kiln lines, grinding facilities up to expedition incl. overall quality and effectiveness indicators monitoring. Last but not least we often control the production of final building products, as e.g. bricks, tiles or spongy aerated concrete.

Large projects we deliver to our customers as complete solutions on **Siemens SIMATIC PCS7 CEMAT** platform, smaller projects with **Siemens SIMATIC PLC** platform.

Meaningful purchasers of our solutions are many domestic and foreign companies, especially **Lomy Mořina, Vltavské štěrkopísky, Eurovia Kamenolomy, Českomoravský cement, Xella, Knauf Praha, Baumit, Saint-Gobain Weber, Saint-Gobain Rigips, LB Cemix KVK Kunčice, Bramac, Lasselsberger, Vápenka Čertovy schody, Cembrit, PSP** and others.

GLASS, CHEMICAL AND PHARMACEUTICAL INDUSTRIES

The continual production processes in the glass, chemical or pharmaceutical industries and their subsequent discrete dosing, packing and expedition processes always represent a big challenge in automation projects.

In the course of our activity we were thus confronted with the control of continual processes in glass-melting tank, acid maker, distillation column, pharmaceutical machine and even with the control of the oil and gas extraction. We faced also the control of many discrete processes, as e. g. glass products pressing, glass plates production, fibre drawing and parting, filling, packing and expedition of various products. Some projects comprised as well data acquisition solutions and production data monitoring with production quality and effectiveness evaluation.

As a solution base we utilised in all applications the time-proven automation platforms **Siemens SIMATIC PLC/OP/SCADA, Siemens SIMATIC PCS7** or **Emerson DELTA V** in the automation section, and **AspenTech IP21, Siemens SIMATIC IT** or **SIDAS®** in the production monitoring section.

Our solutions are to be found e. g. in the following domestic and foreign companies: **Unipetrol, Glaverbel, SPOLANA, Lovochemie, SYNTHESIA, Glanzstoff Bohemia, SPOLCHEMIE, SILON** and others.

MACHINERY AND AUTOMOTIVE

Conveyors, manipulators, traversers, lifts, single purpose machines, stackers and stores, production lines - this is the technological equipment which we together with its designers and producers mostly automatize.

We deliver complete automation projects, from the electrical part up to the application SW and its commissioning and putting into operation at the customer site. The optimal control system configuration, both in the logical control by PLC and in the control of drives/servo-drives, we always try to find in a close co-operation with the authors of the respective technological solutions.

The platforms used for the projects are **Siemens SIMATIC, Siemens SIMOTION** and **Siemens HMI/SCADA** visualization systems. For production monitoring and production/manufacturing process optimization we apply the **SIDAT** platform **SIDAS® CNC/OEE**.

Our solutions are to be found in all industrial sectors, both at leading inland and outland companies. For all we can mention: **Škoda Auto/ VW, TPCA, KERMI, KRONOSPAN-XYLO, ALLTUBE, JTEKT, KOYO, AUTONEUM, TRW, Faurecia, Carrier, Assa Abloy, MAGNA, Grammer, AAH** and others.

APPLICATIONS FOR LIVING ENVIRONMENT

We cannot ignore the living environment in our work. We realize that the quality of projects focused to this sphere influences our life eminently.

We deliver the control systems for waste water cleaning and garbage disposal. We control and monitor industrial and potable water supplies, automatize the cold and warm production for industrial factories. In all these projects we in preference deal with the optimization of the production units and their energy demandingness. A part of our solution is also the information passing and operational parameters reporting, related to controlled technologies, towards facility pursuer and environment supervisory institutions.

In vast projects we apply the reliable control systems based on **Siemens SIMATIC PCS7** or **Emerson DELTA V** platforms, smaller projects utilize the **Siemens PLC/OP/SCADA** platform. The monitoring tasks solutions are based on **AspenTech IP21** platform (vast projects) or on the platform **SIDAT SIDAS®** (in case of smaller applications).

Our customers in this field are the biggest municipal companies which secure the waste water and garbage liquidation in the capital city Prague (**ÚCOV Praha** and **Spalovna Malešice**), the potable water supplier for city Prague (**Vodárna Káraný**) and the industrial waste water cleaning facilities within the noted Czech breweries (**Plzeňský Prazdroj/ASAHI, Krušovice/Heineken**).

THE UNIQUE PROJECT

Hereby is the project of the New Water Line for ÚČOV in Prague. The goal was to secure the waste water cleaning process control for 1.6 Mio inhabitants of the capital city and reach the values which will respond the EU norms.

For the control of this very complex NWL technology we used the platform **Siemens SIMATIC PCS7**. The control system which we designed and carried out controls all processes from dosing of chemical substances for silt coagulation, across the operation and monitoring of every equipment, up to data acquisition. The technology comprises a big fleet of various drives and pumps, the flow-rates of which watch almost two hundred field instrumentation components – flowmeters, level meters, barometers and thermometers Sitrans. We built up a control system embodying 80 HMI screens, 3.500 working objects, 5.000 archived analogue values, 6.500 HW I/O signals and 6.000 communicated signals. The field operators have for their disposal portable tablets, which enable to control the particular site equipment by using its scanned QR code and the web client without necessity to come back to the central operator PC. This special wireless application was developed by SIDAT.

Moreover, there are several **Siemens SIMATIC** based control systems in the NWL facility, which command e. g. the edifice air conditioning, silt centrifuges, superchargers or electrical energy switching stations.

The use of SIDAT know-how and their implementation experience together with the superior SIMATIC platforms thus significantly contributed to the origin of a remarkable aqua-culturing work, which rightfully serves the honour of the capital city Prague.

CUSTOMER CARE

In connection with the provision of the comprehensive automation projects we offer within the **CUSTOMER CARE** programme to our customers a wide range of supplies and services. This support comprises mainly:

SUPPLIES

- ▶ computer HW and standardized SW, electrical systems and field instrumentation components
- ▶ spare parts – using our own warehouse and e-shop

COURSES AND TRAINING

- ▶ standardized and specialized courses and training for customer's operational and maintenance staff who care for the automated production systems as well as for the production management personnel. Courses and training take place in the SIDAT training centre.

24/7 COMPLEX SERVICE

- ▶ complex service both in the warranty and after-sale periods. This service is provided by company's specialized Service centre. The individual service from the complete set we can perform either on the basis of a project contract agreement (in case of the warranty period) or based on a service contract (in after-sale cases), in case of urgency also based on ad-hoc agreements.
- ▶ generally, the following three level approach to the failure removal is routinely applied:
 - removal by the trained automated system operator with the phone SIDAT support
 - removal by the qualified SIDAT intervention to the customer application via VPN
 - SIDAT specialist on site intervention in cases, when the steps mentioned above don't help.

More information can be found on www.sidat.cz, or in special **SIDAT CUSTOMER CARE** brochure.

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