



Managing Director's Statement





Dear Ladies, Dear Gentlemen,

The year 2016, for the PPA CONTROLL group of companies, meant a re-confirmation of a strong position on the Slovak market and at the same time brought further new opportunities to significantly advance abroad. In line with the adopted "Strategy 2021", we continued to increase the efficiency of internal processes, implement new solutions and innovative ideas, as well as strengthen the position of a general / superior supplier in the implementation of major energy investment contracts. We have achieved our set goals for 2016.

The subsidiary PPA ENERGO s.r.o., also in 2016, belonged to significant Slovak suppliers in the field of nuclear energy, but in particular in the second half of the year gradually penetrated into other sectors, for example in the area of construction of new industrial capacities or in the automotive industry.

In addition to a significant position in the field of design and supply of technological parts of transport systems on the Slovak market, the subsidiary PPA INŽINIERING s.r.o. won several implementation and economically significant orders in demanding, foreign markets.

In the field of energy management, site facilities management and distribution of electricity and natural gas, the subsidiary PPA Power DS s. r. o. confirmed that customers have been very positive about the highly qualified service offerings. Evidence is the constantly improving economic performance.

The subsidiary PPA TRADE, spol. s r.o., operating in international trade, focused in 2016 on developing relations with traditional business partners and on expanding the volume of closed trades. This effort should also bring positive results in the coming 2017.

In the past, our activities have also been aimed at increasing the level of safety in all PPA CONTROLL companies by using SCC (Safety Certificate for Contractors) as a new tool in the field of occupational health and safety and environmental protection. In the future, we plan to complete the implementation process by certifying selected companies according to the standard.

To improve the quality of our processes, products and services, we continue to use the already established and certified management systems - the Quality Management System according to

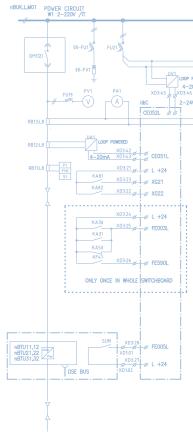
STN EN ISO 9001, the Environmental Management System according to STN EN ISO 14001 and the Occupational Health and Safety Management System according to STN OHSAS 18001. In the area of environmental protection, a strong emphasis was placed on securing a smooth transition to the requirements of the new revision of the STN EN ISO 14001 standard issued in April 2016. The consistent implementation of the new requirements into the processes and business activities was endorsed by the successful Lloyd's Register LRQA recertification audit at the end of 2016 according to the aforementioned standard.

The continuous streamlining of our processes, risk analysis and management, also in connection with the transition to the new revision of the STN EN ISO 9001 standard, product and service innovation, and the improvement of the level of safety and health and the environmental protection remain a priority.

2017 is the first full year on the road to meeting the goals set by the adopted Strategy of the Company by 2021: "Ensure and develop high flexibility and efficiency of our customer service solutions based on the long-term development of corporate know-how and the maximum utilization of the professional potential of our employees."

We want to be our customers' partners in efficiency, build and develop the ability to create, sell and implement solutions that deliver increased efficiency in customers' operations and processes. We will create, acquire, protect and develop, in the long run, our own and unique know-how that we will use to support and strengthen the business position of our customers. A part of our activities will be constantly improving and upgrading our services to our customers and promoting their competitiveness. Our goal is to build good relationships and partnerships with our customers and suppliers at all levels to steadily shorten the path to the ultimate and effective solutions.

In the future, the company will fulfil the tasks resulting from the adopted strategy, strengthen its position on the Slovak market in areas of our traditional interest and in the foreign market, especially in the field of comprehensive supplies for medium-sized energy projects.



Ing. Bystrík Berthoty Managing Director

About the company PPA CONTROLL, a. s.



GENERAL INFORMATION ABOUT THE COMPANY

Legal identity

Business name: Registered office:

Legal form: Company ID: VAT Reg. No.: Date of incorporation: September 2, 1991 Stock capital:

Vajnorská 137, 830 00 Bratislava joint-stock company 17 055 164 SK2020459078 € 1,052,008

PPA CONTROLL, a.s.

The Company is incorporated in the Bratislava 1 District Court Commercial Register Section Sa, Insert No. 159/B

CORPORATE PHILOSOPHY

As a engineering and supply company in the field of electric systems, instrumentation, control and process automation we can look back at over 65 years of success, while currently being in a stable financial position. Furthermore, we would like to continue providing our partners with full, professional services of the highest quality and optimal solutions to

help them streamline their operations and raise competitiveness. We are creating a stable environment for our staff that encourages professional and personal growth. Our main goal is for the company to achieve sustainable growth and strengthen its stable position in the domestic and international market.

THE COMPANY'S **BASIC VALUES**

- The needs of our customers and their satisfaction are paramount
- Negotiating in a professional and accommodating manner and providing services at the maximum level of quality
- · Developing skills and professional growth of our employees
- Transparency, honesty and integrity
- Compliance with the law and safety standards, thorough quality control and a responsible approach to the environment

COMPANY MILESTONES AND HISTORY

ZPA-DP Praha (Prague Industrial Automation and Supply Company Works) founded

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Branch office in Bratislava (ZPA-OZ) founded

Elektromont, k.p. founded in Bratislava with the merger of ZPA-OZ and Elektromontážne závody Bratislava (Bratislava Electro Plants)



Elektromont, s.p. in Prague and its suppliers throughout the ČSFR liquidated and PPA, š.p. founded in Bratislava

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PPA CONTROLL, a.s. established

Received certificate of quality under STN EN ISO 9001

Received certificate of integrated management system under ISO 14001 – Environmental Management and OHSAS 18001 – Occupational Health and Safety

About the company PPA CONTROLL, a. s



LINE OF BUSINESS

STUDIES, DESIGNS, DELIVERIES, INSTALLATION, COMMISSIONING AND SERVICES IN THE AREAS OF:

INSTRUMENTATION AND CONTROL SYSTEMS

- Measuring temperatures, loops of pressures, pressure differences, flows, levels, displacements and other physical variables
- Special measurements, detection of toxic combustion gases, environmental measurements
- Systems for analyzing liquids and gases
- Control valves and actuators
- Regulators and evaluation systems
- Connections to control and LV systems

AUTOMATED CONTROL SYSTEMS

- Control systems for technological processes (DCS and PLC systems)
- Building control systems
- Systems for collecting and evaluating energy information
- Process analysis and creation of user software
- Commissioning of technologies and optimization
- System integration
- Visualization and operator control of technological processes

ELECTRICAL SYSTEMS

- LV and HV underground cable lines
- LV, HV and UHV transformer and substation

- LV cabling
- Power protection
- Building cabling
- Weak current systems (fire, intrusion, CCTV, etc.)
- Parking systems
- Voice communication
- Search and repair the faults of LV power cables (wiring)
- Search and location the ground electrical
- and communication lines

SWITCHBOARD PRODUCTION

- 0.4 kV LV SMO switchboard (Rittal, Sarel, Profiline, Schrack enclosure)
- 0.4 kV LV switchboard for nuclear power plant conditions (SMO-S, SBO, NRS-S)
- RVB modular switchboard with withdrawable blocks (Logstrup boxes)
- System switchboards for control systems, servers and PC
- Switchboards for industrial and data communications
- Power-factor correction switchboard
- Wall-mounted NRS and NRS-P switchboard
- Control room panels and racks
- Road signs

INFORMATION AND TELECOMMUNICATION SYSTEMS

- Integrated light-current distributors
- Data LAN, MAN and WAN networks
- Cisco solutions
- Structured metalic and optic fiber cabling systems
- Data centers
- Search and repair the faults of communication metallic and fiber optic cables

TECHNOLOGICAL EQUIPMENT FOR MOTORWAYS AND TUNNELS

- Supply of electric power for tunnels HV, LV, UPS, backup sources
- Tunnel lighting
- Tunnel ventilation
- Tunnel radio
- Radio connection in tunnels
- Measuring of physical variables in tunnels
- Emergency call telephones
- Measuring meteorological variables
- Traffic monitoring systems
- Traffic management systems variable traffic signs, traffic control systems
- Security systems video surveillance, fire signalling, intrusion detection
- Technology control systems
- Integration of individual technological devices
- Operator station control rooms

ENERGY OUTSOURCING

- Managing power distribution and equipment
- Maintenance, repair, servicing, technical inspection and testing of electrical equipment
- · Measuring and monitoring of electric power
- Supplying electricity and optimizing electric power consumption
- Audits

- electrical
- gas

CONSTRUCTION AND DEVELOPMENT OF INFRASTRUCTURE IN D1 PARK SENEC

- roads
- water pipeline

OPERATION AND MAINTENANCE

COMPREHENSIVE INDUSTRIAL SITE MANAGEMENT

Management and administration reports

• Preparing and reviewing budgets, records of costs and management processes, coordination of suppliers

Technical management

Servicing, maintenance and repairs of technical facilities

Expert inspections and technical testing of classified

technical equipment:

- pressure

Non-technical site management

 Waste management, road maintenance, green maintenance, cleaning, guard service

HV and LV power lines

gas pipeline

foul water drainage and storm sewers

 Warranty and post-warranty service and maintenance

of all supplied systems and equipment

· Calibrations and repairs of physical

and chemical measurement systems

 Calibration of temperatures, pressures and electrical quantities AC/DC

Infrared measurements

About the company PPA CONTROLL, a. s.



CORPORATE SOCIAL RESPONSIBILITY

Corporate social responsibility for our company means a commitment to establish and maintain ethical standards, contributing to improvement in the economic condition of society and the state of the environment. Striving to enhance the quality of life of our employees and their families as well as supporting development in the community where we operate.

Quality management system

PPA CONTROLL, a.s. and its subsidiaries have established and certified a quality management system in accordance with ISO 9001:2008 which includes activities in the fields of "Design, engineering, installation and servicing of instrumentation and process control systems and equipment for weak and heavy current distribution in power, chemical, food, metallurgy, and other branches of industry including power plants. Design and production of electrical switchboards. Purchasing and selling of energy."

By regularly evaluating the effectiveness of the quality management system, by looking for opportunities, by considering the risks as well as internal and external factors, we ensure the achievement of the planned results and the improvement of the quality of the delivered products and services.

Our company emphasizes continuous improvement of the quality management system, product / service innovation and cost reduction to ensure the long-term satisfaction and come up to expectation of customers, employees and other stakeholders.

Osh management system and environmental management system

The Occupational Safety and Health principles and environmental protection are reflected in our company's business activities to prevent possible undesirable situations causing environmental pollution, health hazards and other labour and material damage. The applied OHSAS 18001 health and safety management system according to STN OHSAS 18001 and the environmental management system according to STN EN ISO 14001 serve mainly to raise employees' awareness of

health, safety and environment (HSE) risks and behaviours and to meet the needs and expectations of customers and other stakeholders. According to the above mentioned system standards, the management systems have been certified in PPA CONTROLL, a.s. in the scope of the activities defined. We communicate about the importance and requirements of OSH and environmental protection with employees of PPA CONTROLL and its subsidiaries, including contractors' staff, to ensure their implementation and performance in the execution of contracts. By integrating HSE's employee behaviour into everyday work, we want to eliminate workplace injuries and damage to health, reduce the amount of waste generated, increase the proportion of recycling and minimize adverse environmental impacts. Our company focuses on planning and implementing continuous improvement by utilizing analyzes of the results of controls, recommendations from our customers / stakeholders, new knowledge, circumstances in the execution of orders and outputs from the review of OSH management system and environmental management system.

Noncommercial activities

Also in 2016, PPA CONTROLL, a.s. devoted its attention to non-commercial activities and gave its support to various subjects in a variety of ways. By claiming 1% of the tax paid, we supported civil associations that help disabled and sick people, are dedicated to culture, sport, and animal welfare. In the field of sports, the Banská Bystrica basketball club, Levicki Patrioti o.z. basketball club and the TJ Lokomotíva Kozárovce football club were supported. As usual, we gave a financial donation to the Association of Entrepreneurs of Slovakia.





Company Statutory Bodies





Control system

Switchhose

EXECUTIVE BOARD

Ing. Bystrík Berthoty, Chairman

Born August 9, 1965 and a graduate of the University of Economics in Bratislava. He joined the Company in 1999. At present, he has been Managing Director since 2012 and Chairman of the Executive Board since 2015.

Ing. Ladislav Ondriš, Vice Chairman

Born November 22, 1956 and a graduate of the University of Economics in Bratislava. Between 1999 and 2014 he was Chairman of the Supervisory Board. He has been Vice Chairman of the Executive Board since 2015.

Ing. Zoltán Lovász, Member

Born April 18, 1969 and a graduate of the Slovak University of Technology in Bratislava. He joined the Company in 1999. He was appointed to his current position of Director at PPA ENERGO s.r.o. in 2009. He became a member of the Executive Board in 2012.

Ing. Marián Kolenčík, Member

Born September 19, 1967 and a graduate of the Slovak University of Technology in Bratislava. He joined the Company in 1990. He was appointed to his current position of Director at PPA INŽINIERING, s.r.o. and became a member of the Executive Board in 2013.

SUPERVISORY BOARD

Ing. Karol Pavlů, Chairman

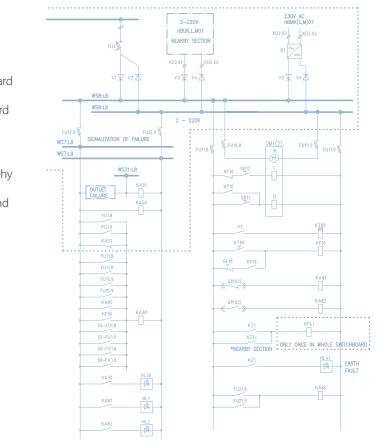
Born on April 19, 1941. Graduate of the University of Economics in Bratislava. Chairman of the Supervisory Board of the company since 1991, Vice-President of the Board of Directors since 1996, Vice-Chairman of the Supervisory Board since 2002 and in the current post since 2014.

PhDr. Darina Pavlů, Vice Chairman

Born June 4, 1946 and a graduate of the Faculty of Philosophy at Comenius University in Bratislava. She became a member of the Supervisory Board in 2005 and was elected to her current position in 2012.

Ing. Mgr. Tibor Gregor, Member

Born June 29, 1971 and a graduate of the Faculty of Technical Cybernetics at the Military Academy in Liptovský Mikuláš and the Faculty of Management at Comenius University in Bratislava. He became a member of the Supervisory Board in 2011.





Organizational Structure



SENIOR MANAGEMENT

Ing. Bystrík Berthoty Managing Director

Ing. Marta Kramárová Finance Director

Ing. Milan Michalík Commercial Director

RNDr. Viera Cehláriková Management Systems Director

RNDr. Valéria Kormanová Human Resources Director

JUDr. Marek Jurina In-house legal counsel

Assembly hall of switchboard production

Assembly workers

of PPA CONTROLL

aroup

SUBSIDIARY COMPANY MANAGEMENT

PPA ENERGO s.r.o.

Ing. Zoltán Lovász **Executive Director**

Ing. Katarína Krchnáková Finance and Human Resources Director

Ing. Peter Broškovič Technical Director

Ing. Erik Vicena Commercial Director

Production Director

Ing. Vladimír Malátek

Ing. Roman Nemček **Executive Director**

Dana Gottweisová

Commercial Director

Kvetoslava Smejová

Ing. Karol Kaštíl

Assembly Director

Director

Peter Hatina Director of facility management department

Ing. Michal Kolimár

department

PPA INŽINIERING, s.r.o.

Ing. Marián Kolenčík **Executive Director**

Ing. Igor Jamnický Director of Traffic Technology Department

Ing. Letko Karol Foreign Engagement Director Ing. Roman Nemček **Executive Director**

PPA Power s.r.o.

PPYCONTROLL TECHNOLOGIES UNDER CONTROL - INSTRUMENTATION AND AUTOMATION

PPA TRADE, spol. s r.o.

Ing. Peter Gašparových Executive Director

Finance and Human Resources

PPA SLAVUTIČ KYJEV, s.r.o.

Ing. Peter Gašparových **Executive Director**

PPA Power DS s. r. o.

PPA CONTROLL CZ. A.S.

Luboš Sobotka **Executive Director**

Director of energy distribution

Human Resources

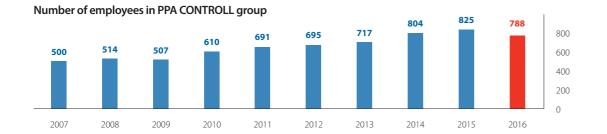
Employee structure by Category



EMPLOYEE STRUCTURE

As part of the development of our companies, streamlining processes were applied in the previous year (2016), which was reflected in the number of employees that reached 788.

In 2016, the staff stability index (percentage of employees with 5 years or more of service with the group out of the total number of employees) increased6 to 59 %.



Number of employees by Gender

Number of employees by Education

	2015	2016	Education	Primary	Secondary	University
Women	135	126	No. of employees	7	455	326
Men	690	662	in %	1 %	58%	41%

Number of employees by Age

	18-29	30-39	40-49	50-59	Over 59	Average Age
No. of employees 2015	142	213	182	220	68	43
No. of employees 2016	110	213	188	204	73	43

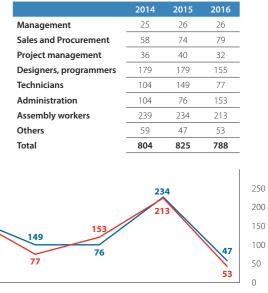


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EMPLOYEE EDUCATION PROGRAM

Great attention is traditionally paid to the opportunities of self-development and self-fulfillment of our employees. We realize that human resources form the basic prerequisite for the success of a company in the competitive environment. Quality of employees, training opportunities, work performance and loyalty belong to the main development sources of our company, its efficiency and ability to prosper in the long term. As a company long-term applies of the certified quality management system and other management systems, we realize that our employees form the most important element ensuring the quality of our services and products. In 2016, the company invested EUR € 222,171.00 in education and training of employees, which was € 279.00 on average per employee. Training was focused on the development of professional competence in the area of electro-technology, IT, production and assembly. Great attention is also paid to language learning, as well as management and business skills. Thanks to the professionalism of our employees we offer our customers constant improvement of the level and quality of our services.







References





ENERGY

SLOVENSKÉ ELEKTRÁRNE. A.S.,

Jaslovské Bohunice Nuclear Power Plant

V-2 Nuclear Power Plant Units 3 and 4

- Replacement of 6 kV cables for the main circulation pumps, cables for Essential Service Water (ESW), cables for Non-essential Service Water, cable from the SAM diesel generator to the ESW central pumping station, non-compliant 6 kV cable joints and fire barriers.
- · Modification of signalling, control and automatics of hermetic door in the containment
- Relocating control of technology nodes from the Central Pumping Station control room and air ventilation system control room to the NPP V-2 control room for Units 3 and 4
- Replacing existing emergency arc protection systems in substations at NPP V-2 Units 3 and 4, the Pečeňady Central Filtration Station and the Trnava Exchanger Station
- Replacing the reactor protection and control system at NPP V2 Units 3 and 4 - complete laying of cables - as subcontractor of ZAT a.s.
- Replacing cables for emergency and regulating compensation drives at NPP V-2 Units 3 and 4 installation of cabling systems and hermetic cable penetrations – as subcontractor of Škoda JS a.s.

- Installing Mobile Measurement Units providing information about important and selected post-power-outage parameters at NPP V-2 – as subcontractor of VUJE, a.s.
- Modification of HVAC technological systems cooling down the steam generator box and reactor pressure vessel pit at NPP V-2 Units 3 and 4 – I&C and electrical parts (as subcontractor of ROF7)
- Replacement of accumulator batteries used to supply safety systems of V-2 NPP (system installations that ensure liquidation of primary circuit accidents and reactor aftercooling) - design documentation, assembly, testing and commissioning

Mochovce Nuclear Power Plant

Mochovce NPP Units 1 and 2

- Manufacture, supply, installation and reconstruction of 0.4 kV switchboards – design documentation, manufacture and supply of switchboards, dismantling, installation, testing and commissioning including activation of each phase during outages of Units 1 and 2
- Preparation of operating rules for "The blockades and protections for 0.4 kV switchboards"; "The power supply for external structures", "Subsidiary switchboards for secondary circuit", "The Works and inspection in cable areas and cable ducts", " 0.4 kV switchboards for the main production unit -power centres" and for "The automatic controllers and control circuits" - as subcontractor of VUJE, a.s.

Turbine hall

NPP Jaslovské Bohunice

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Nuclear Power Plant

- Addition of new signals to initiate low-pressure pumping of emergency coolant to the reactor core
- Replacement of circuit breakers and rewiring in I&C distributors powering control circuits and alarm circuits and in power switchboards powering I&C distributors
- Reconstruction of diesel generators I&C and electric systems – as subcontractor of ČKD DIZ, a.s.
- Replacement of H2 and O2 measurements on hydrogen recombination system – I&C and electric systems (as subcontractor of VUJE, a.s.)
- Severe accident management I&C and electric systems (as subcontractor of VUJE) for the following subprojects:
- Primary circuit depressurizing
- Containment vacuum breaker
- Emergency power supply
- I&C SAM control system, field instrumentation special measurements
- Long-term heat removal from the hermetic zone including modification of the outlets for flooding the hermetic zone
- Severe accident management Emergency cooling source, I&C and electric systems (as subcontractor of ROEZ)
- Detail Design and subsequent implementation of the following I&C subprojects :
- Stator winding temperature measurement for make-up pumps
- Leading start-up signals to make-up pumps
- Adding protections and interlocks for sodium hydroxide pumps

References



Completion of Units 3 and 4 at Mochovce NPP

- Design and engineering activities
- for Nuclear Island
- for Conventional Island

project documentation, verification of documentation at the site

- NPP own consumption equipment 6 kV busducts, 6/0.4 kV transformers, 6 kV own consumption switchboards, 0.4 kV switchboards, 0.4 kV motor control centres, Emergency power supply system of category 1 (rectifiers, converters, inverters, batteries and UPS), Control and Diagnostic System of Power Dispatching of central electrical control room, protections of generator and power transmission control system and protections of 110 kV back-up power substation – production of 0.4 kV switchboards, equipment supply, engineering, installation and commissioning
- Renovation, improvement and completion of main facilities/buildings and external surface finishes
 electrical part design, supply, installation and commissioning
- Main reactor building installation of electrical wiring for building part
- Supply and installation of cables for reactor protection system (RRCS)
- Supply and installation of selected parts of I&C and electric systems for Nuclear Island – main cable routes, sensors of technological parameters, sample system for sensors of technological parameters, hermetical pipe penetrations, hermetical cable penetrations, cabling, chemical analyzers – engineering, supply, installation and commissioning
- Supply and installation of switchboards powering
 the EXCORE system

- I&C, safety systems and operational management systems – installation and assistance during commissioning –

 (as subcontractor of AREVA NP - control system supplier)
- Interim power supply of pumps of after-installation cleaning operations (as subcontractor of Enseco)
- Modification of billing measurement of automated data collection for ROVE systems heat supply balance MO34 data

Nováky Power Plant

DeNOx overhaul of block 1 and 2

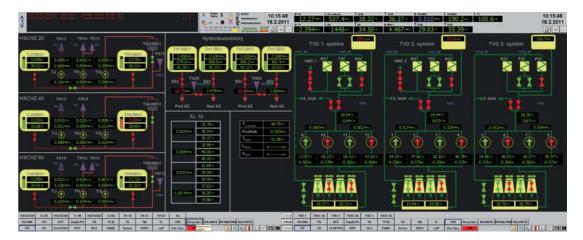
- · Supply and installation of control system
- Supply and installation of heavy current lines for SNCR secondary measures and primary measures on two steam boilers to comply with NOx emission limits





Hermetical pipe penetrations

Nováky Power Plant



NPP Mochovce

- Supply and installation of Ovation (EMERSON) control system
- Supply and installation of LV switchboards, frequency converters and process heaters
- Services: design documentation, modification of existing software and installation of new software, coordination of all supplies, dismantling and installation of field instrumentation and LV cables, individual and complex testing, commissioning, staff training and presence during guarantee testing.

Hydro Power Plants (HPP)

- Reconstruction of control information system for turbo-generators at hydro power plant Hričov and Kraľova HPP
- Transfer of billing measurement of automated data collection from Gabcikovo HPP do o the new Gabcikovo switching station (operator SEPS, a.s.)

Visualisation TPS

References





RNFST Brazil



Centro Venezuela

PLANTA CENTRO THERMAL POWER PLANT, VENEZUELA Reconstruction of 400 MW Boiler No. 5 - EPC Contract

- 420 kV power transmission line (surge arresters)
- 30 MVA transformers 5BT01 and 5BT02
- Generator outlet and zero
- Generator exciter system
- Electrical protections and measurements, MicroSCADA
- HV block substation
- LV block substation
- Subordinate + 6.1m substation
- Subordinate water treatment distributor
- Subordinate pumping station distributor
- Grounding and lightning protection for technological structures
- Lighting and socket wiring for technological machinery
- Direct current sources and wiring
- Diesel generator

RNEST-PETROBRAS, BRAZÍLIA

Field instrumentation

- Measurement circuits for control of technological units
- Cabling and installation material
- Spare parts for commissioning
- Complete design documentation
- Coordination and supervision
- · Comprehensive testing of equipment
- Customer staff training

SERVICING, REPAIRING AND INSPECTION OF EQUIPMENT

Slovenské elektrárne, a.s.

- Maintenance of I&C and electric systems Jaslovske Bohunice NPP
- Maintenance of I&C and electric systems Mochovce NPP
- · Post-warranty service of automated collection system of electricity consumption data
- Post-warranty service assistance for 1-minute automated collection system of electricity consumption data
- Repair of machinery at heat exchange stations in Hlohovec, Leopoldov, Jaslovske Bohunice
- Service of I&C and electric systems and machinery at central heat exchange stations
- Preventive maintenance of fire doors open position signalling at V-2 NPP
- Provision of readiness to remove defects of V-2 NPP technological computer and information system
- Modification, upgrading and engineering support of software and corrective maintenance of hardware in the technology computer system
- Preventive and corrective maintenance of SIMATIC control systems at V-2 NPP
- Corrective maintenance of HW components and modification of SW for equipment at V-2 NPP
- Repairing rectifiers and frequency converters Novaky Power Plant
- · Servicing the elements of electronic interlock system -Novaky Power Plant

- Repairs on GESTRA steam traps NPP V-2 • Diagnostics and servicing of drain pipes for steam turbine-generators – Mochovce NPP
- Servicing of equipment access control system at Mochovce NPP, Units 3 and 4

Jadrová a vyraďovacia spoločnosť, a. s. (JAVYS)

A5.A3 - Optimisation of Electric Scheme (The Bohunice International Decommissioning Support Fund project)

Operation and maintenance

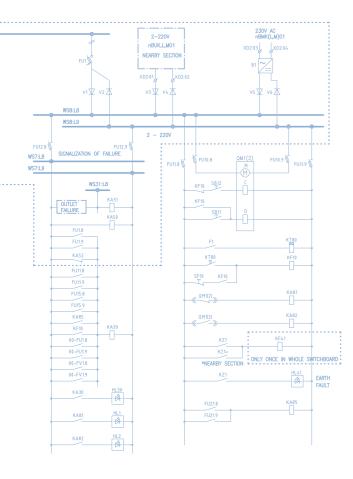
- and testing of electric systems



• optimisation and modification of power supply of the individual equipment and gradual disconnecting and dismantling of not required equipment during V1 NPP decommissioning. Ensuring reliable power supply over the whole period when the relevant equipment of Main Reactor Building, Interconnection Bridge, Stack, Auxiliary Service Building, Water Pumping Station and Transformer Station must be functioning.

- Complex performance of technical inspections
- Repair and maintenance of I&C systems
- Repairs and maintenance of electric systems

References





INDUSTRY

VOLKSWAGEN SLOVAKIA, A.S. - ZÁVOD BRATISLAVA

VW H4c – LV busbar system and S- stations

- Supply and installation of 2,500A low voltage bus bar system
- Supply and installation of penthouse transformer stations

VW Finish centre – Extension of H3 hall

- Supply and installation of main switchboards RM1, RM2
- Supply and installation of lighting switchboards RS1
- Supply and installation of illumination of H3 hall with a connection to RS Luxmate
- · Supply and installation of heavy current lines (cable routes, LV cables including termination)
- Supply and installation of earthing system and lightning rod

VW Conveyors

- Installation of conveyor technology switchboards
- Conveyor technology connection
- Installation of conveyor electrotechnology
- Design and installation of conveyor lighting, including its control

VW 0.4kV lines for H3a ha and diesel generator

- Supply and installation of LV switchboards
- Delivery and installation of diesel aggregate
- Installation of lighting switchboards
- Supply and installation of indoor lighting
- Supply and installation of heavy current lines (raceways, LV cables including termination)
- Connection of technological equipment
- · Supply and installation of lightning rod

VW Extension of H8 hall

- Extension of 22kV R1.8 transformer switching station with field No.13
- Indoor and outdoor wiring, including termination
- Supply and installation of socket wiring
- Supply and installation of LV switchboards
- Connection of technological equipment
- Complete supply of heavy current lines and artificial lighting, including emergency, escape and outdoor lighting
- Supply and installation of cable support systems
- Supply and installation of earthing system and lightning rod
- Protective bonding

U. S. STEEL KOŠICE

Repair of electrical installations, I&C and auxiliary drives for TD5 turbocharger

- Supply and installation of indoor electrical installations, cable support systems
- · Supply and installation of rotor starter, temperature and pressure sensors, electro pneumatic actuators in explosive atmospheres
- · Supply and installation of LV switchboards and Symatic S7 Control System & Visualization

Reconstruction of 5ST TANDEM transducers

- Installation of indoor electrical installations
- · Dismantling of existing switchgears and installation of new transducers
- · Connecting and activating the equipment

Reconstruction and modernization of boiler house, Stage 1 - K7 boiler

- Supply and installation of indoor electrical installations and cable support systems
- Supply and installation of lighting fixtures and electrical appliances
- Supply and installation of LV switchboards
- Supply and installation of central battery system

PPPCONTROLL TECHNOLOGIES UNDER CONTROL - INSTRUMENTATION AND AUTOMATION



Low-emission coke quenching VKB1 national limit- electrical part

- Realization of electrical installation works within the framework of the PD
- Supply and installation of electrical connection for
- technological switchboards, cable routes and connection
- of switchgears of technological equipment
- Testing and commissioning

PZ2 Galvanizing Line No.2 Material Tracking

- Supply and installation of indoor electrical installations and cable support systems
- Installation of cabling to connect I&C elements
- Installation of switchboards and control cabinets
- Testing and commissioning

DUSLO. A.S., ŠAĽA

- Project documentation for reconstruction of field
- instruments at TN network I&C and electrical parts
- Supply of switchboards for CHUV3 reconstruction and modernisation
- Reconstruction of power supply of cubicles of main HTR2 transformer station
- Modernization of the 6 kV switchgear NPK
- (max. admissible concentration) instrument transformer station
- · Reconstruction of the electric heating of natural gas at the reduction station for the incinerator
- Connection of CV5 instrument transformer station to control system
- Supply and installation of PV1, PV6, RM 1 switchboards

INGSTEEL S. R. O. BRATISLAVA

Production plant BONFIGLIOLI – Stage III

Implementation of the complete electrical part – completion of the detailed design, supply, installation and commissioning

References



Duslo Šaľa

IKEA Industry Malacky

SLOVNAFT, A.S.

Increase of CC6 efficiency

- Retrofit of HV cubicle
- Construction of HV substation
- Supply and installation of HV transformer
- Supply and installation of a frequency inverter for a 250 kW motor
- Link to CS YOKOGAWA C3000
- Replacement of fire alarm control panel and addition of new fire detectors
- Telephone connection with Slovnaft network
- Static checks for transformer station and base for pump with motor

Reconstruction of SO-01 6332 Testing laboratories

- Erection of a new LV connection
- New lightning rods including earthing
- Complete delivery of heavy current lines including lighting
- Complete low-voltage power supply installation including optical connections
- Setting the ABB protections and putting the LV connection into operation

IDC HOLDING A. S. BRATISLAVA

Pečivárne Sereď (biscuit factory) - Increasing electrical power due to modernization and expansion of production in Hall B

- Developing a feasibility study and project documentation
- Supply, installation and commissioning of HV and LV equipment

SAMSUNG ENGINEERING

Implementation of electrical part for the Samsung production hall in Göde (Hungary)

- Lightning rod
- Lighting
- Heavy current
- Assembly of hook-ups

Storage Room SAMSUNG K4 in Galanta

- Development of PD for heavy current, weak current and HV lines
- Complete supply of heavy current lines including outdoor lighting
- Complete weak-current delivery, including fibre optic connections
- Complete delivery of HV lines including transformer station for K4 hall
- Modification and retrofit of original K3 HV switching station
- Setting the SEPAM protections and putting the HV connection into operationy

EUSTREAM, A. S.

• Extention of station control system (SCS) KS01 and connecting actuators for the project:

Installation of ball valves bypass at the natural gas inlet.

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Samsung production hall

Slovnaft Bratislava

ABB S. R. O. BRNO

Installation of switchboards

IKEA INDUSTRY MALACKY

Analysis of data collection from AHUs

- Analysis of possible data collection from AHUs
- Design of technical solution for data collection from AHUs
- Programming and data acquisition of AHUs
- Supply of SW Wonderware
- Supply of application software for SW Wonderware

ZF SLOVAKIA A.S.

ZF Levice - Geňa - Reconstruction of main lighting

ZF Trnava – General overhaul of lighting in PKW production hall in building No. 24

 Dismantling of original and supply and installation of new lighting fixtures, heavy current lines and communication wiring to DALI control system (supplied by Philips)

NAFTA A. S., SUCHOHRAD

Construction of fire alarms and gas detection systems to increase ZS3 safety

- Fire alarm system
- Gas detection system
- Safety control system

References





Switchboard nstallation

Waste water Treatment Plant

ZEMIANSKE KOSTOĽANY -**RECONSTRUCTION OF FUEL** UNDERGROUND STORAGE

 Supply and installation of heavy current and weak current lines in PS01 – Indication of fuel leakage in T53-60

EI

- Supply and installation of I&C for HVAC
- Temporary tunnel lighting under repositories throughout construction

ZVOLENSKÁ TEPLÁRENSKÁ, A. S.

Remote control

Hotline, service and emergency service

DRAKA COMTEQ SLOVAKIA S.R.O. PRODUCTION PLANT, PREŠOV

- Supply and installation of heavy current electrical installations in newly built production plant
- Weak current connection
- Supply and installation of I&C systems

IMUNA PHARM A.S., ŠARIŠSKÉ MICHAĽANY

Infusion solution storage area

- Supply and installation of indoor heavy current and weak current electrical installations
- Supply and installation of cable support systems
- Supply and installation of HV switchgear and HV transformer
- Establishing HV connection

CRH ROHOŽNÍK A. S.

• Implementation of electrical and I&C parts according to customer's requirements

MTA SLOVAKIA S.R.O., BÁNOVCE

Supply and installation of heavy current electrical wiring in a production and storage plant

- Supply and installation of heavy current electrical wiring in newly built hall
- Supply and installation of a busbar system
- Supply and installation of external area lighting and heating of roads
- Supply and installation of HV connection and HV distribution cabling
- Supply and installation of transformer station

ADLER PELZER AUTOMOTIVE SLOVAKIA, S.R.O.

BRA1 hall - HP PELZER - Power supply of technological switchboards

- Development of PD
- Supply and installation of LV switchboards (with compensation)
- Supply and installation of cable support systems
- Supply and installation of power cables, including termination

EUROTALC. A.S.

Talc processing plant Gemerska Poloma

- · Supply and assembly of complete power and weak-current wiring in six production halls and one administrative building
- Implementation of HV connection
- HV relaying
- Supply and installation of heavy current, weak current lines and fibre optic network throughout the facilities
- Increase of T28 transformer station power output

PPPCONTROLL TECHNOLOGIES UNDER CONTROL - INSTRUMENTATION AND AUTOMATION



VODOHOSPODÁRSKA VÝSTAVBA, Š.P.

- Modra Waste Water Treatment Plant (WWTP) construction electric equipment and work, transformer station, HVAC system
- WWTP Krupina transformer station, power electric and construction electric equipment and work, HVAC system, I&C, process automation-control system connected to the control centre
- WWTP Sered' power electric and construction electric equipment and work, filling stations with transfer, I&C, process automation-control system connected to the control centre
- WWTP Poltár power electric and construction electric equipment and work, HVAC system, I&C, process automation-control system connected to the control centre
- WWTP Dolná Streda delivery and installation of electric motor soft starter
- WWTP Veľký Krtíš gas holder and HV overlap
- · Lopej small hydroelectric power plant modernization of control system

MECAPLAST PRODUCTION PLANT. ZAVAR - TRNAVA

Complete implementation of electrical systems - HV connection, LV lines, public lighting, weak current, earthing and technology connections

• project documentation, delivery and installation of components, testing, commissioning

CONTINENTAL MATADOR RUBBER S.R.O., PÚCHOV

 Supply and installation of electrical equipment (HV switchboards, transformer station, HV transformer)

References



TECHNOLOGICAL EQUIPMENT FOR ROADWAY TUNNELS, MOTORWAYS AND RAILWAYS

NDS, A.S.(NATIONAL MOTORWAY COMPANY)

Motorway R2 Ruskovce - Pravotice, Motorway Information System (MIS)

PPA CONTROLL, a.s. did complete delivery of construction and technological parts for MIS R2 Ruskovce - Pravotice:

- Complete communication infrastructure
- Supply, installation, integration and visualisation of meteorological stations
- Supply, installation, integration and visualisation of traffic counters
- Road signal lights
- Technological nodes
- Surveillance cameras
- SIMATIC S7 control system
- Operator station at the Highway Administration and Maintenance Centre, Trenčín

Delivery, assembly and maintenance of our installations of road tunnels

Horelica Tunnel

- Amendment and adaptation of the central control system software, update of traffic-operating conditions and adjustments to visualization
- Maintenance of central control system
- Breakdown repairs

Branisko Tunnel

- Maintenance of fire alarm system, fixed firefighting system, high voltage supply
- Maintenance of D1 motorway Studenec Behárovce
- Maintenance of D1 motorway Jablonov Studenec
- Breakdown repairs

Bôrik Tunnel

- Standby power systems
- Emergency call equipment SOS boxes
- · Surveillance closed circuit TV in the tunnel
- Radio connection
- Communication circuits transmission system
- Telephone connection
- Tunnel radio
- Fire doors
- Central control system
- Measuring of physical variables

- Traffic signs
- Control centre equipment
- Fire alarm system
- Tunnel lighting
- Tunnel ventilation
- Fire water supply electric systems
- Outdoor illumination
- Breakdown repairs

Maintenance of Motorway Information Systems (MIS)

- Motorway D1: Sverepec Vrtižer
- Motorway D1: Vrtižer Hričovske Podhradie
- Motorway D1: Hričovske Podhradie Žilina (Stražov)
- Motorway D1: Važec Mengusovce
- Motorway D1: Mengusovce Janovce
- Motorway D1: Studenec Beharovce

Scope:

- Construction (power supply distributors, cabling, grounding)
- Emergency call stands
- Electronic security alarms
- Surveillance cameras
- Technological communication switchboards
- Variable message signs laminated
- Variable message signs LED
- Road signal lights
- Radio transmission
- Cut off signal-circuit controllers
- Operator station

Operator workstation of Borik tunnel

Tunnel Horelica

Tunnel Branisko

Automatic traffic counters

- Delivery and installation of automatic traffic counters
- Delivery of software
- Testing and commissioning

DOPRAVOPROJEKT, A.S.

 D3 Motorway Žilina(Strážov) – Žilina(Brodno) – technologies of Považsky Chlmec tunnel – detailed design

References

OUTSOURCING OF ENERGY MANAGEMENT



Technical and non-technical management of energy facilities and structures, optimisation of energy processes, supply of energies, local distribution of energies, engineering contractor work:

- D1 Park Senec
- ProLogis park Senec
- Manufacturing plants ZF Sachs Trnava, Levice

Management and administration

Preparing and reviewing budgets, records of costs and management processes, coordination of suppliers

Management of utility networks

- Servicing, maintenance and repairs of:
- HV and LV power lines
- Gas pipelines
- Heat pipelines
- Water pipelines

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- Foul water drainage and storm sewers

Construction and development of infrastructure in D1 Park Senec

Roads

- HV and LV power lines
- Gas pipeline
- Water pipeline
- Foul drainage and storm sewers

Technical building management

- Servicing, maintenance and repairs of:
- Heating systems
- Air conditioning and cooling systems
- Fire technical and safeguarding systems
- Compressed air distribution
- HV, LV and I&C systems
- Lifting devices
- Expert inspections and technical testing of classified technical equipment:
- electrical
- gas
- pressure

Non-technical building management

Waste management, road maintenance, green maintenance, cleaning, guard service

- Industrial Park, Veľka Ida

Deliveries of electricity and gas

Operation of water and sewer systems

- acting as professional representative for the operation of public water mains
- acting as professional representative for the operation of public sewers
- servicing, maintenance and repairs

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D1 Park Senec



DELIVERY AND DISTRIBUTION OF ENERGY

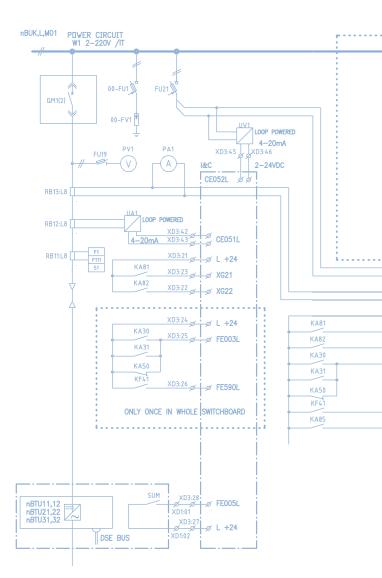
- P3 Logistics Park, Lozorno
- D&K Küster Industrial Park, Devinska Nova Ves
- Košice Airport Industrial Park
- EUROVEA Shopping Centre, Bratislava
- Galeria Shopping Centre, Lučenec
- Automotive Industrial Park, Lozorno
- Both electricity/gas supply, online electricity and gas consumption surveys, notifications of cut-off points and defined parameters

Operation of energy distribution networks

- Creation of local distribution networks, registration of offtake points, legislative certification, fixing and approval of distribution rates, consumption measurements, billing for the consumption, local energy sources

References





ENERGY AUDITS AND OPTIMIZATION SERVICES

- Železničná spoločnosť Slovensko
- Plastic Omnium Auto Exteriors
- SLOVALCO Žiar nad Hronom
- ProLogis Slovak Republic

General identification of energy management

Professional assessment of the condition of buildings, technologies and facilities, determining energy demand and potential savings

Developing economically recoverable austerity plans

Measures requiring no capital investment, low-cost measures, long-term measures

Implementing austerity plans

Coordination of processes, potential financial partnership

OPERATION OF ENERGY SOURCES

- Photovoltaic power plant, Drahovce
- Photovoltaic power plant, Selany
- Photovoltaic power plant, Čechanky
- Biogas power plant, Veľke Turovce, Kamenica nad Cirochou

Technical operation of plants

Trouble-free operation of plants, servicing, maintenance

Legislative resource management

Compliance with plant legislative obligations, monitoring, billing inputs, reporting of mandatory data

OTHER

CITY ARENA TRNAVA - CONSTRUCTION OF THE YEAR 2015

Electro-installation works - supply and installation of heavycurrent part and installation of football stadium lighting.

- Production, supply and installation of power switchboards and subdistribution switchboards
- Supply and installation of cable support systems
- Supply and installation of lighting of all stadium areas
- Installation of lighting of the playing field
- Design, production, supply and installation of switchgears for lighting of the playing field
- Supply and installation of emergency lighting system including lighting loops of the central battery system
- Supply and installation of terminal and control elements (switches and sockets) in all stadium areas
- Supply and installation of lightning protection system
- Supply and installation of electrical heating of sanitary facilities
- UPS
- Internal and external lighting
- Grounding and lightning protection



City Arena Trnava

J & T REAL ESTATE, A.S.

Zuckermandel - ČSOB bank

- · Installation of main LV switchboards
- Installation of lighting switchboards
- Supply and installation of indoor lighting
- Supply and installation of heavy current lines
- (cable routes, LV cables including termination)
- Connection of technological equipment
- Supply and installation of lightning protection system

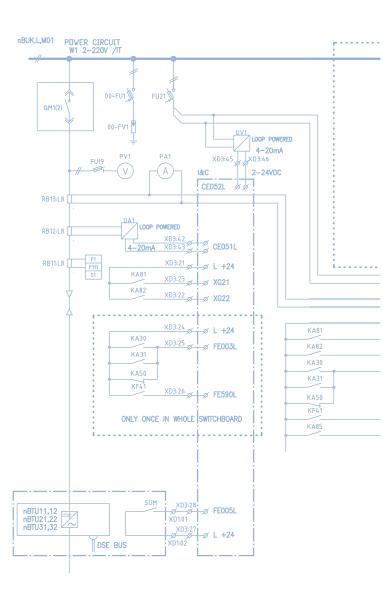
Zuckermandel - administrative buildings

- Installation of main LV switchboards
- Installation of lighting switchboards
- Supply and installation of indoor lighting
- Supply and installation of heavy current lines
- (cable routes, LV cables including termination)
- Connection of technological equipment
- Supply and installation of lightning protection system

Westend Quadrant Bratislava

- Supply, installation and as-built design
- HV substation, transformers
- HV, LV cabling
- LV switchboards
- Central battery system
- Operation of transformer station





TRNAVA TEACHING HOSPITAL

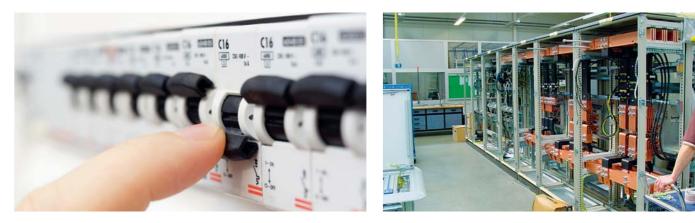
 Replacement of LV distribution wiring and stand-by power supply

ORGA-TRADE NETWORK SYSTEMS A. S.

Electrical systems for the Bratislava city surveillance camera system

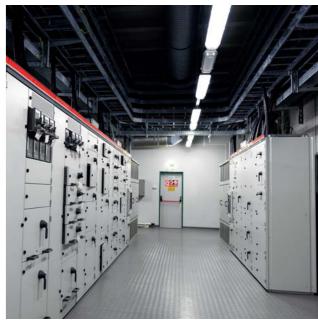
PRODUCTION AND DELIVERY OF SWITCHBOARDS FOR:

- V-2 Nuclear Power Plant, Mochovce NPP Units 1&2 and completion of Units 3&4
- Lidl Sered'
- Mobelix Nitra
- Fatra Napajedla
- Zuckermandel housing estate
- Cloetta Levice
- Volkswagen Bratislava Hall 3
- Vailant Trenčianske Stankovce
- Samsung Galanta
- Maccaferri Slovakia





Westend Quadrant, Bratislava



Balance Sheet, Profit and Loss Account



Consolidated Balance Sheet ending with the 31st December 2016 in thousands of EURO

	TO 31/12/2016	TO 31/12/2015
Non-current assets	12,485	12,771
Intangible assets	73	76
Tangible assets	9,549	9,878
Other movable property	1,959	1,693
Goodwill	0	0
Non-current financial assets	0	0
Other financial assets	166	192
Long-term receivables	378	472
Deferred tax assets	360	460
Short-term assets	54,118	65,554
Inventory	2,723	1,444
Receivables	29,538	33,435
Other receivables	1,151	3,180
Short-term accruals	707	727
Cash and bank accounts balances	19,999	26,768
Total assets	66,603	78,325
Equity attributed to shareholders	35,857	39,282
Share capital	1,052	1,052
Fund of exchange differences	119	47
Capital and Statutory funds	282	285
Funds of profit	4,289	2,683
Retained earnings	25,354	28,856
Profit for the period attributed to shareholders of the mother company	4,761	6,359
Equity attributed to non-controlling shares	257	328
Total equity	36,114	39,610
Long-term liabilities	9,294	9,073
Long-term trade and other payables	729	546
Deferred tax liabilities	89	110
Long-term provisions	8,476	8,417
Current liabilities	21,195	29,642
Short-term trade payables	18,408	22,742
Liabilities to the state	75	1,324
Other current liabilities	1,481	4,189
Short-term income and accrued expenses	515	472
Short-term provisions	707	906
Short-term borrowing	309	9
Total liabilities	30,489	38,715
Total equity and liabilities	66,603	78,325
	00,000	, 3,323

Sales	
Cost of goods sold	
Shaft material and energy	
External services	
Occupational loan	
Depreciation	
Gross margin	
Other operating income	
Other operating expenses	
Operating profit	
Financial income	
Financial expenses	
Profit before tax	
Income tax	
Profit after tax	
Shares in associated companies affiliated operations	
Discontinued operations	
Profit from discontinued operations	
Profit for the period	
Assigned to:	
holders of the parent company	
non-controlling shares	

YEAR 2016	YEAR 2015
101,553	117,117
,	
-14,182	-10,405
-27,348	-45,274
-27,953	-23,683
-24,704	-25,489
-1,128	-1,079
6,238	11,187
985	836
-753	-3,048
6,470	8,975
250	1 402
258	1,493
-515	-1,628
6,213	8,840
-1,523	-2,532
4,690	6,308
0	0
0	0
4,690	6,308
4,761	6,359
-71	-51

Consolidated Profit and Loss Account ending with the 31st December 2016 in thousands of EURO

REGISTERED

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