

ZAT – World Supplier of Rail Transportation Control Systems

ZAT participates in supplying locomotives to Turkey as well as subway vehicles to Chinese Su-chou.

The Czech company ZAT is an established company in the field of automation of technology process in the Czech Republic and also abroad. It is among companies which have been doing business in the field of automation for the longest period in the world, last year the company celebrated the 50th anniversary of its foundation. ZAT has its own departments for development, design, manufacturing, installation and service of electric appliances, control systems and their spare parts. It principally focuses on nuclear power generation, control of technology processes and transportation systems and supplying of industrial installation including securing of complex supplies and system integration.

ZAT FOR RAIL TRANSPORTATION

Supplies for nuclear power generation represent half of all ZAT's contracts. The company supplies type as well as complex solutions for control of the primary and secondary circuits and auxiliary operations and secures functions connected with operation and effect of nuclear installation operation also in the highest safety category. Top-class quality which the company has to meet when working on these projects is maintained also when manufacturing the control systems for rail and transport technology. In the field of rail transportation, ZAT secures higher supplies of automated systems for technology process control including coordination of all required activities and subcontracts. Design and implementation of technical concepts and hierarchies of control systems represent strengths of the company. "These possibilities allow company to integrate various control systems, for instance, within a single controlling device" says Ivo Tichý, a member of ZAT management. This concept was applied when supplying four control departments with use of Wonderware and Reliance systems for the Správa železniční dopravní cesty (Railway Infrastructure Administration). The company has also carried out several supplies of traction line control systems for objects of traction substations or switching substations and railway stations. Every

year ZAT invests more than EUR 1.6 mil. into new products and innovations. At present, thanks to first-rate technological base and know-how, it is manufacturing, for instance, drive control systems for a supply of 80 locomotives for the Turkish State Railways. These electric locomotives have four axles and a capacity of 5 MW. Controlling electronics developed by Škoda Electric and used in these locomotives is produced by ZAT. Nowadays, the company participates also in other projects such as production of electric drives for new subway vehicles for Su-chou, a city located in the eastern part of China having four million inhabitants, and production of drivers for controlling of Hitachi power semiconductor segments designed, for instance, for South Korean high-speed trains. In the Czech Republic, ZAT carried out also supplies of power and controlling electronics for electric locomotives, 460 wagons of Prague subway and tens of locomotives for České dráhy (Czech Railways). According to Tichý, the



Ing. Ivo Tichý



Popisek



Vladislava Česáková

company carries out contracts in the field of transportation in accordance with customers' requirements and their documentation and offers own development solutions.

A NEW CONTROL SYSTEM DESIGNED BY CZECH DEVELOPERS

Company ZAT is one of few companies which have developed their own control system and use it for their supplies. In 2011, it introduced a control system SandRA (Safe and Reliable Automation) equipped with a special application for controllers of exciter sets to the market. These controllers are designed for controlling of all types of synchronous generators used in nuclear power generation. Their parameters and algorithms meet the strictest criteria for stabilization and power system load and are among the world top products in their category. "Besides our own development we support research and development

of Czech universities and research institutes. We cooperate with the University of West Bohemia in Pilsen, Czech Technical University in Prague, Technical University of Liberec, ÚJV Řež a.s., Research and Testing Institute Pilsen and also with VUJE a.s. Trnava," says Vladislava Česáková, a member of the ZAT management.

If required by a customer or investor, ZAT applies also systems of other producers, for instance, Siemens, GE Fanuc, Saia, etc. When solving superior computer systems, hardware produced by companies: HP, DELL, IEI, Advantech and Kontron in which ZAT visual applications work on the basis of products: Wonderware, Reliance, etc. are used.

ZAT ABROAD

At present, supplies to abroad represent 35 per cent of a total volume of sales of the company.

Activities of ZAT abroad are mostly connected with installation and launching of supplied products into operation and subsequent provision of service. Systems produced by the company control technologies all over the world, for instance, in South America, Mongolia but also in Finland, Sweden, Turkey, Slovakia and the Czech Republic. "When supplying control systems and service, we wish to be as close as possible to our customers and that is why our company has its subsidiaries in plenty of countries including Slovakia," adds Česáková.

INVESTING INTO FUTURE

At present, the company employs more than 80 per cent of workers with full secondary or university education. Support of young and educated employees and long-term investments into research and development secures growth to the company also during an economic crisis. During the fiscal year 2012, ZAT anticipates record sales in the company's history.

*Denisa Ranochová,
denisa@ranochova.cz*



ACTIVITIES OF ZAT IN RAIL TRANSPORTATION

- CONTROLLING TECHNOLOGY FOR TRACTION LINE FEEDING
- CENTRAL CONTROLLING DEVICES
- INTEGRATION OF PRODUCTS MANUFACTURED BY DIFFERENT PRODUCERS WITHIN A SINGLE SYSTEM
- POWER AND CONTROLLING ELECTRONICS FOR ELECTRIC LOCOMOTIVES
- DRIVERS FOR CONTROLLING OF IGBT POWER SEMICONDUCTOR SEGMENTS
- MAXIMUM ADAPTATION TO CUSTOMER'S REQUIREMENTS
- TECHNICAL AND TECHNOLOGICAL KNOW-HOW
- WARRANTY AND AFTER WARRANTY SERVICE

ZAT WORKS IN THE FOLLOWING FIELDS

- NUCLEAR POWER GENERATION
- HEAT-POWER GENERATION
- HYDRO-POWER GENERATION
- TECHNOLOGY PROCESS AUTOMATION
- PRODUCTION OF INDUSTRIAL ELECTRONICS
- MAINTENANCE AND SERVICE
- AUTOMATION DEVICES FOR TECHNOLOGY PROCESS CONTROL
- SPECIALISED MEDICAL DEVICES



www.zat.cz