

Tomsk Electronic Company:

«doubling principle»

One of the most important tasks of the present-day Russia is to move from raw-material economy to innovative economy, basing on the domestic research and technology. Tomsk region is one of the major participants in the innovative process: in 2005 it, among several other regions, won tender on placing special economic area to implement new technologies. The region's intelligent potential includes extensive

network of universities, Research and Development Institutes and hi-tech enterprises. Their work is destined to bring Russian economy to the next stage of development. As an example we would like to indicate "Tomsk Electronic Company", which was officially named the best innovative company among medium-size enterprises, applying technologies.

Scientific and manufacturing enterprise "Tomsk Electronic Company" is known as one of the leading companies, developing hi-tech control systems for oil-and-gas, petrochemical and metallurgic industries. Dynamic development of the company is remarkable.

- Whatever we undertake, we always imply annual doubling, - says Andrei Shestakov, general director of SME "Tomsk Electronic Company". – For example, we can increase sales, or expand research and development, or speed up developments substantially... All our plans and actions are based on the principle of rapid growth with annual double increase.

HOW TO RAISE A "KULIBIN"?

*«The development of the civilization cannot be reversed, as long as the youth lives on the Earth».
(Keller)*

Innovative thought is an especial state of mind that is why top management of TEC endeavors to employ workers, able to generate and realize ideas. It is not an exaggeration that at the present time TEC has a strong intellectual team, involved in the technological-process automation. The share of young people up to 30 years old exceeds 40%, which determines fresh ideas and solutions. As a rule, young workers come to Tomsk Electronic Company as students in order to pass practical training, externship or graduate residency.

- We have a student engineering department, including up to 20-30 people, - tells Andrei Shestakov. – Certainly, they are not concentrated in one department; they work in various departments and areas. After they have obtained diplomas, we invite the endowed youngsters to take part in competition and fill a vacancy.

The main principle for training young engineers and research workers is freedom. Our young employees receive "carte blanche": choose a subject, which interests you, and create, imagine, realize! The top management does not hesitate to entrust to young workers the most crucial projects: in TEC there are many heads of departments younger than 30. For example, Processing lines development department, headed by Aleksey Gontar. He graduated from Tomsk State University of Control Systems and Radioelectronics, Radio-design faculty, began to work in the Company as a fourth year student. He has been working in our company for two years.

Our work is interesting and creative, - says Aleksey. – We design bulk materials weighing lines for metallurgy, develop finishing control lines of railroad wheels. Our work is connected with subjects, which we did not study at the university, therefore the newcomers have to learn a lot from their experienced colleagues, who have acquired substantial knowledge, responsibility for its application, ability to achieve the set goals.

The young workers are certain about their career and future, which provides successful development for the whole company. The young researchers and engineers have been involved in almost every Research and advanced development within SME "TEC", contributing to their innovativeness. All

the products and systems, manufactured by TEC, are reliable, functional, sophisticated and world competitive.

WHY SIEMENS-VAI CHOSE TOMSK ENTERPRISE?

«Science and art belong to the world, and before them all national barriers disappear». (Goethe)

In 2002 top management of Tomsk Electronic Company made a crucial decision: focus on complete delivery and combine integrating, developing and manufacturing functions. That event stipulated a new stage for the enterprise development -



• Scientific and manufacturing enterprise "TEK" concluded the contract with company "Siemens-VAI".

cooperation with foreign partners and participation in major projects. SME "TEC" was named one of the best innovative companies in Tomsk region after an important event, which happened a year ago.

We considered several indices: growth of the amount of employees and the volume of output, implementation of new developments. However, there are many firms which could be named leaders under such conditions, - says Aleksey Pushkarenko the chairman of the regional committee for science and innovative development. – The main factor in favor of SME "TEC" was it's winning the major tender to manufacture the automated line of the railroad wheels final check for the band-wheel plant at the Nizhny Tagil Steel and Iron Plant.

The contract includes not solely the supply of two final check lines, but also erection supervision, commissioning, start up and consultations. As a matter of fact, the Customer entrusted to Tomsk Electronic Company role of general contractor and designer in this complicated project. The technical director Sergei Vasilievich Khlyst, who was awarded with certificate "Professional engineer of Russia" in the fourth All-Russia contest "Engineer of the year 2005":

We unite efforts of leading Russian and foreign companies, providing hi-tech level of the task fulfillment. For example, what is the final check line? It is a high-production transportation line with built-in sophisticated equipment of supersonic test, fluorescent magnetic particle inspection, hardening of railroad wheels, including machine vision and up-to-date APCS. The line cycle, 1 wheel in one minute, determines severe requirements to the equipment, automation and mechanization level of technology process.

Cooperation with Nizhny Tagil Steel and Iron Plant gave Tomsk Electronic Company the first essential experience of international partnership: TEC concluded a contract with "Wheelabrator Group" (Canada) – one of the world leading manufacturers of shotblast cleaning systems. In January 2006 representatives of "Wheelabrator Group", Shawn Horton and Rafael Blyakher visited SME "TEC". They voiced opinion about their new business partner:

We think that TEC is a highly developed company with serious attitude towards work.

It was pleasant to see, that people of this company are interested in their work. And it is obvious, that they do so not because they have been said so - they do it, because they perceive and know their responsibility. And it is absolutely different!

In 2005 Tomsk Electronic Company also began together with TomZEL the Research and Advanced Development for megaproject JSC "Transneft": a powerful main oil-pipe "East Siberia – Pacific ocean". Specialists from Tomsk developed, manufactured and successfully tested a new intelligent electric drive, designed for 50000 Nm. Nowadays Tomsk specialists during development of new models focus on improvement of diagnostic operation by introducing into electronic control module a "black box", which allows to save and store complete "history" of the electric drive, including date, time and information of control commands and emergency events.

The year 2006 brought to Tomsk Electronic Company next large order. The enterprise was chosen as partner of Siemens-Voest-Alpine (Austria) in a major project, connected with large-scale revamping of oxygen-converter plant at Nizhny Tagil Steel and Iron Plant. Siemens-VAI, a world leader for development and construction of industrial-scale plants, producing steel and cast iron, has chosen SME "TEC" after a durable analysis of work. In September Anton Engelmann, chief technical project manager, visited Tomsk. The Austrian representative has highly estimated the Siberian colleagues' readiness to fulfill such complicated project:

INNOVATIONS IN RUSSIA • Tomsk experience

It is well-known, that Siemens-VAI chooses their partners thoroughly, both technically and commercially. TEC is a strong partner, a dynamic company with good innovational and production possibilities, that is why I am completely sure, that we will have a successful cooperation at Nizhny Tagil Steel and Iron Plant, and together we will be able to contribute to the development of the steelmaking production at NTMK.

WHAT IS THE KEY SUCCESSFUL FACTOR FOR TEC IN INDUSTRY?

"What is done wisely – done well". (Shelley)

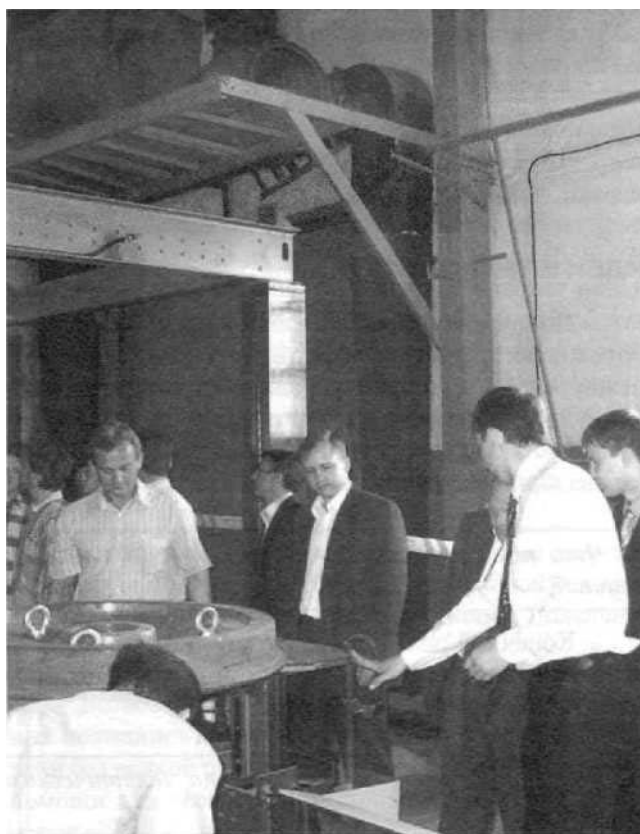
Automated process control systems are nowadays one of key aspects for the domestic industry development, the main factor, contributing to the country accession into world economic territory. Tomsk Electronic Company is actively involved in this process, as it offers to the Customers the most effective solutions, and, first of all, complex projects and supplies. The enterprise work quality is confirmed by the certificate of management quality system conformity with international standard ISO 9001:2000.

Hundreds of enterprises in Russia and CIS countries were able to improve labor productivity, minimize production expenses, improve operation conditions and start manufacturing of new products in conformity with world requirements owing to cooperation with Tomsk Electronic Company. Projects of SME "TEC" are being successfully realized in different industries. This article gives just a few examples.

- The company produced and supplied more than 5000 electric drives of "RemTEC" type for oil companies "Rosneft", "Lukoil", TNK BP "Surgutneftegaz", East Oil Company "Tomskneft", "Slavneft" and other Customers.
- Measuring and computing systems "MicroTEC" effectively operate at facilities of such companies as East Oil Company "Tomskneft", "Samaraneftegaz", "Slavnefteftegaz" and "Yuganskneftegaz", providing current and intercompany estimation of the extracted oil quantity and quality.
- Tomsk Electronic Company installs at metallurgical enterprises in Russia and Kazakhstan automated systems for control and accounting of raw materials, technologic materials, product yield and residues. SME "TEC" worthily ranks among Russian leaders for automation of ferroalloy furnaces weighing and measuring.

Certainly, this is just a few of all works, carried out by "Tomsk Electronic Company". It is important to note, that specialists are ready to offer the most effective product automation project for each enterprise. In addition, TEC applies for intelligent equipment production not only its own advanced developments, but also solutions of world leaders, including Emerson Process Management (Fisher Rosemount), Schneider Electric (Modicon), Siemens.

Rapid development of IT-technologies prompts us to move constantly and seek new possibilities, applying entire intellectual potential, creativity and enthusiasm of our specialists, - says General director of SME "Tomsk Electronic Company", Andrei Shestakov. – We are sure, that our innovative developments will henceforth contribute to economic well-being of our partners and increased competitiveness of domestic production as a whole. Regarding outlooks, our aim is to enter and establish ourselves in the market of supply and development of complex automated systems. Our objective is to equal international companies, which supply entire plants.



Supply of finishing control lines of the railroad wheels FOR Nizhnetagilsky metallurgical combinat.