



Rakurs Ltd

Rakurs
Automation
Know-how:
User-friendly
Reliable
Solutions



Automation in perspective



Rakurs Ltd

17 years of development

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities



The Company "RAKURS" founded in 1991 is a leader at Russian market of industrial automation for the objects of hydroenergrtics, heat-and-power engineering, metallurgy and pulp & paper industry.

For these years we have stored up a big experience in creation of the automated control systems of the technological process, both for the relatively small stations and for big complexes



Directions of business activity

Company



Supply of Control systems, based on:



Quality



Sales of components for industrial automation



Systems

Distribution



Drive Department (repair, service and drive engineering)



Electric drive

Education



Training and consulting for customers



Our abilities



Assembling and manufacturing of automation cabinet



RAKURS

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities

“Rakurs” is successfully developing!

On January 16, 2008 at the meeting of the advisory committee regarding Special Economic Zones the RAKURS Company was awarded the resident status of the Special Economic Zone in St-Petersburg.

In Special Economic Zone RAKURS will realize the investment project
“Working out and developing the production of the software-technical complexes for the objects of the power branch in Russia”.



RAKURS will invest
more than 10 million EURO during
the realization of the project

and build up a new building with
total area **more than 11000 m²**



2005



Employees

The high competitive potential of the "RAKURS" company is ensured by the work of **200 highly qualified specialists**, who are able to solve comprehensively in fact any task of development, production and and adjustment of control systems for technological processes and equipment.

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities



Our personnels' advantages

1. An additional education of top and middle managers in St.-Petersburg State University.

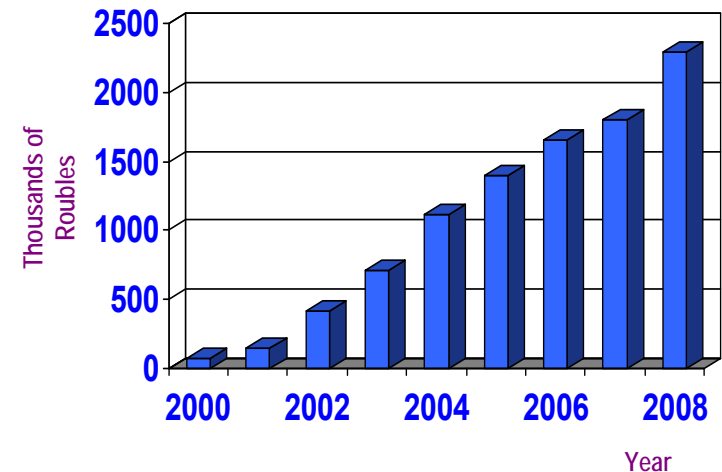


2. Training of the "Project Management" course

3. Getting knowledge in new production and new solutions of:



Human Capital Investments



2005



Certificate ISO 9001:2000 covers all our business processes

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities

*The quality of our productions is our main priority!
Quality is each employee's concern!*



It is the participation of the whole collective body of «Rakurs» in continuous perfection of our products that makes it possible for us to bear responsibility to the company's clients for the final result in full measure.

Balanced Score Card (BSC) is used in our company. All business activities are under control.



2005



Система качества сертифицирована



The Prize of the Russian Government in the field of quality management

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities

By the resolution of Government of the Russian Federation dated 25 April, 2006 the "RAKURS" Company was awarded **the prize of the Russian Government in the sphere of quality**. This award was presented for the considerable results in the sphere of production and services quality, and also for the application of the high-performance methods of the quality management.



"RAKURS" has become **the first Russian Company**, working in the sphere of industrial automation, which got this award.





RAKURS

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities

Automated control systems of technological processes and MES-systems

“RAKURS” is specialized in a field of creating of automated control systems for technological process and equipment. We provide a complete engineering cycle of an industrial automation.



Rakurs supply systems to the

- power generation,
- nuclear,
- pulp-and-paper industry,
- metallurgy and mineral resource industry,
- building industry
- and other markets

**The most of our projects are made
for power generation market.**



2005



RAKURS

Automated control systems of technological processes and MES-systems

By the present day, over **400 projects** have been put into operation by our company in Russia and abroad.

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities

Hydroenergetics

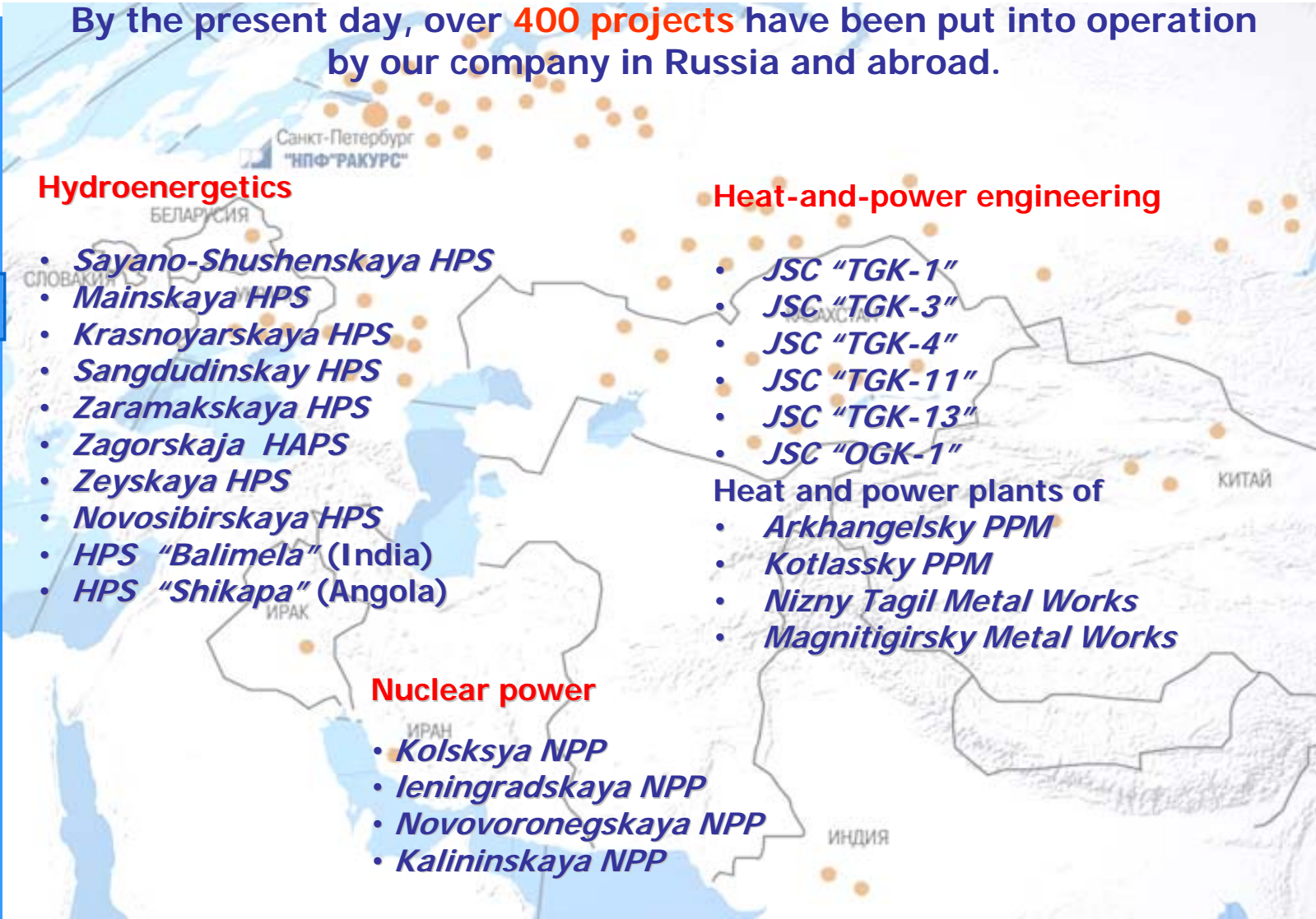
- *Sayano-Shushenskaya HPS*
- *Mainskaya HPS*
- *Krasnoyarskaya HPS*
- *Sangdudinskay HPS*
- *Zaramakskaya HPS*
- *Zagorskaja HAPS*
- *Zeyskaya HPS*
- *Novosibirskaya HPS*
- *HPS "Balimela" (India)*
- *HPS "Shikapa" (Angola)*

Heat-and-power engineering

- *JSC "TGK-1"*
 - *JSC "TGK-3"*
 - *JSC "TGK-4"*
 - *JSC "TGK-11"*
 - *JSC "TGK-13"*
 - *JSC "OGK-1"*
- Heat and power plants of
- *Arkhangelsky PPM*
 - *Kotlassky PPM*
 - *Nizny Tagil Metal Works*
 - *Magnitgirsky Metal Works*

Nuclear power

- *Kolsksya NPP*
- *leningradskaya NPP*
- *Novovoronegskaya NPP*
- *Kalininskaya NPP*



2005



"Rakurs" company is the official engineering partner

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities



The competent authority of



in a field of power industry



The official Engineering partner of



The official engineering partner of PGTD



Also Rakurs have signed the Agreement with Metso



2005



RAKURS

“Rakurs” is a general contractor of comprehensive automation projects

Working on “turnkey” basis RAKURS have a great experience of performing the functions of a general contractor with outsourcing of partners having impeccable reputation.

Company

Quality

Systems

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Electric drive

Education

Our abilities



For our Clients we are the only one company, who responsible **for all** work-processes from hardware delivery to installation of control system within one customer.



2005



RAKURS

Company

Quality

Systems

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Electric drive

Education

Our abilities

"Rakurs"

for heat-and-power engineering

Automated control systems for:

- combined-cycle plants
- power generating units, gas turbine power units and steam-gas power units;
- low-powered, middle-powered and high-powered boiler units;
- turbo-sets units.
- Electric part of regulating and protecting system for steam turbine.
- Technological control system for turbogenerators ("*STK-ER*").



Automated control systems for:

- main and auxiliary equipment of heat-and-power plant;
- main and auxiliary equipment of nuclear power station.



2005



RAKURS

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“Rakurs” for hydroenergetics

- PLC and Field Level of automated control system for HPS
- SCADA Level of automated control system for HPS
- Electric part of frequency and active power regulating system for hydraulic turbines
- Control system for Oil-Pressure Plant of HPS



- Automated control systems for main and auxiliary equipment of hydroelectric power station;
- Systems of temperature control for hydro generators
- Power and Distributing Boxes of automated control system for HPS



2005



RAKURS

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Our abilities

“Rakurs”

for Electricity Transmission and Distribution

Hydroenergetics:

Zagorskaya HPSPP

- PCS,
- ACS for protective relaying and automation,
- Telemechanics,
- Distributing gear, switchgear and control gear of electric power (500 kV),
- technological and electrical equipment

Sayano-Shushenskaya and Mainskaya HPP

- Telemechanics,
- ACS for outdoor switchgear (220/500 kV)

Sangdudinskaya HPP

- Protective relaying and automation
- ACS for outdoor switchgear (220/500 kV)
- electrical equipment

Boguchanskaya HPP

- control and monitoring system for transformer equipment

Heat-and-power engineering:

Kalujskaya and Livenskaya Power Plant

- PCS,
- Telemechanics,
- Automated informative electric power accounting system

South-West Power Plant

- PCS,
- control and monitoring system for transformer equipment (4 transformers)





"Rakurs" for Electricity Transmission and Distribution

Transformer Monitoring System is multifunctional system for

1. continuous measurements, registration and display of information about transformer parameters,
2. transformer technical state prediction;
3. automatic control of cooling systems;
4. automatic control of voltage regulation system;
5. etc.



Company

Quality

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Automated operational dispatch control systems

Manufacturing Execution System

Company

Quality

Systems

Distribution

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Our abilities

Apogey



SIEMENS

**SPPA M300
Plant
Management.**



- Arkhangelsky pulp and paper mill;
- Kotlassky pulp and paper mill;
- Svetogorsky pulp and paper mill...





«Standard» solutions

Electric part of frequency and active power regulating system for hydraulic turbines

PTC EHR

(Program and Technical Complex of Electro Hydraulic Regulator)

Company

Quality

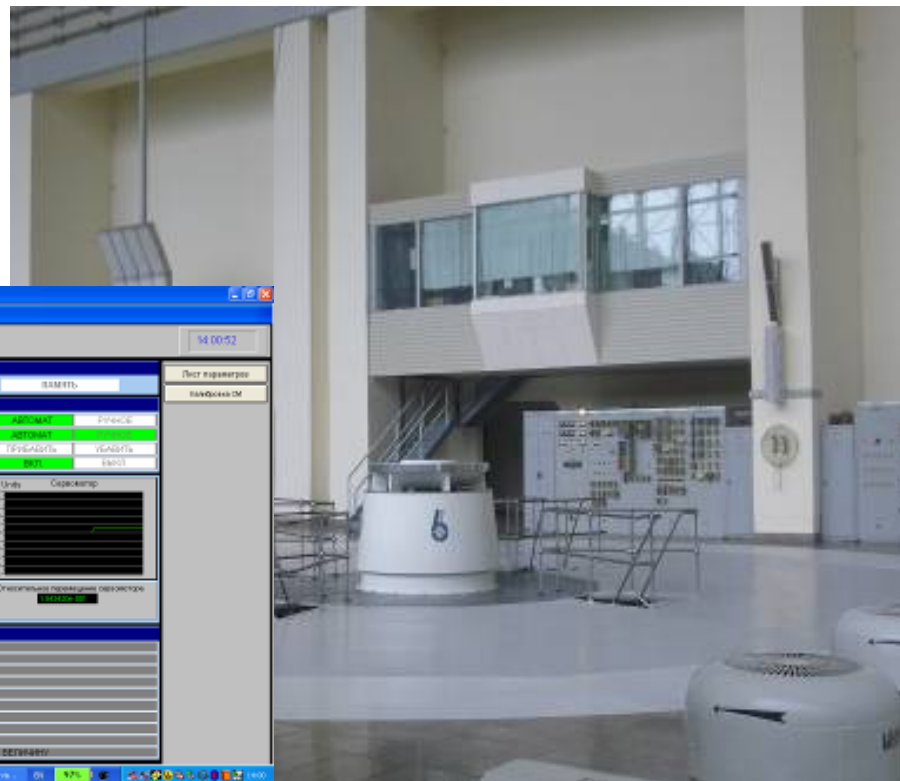
Systems

Distribution

Electric drive

Education

Our abilities





«Standard» solutions

Electric part
of regulating and protecting system for steam turbine

Company

Quality

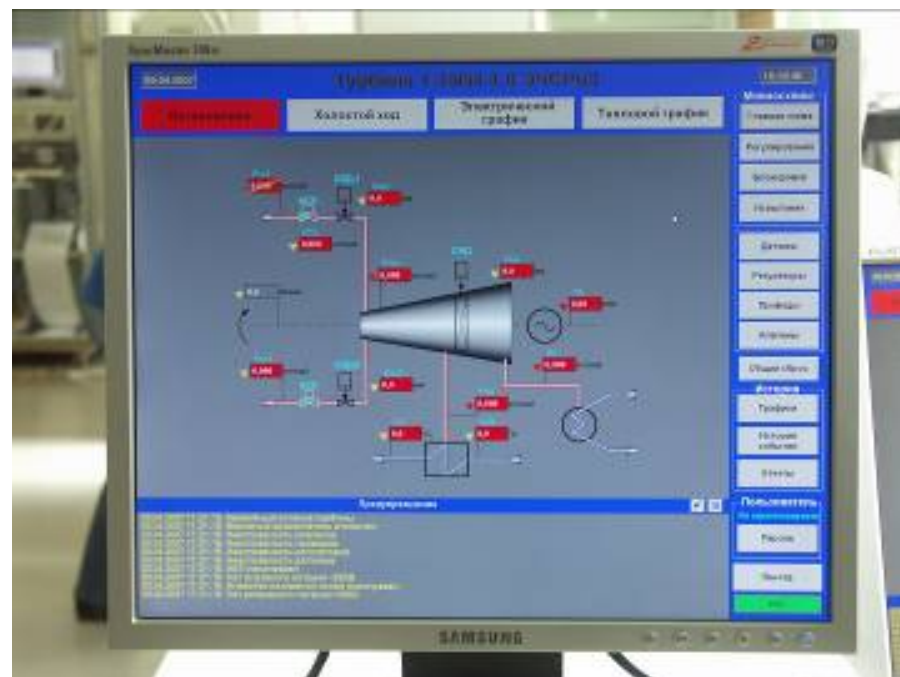
Systems

Distribution

Electric drive

Education

Our abilities



2005



RAKURS

«Standard» solutions

Stator Winding Vibration Control System

System capability:

- Visual display of vibration value
- Storing of measured vibration value (registration frequency is not less than once in 5 sec.);
- Construction of a graphs



Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities

Implemented systems and projects in process :

2009	Kaliniskaya Nuclear Power Plant	Russia
2009	Balakovskaya Nuclear Power Plant	Russia
2009	Volgodonskaya Nuclear Power Plant	Russia
2008	Barh Power Plant	India
2007	Sipat Power Plant	India
2003	Yong Bi Power Plant	Vietnam



2005



Distribution of industrial automation components

Currently "RAKURS" offers automation components produced by the well-known companies



Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities





RAKURS

Electric Drive Department

“RAKURS” is the official service partner of Omron, Yaskawa, Control Techniques, Danfoss, Siemens, Schneider Electric and has a full technical support of this companies.

Company

Quality

Systems

Distribution

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Education

Our abilities



2005



RAKURS

Electric Drive Department

Creation of drive engineering package based on



Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities



- Design
- Production
- Installation
- Service

On the picture:

Drying cell control boxes of PC«Norskiy pottery», Russia.
Omron-Yaskawa Frequency invertors and intelligent module
“Smart Slice” of Omron were applied at this control system.



2005



RAKURS

Company

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Electric Drive Department

“RAKURS” is the official partner of “Siemens”
by high-voltage electric drive “Robicon Perfect Harmony”



SIEMENS

- **Selection**
- **Setting up**
- **Putting into operation**
- **Service**

We also offer you solutions, based on high-voltage electric drive «TM-drive» Mitsubishi, «FSdrive-MV» Yaskawa.



2005



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Training and consulting centre

New technologies require new approaches to retaining and professional improvement. Becoming our client, you may have a course of individual training at the Training centre or the company – based on the principles of flexibility, modularity and topicality.

1. The basic Training centre in Russia is located on the territory of St.Petersburg State University of Electrical Engineering;
2. Availability of a training classroom at the "Rakurs" office;
3. Training of operating personnel at their workplaces;
4. Training service is usually included in a contract.



To be always fit and up to the mark, be sure to use the services of our training centre.





RAKURS

We have our own building

Labour organization is extremely important in any business, moreover it is important in development of high-quality automated systems.

Our company's structure consists of several departments, oriented at a single result - to implement the Customer's task in time and with high quality.

Company

Quality

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Our abilities



“RAKURS” has all necessary resources, which is concentrated in our own building of 3000 m², for producing of comprehensive control systems



2005



RAKURS

Production and engineering complex

Company

Quality

Systems

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Electric drive

Education

Our abilities



The following divisions –

- procurement and logistic department,
- sales department,
- design documentation department,
- testing and adjustment department,
- quality management group
- and the company's own assembly site

– are the links of one technological chain leading to successful work with the partners.



2005



RAKURS

The assembly site

Having our own assembly site we guarantee high quality of made equipment as well as high quality of a design work.

Company

Quality

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Our abilities



2005



RAKURS

The testing and adjustment department

The testing and adjustment department equipped with up-to-date metrological equipment and testing software is responsible for quality control of manufactured systems, their compliance with the Customer's requirements; it contributes to prompt and efficient adjustment work at the Customer's objects.

Company

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Our abilities



2005



RAKURS

Company

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The warehouse

“RAKURS” has a warehouse of component parts in St.-Petersburg, which is being permanently replenished. The complete spectrum of equipment for industrial automation from relays to PLC enables us to meet our obligations to the Customers as proper and in due time and to cut the project realization timeframe considerably.



2005



RAKURS

Innovation management

We aspire to use the most effective solutions and information technologies at our work. We follow the principle that **the space for creative work is always exists even while solving absolutely routine problems.** Brilliant and distinguished personalities work at our company. Original and non-standard approaches to a problem allow us to offer the most suitable solutions to Customers.

Company

Quality

Systems

Distribution

Electric drive

Education

Our abilities



Special measuring instrument laboratory



IT Department



Department of Product development



2005



Rakurs is your reliable partner!

Our profile – large projects! Our priority – long-term cooperation!

Company

Quality

Systems

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Electric drive

Education

Our abilities



4.07.96 8.20

**Российская федерация
АО "КрасноярскЭнерго"
Дочернее акционерное общество
"Красноярская ГЭС"**

Facsimile To: Чернигову Л.М., Fax(812)183-68-42
From: Колмогоров В.В., Fax: (391-44) 2-21-34

Уважаемый Леонид Михайлович!

Направляю Вам отзыв о системе термомконтроля, установленной на Красноярской ГЭС:

Система термомконтроля гидроагрегата производства предприятия "Ракурс" (С.Петербург), выполненная на базе средств автоматизации фирмы "Отпос", эксплуатируется на нашем предприятии с 1995 года и установлена на 2-ом гидроагрегате.

За время эксплуатации системы подтвердила свои высокие потребительские качества:

- высокая надежность - система эксплуатируется круглосуточно, наличие обзоров или выходов из строя не отмечено;
- высокую помехоустойчивость - система работает в непосредственной близости от гидроагрегата, в условиях сильных электромагнитных помех, при этом ложных срабатываний не было;
- высокий уровень сервиса - система предоставляет оператору всю необходимую информацию о температурном состоянии агрегата и производит необходимый объем диагностических операций;
- возможность передачи данных на верхний уровень АСУ ТП, для последующего анализа и архивирования.

По сравнению с системой термомконтроля типа СТК - 400 (ПО "Микропробор" г.Львов), эксплуатируемой на нашей станции с 1976г. до последнего времени, система термомконтроля производства НПО "Ракурс" по своим качествам является системой нового поколения.

Учитывая вышесказанное, мы положительно оцениваем внедрение системы термомконтроля производства НПО "Ракурс" и предлагаем оснастить этими системами остальные агрегаты станции.

Генеральный директор
ДАО "Красноярская ГЭС" Колмогоров В.В.

**Российская федерация
АО "КрасноярскЭнерго"
Дочернее акционерное общество
"Красноярская ГЭС"**

ИТ ГАЭС
заказчик заказа и поставщик
для гидроагрегата 040-Красноярская ГЭС.

С 1996 по 2001 г. на нашей ГЭС было установлено шесть комплексов термомконтроля гидроагрегатов, разработанных, изготовленных АО "РАКУРС" (г.СПб, г.Львов), выполненные на основе программного обеспечения компании "ОТПОС" (г.Москва) (ООО "АЭЭ-АВТОС").

За время эксплуатации системы подтвердили свои высокие потребительские качества:

- Высокая надежность - системы эксплуатируются круглосуточно, наличие обзоров или выходов из строя не отмечено;
- Высокую помехоустойчивость - системы работают в непосредственной близости от гидроагрегата, в условиях сильных электромагнитных помех, при этом ложных срабатываний не было;
- Высокий уровень сервиса - система предоставляет оператору полную и необходимую информацию о температурном состоянии агрегата и производит необходимый объем диагностических операций;
- Возможность передачи данных на верхний уровень АСУ ТП, для последующего анализа и архивирования.

Кроме того, на нашей ГЭС были выполнены комплексные работы по информационному обеспечению АСУ ТП, включая анализ, разработку и внедрение программ (г.Львов, г.СПб, г.Москва) и систем ИИИ (г.СПб) для гидроагрегатов, расположенных в зоне и на территории нашего предприятия. Работы проводились совместно с филиалом "Информационные системы" ОАО "РАКУРС" (г.Москва).

Наши клиенты высоко оценивают качество работы разработчиков АО "РАКУРС" и поставщиков, а также надежность и долговечность их систем термомконтроля. Благодарим Вас.

Генеральный директор
ОАО "Красноярская ГЭС" В.В. Колмогоров

"РАКУРС" СКОПОВОЕ ПРЕДПРИЯТИЕ

ИТ ГАЭС
заказчик заказа и поставщик
для гидроагрегата 040-Красноярская ГЭС.

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Генеральный директор
ОАО "Красноярская ГЭС" В.В. Колмогоров



Reviews of our Customers and Partners

You will Enjoy to Control!



On



Off

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