

ABOUT CONSORTIUM

The consortium "RUBIN-AUTOMATION" consolidates professional experience of key specialists in the field of automated control systems.



INVESTIGATION



DESIGNING
AND INSTALLATION



MONITORING
UTILITIES



UTILITIES



SCIENCE
AND EXPERTISE



TRAINING
AND PROFESSIONAL
DEVELOPMENT



a pool of scientists, experts, designers, practical engineers, highly skilled workers as well as specialists in various fields of expertise connected with issues of providing effective control over automation objects.



An engineering centre engaged in a wide range of projects and services from making draft proposals, designing and coordinating the project appraisal to actualizing and maintaining automated systems.

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CONSORTIUM RUBIN-AUTOMATION

*Professional solutions
– basis for development!*



**Automatic Process Control System (APCS)
for water supply systems**



Control-objects

Clear-water reservoirs, pumping stations pumping water to the consumers' water supply network.

Goals-of-introduction

- Creating a single control centre of the water supply system.
- Providing uninterrupted supply with water of the proper quality.
- Introducing optimal water supply modes.
- Preventing or reducing damage from accidents.
- Accumulating statistic data for planning and forming water supply modes.
- Saving electric power, heat- and hydroresources.

System functions

- Monitoring and control over geographically dispersed water supply objects.
- Collecting, logging and displaying technological parameters, sending data to the control station from all clear-water reservoirs and pumping stations.
- Warning lights and audible warning in case of going beyond the preset parameters values.
- Monitoring and keeping the preset hydraulic water supply mode.
- Calculating the pumping units running time, optimizing usage of equipment life.
- Technical accounting of incoming water used for the company's own needs.
- Technical/commercial accounting of water supplied to consumers generating accounting documents.
- Quality control of water supplied.
- Control of pumps using frequency converters.
- System continuous self-testing.

System features

- Deep integration of used software and hardware facilities results in the system lower aggregate cost, reducing labour costs of introduction, maintenance and repair.
- The system scalable modular architecture allows performing step-by-step automation of production facilities and upgrading the system.
- The system users maybe connected via wire (RS232, RS485/422, Ethernet, fiber-optic communication lines, telephone lines) and wireless (GPRS, CSD, radio) communication channels.
- The system uses sensors readings and retrospective information to automatically calculate engineering-and-economic performance indicators: running time of pumping stations equipment in general per hour, per day, per month, etc. It allows timely scheduling and performing routine maintenance, preventing emergencies. The afore-mentioned system features can significantly extend time between repairs and maintenance, which will increase economic operational efficiency.
- Documenting information on technical/commercial accounting for accounting periods makes water supply real dynamics transparent and reduces labour costs of generating reports.

Components

- Programmable logic controllers DevLink®-C1000 located in control cabinets.
- Data base servers and an operator's AWS on the basis of SCADA KRUG-2000®.
- Dispatcher's console on the basis of commercial furniture of ConsErgo® series.
- Radio modems.

Implemented projects

- "Kostromagorvodokanal", Kostroma.
- "Gorvodokanal", Odintsovo, Moscow obl.
- "Kuban water supply treatment facilities", Mineralniye Vody.
- "Gorvodokanal", Penza.

