

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 intake**



Control objects

- Water intake wells, 1-st elevation pumping stations.

Goals of introduction

- Creating a single control centre of all water intake.
- Organizing high-reliability communication with minimal costs.
- Monitoring water intake in real time on the dispatcher's AWS.
- An option of the system further expansion.

System functions

- Centralized control over geographically dispersed water intake objects.
- Collecting information via digital channels from smart sensors (flow meters, level meters, etc.).
- Detecting, warning about and logging deviation of parameters from the preset
- Supplying personnel with retrospective technological information (event log, trends, etc.) to analyse water intake dynamics.
- Technical accounting of water intake, generating accounting documents.
- Control of pumps using frequency converters.
- Monitoring power consumption.
- System continuous self-testing.

System features

- The system users maybe connected via wire (RS232, RS485/422, Ethernet, fiber-optic communication lines, telephone lines) and wireless (GPRS, CSD, radio channel) communication channels.
- The system uses minimum of sensors readings and retrospective information to automatically calculate engineering-and-economic performance indicators: running time and rating of wells and water intake in general per hour, per day, per month, etc. It allows timely performing well routine maintenance (filter unloading, submerged pump servicing, etc.), forecasting the situation at wells, preventing emergencies. The afore-mentioned system features can significantly extend time between repairs and maintenance, extend water intake life time, which will increase economic operational efficiency.
- Documenting information on technical/commercial accounting for accounting periods makes water intake real dynamics transparent and reduces labour costs of generating reports.

Components

- Modular integrated SCADA KRUG-2000®.
- OPC-server ModBus made by SPC "KRUG".
- Industrial controller DevLink-C1000 – for the version using with different protocols.
- Dispatcher's AWS.
- Dispatcher's console on the basis of versatile constructions of the ConsErgo® series.
- Ultrasonic flow meters and submerged level meters connected to DevLink-C1000, frequency converters.
- Radio modems.

Implemented projects

- Municipal Unitary Enterprise "Vodokanal", settlement Matveevo-Kurgan, Rostov obl. (introduced by firm "Donvodservis", Bataisk, Rostov obl.).
- "Rosneft – Tuapse refinery", Ltd., Tuapse, Krasnodarskii Krai.
- Artesian water intake of Saransk heat electropower station ТЭЦ-2, Saransk, etc.

