

## 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 chemical plants of water utilities



### Control objects

System of chemical plants of water supply treatment facilities: supply and grout tanks, storage tanks for chemicals, proportioning and transfer pumps.

### Goals of introduction

- Providing reliable and quality water treatment with minimal operating costs due to: strict observance of the requirements of process regulations; on-line control over the equipment operation, reducing its repair costs; accuracy of keeping the preset parameters values; timely detection, containment and liquidation of accidents; saving chemicals, energy resources and water for the company's own needs.



### System functions

- Measuring and control over technological parameters, production control.
- Detecting, logging and warning about deviations of parameters from the preset limits and protection system operation.
- Generating and sending on-line data to the personnel.
- Generating and printing reports.
- Archiving history of changing parameters.
- Calculation tasks: chemicals consumption, the equipment running time, etc.
- Emergency shutdown devices (SDD).
- Informing the personnel in case of hardware failures.
- Automatic regulation.

### System features

- Meeting national quality standards for potable water according to GOST 28.74-82.
- Timely sending quality information on the course of the process, status of the equipment and control hardware to the operating personnel.
- Reducing probability of the operator's erroneous actions due to timely sending reliable visual information.
- Extending the equipment operation life due to immediate response to failures in the system.
- Reducing energy resources consumption due to functions of automatic regulation and control.
- Minimizing costs of engineering works.
- Long-term storage of accumulated data.
- Using certified software and hardware facilities including the ones entered in the State register of gages.

### Components

- Actuating mechanisms, incremental transducers, instrumentation transducers located in technological sections.
- Microprocessor controller DevLink-C1000 with modules for input/output of analogue and discrete signals which, depending on the task, maybe made according to the scheme of 100% "hot" sparing of controllers or 100% "hot" sparing of the controller processing (computing) part.
- Servers for collecting and storing data, users' automated workstations on the basis of SCADA KRUG-2000®.
- Dispatcher's console on the basis of commercial furniture of ConsErgo® series.

### Implemented projects

- Water supply treatment facility "Podgornaya" (Municipal Unitary Enterprise "Gorvodokanal"), Penza.

