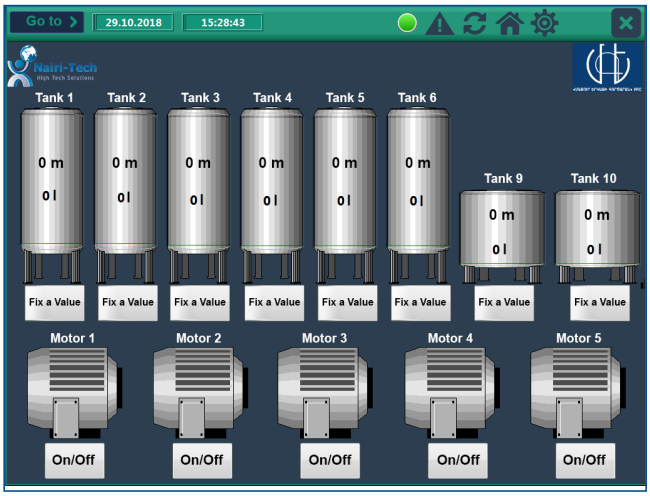
Automated Process Control System for Chemical Industry

Overview

Automated Process Control System is designed for continuous monitoring and indicating of liquid level in tanks, as well as for monitoring of pumps motors state. All processes are performed by the system in real-time mode.

Automated Process Control System includes hardware and software parts. Hardware part of the system is designed on the basis of the control and measuring equipment from National Instruments company. Automated system is based on NI cRIO-9066 industrial 8-slot real-time controller which has the possibility of modifying and updating through module construction. NI cRIO-9066 controller is intended for use in harsh climatic conditions.

To ensure the operation of the system, specialized software has been developed, written in the LabVIEW graphical programming environment. The software has an intuitive and highly-customizable user interface.

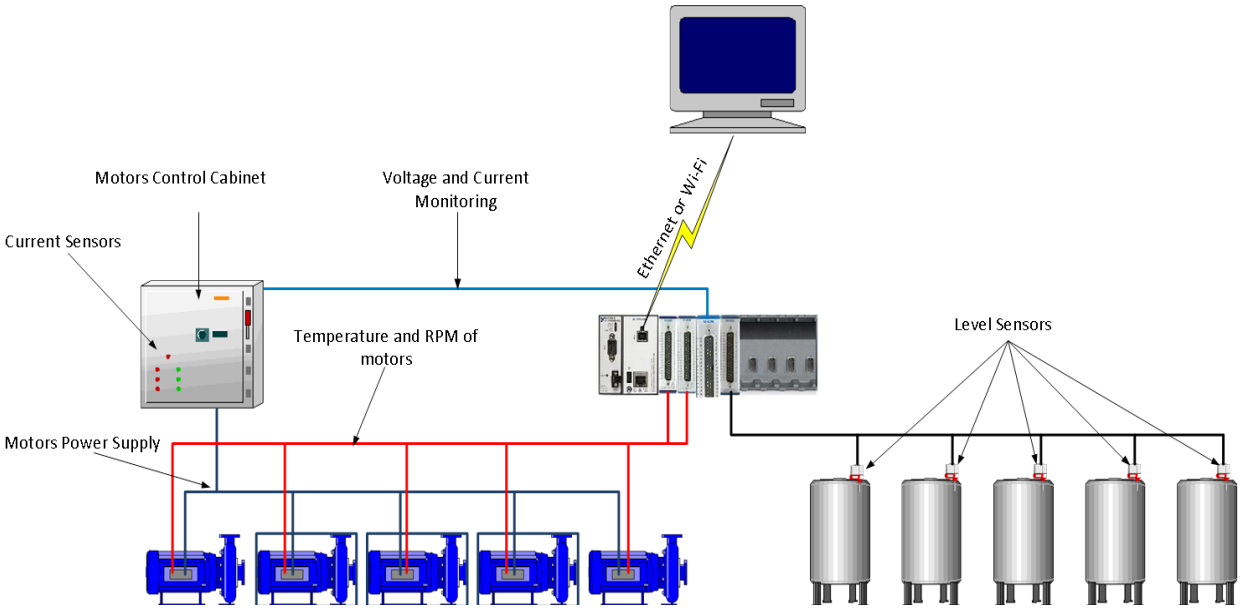


System Features

- Data acquisition, processing and visualization of liquid level in tanks
- Calculation of the amount of liquid remaining in the tanks
- Indication of key parameters of motors: voltage, current consumption, temperature, RPM
- Setting of valid values for registered parameters
- Actuation of light alarm in case of emergency situations

Software Features

- Data acquisition and visualization from level sensors in real-time mode
- Continuous monitoring of temperature, RPM, current and voltage of motors
- Configuration of the light alarm generation parameters separately for each component of the system
- Automatic generation of control signals in the case of emergency situation
- Alarms logging and saving in the log-file, as well as liquid amount in tanks
- Software settings saving in the configuration file



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