More efficient use of the main equipment and a higher reliability of the power supply system

SUPERVISORY OPERATION CONTROL OF POWER SUPPLY

APPLICATION:

- Power supply supervisory operation control systems are used to avoid untimely response to pre-alarm indication by reducing the time of spotting and rapid response to the pre-alarm indications generated at processing facilities with geographically-distributed electrical installations of various purposes.

LIST OF EQUIPMENT

The monitoring and control system implemented by NIPOM includes the following elements:

- a software and hardware suite for local control of electrical installations that controls the parameters of the electrical installations and the condition of the switchgear equipment, protection control, automatic switches, which enables manual control of electrical devices in the remote control mode from the duty personnel's station at the facility;
- a software and hardware suite of Industrial Ethernet with fiber-optic communication lines;
- a software and hardware unit of the duty personnel's station at the facility that provides: visualization of dynamic mimics of all electrical installations and remote control of switching their switching equipment;
- indication of abnormalities, emergency and pre-emergency situations; event logging and archiving;
- means of GSM mobile communication for an automatic transmission of SMS about any important emergency situations to mobile phones.

FEATURES AND ADVANTAGES

The efficiency of the basic equipment and the reliability of the power supply system due to the operational control of electrical power supply to consumers

- Provision of personnel with sufficient, reliable and timely information on the modes of operation and the condition of electrical equipment, information for analysis, optimization and scheduling of equipment operation and repairs:
  - monitoring of the current basic operating parameters of the power equipment;
  - monitoring of the condition and position of the basic switching devices;
  - indication of equipment taken out of operation for repair;
  - indication that the equipment is not ready and information received from it is unreliable.
- Operational control of switching devices, the possibility to change the working conditions of electrical equipment using remote control.
- Control of the number of switching operations, control of tripping of circuit breakers, warning about the approaching exhaustion of the life span.
- Transfer of the data received to MES and ERP system of the enterprise, remote control centers and offices of the company.

The reliability of the power supply system due to the prompt warning of the duty personnel in case of emergency and pre-emergency situations and reduced time for troubleshooting

- Warnings and alarms.
- Logging with assigning a timestamp.
- Sound warning.
- Sending SMS to the operating personnel about important emergency situations.
- Creation of reporting documentation.

Increased quality of service and a reduced number of human errors

- Separation of user access levels.
- Protection from erroneous user actions.
- Logging of operating personnel's actions.
- Archiving data with different sampling frequency, data display in graphical and tabular form, grouping of data by type of equipment, list of parameters and time interval.

Flexible and easy-to-expand system

- The system is open to upgrades and improvements in the future.
- The possibility of using domestic hardware and software.