

1.08. AUTOMATED SUBSTATION CONTROL SYSTEM

The system is intended for automated monitoring and control of electrical substations.

ASCS complex consists of:

- automated system of dispatch control;
- automated system of data acquisition from MDRPA;
- disturbance recording system;
- wide-area measurement system;
- system of data transmission to the upper hierarchical levels;
- automated control system of high-voltage bushings insulation;
- monitoring system of the substation's own needs;
- automated system for the dispatch reporting and operational documentation formation;
- system of technological and security
- technological and security video surveillance system.

Main system advantages:

Ease of handling, i.e.:

- simple and intuitive interface;
- ability to control all switching devices of the facility taking into account operational blocks;
- operational control of electrical circuit;
- automatic maintenance of the logs of switchings, events, and failures logs;
- operational control of acceptability of operation and information entered;
- complete self-diagnostics of all system components;
- holding of all individual settings;
- full-featured training course and detailed reference materials;
- context-sensitive help and tooltips.

A unified environment for ASCS development, allows to:

- solve the problems of software integration of different system devices and related modules;
- create algorithms of control, management and blocking classified by devices;
- have access from any workplace to the whole information available in the system in accordance with the rights granted.

Openness and compliance with the standards provides:

- an interaction with other programs and systems using the latest technologies (OPC, OLE, DCOM, ActiveX, OLE DB, ODBC etc.);
- a support of the protocols of IEC standards;
- usage of any types of documents in the operator interface and data exchange with them;
- an unlimited extension of functionality by third-party products;
- open interfaces for creating any basic elements by a user.



Control room of 750kV "Kakhovska" substation

The developed ASCS is a completely new fully functional automated complex, which provides dramatic reduction in efforts and increase in the substation reliability. The system does not have any analogues in Ukraine and corresponds to the best world standards.

ASCS is implemented on 750 kV "Kyivska" and "Kakhovska" substations, and a number of 330kV and 110kV substations.