FEATURES OF INFORMATION AND ITS EFFECTIVE USE IN INTEGRATION AUTOMATED CONTROL SYSTEM

Gatilov Dmitro, Pridvorov Sergei

Ukrainian Engineering Pedagogics Academy

One of the most characteristic features of the development of the energy industry is the outstripping growth of the so-called "information load" of the ACS energy system (ES) in comparison with the increase in unit capacities of TPP power units and. especially nuclear power plants. If we introduce the concept of a specific indicator of "information load" per 1 MW of installed power units inf/MW, then over the period under review it has increased several times. It can be stated that with the use of computer technology in the ACS ES, a new stage of their construction and development has begun. Significant potential capabilities of ACS ES make it possible to cover and control a huge "information field" in terms of the flow of various information flows. Therefore, today we can justifiably speak of "information monitoring", investing in this concept the implementation of the function of the ACS ES for the collection, processing and optimal use of information flows circulating in this "information field". Under these conditions, the determining role in ensuring the effective functioning of the automated control system of a power unit belongs to its information support (IS) - a set of decisions on the volume, placement and forms of organization of information circulating in the automated control system during its operation. The modern concept of managing the power unit of TPPs and NPPs is based on centralized control and management from the central unit control panel (BCR). To present information, the information-computing system (ICS) is divided into subsystems, each of which serves the corresponding part of the power unit (steam generator, reactor, turbine, electric generator, etc.). This subsystem includes terminals for communication with an object (USO) and central nodes for collecting and processing information (computer systems (VKO). When TSO is directly connected to the VKO, two levels of the information processing hierarchy are formed corresponding to the information algorithmic structure of the APCS by the power unit