FUNDAMENTAL STRATEGY OF THE METHOD OF ACCOUNTING AND CONTROL OF AUTOMATION AND TELEMECHANICS DEVICES

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ABSTRACT

The article considers the consequence of practical promotion of the computerized process of operation of railway automation and telemechanics devices: signaling, centralization and interlocking; the factors of the automated-executive section of the scheme are indicated; a theoretical form is designed, a modern innovative procedure is improved and the project properties of the automatic method are illustrated. The formation of an automated structure is examined and the method of running this system is explained.

ANNOТАЦИЯ

В статье рассматриваются последствия внедрения в практику компьютеризированного процесса работы устройств железнодорожной автоматики и телемеханики: сигнализации, централизации и блокировки; указаны коэффициенты автоматизированно-исполнительного участка схемы; разработана теоретическая форма, усовершенствована современная инновационная процедура и проиллюстрированы проектные свойства автоматического метода. Рассмотрено формирование автоматизированной структуры и объяснен метод запуска этой системы.

Keywords: centralization and blocking devices, windows architecture, date of installation, scheme, program.

Ключевые слова: устройства централизации и блокировки, архитектура windows, дата установки, схема, программа.
The conventional process to automatize the computerized form operation of project documentation is that computer software improvement is gradually forced toward the background, as equal delicate alterations in the strategy of transportation and workflow base the necessity to reprogram the implementation and pass extra interval and currency. An outcome, there is no time to renovate requests positioned on proceeding situations and qualifications of railway transport. Actively developing formations connected to initiative automation demand numerous trained personnel due to high labor intensity. In addition, many qualified specialists in the field of automation are not growing fast enough [1,2,3,4].

At present, several technological means have reached the end of their service life or are approaching it (in indication projects, this is about a quarter of those in production). On purpose prevent further aging of devices, workers of the automation and transmissions economy will have to dramatically growth the pace of modernization of industrial means in the coming years. Meanwhile, newly improved and improved domestic and foreign system of electrical centralization, automatic blocking, dispatcher centralization on a microprocessor foundation should be introduced. Simultaneously, it is compulsory to switch to new modern service automations. The operation is to introduce the maintenance of appliances as much as probable due to technological development, to decrease the likelihood of a negative impact of the human factor on the procedure of establishing the trouble-free operation of scientific indications and, as a consequence, train safety is ensured [5,6,7].

The window construction of the computerized method contains of three stages: program window, system login and window types (fig. 1).

In an automated control system, the user is the most important process. It plays the role of an indication of input, output, search and grouping of material in relation to appliances. Custom windows should be simple, clear, and also ergonomic [8,9].

Let us consider in more detail the main window of the system, which is shown in fig.2. This window is logically divided into 5 parts: 1) the main window of the program, 2) the main menu of the program, 3) the toolbar, 4) the main field of the program, and finally 5) the device display field (DMS), divided into categories.

Figure 1. Windows architecture of the automated system method
Adding a new workshop and station for the automation and transmission interspace is provided by the corresponding functions. You can call the list from the context menu of the design diagram. A list of information about all the devices located at the station can be viewed in separate sections. There are several processes of the method. One of them is a window for viewing expired fixtures [10,11,12].

Basic view of the system, replaceable fixtures is identified using the following icons:

Icon - shows all appointments of a particular element.

Icon - shows the main appliances of a distinct element.

Icon - shows replacement devices (before the 30-day period expires).

Icon - shows overdue (expired equipment) devices.

Replacing an expired appliance is transported in the “Replacing apparatus” window, which indicates the section, place, type, number, name accordingly the project, observation date, expiration period of device, appointment of removal, remaining service life and the sign of the appliance (fig. 3).

In the general communication section, when a specific device is selected from a particular element, the panel displays instruction concerning the appliance (pattern, serial number, manufacturer, name in accordance with the project, location, replacement season, period of establishment, time of removal of the appliance).

In this window, you can explore for appliances that are gathered in the database system. For example, in order to find a device, select the “Search” tab, the label of the project is written in the textbook field. After clicking the “Detect” button, the window shows the search results. Instrument reporting information can be printed from the print dialog section. In this window, you can configure print settings, preview [13,14].

Automated systems are also being developed in the field of railway automation, as a result of scientific research all manual labor will be converted into an automated system. This not only increases work efficiency but also allows for safe control of devices. All data of the devices is stored in an automated system and their status is constantly monitored. The automated system displays the data of the devices in the case of categories and automatically exchanges them in the database when they are replaced.
References: