

Planning The Procedure For Keeping Records And Monitoring The Progress Of Work Through Technical Documentation

Astanaliev Elmurod Tursunali ogli

“Department of Automation and telemechanics of Tashkent state transport university” Master’s student,

elmurod1246@mail.ru

Tashkent state transport university, Tashkent, Uzbekistan

Abstract. *The article illustrates the forms of maintenance for the control of railway automation devices. The automation devices are serviced through annual and four week maintenance schedules. Each job is completed on time and the work is contributed equally. All completed work is recorded in the document with exact dates and times. Mathematical methods have been proposed to optimize the maintenance process.*

Keywords: maintenance schedules, signaling devices, four-week, documentation, electrician.

I. INTRODUCTION

A distinctive feature of the operation of railway automation and telemechanics systems is not only the increasing complexity of the devices, but also the difficult conditions of continuous round-the-clock operation. In such conditions, new forms of maintenance based on the use of methods and means of technical diagnostics are of particular importance.

To maintain cyclically, the planned frequency of work in the maintenance schedules should be a short week. For each neighborhood (brigade), an annual and four-week schedule for the maintenance of signaling devices is drawn up and approved.

The four-week schedule includes work that should be performed with a frequency of 4 weeks or more, and in the annual –work that is performed less often than once every 4 weeks. The four-week schedule should have fixed and variable parts. Permanent part of the schedules reflects the maintenance work of signaling devices located within the neighborhood (brigade), and the frequency of their implementation, determined by this Instruction; and in the variable –the calendar due dates for each job.

II. METODOLOGY

In order to maintain uniform (within the distance) schedules providing for the execution of task on specific days of the week, at the end of each year the calendar period for the execution of task is changed. The works included in the schedule are planned in such a way that the time intervals between the same jobs are, as a rule, equal, and the jobs that are technologically related to each other are performed simultaneously.

Scheduled plans are drawn up by a senior electromechanic, agreed by the head of the production site and approved by the head of the distance or his deputy. Re-approval of plans-schedules is carried out as required. Once every 4 weeks, the senior electrician draws up an operational plan for the district or brigade, which includes the work of the four-week and annual maintenance schedules, the reliability improvement plan and previously unforeseen work. The operational plan is approved by the head of the production site. On the site and in the vicinity, where there is no shift duty, work, the date of which coincides with the holidays, should be planned on working days and performed at a shorter frequency.

Every day, the execution of the work stipulated by the operational plan is confirmed by the performers (electrician) by writing in the appropriate column of the operational plan, and the results of inspections are recorded in the logs of the established form. In addition, the electromechanic reports on the performance of the operational plan to the engineer on duty at the distance.

In case of non-fulfillment of the work according to the four-week maintenance schedule for a valid reason, with the consent of the engineer on duty, the work may be postponed for a period of not more than two days. Control over the execution of this work is assigned to the engineer on duty at the distance. On cases of non-fulfillment of work according to the four-week maintenance schedule, the duty engineer reports to the management of the distance.

After checking the technical condition of signaling devices at the site, distance managers, heads of production sites and senior electromechanics must record the identified deficiencies and the timing of their elimination in the SHU-2 form log. After eliminating the noted shortcomings of electromechanics, or senior electromechanics make a corresponding entry in the journal of the SHU-2 form, indicating the date of execution and put their signature. The head of the production site and the senior electromechanic must selectively check the quality of work for previously identified deficiencies. In the areas with shift duty, a desktop journal of the SHU-2 form is kept. In this log, the reception and delivery of duty are noted, failures of signaling devices during the duty are recorded, as well as the measures taken. The senior electromechanic controls the performance of work at the outlook (brigade) according to the marks in the operational plan, the SHU-2 form log, reporting documentation and when checking the status of devices.

III. RESULTS

The results of production checks and measurements are recorded in the appropriate journals and accounting cards.

The senior electromechanic also checks the correctness of the work according to the entries in the Inspection Log, depending on local conditions, but at least once every 4 weeks. The results of the inspection are recorded in the Inspection Log.

The reporting procedure for senior electromechanics is established by the head of the signaling and communication distance. The head of the service and the head of the signaling and communication distance have the right, depending on local conditions, to reduce the frequency of inspections and checks of equipment and signaling devices.

The frequency of checking and inspecting signaling and signaling equipment and devices not specified in this Instruction is established by the head of the service or the signaling and communication distance. The basis in these cases should be taken the frequency established by this Instruction for similar types of equipment and signaling devices.

IV. DISCUSSIONS

The increase in the volume of automation and telemechanics equipment, its technical complexity and intensity of use, requires an improvement in the quality of its service, qualified personnel and significant costs of material and human resources. Under these conditions, the use of mathematical methods for solving problems of optimization of maintenance becomes relevant. This served as one of the main reasons for the development of mathematical methods for finding ways to best solve production and management problems. Therefore, the study of mathematical methods to optimize the device maintenance system is necessary to improve maintenance and decision-making.

REFERENCES

1. Vasilenko M. N. Electronic document management in railway signalling / M. N. Vasilenko, V. G. Trohov, Zuev D. V. // Automation, communication, Informatics. – 2014. – №8. – Pp. 2-3.
2. Baratov, D. K., Aripov, N. M., & Ruziev, D. K. (2019, September). Formalized Methods of Analysis and Synthesis of Electronic Document Management of Technical Documentation. In *2019 IEEE East-West Design & Test Symposium (EWDTS)* (pp. 1-9). IEEE.
3. D.Kh. Baratov, A.Kh. Boltaev, E.T. Astanaliev (2019) “Functional Support of the Automated Accounting System and Control of Devices in Railway Automation Telemechanics” // International Journal of Advanced Research in Science, Engineering and Technology. Vol. 6, Issue 3, March 2019. P.8572-8580.