SORTING HILLS CURRENT PROBLEMS IN AUTOMATION AND TELEMECHANICS SYSTEMS

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ABSTRACT
In this article, the existing problems encountered in railway sorting peaks automation and telemechanics systems are considered. It focuses on solutions to the problems of disconnecting disconnections from the peak as well as connecting and slowing down the content. The way of connecting the automation and telemechanics control devices on the railway sorting Hills with the electric centralization system is illuminated.

Keywords: Electric centralization, sorting Hill, automation and telemechanics, moderator, disconnection.

АННОТАЦИЯ
В данной статье рассматриваются существующие проблемы, возникающие в системах железнодорожной сортировки, автоматизации и телемеханики. Основное внимание уделяется решениям проблем отцепки,прицепки и замедлению вагонов. Рассмотрен способ подключения устройств управления автоматики и телемеханики на железнодорожных сортировочных станциях к системе электрической централизации.

Ключевые слова: Электрическая централизация, сортировочных горках, автоматизация и телемеханика, замедлител, отцеп.

АННОТАЦИЯ
Ушбу мақолада темир йўл саралаш тепаликлари автоматика ва телемеханика тизимларидаги учрайдиган мавжуд муаммолар кўриб чиқилган. Тепаликдан узилмаларни узишдаги ҳамда таркибга улаш ва секинлаштиришдаги муаммолар ечимларига қаратилган. Темир йўл саралаш тепаликларидаги автоматика ва телемеханика назорат қурилмаларининг электр марказлаштириш тизими билан боғлаш усули ёритилган.

Калит сўзлар: Электр марказлаштириш, саралаш тепалиги, автоматика ва телемеханика, вагон секинлаштиргич, узилма.

INTRODUCTION

Currently, human participation in the intermittent descent management system is one of the current topics of discussion. We note the pros and cons of human participation in the system.

1. The disadvantages of not being in the system;
2. the specialist loses qualification and is unable to do so when switching to manual mode;
3. distribution of interruptions at low speeds;
4. the use of human mental capacity and experience is excluded;
5. the advantages of not being in the system;
6. subjective views of the human operator are not allowed;
7. in this case, the following questions remain controversial;
8. who is responsible for the distribution results?

Responsibilities are redistributed between service personnel and developers [1]. Experience with the use of the system in modern conditions has shown that after 1-1.5 years of full-scale operation, employees of the rapid maintenance of a comprehensive automated and centralized management system sorting station will lose their work skills without automation. There are a number of reasons for this. The main reason for the successful operation of the system is the complete absence of the need to manually perform a single rhythmic and repetitive large-scale work on the formation of routes for the interruptions descending from the sorting hill and coordinating their speeds. In this case, doing this work requires constant experience, otherwise the ability may be lost very soon [3]. Also, the work of the operator and the duty officer on the hill is very specific, they are even more responsible than the work of the operators at ordinary stations. At stations of medium power and above, attention is required not to be distracted, causing the situation to be in a state of constant tension. Depending on this, a large number of specialists change the direction (profile) of work (if adaptation is not possible), or climb up the service ladder to the top shift, shunting shift (if they understand the job well and succeed). As a result, after 1-2 years, more than 50% of the peak operational staff will be replaced. One of the main reasons for this is that they first learn to work on an automated hill from the beginning, but these employees do not even have an idea of how to work “manually”. Thus, a number of unacceptable situations may arise, even if they occur: A situation arises that requires operator intervention according to the Instruction. For the reasons mentioned above, he does not have time to intervene, or does not even know how to intervene, or else his untrained intervention will exacerbate the situation, causing injuries, downtime, and financial losses. In this regard, the new concept requires the development of standard situations that mimic possible failures (interruptions), as well as their imitation in the mandatory manner and the release of information about the readiness of the operator. That is, it obtains a specific permit (dopusk) to start work [5]. It is time for the equipment to fail. Equipment failure is inevitable

due to natural causes. 100% of the equipment is not backed up, but often a spare set of equipment is not available to save on purchases (either, they can be manually operated or repaired on their own if something happens) [6]. During the breakdown of the equipment, it is necessary to use the possibility of "manual" operation until its recovery. However, this option is considered to be virtual, ie computer-based, due to the lack of "manual" skills. In fact, it is run at a very slow pace, or the work is suspended until the consequences of the failure are eliminated. This can lead to downtime, downtime, closure due to non-acceptance of the station, as well as financial losses [7]. All devices are working normally. The operator has nothing to do at all. In order not to fall asleep and control the situation even a little bit, or because of emotional disturbances due to any personal problems, they simply start working by hand when they accept that their work is better done or needs to be finished sooner. Often such actions lead to a deterioration of system performance, a decrease in the level of security due to interference in its operation, which can not predict and predict the system, as well as to hide potential problems in system settings (problems may go unnoticed due to manual operation). n view of the above, a number of researchers believe that a comprehensive automated and centralized management system should fully automate and centralize distribution in order to analyze the work of operational service personnel at sorting stations and prevent absolutely wrong teams, or teams that could worsen the situation. This development will inevitably lead to an increase in system responsibility, which, in turn, may lead to a certain decrease in the rate of distribution. However, it is clear that rolling stock will significantly increase security and integrity [4]. The statistics of monitoring the operation of existing automation systems of peak processes today show that the allocations in the area of formation of new structures are not managed effectively enough. An important economic task today is to boost the Uzbek economy by improving the sustainable operation of these railways. Ensuring a stable financial condition of the railways is inextricably linked with solving the problem of saving resources, which is one of the main sources of operating costs. Using the existing methods, we believe that it is not possible to achieve the intended coordination accuracy that ensures reliable operation of the separations while minimizing breakage and load breakage. In conclusion, by automating microprocessor-based control of automation and telemechanics control and control devices, the railway sorting hill can be connected to the group of wagons waiting for the interruptions by determining the weight and speed of the interruptions and not overloading them. The arrow is obtained by cutting the conductive elements. A significant increase in the sorting of one-day breaks will be achieved.

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