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AN ANALYSIS OF THE WORK OF PASSENGERS TRAINS ON TWO-ZONE SECTIONS AND THEIR ALERT AUTOMATION

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Annotatsiya: "O'zbekiston temir yo'llari" AJ da hozirgi kunda yo'lovchi tashishda ularning xavfsizligiga e'tibor juda katta. Yo'lovchi poyezdlari yo'lovchilarni yaqin hamda kelejakda yo'lovchilar oqimini miqdoriga ta'sir etuvchi bir qancha omillarni xisobga olgan holda amalga oshiriladi. Shuning uchun yo'lovchi poyezdlariga yo'l xo'jaligi xodimlari, elektr ta'minoti, signalizatsiya va aloqa xodimlari qolaversa bekat navbatchisi, poyezd dispetcheri tomonidan beriladigan ogohlantirishlarni aniq va bexato bo'lishini taqazo etadi. Ushbu maqolada poyezdlarga beriladigan ogohlantirishlarni avtomatlashtirish va ikkita zonali uchastkalardagi poyezdlarning harakatini tashkil qilish xaqida bayon etilgan.

Kalit so'zlar: Yo'lovchi poyezdlari, yo'l xo'jaligi xodimlari, elektr ta'minoti, signalizatsiya va aloqa xodimlari, bekat navbatchisi, poyezd dispetcheri, zona, ogohlantirishlar, poyezdlarning harakati.

Аннотация: АО «Узбекистон темир йуллари» внесло большой вклад в безопасность перевозок пассажиров. Ожидается, что пассажирские поезда будут иметь ряд факторов, влияющих на большой пассажиропоток в ближайшие дни и буду в будущем. Вот почему пассажирские поезда требуют, чтобы выдача предупреждений со стороны работников путевого хозяйства, электроснабжения, сигнализации и связи, а также дежурных по станции диспетчерами, были точными и безошибочными. В этой статье описывается

автоматизация выдачи предупреждений на поезда и работа поездов на двух зонных участках.

Ключевые слова: Пассажирские поезд, работников путевого хозяйства, электроснабжения, сигнализации и связи, дежурных по станции, диспетчер, предупреждений, движения поездов.

Summary: Company "Uzbekistan railways" has made a great contribution to the safety of passenger traffic. It is expected that passenger trains will have a number of factors affecting the large passenger traffic in the coming days and will be in the future. That is why passenger trains require that the issuance of warnings from workers of the running facilities, electricity, signaling and communications, as well as station attendants at the station by dispatchers, be accurate and error free. This article describes the automation of issuing warnings for trains and trains at two zones.

Keywords: Passenger trains, workers of the running facilities, electricity, signaling and communications, station attendants, dispatchers, warnings, movement of trains.

Introduction

The current conditions in the area surrounding the city are likely to be reflected in statistical data that has been reported by the trains. As well as, by studying the approximate amount of passengers' traffic on the main stations at major railroad tracks, by determining the number of passengers arriving and leaving the station at the clock or by hour of the day.

This information should be reviewed for holidays and working days.as well as the process of distribution of passengers' flow over the clock hours for these days

Passenger trains are carried out taking into account a number of factors influencing the flow of passengers in the near future as well as the flow of passengers in the future

The socioeconomic factors such as the material and cultural level of the population, the organization of work and rest, the development of recreational

facilities in passenger trains, the development of economic and production capacities in the areas of passenger trains, and the reduction of passenger travel costs are taken into account .

In addition, it is important to emphasize the factors connected with the reconstruction of lines, namely the operation of multilevel lines, the introduction of relative intelligence, the use of automobiles, diesel trains in passenger trains, electrification of pedestrian train sections or transferring them to a new type of recycling, improving the processing technology of stations, train stations and stopping points.

In any case, the main focus should be on reducing travel time and costs of passengers.

In addition, it is necessary to develop the use of other types of transport, which are also involved in passenger transportation, in parallel with passenger trains.

Technical equipment of other types of vehicles, improvement of working lines of passenger lines will allow them to determine the level of passengers train passengers.

In addition, we are working hard to improve the passenger traffic and increase the flow of tourists, as well as to improve the quality of passenger trains and mitigate the burden of passengers. From the above, it implies automation of warnings for passenger trains. The warnings given to the passengers' safety are invaluable

How to fill the DU-61 with one yellow line on the diagonal, which is currently a stimulant blank. The traffic officer sends the warnings received by the traffic inspector, ie the telegram to the officer on the road and the duty officer submits the warnings to the train machinist according to the time of their registration.

As you can see, the average time spent on the DU-61 alert machine to the machinist is 2-3 hours. If the program is designed to fill the DU-61 electronic form, it will be possible to reduce the time spent on the program and to retain the warnings and send it to the next train in that direction. For example:

Form DU-61

PAPER OF WARNING

The warning to train №__ received «__» __ 20_year.

Machinist (assistant of machinist) _____

Cutting line

Station _____ (stamp)

F. DU-61

«__»___20_year.

Notice to train №_____

Kilometres	Warning time	speed no more km/hour	Stop at the red signal and if not follow with speed. No more km/hour	Other special conditions of follow trains
1	2	3	4	5
15	Before negation	25		
28	8-16	15		
123	8-14		2	
172-175	8-16			works
				dilly
				Stop for
				Disembarking doctor
186	10-12	Installed		

Station duty officer_____Haydarov_____

(blank white with a yellow stripe diagonally)

The amount of movement of passenger trains is determined by the following formula based on the volume of passengers' flow in each zone and the acceptance capacity of the passenger train:

The number of dots can be found by the following formula:

$$K = \Pi \sqrt{\frac{A_{cp}\tau}{a_p}}, \qquad \text{zones}$$

It is Π –the number of intermediate points and stopping points in the block. $\Pi = 23$

A_{cp} –Average passenger turnover in a busy timeframe or intermediate station .

$$A_{cym}^{cp} = \frac{A_{np} \bullet \gamma}{100 \bullet \Pi} \text{ passenger}$$

$$A_{cym}^{cp} = \frac{7500 * 25}{100 * 23} = 82 \text{ passenger}$$

It is γ – Daily passenger turnover in%

τ -.the time to stop, accelerate and slow down at each stop of the train.

$$\tau = \tau_R + \tau_{ST} + \tau_Z$$

$$\tau = \tau_R + \tau_{ST} + \tau_Z = 0.5 + 2 + 0.5 = 3 \text{ } minutes = 0,05 \text{ hour}$$

a_r –the logical capacity of the train

$$a_r = \frac{a_{min} + a_{max}}{2} \text{ passenger}$$

a_{min} – number of seats on the train

a_{max} – number of passengers on the train, except for the number of seats in the train
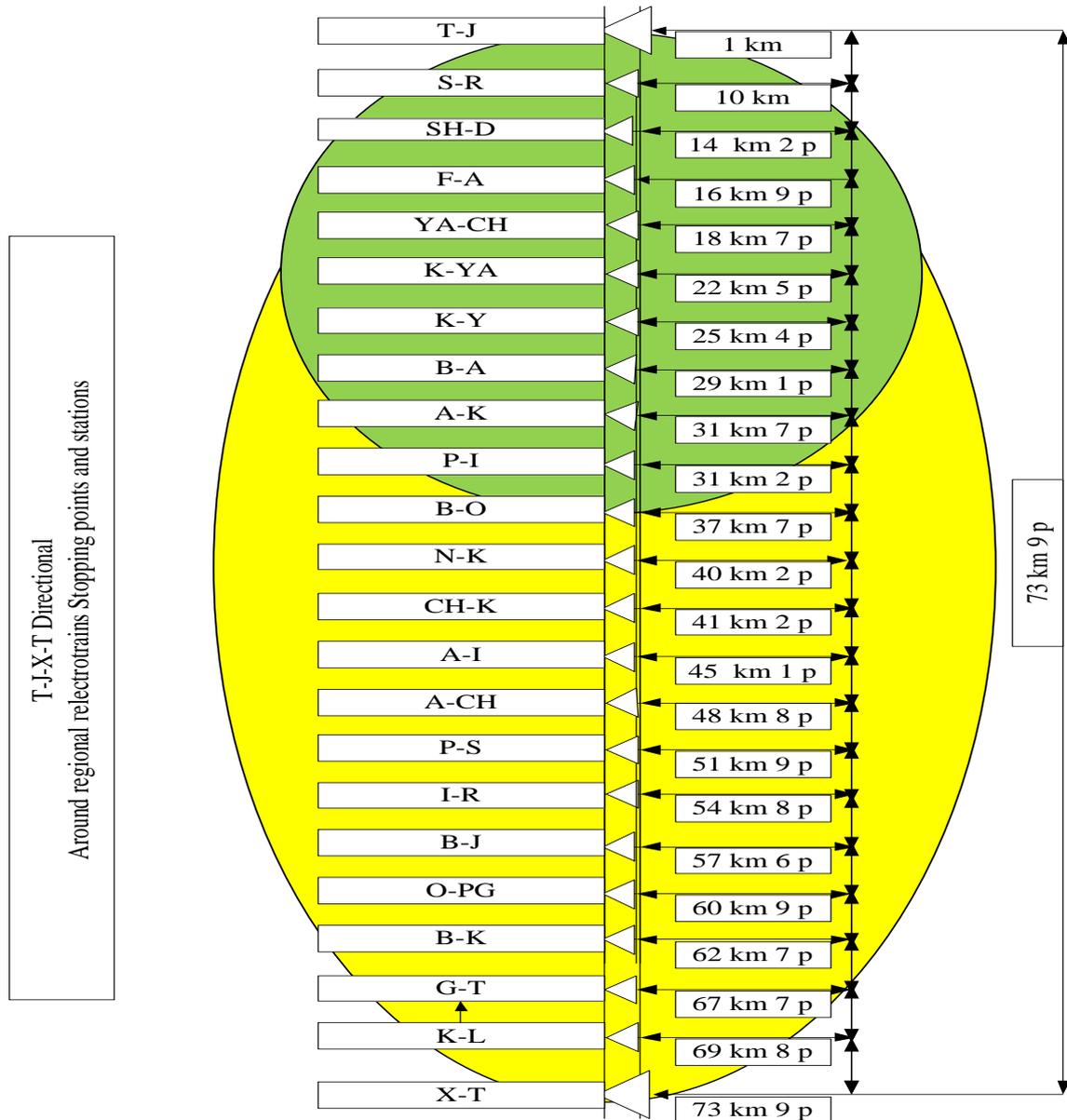
$$a_r = \frac{520 + 1000}{2} = 760 \text{ passenger}$$

From the following:

$$K = 23\sqrt{\frac{82 \cdot 0,05}{760}} = 1,68 \approx 2 \text{ } zones$$

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The outcome of the calculations and the boundaries of zones are given in Figure 1:

1-figure. Boundaries of defined zones.

Analysis and results

It should be noted, however, that the amount of trains identified should be used efficiently by the train capability, and at the same time to comply with a certain frequency of movement.

Required navigational capacity of the train passenger train is determined by the existing passage capacity of the passenger train track, the passenger traffic, the volume of passenger flows and the daily traffic.

In conclusion, it is possible to say that if the movement of the train from Tashkent to Khodjikent-Tashkent and the distances between them are divided into sections II, it is necessary to reduce the time of train from Tashkent to Hojjikent station and use the services of railway transport for passengers to secure a safe and timely arrival.

For example, it leaves Tashkent at 07:36 and arrives at Khodjikent at 09:46, ie it is 2 hours and 10 minutes, and if it's too long then the time spent on the car will be 1 hour. Another reason for the increase in time consumption is the widespread urban electricity train and the low number of electric trains. In order to increase the passenger flow and develop the economy of Uzbekistan Railways it is desirable to divide the Tashkent-Khodjikent-Tashkent train into two zones for the purchase of new electric trains and reducing the time of their arrival.

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