

The Use of Electronic Tacheometers in the Spring of The Work On The Creation Of Land

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Annotation: the relevance of the article is such that the increase in the productivity of the labor activity of Geodesy in the development of land resources and their use, Cadastral and topographic survey work, the reduction in the spring term of Geodesic work play an important role. The results of the conducted comparative analysis show that the efficiency of the blind electronic tachometer is increased, the increase in labor productivity and the reduction in the duration of development.

Keywords: Electronic tacheometer, topographic measure, cadastre, modern geodesy, Topcon GPT 3000 N, engineering search work.

I. INTRODUCTION

One of the important Sciences studied by mankind is modern Geodesy. It is a science that is developing around the world from day one-kip. At last times, as a result of the examination of specialists, the volume of Geodesic work on the lake is growing exponentially. In general, Geodesic works are the basis of the work on the creation of the Earth, the leading role is played. Among the Sputnik appliances, it is necessary to use apical Geodesic measuring methods and technical means, in the spring topographic-Geodesic works of the hag khil type, which are more important food. A tool that is made from all to the lake, aupi is an electronic tach meter that calculates the angle and high precision linear dimensions as well as the right-angled coordinates and heights at the moment.

II. METHODS

Japan developed Topcon GPT 3000 n electronic tacheometer, as well as a set of Geodesic instruments - 2T2 theodolite and 2ST-10 svet'nomer how to use them, the purpose of which is to test tacheometric readings on a given territory. This volume of gudezik works is convenient in two ways. The result of this conducted experiment reveals not only all the details of the tachometer, but also the method of work. In recent years of Geodesic practice, in the production of engineering and Geodesic works, and a quality Geodesic measuring instrument, which is enriched for the performance of automated taxometric geometries, a wide range of electronic tacheometers have come into being.

III. RESULTS

An electronic tachometer (ET) is an indicator device that provides (on the basis of microohm) the control of the processes of connecting, controlling and measuring long - distance parts and angles. The basis of the electronic calculation of the tacheometer is the collected greens and the positioning part. The rapid development of electronic tachometers, in the difference of high degree of automation in the measurement of angles and lines, processing of systems, input as organizational parts or the indicated part of the instruments, and high degree of automation is not a separate process, in general, is a topographic geomka. This linear-angle measurements are much more automated, and at the same time, using an electronic tachometer in the execution of topographic geometries, it is necessary to ensure the conduct of such work. Electronic tachometers are used in carrying out the following works: In carrying out topographic-geodesic work, field work, construction sites, production of gidromeliorative works, large mechanical engineering, shipbuilding, engineering and engineering-geodesic search works, geological exploration works, military works and many other works. When performing work with the help of electronic tachometers, many practical tasks are solved, that is, they are the main elements of planning work, measuring the project angle in place, setting the project distance, moving the project ATM to the location, moving the project line and plane to the location, creating and updating the topographic map and plans. Modern electronic tachometers differ from previous devices in that measurements and calculations are fully automated, constitute the possibility of updating digital maps and plans, do not require much power. The built-in small electronic counting mechanism (exposure) raises the productivity of the measurement process, ensures the work done without errors, processes the measurement results. All internal processes of electronic computing mechanism (exposure) are automated when connecting the device; measuring distances; processing of coordinates of points and other dimensions; giving results to the display and counter; top find the specified locations through the channel; hisoblash calculate the slope of the vertical arrows of the instrument; one-sided calculation of the eccentricity limb error; Met make corrections to the meteor; obtaining data for processing coordinates of points; data for processing on digital cards or location plan. The structure of electronic tachometers takes into account two situations of the circle when measuring angles, in others the angle is measured only in one case of the circle – errors occur in measurements of such order. The viewing tube of the tacheometers is structured in a multifaceted form, attached with a dalnomer part of the receiving-transmission system. Electronic devices of this type can automatically calculate the slope of vertical rotational axes.

IV. DISCUSSION

The creation of modern electronic tachometers is the result of the development of optical and mechanical tachometers, coded theodolites and electronic dalmometers, Geodezic instruments, created in the last decades, when they were. All leading foreign firms and manufacturers of optical, optical and electronic Geodezic instruments, traditionally specialized, present the different structure of the electron tachometer (ET) to the world market. They have their own sales Authority in Russia - Carl Zeiss (Germany), Leica AG (Swedensariya), Topcon (Japan), they produce at the experimental optical-mechanical plant (EOMZ) and the Ural optical-mechanical plant (UOMZ). In our country, the processing and production of lektron tachometer (ET) is carried out at the same time. The electronic tachometer (ET), which is modern, can be taqsimlash: simple ,salsal and robotic. A simple electronic tachometer (OET) is an instrument with a minimum of automation and an extremely large software. In such a tacheometer, the accuracy of measuring angles is 5-10", the length of the lines (3 + 5 * 10-6 D) mm. Universal electronic tachometer (UET) - options advanced instrument. They are equipped with a large number of sizes and a number of applications. In such a tacheometer, the accuracy of measuring angles is 1 -5", the length of the lines (2+3*10-6D) mm. A robotic electronic tachometer (RET) is a servomotor tachometer that occupies capacity with all previous groups. Servomotor Radi is a device with a communication structure. Tachometers-robots, which fall into the category of devices that allow automatic monitoring, reflection of all systems. The main technical specification for modern electronic tachometers is presented in Appendix 1. The use in the production of electronic tachometers, which have a constructive and technological peculiarity, provides a high level of capabilities Electronic tachometers can be classified according to the category of Geodezic issues, taking into account their technological development:

1. These instruments are designed for trilateration and classical triangulation, the length of which is more than 250 meters on the sides, which is described in relation to the accuracy of the upper angle.

2. This tool is designed for fast execution of syllables. The main requirement of these tools - the measurement time is not more than 0.5 seconds, the angle accuracy (10") is not lower, the distance measurement accuracy - should not be less than 250 meters per 1 cm.

3. Instruments of the 1 or 2 category are serviced by an executive (providing a clear automatic detection function of the target and tracking them). Some of these instruments function deliberately designed for yakori precision monitoring in autonomous order.

V. CONCLUSION

Electronic tachometers are effectively used in carrying out the following types of topographic work: - creation of Geodezic networks (based on syomka) for multiple purposes; - implementation of topographic and cadastral maps; - production of land processing and other land forming works; - conduct various engineering Search Jobs; Geodezic maintenance in the work of land formation is complex and measurements take a lot of time. Now, with the rapid development of science, modern tachometers instead of old styles and appliances have entered. According to the data of the conducted analytical work, the results of the presented observation indicate the qualitative superiority of the electronic tachometer. The results of the conducted experiment reveal that with all the details of the electron tachometer in the performance of land-building work, the methodological work is visually reduced by the criterion of time expenditure and the increase in labor productivity with the increase in the efficiency of the performance of Geodezic works.

VI. REFERENCES

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