

AUTOMATED WORKPLACE OF A SPECIALIST: MODERN APPROACHES

Klyashtorny A.A., student
Piven N.D., student
Scientific adviser – Romanova P.V., lecturer
English language department №1
Belarusian National University of Technology
Minsk, Republic of Belarus

The field of manufacturing process automation, focused on robotization of monotonous repetitive operations, acts as one of the key sectors of the economy, forming the basis of Industry 4.0 [1].

An automated workplace of a specialist is a complex of information and software and hardware tools designed to improve the efficiency of work in various fields. The main purpose of an automated workstation is to automate routine tasks, allowing specialists to focus on more complex aspects of their activities.

An AWP can be characterized as a set of resources united to perform specific functions. Researchers distinguish the following components of an AWP:

- software for processing data and performing calculations;
- hardware such as computers and peripherals;
- organizational technologies designed to optimize work processes.

Let's consider the functional resource of an AWP. With the help of AWP, specialists significantly expand their capabilities, as automated workplaces allow:

- process text and graphic data;
- participate in communications (sending and receiving messages);
- maintain documents and personal archives;
- perform calculations and present results in tabular or graphical form.

Automated workplaces corresponding to their functional purpose should be provided for each management object. At the same time, researchers emphasize a number of principles when creating automated workstations:

- flexibility;
- sustainability;

- efficiency;
- maximum focus on the end user;
- problem orientation to solve a specific class of problems;
- ergonomics;
- the principle of matching the user's information needs with the technical means used [2].

Automated workstations are widely used in various fields. Let us consider examples of the use of automated workstations.

1. Accountant's AWP. In the accounting department, the AWP automates routine tasks such as processing primary documents and generating reports. It allows accountants to receive financial statements in any period and with high accuracy of data processing, which significantly saves time and reduces the probability of errors.

2. Doctor's workstation. In medical institutions, a doctor's workstation helps to maintain medical records, which reduces the time for processing and improves the quality of patient care. Specialized programs allow quick access to medical history and test results.

3. Engineer's AWP. Engineers use AWP's to design and model various processes, systems and objects. The software allows to perform calculations, analyze data and visualize projects, which speeds up the process of development and implementation of new technologies.

4. Sales manager's AWP. In sales, the AWP helps to track customer interactions, manage the customer database and automate the invoice generation process. It enables managers to focus on building trusting relationships with customers and increasing sales.

5. AWP for monitoring of production processes. In production, AWP's are used to monitor equipment status and fulfillment of production tasks. The systems collect data in real time, which allows to promptly respond to changes and optimize production processes.

6. AWP's for project management. Specialists can use an AWP to plan, distribute tasks and control project implementation. This improves the organization of team work and helps to achieve the set goals on time.

APW also includes the use of chat-bots to automate work with help information. Chat-bots can retrieve data from knowledge bases and provide up-to-date information to users, reducing the burden on the helpdesk.

Automated workstations for industrial and engineering professionals provide many features that significantly improve efficiency and productivity.

These systems allow decentralized processing of information, providing rapid acquisition and analysis of data on production processes and resources.

Specialists can use AWP to monitor equipment status and production tasks, which allows them to quickly respond to changes and optimize processes [3].

The systems under consideration provide access to the necessary information and reference data, providing information and reference services, thus facilitating decision-making and reducing the time spent on information retrieval.

Systems automate documentation processes by providing the ability to store and process project data, making reporting and compliance easier.

The described functions distinguish AWP as a unique tool for specialists in industry and engineering, providing deeper control over production processes and contributing to their efficiency improvement. Thus, automated workstations are an important tool for increasing labor productivity and improving the quality of work of specialists in a wide range of fields.

References

1. Алисеенко Д.С. Инновационные стратегии обучения в системе подготовки будущих специалистов в области автоматизации и робототехники / Д.С. Алисеенко // Инновационные технологии, автоматизация и мехатроника в машино- и приборостроении : материалы XII междунар. научн.-практ. конф. (Минск, 13 марта 2024 года) : в рамках выставки «Автоматизация, электроника – 2024» / редкол.: А. Р. Околов (гл. ред.) [и др.] ; сост. А.Н. Дербан. – Минск : БНТУ, 2024. – С. 11–12.

2. Автоматизированные рабочие места. – URL : https://hist.bs.u.by/images/stories/files/uch_materialy/dok/4_kurs/KITDO_U_Porova/3.pdf. (дата доступа: 01.04.2025).

3. Автоматизированные рабочие места (АРМ) – URL: <https://intechnology.ru/vozmozhnosti/avtomatizirovannye-rabochie-mesta/>. (дата доступа: 01.04.2025).