science. By pursuing a career in this field, you can contribute to the ongoing automation of manufacturing processes and help create a more sustainable future.

УДК 811.111:004.318

THE PRINCIPLE OF OPERATION OF THE CRYPTOCURRENCY

student – Matskevich N.N.
scientific supervisor – lecturer Samusevich A.S.
Belarusian National University of Technology
Minsk, Belarus

Cryptocurrencies are a peer–to-peer tool (a peer-to-peer network is a network based on the equality of participants). This means that its individual participants can perform transactions without the participation of a third party or an intermediary.

Upon careful inspection, it can be found that all cryptocurrencies are based on an identical set of technologies and principles, the basic of which is Blockchain technology. Blockchain is an open cryptographically secure distributed transaction registry ("Block Chain"). This is a chain of interconnected blocks, each of which has a single identifier and contains transaction records. Records are protected using cryptography (cryptography is the science of privacy methods). Such a device does not allow you to make changes to a block without losing data with associated blocks, which signals to other users that there was a completely third-party intervention. This makes it possible to reject the transaction. If the majority of participants are rejected, the network continues to work with the original branch. This system requires a lot of computing power to create new blocks in it and process transactions. To do this, some users participate in the mining process. "Miners" use the computing power of their equipment in order to "prove the performance of the work." Proof-of-

work is a form of economic regulation of Blockchain, which serves as the main protection against cyberattacks, spam, etc.

Cryptocurrencies are stored on hardware and/or software wallets, which are accessed through a unique cryptographic key. The funds that are stored on such wallets are within the public Blockchain-a. Software wallets are divided into two types: "cold" and "hot". The "hot" ones are hosted on the servers of online services. Access to the "cold" can be obtained without a network connection. In fact, a "cold" wallet is a file on some medium. The loss of this medium or file will mean the complete loss of the wallet and all its contents.

Summarize, cryptocurrency has three main principles: decentralization (there is no single control center), anonymity (there is no way to find the owner of the crypto wallet) and openness (every blockchain user can view any transaction).

References

1.   Cryptocurrency Market Capitalizations Is [Electronic resource]. – Mode of access: http://coinmarketcap.com/. – Date of access: 17.04.2023.

2.   Доступно о том, как работают криптовалюты [Electronic resource]. Mode of access: https://habr.com/ru/companies/jincor/articles/40794/ – Date of access: 17.04.2023.