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AUTOMATION OF TECHNOLOGICAL PROCESSES IN MANUFACTURING

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The automation of technological processes in manufacturing is becoming increasingly important as industries strive to improve efficiency and productivity. Instrumentation engineering is a key aspect of this process, involving the design, development, and implementation of sensors, control systems, and software to automate production processes. This report provides an overview of instrumentation engineering and its role in the automation of technological processes in manufacturing.

Instrumentation engineering is a branch of engineering that focuses on the design, development, and implementation of sensors and control systems. This field encompasses a wide range of technologies, including electronics, mechanics, and computer science. Instrumentation engineers design and develop sensors that can measure physical parameters such as temperature, pressure, and flow rate. They also design control systems that can use this data to automate production processes.

The automation of technological processes involves the use of sensors, control systems, and software to automate production processes. The goal of automation is to improve efficiency and productivity while reducing costs and increasing quality. Automation can be used in a variety of industries, including manufacturing, transportation, and healthcare.

Instrumentation engineering plays a key role in the automation of technological processes. Sensors designed by instrumentation engineers can be used to collect data about the production process, while control systems can use this data to make decisions about how to optimize production. Software developed by instrumentation engineers can be used to monitor and control the production process, providing real-time feedback that can help improve efficiency and reduce waste.

As a student of automation of technological processes in manufacturing, you will learn about the fundamental principles of instrumentation engineering and their application in the automation of various manufacturing processes. You will study topics such as sensor design, control system development, software programming, and data analysis. You will also learn about the various types of sensors and control systems used in industrial automation, and their advantages and disadvantages in different applications.

In addition to theoretical knowledge, you will gain practical experience through laboratory exercises and projects that simulate real-world applications of instrumentation engineering. You will have the opportunity to work with various sensors and control systems, and learn how to integrate them into a complete automation solution.

Upon completion of your studies, you will be well-prepared to enter the workforce as an instrumentation engineer or pursue further studies in this field. You will have the skills and knowledge needed to design and develop instrumentation systems for a variety of applications.

In conclusion, studying automation of technological processes in manufacturing is an excellent choice for those interested in technology, innovation, and making a positive impact on the world. This field offers a range of career paths, from instrumentation engineering to research and development, and provides a strong foundation in mathematics, physics, and computer

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.

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THE PRINCIPLE OF OPERATION OF THE CRYPTOCURRENCY

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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-