# FIRST INTERNATIONAL CONFERENCE «INTEGRATION NETWORK OF THE PHARMACEUTICAL ECOLOGY IN THE MODERN ENVIRONMENT - 2023» WAYS TO MODERNIZE TPP

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### RELEVANCE:

ensuring a close relationship between the environmental situation and pharmaceutical production, taking into account the importance of modern thermal power plants. Improving the quality and ways to improve thermal power plants at Kazakhstan pharmaceutical enterprises.

#### **RESEARCH RESULTS:**

a modern thermal power plant (TPP) must provide reliable, safe and efficient electricity production. A high degree of wear and tear of equipment, large losses of electricity and insufficient automation of thermal power plants hinder the achievement of new dosage forms and their efficient production. Modernization of thermal power plants in accordance with new requirements is the main problem of many enterprises in the country and abroad. Leading engineering companies are engaged in automation, power control, optimization of fuel combustion conditions, etc. in the development of advanced technologies. Modernization of thermal power plants Currently, European countries have begun to abandon outdated thermal power plants running on fuel oil and coal. They are working to replace clean energy installations using renewable energy sources, including solar photovoltaic plants and wind farms. Of course, this, in turn, creates new problems for thermal power plants, including the need to operate in harsh cyclic modes due to equipment wear. Tightening environmental regulations and dwindling fossil fuel reserves have led energy companies to seek engineering solutions to improve energy efficiency and reduce emissions. The main goals of modernization of thermal power plants are: modernization and automation of process equipment, increasing their service life and production time, reducing energy costs, improving environmental performance in accordance with standards. Restoring design parameters is a condition for further electricity production, and compliance with environmental requirements excludes fines.

## **CONCLUSION:**

one of the most important areas of social development is pharmaceutical production technology. Over the 32 years of the country's independence, Kazakhstan has developed its own history of the pharmaceutical industry. Especially during the outbreak of the pandemic, the pharmaceutical industry in Kazakhstan made an attempt to show its best side, but the following issues had a negative impact: shortages of drugs and unreasonable increases in prices for them, shortages of necessary PPE (personal protective equipment) for medical workers and related corruption disputes. But despite these circumstances, during the pandemic and crisis, pharmaceutical companies are not only restructuring their work under new restrictions, but are also looking for a treatment for COVID-19 and are still developing vaccines. With the pandemic shaking the world, we seemed to understand that there was a need to focus on the medical sector, especially pharmaceutical manufacturing. In this regard, it is clear that the pharmaceutical industry currently needs a lot of innovation and new energy sources. That is, to modernize thermal power plants, charge efficient paths and devices that work longer and more productively.

#### PURPOSE OF THE WORK:

АССОЦИАЦИЯ

to consider new development paths and new innovative devices with a study of the place and importance of thermal power plants in pharmaceutical production. Modernization of thermal power plants. The main goal is through today's thermal power plant we obtain new and efficient sources of energy. Proper use of these energy sources and no pollution.

Materials and research methods: the main trends in the pharmaceutical industry in recent years have been research and practical work carried out in the field of biotechnology. In addition, developments in the field of genetic engineering are being actively used, and fundamentally new dosage forms are being developed. All this is achieved thanks to the close relationship of pharmaceutical technologies. Of course, this production requires large energy reserves and new technologies. Including heat sources and thermal power plants, as we know, are important and necessary. At the same time, modernization of these thermal power plants to a new level and consideration of sources of efficient and energy-intensive technologies.

## List of used literature:

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