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ECONOMIC ASPECTS OF THE IMPROVEMENT OF ENERGY EFFICIENCY OF THE ENTERPRISES PRODUCING TIRES

Modern trends in energy markets encourage producers to develop and implement relevant areas of energy efficiency.

The methodological framework of the economic justification of energy conservation areas has already formed. However, currently goes on scientific discussion: do we need to include some factors that determine the degree of economic efficiency in warehouse efficiency criterion? In any case, these indicators and criteria allow making true decisions.

The questions of the energy efficiency are very important both for the state and individual enterprises. Energy intensity of GDP in Ukraine is 3 times higher than in economically developed countries. Energy intensity can only be reduced through the introduction of radically new technologies.

Energy efficiency of the production process is one of the most global problems in the chemical industry. At this stage, one of the main

ways to reduce fuel consumption by tire companies is using heat of steam condensation, which is used for vulcanizing tires.

The total investment in this energy-saving technology is 3,828,750 UAH. It includes the cost of equipment (tank for condensate storage, steam- and water-heaters, condensate pumps, installation costs and transportation of equipment). Using the equipment (according to the authors) requires running costs such as amortization and the cost of maintenance. The technical solutions to recycle heat condensate will save heat energy in the amount of 73,600 UAH/year.

In the simplified form (including the amounts of saved natural gas, boiler efficiency, heat of combustion of natural gas) the results of the research (calculated by the authors) are the following: the natural gas saved after the introduction of steam condensate heat utilization will constitute 2,410,744 m³/year.

This energy efficiency measures allow the company annually saving more than 14 million UAH. In terms of expectations of further substantial increase of the price of natural gas, total savings will grow.

Net income from the introduction of steam condensate heat utilization can be estimated by adjust-

ing the amount of net savings in corporate tax rate (18%). Thus, the increase in net income as a result of energy efficiency measures will be 10.7 million UAH/year.

The payback period, estimated as the result of dividing the investment amount by the amount of net income and additional amortization will be 0.33 per year.