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METHODS FOR CONDUCTING ENERGY INSPECTIONS AT AN INDUSTRIAL ENTERPRISE

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Abstract

The current development of the technique is characterized by a large consumption of energy, and therefore is the period of the scientific and technological revolution, differing in quality level from previous developments. The level of quality is primarily manifested in large revolutionary shifts of the production forces in labor weapons equipped with highly efficient automation in a wide range. Therefore, nowadays, the achievement of energy efficiency at the expense of eliminating losses in the power supply systems of industrial enterprises has become one of the pressing problems. For this reason, the dissertation work is considered relevant.

Keywords: local energy, energy resources, raw materials, reserves, hydrocarbons, power plants, gas turbines

Introduction

Sources of information related to the field, scientific and technical literature were studied to solve the issues of the following qualification dissertation. Data on the structure of electricity consumption in the electrical networks of the joint venture UZSUNGWOO LLC, located in Fergana, was obtained and taxied, the state of operation of electrical equipment was studied. Statistics were calculated and processed on them, the amount of electricity consumption was studied by the gods of the enterprise, by months and seasons. The factors of electricity wastes were studied and considered measures to reduce them, saving electricity consumption. When collecting data on the taxability of technological processes and electricity consumption, the annual characteristics of the enterprise were used. Mathematical statistical methods were used in the use of indicators of heaters and in the regulation of energy consumption. On the basis of the experimental base, energotechnological descriptions of boron electrical equipment were used. When creating energy-saving measures, new and devices with higher energy coefficients were adopted. Organizational and technical measures have been

developed to reduce electricity consumption. The results of the events were achieved in kWh hours and the costs were recorded in sums.

UZSUNGWOO LLC QK is a high-tech enterprise specializing in the production of stamping parts for cars produced in the JSC" Uz Auto Motors".

The project was carried out in accordance with the decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 113 of April 14, 2011.

Joint venture of UZSUNGWOO LLC:

50% of the UZ Auto Motors - charter fund " AJ " of Uzbekistan

South Korean SUNGWOO Hitech Co., Ltd-50% of the statutory fund

The enterprise produces 186 components of Uz Auto Motors ' Cobalt, GENTRA, NEXIA-3 vehicles.

In addition, the enterprise exports 10 parts of the DAMAS model to the address of the Korean company "Sung Hi-Tech", 4 parts of the Gazel Next car to the address of the Russian LLC "GROUP GAZ" and 52 parts of the PEUGEOT PARTNER and SITROEN BERLINGO cars to the address "PSMA RUS" LLC.

The enterprise is fully equipped with the latest equipment supplied from South Korea.

The plant was built on the territory of the Fergana Mechanical Plant. The total area of the plant is 60,500 m2, and the production area is 11,117 m2.

On the territory of the enterprise: there is an administrative building, a production body, storage and household rooms, a boiler room, a pumping station, a compressor, artesian wells.

The production Corps has the following workshops:

main:

- pressing workshop
- welding workshop

assistant:

- compressor
- pump
- boiler room.

The joint venture of UZSUNGWOO LLC uses electricity and compressed air in the technological process. Natural gas is used for household needs (heating, hot water supply).

Actual consumption of energy resources for the enterprise in 2020:

1. Electricity-6,835,393. 2 KW•s

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2. Natural gas – 104 866 m3

3. The average annual total productivity of working compressors is = 7620 thousand m3 per year.

The number of employees in the enterprise is 450 people, of which 60 are ITR and 390 are production workers.

The work schedule of the enterprise is a 5-day (40-hour) work week. The annual working time Fund is 2042 hours or 256 days.

Existing regulated power supply scheme,
energy calculation and technical accounting instruments,
also counters that take into account the vacation to the side

Power supply:

UZSUNGWOO LLC:

Definition Group: I

Power supply reliability Category: II

The power supply of the enterprise is carried out through three cable lines with a voltage of 6 kV from the “mechanical substation”. Factory 110/6 sq.

From the feeders" Cobolt No. 1"," Cobolt No. 2 "and" Cobolt No. 3", a 6 kv voltage with Apvvng 3x240 brand cable lines is supplied to two TSLZ power transformers of 1600 kVA each and one TSDZGL 1600 kva power transformer installed on the territory of the enterprise. The length of one cable line from the feeder is 830 meters, the total length of cable lines is 2490 meters.

Commercial accounting for electricity consumption is carried out with three electronic three-phase active and reactive energy meters of the ENERGOMER SE-303 brand in a 6 kV high stopron.

The enterprise has an ASKUE commercial accounting system.

The condition of power transformers is satisfactory. The central heating system of the plant is equipped with a one-line power supply scheme and safety instructions.

Scheduled preventive maintenance of power transformers (RPT) is carried out according to the approved schedule. In recent years, analysis of RPT tables has shown that repairs did not lag behind the approved schedule.

Low-voltage energy-intensive technological and energy equipment is not equipped with a technical accounting of electricity, which makes it difficult to analyze the energy indicators of the equipment in detail. In particular, the

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electricity consumption of press and welding workshops, as well as ventilation devices, compressor, pump, etc., cannot be taken into account separately.

Accounting and technical accounting status

Electricity accounting is carried out by commercial meters. There is no technical account.

Commercial accounting counters are installed in the" Mechanical Plant " 110 kV substation.

1.Feeder electric meter" Cobolt No. 1 "3-phase " Energomer SE 303", Factory No. 009718036000336

Last check date-18.07.2019

Next check date-18.07.2023

2."Cobolt No. 2" feeder 3-phase electric meter "Energomer SE 303", Factory No. 009718069000366

Last check date-16.03.2017

Next check date-14.03.2022

3.Feeder electric meter" Cobolt No. 3 "3-phase " Energomer SE 303", Factory No. 009211091480269

Last check date-17.07.2018

Next check date-17.07.2022

Conclusion

1.On the topic given to me in this article, I looked at the example of a high - tech enterprise specializing in the production of stamping parts for cars manufactured at Uzsungwoo LLC QK-Uz Auto Motors in Fergana, "achieving energy efficiency by studying the state of efficient use of energy in industries when conducting energy inspections at an industrial enterprise". The project of this enterprise was carried out in accordance with the decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 113 of April 14, 2011.

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