



Methods of Disposal of Industrial Waste with Harmful Chemicals

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ABSTRACT

The problem of environmental protection is complex and global, and the level of pollution with industrial waste has been increasing in recent years. Long-term pollution of the environment with industrial waste leads to environmental degradation and waste disposal is required. It was recommended to use a highly efficient filter with a high-efficiency filter to ensure that the amount of pollutants released into the atmosphere does not exceed the allowable amount. The practical application of this equipment has made it possible to reduce the number of pollutants released into the atmosphere and to dispose of trapped industrial waste.

Keywords:

Utilization, Industrial Waste, Dust, Recycling, Resource, Environment, Second Energy-Saving Method, Technological Process.

The protection of the environment from production and consumption waste is inextricably linked with the problems of rational use of natural resources and the implementation of environmentally friendly technologies. The introduction of waste-free clean technologies in reducing environmental pollution is achieved by reducing its pollution and mutations by recycling any waste. Secondary recycling of waste is the most convenient method of disposal [1,3].

Eighty percent of the waste is organic matter, and recycling can produce large amounts of energy and energy carriers. Experts say that household waste is a cheap raw material all over the world. The experience of developed countries shows that 85% of it can be recycled. Northern European countries already have a separate collection of waste, as a result, most of the raw materials, such as paper, plastic, and aluminum sent for recycling. The positive impact of this process on the eco-environment is enormous. Waste recycling significantly saves energy and raw materials [2].

The protection of the environment from production and consumption waste is inextricably linked with the problems of rational use of natural resources and the implementation of environmentally friendly technologies. For many centuries, improper waste management has led to changes in natural resources, and unexpected changes in nature [4].

Scientists from St. Petersburg State Technical University of Russia (Barabanshchikov D.A., Serdyukova F.A.) researched the topic of industrial waste disposal and discussed the issue of industrial waste disposal. It has been concluded that the utilization of waste, the implementation of secondary recycling measures, the efficient use of resources, the use of and new energy-efficient methods bring economic benefits to both the enterprise and the state [2].

In addition to the work carried out, the research process does not cover the technological processes of industrial waste utilization.

The object of research is a joint venture of ECOCLIMAT LLC in the industrial zone of Jizzakh. The main activity of the enterprise is the production of heat and noise reflective fiberglass wool materials.

The enterprise consists of the following departments: production department, product warehouse, production area, roll-up department, repair department, chemical storage department, finished goods warehouse, administration, liquid chemical warehouse, and heating department. The area of the enterprise is 1.92 hectares.

The company produces 10,000 tons of glass per year. The following equipment and furniture are installed on the territory of the enterprise:

In the production shop: conveying machine, mixer, melting furnace: natural gas mixing furnace, centrifuge, fiber collection equipment, conveyor, cooking furnace, cooling conveyor, shearing machine, vacuum mixing pipe, suction pipe, pipe, compressor, liquid chemical pump.

The velocity of the dust mixture released into the atmosphere through the pipe was determined using a micro manometer type MMN, the amount of aspirator.

To prepare 1000 kg of mixture: 388.03 kg of quartz sand, 145.45 kg of feldspar, 100.95 kg of dolomite, 27.74 kg of calcite, 238.4 kg of calcium soda, 19.77 kg of tetraborate pentahydrate, 74.20 kg of tetraborate decoction is used. From chemicals: urea, 25% ammonia, technical formalin, phenol, very small amounts of aminopropylite, triptorelin, and technical salt added as a softening agent.

According to the results of the study, the company has 12 sources of air pollutants. 5 of the sources emit pollutants into the atmosphere in an organized manner and 7 in an unorganized manner.

Pollutants emitted into the atmosphere from sources account for a total of 43,833 t / year, of which 2,442 t / year in solid form and 41,391 t / year in gaseous and liquid form. Measurements carried out to determine the number of pollutants released into the atmosphere and the number of pollutants was determined.

As a result, the operation of the facility, the maximum share of nitrogen oxides emitted from sources in the work area is 4.21 REM relative to the allowable amount (REM), 1.24 REM outside the facility boundary, the largest share of sulfur oxide in the atmosphere is 4.6 REM was 1.36 REM outside the object boundary. The proportion of the remaining pollutants in the atmosphere does not exceed the REM in the work area of the facility and outside the facility.

The applied filter cleaning equipment is a contact-operated dust collector, which based on the retention of particles, as a result, passing through the layers of ceramic particles in the filters.

The number of pollutants released into the atmosphere and the capacity of the air was determined after the equipment installed.

Pollutants released into the atmosphere in excess of the permissible amount of nitrogen dioxide and sulfur oxides in the air at the source are relative to REM: nitrogen dioxide is 0.94 REM, the sulfur oxide is 0.92 REM.

CONCLUSION. According to the results of the study, the effect of physicomachanical properties (dispersion, density) of dust on the time and speed of filtration, the initial concentration of the dispersed phase. The efficiency of the equipment filter in the applied dust capture equipment investigated.

Correlations made for the calculated pressure drop and efficiency to evaluate and enter the most important operating parameters of the filters studied.

The proposed new design solution found to be an economical solution with reliable performance under the influence of various polluted air and high efficiency of the cleaning technology.

It achieved to capture dust emitted into the atmosphere through the pipeline, increase its efficiency, reduce the impact of dust on the environment, and not exceed the permissible amount of dust emitted into the atmosphere (REM).

References

1. Khoroshavin L.B., Belyakov V.A., Svalov E.A. Basic technologies for processing industrial and municipal solid waste. Tutorial. Ural Federal University named is after the first President of Russia B.N. Eltsyn. Yekaterinburg publishing house of the Ural University 2016.
2. Drummers D.A., Serdyukova A.F. Utilization of industrial waste. Young scientist. International scientific journal. No. 25 (159)/2017. pp. 101-104.
3. Raxmatov S. Uzbekistan Republic High the Legislative Chamber of the Assembly deputies. Waste - damage to the deposit (large if recycled wealth). Description of the state of the environment. 2009 y. October _
4. Kushchev, L. A. Energy-saving devices for capturing the solid and liquid phases of aerosols [Text] / L. A. Khrushchev. - Belgorod: Logia Publishing Center, 2002. - 187 p.
5. Karimova F. S., Mullajonova Z. Use and protection of mineral resources // Science and education 2021. - Vol. 2. - no. 4. - S. 77-82.
6. Karimova F. S., Azizova S. I. Q. Technology of capture and utilization of industrial emissions into the atmosphere // Academic research in educational sciences. - 2021. - T. 2. - №. 10. - C. 939-947.
7. Karimova F. Technological and ecological problems of spinning mills // Jurnal estestvennykh Nauk. - 2021. - T. 1. - №. 2.
8. Sattarovna KF The impact of polymer waste on the environment // Journal of Natural Sciences. - 2021. - T. 1. - №. 3.
9. Sattarovna KF Wastes from the production of chemical additives for paints for light industry // Journal of Natural Sciences. - 2021. - T. 1. - №. 3.