

tensification of the lime burning process and utilization as ice-melting composite. Making brines for soda production on the basis of these wastes, which started to be applied at the Berezniki chemical plant, is new and promising direction.

The assignment level of phosphogypsum was increased by 0.3% in comparison with 2005 and had been amounted only 0.8% by 2014. Phosphogypsum is used for the fertilizer manufacturing, feed additives and ameliorants. The use of phosphogypsum JSC "Belarusian cement plant" as a partial replacement of natural gypsum stone in supplements regulating the rejecting time is also promising direction. Traditional ways of using phosphogypsum are high strength gypsum composite materials; the composition of synthetic compounds based on krumnagel and phosphogypsum; using for road construction fosfodiesterasa bitumomineraljnykh composite materials; gypsum binder on the basis of phosphogypsum; carbide of calcium from phosphogypsum. The fill-up of additives from phosphogypsum printing paper in a mode of heterologously, the preparation of the new phosphate-based feed additives for animal industry, the use of phosphogypsum as a component of flame retardant polyurethane foam are new and promising.

In 2005, lignin was in third place in waste production terms. Nowadays, lignin is used as fuel and in 2014 it was not included in the list of large-capacity waste.

In 2014, the large construction waste came in the third place. In 2014, 7115,9 thousand tons of construction wastes were produced, 78% of which - the uncovering breed; 5% – mixed waste of construction, demolition of buildings and structures. The amount of waste production of the rest construction wastes does not exceed 17%. The index they use is very high – about 63.8% of the volume of waste production. The main direction is recycling of these wastes to large recycling companies, for example. PRUP "Crushed stone".

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ANALYSIS OF ENVIRONMENTAL WASTE STATISTICS. BACKGROUND TO THE ELECTRONIC STATISTICAL REPORTING FORMS

Organization of industrial waste management system in the Republic of Belarus is one of the priority tasks in the field of ecology. To assess the effectiveness of action in this area, the development of the targets and taking strategic decisions in our country for more than 20 years, there is a form of state statistical reporting on waste. The statistical data transmitted on paper to the RUE "BRC" Ecology " today, employees of the organization carry out date further analysis and processing.

Database technology (DB) under the control of MS Access is now used for the processing and storage of statistical data

Creation of electronic forms of statistical reporting on the treatment of industrial waste (hereinafter – EF) with web-tools can become a shining example of the use modern information technologies in environmental protection activities.

EF is a client-server application and has a number of advantages:

1) collection of information takes much less time, thus reducing labor costs by making data in the database table;

2) validation (compliance) of input data on the client side (a nature-user) includes a comparison of data for several years, and completely eliminates the possibility of erroneous data in the database;

3) the amount of stored information is not particularly limited;

4) the use of GIS-technology provides more visual and complete information in territorial aspect;

5) there is a possibility of interaction between different information resources in the field of waste management and EF (eg, for the purpose of environmental agencies coordination).

To date, it solved a number of issues related to the creation of the EF:

1) an assessment and analysis of the information technologies used in environmental statistics, taking into account international experience;

2) the structure of the EF, the algorithm of its work and possible links with existing information resources used by environmental protection activities;

3) developed the design of the user interface of the system with a view to minimizing the user effort;

4) identified enablers ESP project.

The investigations as well as design of the system are carried out in the Republic Unitary Enterprise “Belarus Research Centre “Ecology”. During the next a few years is planned to amend the regulations governing the issues of environment statistics, the implementation of the pilot version of the EF and its functional for the possibility of using EF as an alternative to existing technologies, the creation of new EF modules for a more visual representation of information using GIS-technology.

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THE CALCULATION MESH FOR HEAT TRANSFER COMPUTER SIMULATION IN PERMAFROST GROUND

Physical processes in soils are described by systems of nonlinear differential equations in partial derivatives, supplemented by the boundary conditions. In the models describing the physical processes in frozen soils should consider water-ice phase changes and dynamic phase transition boundaries. This is why the calculation