

THE SYSTEM AND MODELS OF COMPLEX TREATMENT OF INDUSTRIAL EFFLUENTS

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The technological models of the function of water as an aqueous-alcoholic extract of raw materials [1, 2], the development of energy-saving technologies for the conversion of phosphogypsum using energy-technological schemes involving the complete processing of raw materials and by-products into useful products is the rational use of all components of raw materials and energy, using secondary energy resources based on the principles of recirculation and cyclisity [3, 4].

We consider all stages of the technological process for the disposal of the polymer part of solid waste (products and materials that had lost their necessary properties due to physical, chemical or moral deterioration) according to the schemes of the chemical processing system (CPS) as a complex of innovative projects and technologies, taking into account the models of water functions as an integral part of scientifically based CPS. The material balance of the granulation process of the obtained VPE makes it possible to recognize the functions of water at this stage (Table 1).

Table 1 – The material balance of the materials, water and energy

Type of materials and energy resources	Cost norms, kg/t
Polyethylene film (from waste)	1064,1
Electric power	1016,3
Recycled water	5713,1
Direct-flow	239,0

The development of processing is tightly linked with their washing and subsequent drying, therefore, with the study of the basic laws of heat and moisture transfer in the polymer part of solid waste.

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