

and the others at the waters chlorination, having contained the organic impurities, as the anthropogenic, well as the natural origin.

Thus, the complex anthropogenic load upon the drinking water (e.g. $K_{\text{water drink}}$) by the Sanitary and Epidemiological Service (SES) data has the same values in all the city's districts (e.g. the average value for the 84 months or for the 7 years – has the 28,17; the tendency to the growth +12,15).

The environmental pollution analysis and the contamination by the chemical substances, which are being the highly level toxic and the carcinogenically hazardous and dangerous ones for the people, is being given the possibility for the subsequent investigations of the cause-and-effect relations between the environmental pollution, and the contamination, and also the Kemerovo city's population socially significant diseases and the illnesses for us.

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RECYCLING OF OIL-SLIMES BY CHEMICAL METHOD

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Oil-slimes, formed during manufacturing process, transport and oil refining, accumulate in huge quantities on a territory of oil refining factories and ne-

gatively influence atmospheric air, hydrosphere and le-tosphere. More over oil-slimes belong to the most persistent environment pollutants.

There are some methods of oil-slimes recycling, which include methods of division into three phases with use of special substances - demulsifying agents, methods of creation fuel compositions, methods of hardening and burning and so forth. The choice of a method depends on their origin, composition and structure. As a rule in most cases it is enough to know the quantity of mineral oil, water and mechanical impurities to choose a direction of the oil-slimes usage.

So, at first the phase structure of oil-slime is determined. Oil-slimes contain water 26,25 %, mineral oil 33,75 %, mechanical impurity 40,00 %.

For recycling of oil-slimes it is offered the way of its processing by chemical method with lime-containing reagents. As an adsorbent it was suggested to use exhausted silica-gel – gas industry waste on the stage of gas dehydration. The given technology of joint recycling of oil-slimes and exhausted silica-gel allows converting viscous-flowing oil-slimes into combined and safer powder state. The essence of the method consists in the interaction of components, which leads to the formation of dry, waterproof powder substance. Silicon oxide exhausted silica-gel plays a role of the dehydrating agent and influences the process of granulation, carries out functions of adsorbent of hydrocarbons and also influences a migration of contaminants into water.

The compositions of quicklime and exhausted silica-gel are investigated. It is established the proportion of those components depends on the quantity of mineral oil in the oil-slime and may be from "one to one" to "one to two". The quantity of silica gel can be up to 30 %.

For the substantiation of the ecological safety of oil-slimes recycling products it was analyzed their water extracts. From this analysis it follows that a migration of contaminants into water is less than in case of waste. Calculation of danger class is also carried out. Oil-slimes recycling products fall under the category of the 4th danger class.

As a result both oil-slimes and exhausted silica-gel are neutralized and utilized and can be used as a secondary raw material, for example, in manufacture of building materials.

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