Purification of Storm Water from Gas Stations from Petroleum Products and Suspended Solids

A. V. Svyatchenko, J. A. Sapronova

V. G. Shukhov Belgorod State Technological University, Belgorod, Russia

Keywords: coagulation; storm drains; leaf litter; petroleum products; sorption materials.

Abstract: The composition of the wastewater of a gas station in Stary Oskol was studied. A deep chemical analysis of the main components of storm drains and tests of the developed coagulating suspension, obtained on the basis of dust from electric arc steelmaking furnaces and sorption material, a thermally modified chestnut leaf litter, were carried out. It has been shown that when performing two-stage purification, where the first stage is coagulation of suspended solids, the second is purification by sorption material, standard values for oil products are successfully achieved, which is important to reduce the technogenic load on natural ecosystems. The amount of sorption material added was 2.5 g/dm^3, while a cleaning efficiency of 92.8% was achieved.
