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A CASE STUDY OF INDUSTRIAL WATER POLLUTED WITH CHROMIUM (VI) AND ITS IMPACT TO RIVER RECIPIENT IN WESTERN SERBIA

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Abstract

In this work the method for the treatment of industrial waste waters effluents containing hexavalent chromium in three companies during process of treating metal surface with chromic acid is described. Industrial water polluted with hexavalent chromium is collected in separate sewage system. Polluted water is collected in precipitation tanks which are directly connected with neutralization reservoirs. The treatment process includes pre-neutralization by lime-milk, sedimentation, flocculation, ion exchange and final neutralization of purified water before its final delivery to river flow. The samples from two river recipient of industrial water have been collected and analyzed. The impact on pollution of these eco systems was evaluated. The toxicity effect of hexavalent chromium on people health was discussed.

Key words: hexavalent chromium, ICP spectrometry, neutralization plant, spectrophotometry, toxicity

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