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DIGITIZATION OF THE ENVIRONMENTAL IMPACT QUANTIFICATION PROCESS

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Abstract

Environmental impact refers to the negative influence of certain industrial or anthropogenic activities, induced in environmental components such as air, soil, surface and ground water, emissions discharged into environment. Usually, there are methods and techniques applied for impacts evaluation of various projects proposing the development of new industrial activities. This was stated for the first time in 1969 in United States of America, by the National Environmental Policy Act, but currently, in Eastern Europe there are many industrial activities operating without being assessed previously from an environmental impacts perspective. While the conventional methods were focused on assessing the new proposed activities by various matrix types, new methods are designed, focusing on the development of an integrated approach for environmental impact and risk assessment. The new approach join together the efforts of scientists to assess the industrial activities in an integrated manner, considering both the impact induced in environment and associated risks, to make the quantitative assessment more accessible and easier to be applied, by applying a digitizing technique in relation to the conventional methods.

The purpose of this work was to underline the new perception in terms of quantitative assessment of impacts induced in environment by certain industrial activities, digitizing the conventional method used before. The digitizing process referred to a new data base of quality indicators, more suitable to characterize the environmental quality, considering the maximum allowed concentration and alert level as established by national standards. The new digitized method was applied for various scenarios, and none error was registered, it was also ruled for few case studies. It was proved that in this way the environmental impact quantification process becomes more objective, facile and it is not anymore influenced by the experience of evaluators, improving the decision making process.

Key words: digitization process, environmental assessment, impact quantification

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