

Innovative Polish solution to hazardous industrial waste with process and cost efficiency

Polish company Ecotech Polska offers an innovative and unique solution, patented in the EU and US, to all those who need an effective and affordable way to neutralise/recover hazardous waste such as: ash, sludge, soil contaminated with heavy metals, hydrocarbons (eg. PAH) and pesticides.

Up to now, hazardous waste, derived from industry or factories utilising incineration methods, has been perceived as a serious problem for its owners. It draws from industry great financial resources either for waste storage or waste disposal. There is a shortage of appropriate hazardous waste storage and thus, its cost is escalating. What is more, waste legislation specifies that not all types of waste can be classified for direct storage.

Ecotech's method of stabilisation is the alternative solution to storing and also to an extremely expensive incineration method. According to the definition in legislation, waste stabilisation occurs if there is a change of features of hazardous waste. Our end-product after treatment is no longer hazardous – it becomes an industrial waste.

Chemical Fixation and Solidification (CFS) technologies are well-developed methods in the process of hazardous waste stabilisation.

Existing stabilisation methods have hinged on the implementation of cement and/or lime as a stabilising factor. The large increase of volume (and mass) of the end-product, caused by the addition of a huge amount of cement, limited time of solidification durability, and large porosity are the major shortcomings of using cement for solidification.

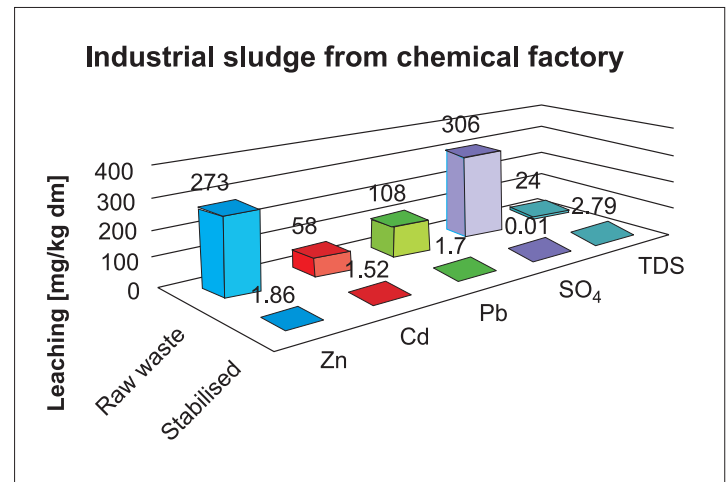
According to recent studies, the period of full cement strength (connection) lasts only 2 to 3 years, depending on the quality and quantity of cement. After this period, secondary pollution takes place because of leaching back to the environment.

Stabilisation determined by magnesium compounds is not only an alternative solution but also the only one that will last long.

The process, called EnviroMix®, is based on the absorption of polluted material as a thermodynamically stable mineral and on altering this organic waste into microcapsules of mineral structures.

The process, developed in Poland, focuses on the combination of catalytic reactions and the use of corresponding additions. It does not involve any incineration.

As a consequence of a catalytic reaction, three-dimensional polymerisation of the synthetic mineral matrix, which imitates natural structures, takes place. To put it simply, the process involves the closure of polluted material in an "artificial rock". As a result, the guarantee of safety is simply limitless;



even if stabilised waste is crumbled or put in an acidic environment, it will never leach again.

Everyone using this stabilisation process has the opportunity of using the converted waste for building materials such as ballast, aggregate, or filling materials for concrete.

The absorption of carbon dioxide from the atmosphere during the stabilisation process appears to be an additional ecological gain.

Very good results can also be obtained in hydrometallurgy, metallurgy, chemical industry, and oil industry waste.

Furthermore, EnviroMix® technology is a good solution to chloroorganic waste and building materials polluted with heavy metals.

Another economic-environmental benefit is the fact that the process is not a source of dust, sewage, additional waste, or gas emission.

Technology verification, conducted in Israel, Italy, Poland, Finland, Germany and Britain, has confirmed the exceptional effectiveness of the process, safety of stabilised waste, and ease of use.

It is worth emphasising that EnviroMix® technology, developed by Ecotech Polska, is lodged for a patent to the European Patent Office and to the United States Patent and Trademark Office.

EnviroMix® technology can be found in a technology base of Enterprise Europe Network and Wastetrans Project.

Ecotech Polska has won the National Innovation Leaders contest with "The Most Innovative Company" title in both regional and national editions.

Ecotech Polska has been appreciated by the jury of the Mazovia Innovator competition and awarded in a prestigious competition run by Kronenberg Foundation.

The company has been selected by the Polish Ministry of the Environment as one of the leaders in the use of the innovative green technology in Poland. This GreenEvo (Accelerator of Green Technologies) Project award, granted by the government, guarantees the quality of our "made in Poland" green technology.

Please see more details at www.ecotech.com.pl

