

Restoration of polluted environment and ecology of marine sediments by reducing Acid Volatile Sulfides

Man Gil Ahn

ABSTRACT: In the marine environment, pollutants continue to flow from land to the sea, and pollutants settle in sediments under the sea, and the environment of coastal marine ecosystems decomposes due to the increase in pollutants. Incapacitated sediments create an imbalance in the ecosystem in which marine life lives due to increased anaerobic conditions. In addition, fish excrement and sedimented feed generated in coastal marine fish farming are sources of sediment pollution and cause ecological problems for sediments. Over the years, methods for restoring the ecology of marine sediments have been contaminated by physical, chemical, biological, and various methods of dredging marine sediments. Restoration is performed by a specific method. (sediment dredging, sand, zeolite, limestone, fly ash, furnace slag, red mud, assembly of inorganic materials including, Coal Ash, Iron oxide, shells, adsorption of microorganisms to adsorptive substances,

etc.) Coal ash, which is generated by burning coal from a coal-fired power plant, is discharged and landfilled in the ground.

We have developed and applied it as a basis for the reduction of land-based waste generated by the reduction of landfills in the ground and the restoration of the ecological environment of polluted marine sediments. The composition of coal ash resembles marine sediments, reburning coal at high temperatures and recycling it as a porous ceramic product. We have demonstrated this by applying it widely to the fields of marine and fisheries and land reservoirs.

Hainet Korea Corporation Ulsan 44998. South Korea



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