# Reuse CO2 in Cement Industry to Decrease Its Effect as Greenhouse Gas as well as Using the Waste from Marble Cutting and Steel Slag instead of Polluting the Environment

emad, zyad (School: Red Sea STEM)

CO2 has great effect on the environment , the aim of the project is to reuse CO2 in cement industry to decrease its effect as greenhouse gas as well as using the waste from marble cutting and steel slag instead of polluting the environment , this was done by dissolving the CO2 with sea water at low temperature to avoid escaping of this Gas, then we applied an electrical current to make Ca-Mg salts precipitate as Ca-Mg carbonate, furthermore, we took the result product and used the marble powder as source of silicate (SiO2) and steel slag to increase the concrete strength, reduce porosity and decrease the water and chlorate absorption by a specific process (active SiO2 in waste marble powder can react with the Ca(OH)2 in concrete to form secondary calcium silicate hydrate, making it chemically stable and structurally dense), which lead to increasing in compressive strength .

**Awards Won:**