

# **Reuse CO<sub>2</sub> 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)

CO<sub>2</sub> has great effect on the environment , the aim of the project is to reuse CO<sub>2</sub> 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 CO<sub>2</sub> 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 (SiO<sub>2</sub>) and steel slag to increase the concrete strength, reduce porosity and decrease the water and chloride absorption by a specific process (active SiO<sub>2</sub> in waste marble powder can react with the Ca(OH)<sub>2</sub> in concrete to form secondary calcium silicate hydrate, making it chemically stable and structurally dense), which lead to increasing in compressive strength .