Carbon Negative Role of Oxide Streaming in Steel and Cement Production Saves Big on Carbon Sequestration Costs

Oxide reacts with water to form doublet hydroxyl. Hydroxyl can mineralise CO_2 to pure carbonates for cement making, and make the mineral acid H_2CO3, which will rain out of natural precipitation in the environment.

ReductionTech's cells can produce 3 Tonnes of oxide per year, which equates to capturing 35.3 Tonnes of CO2/year.

Disrupt Climate Collapse

For Cement making, we have calculated that the business case for making ultra pure CaCO3, can bring the cost of this feed stock, made from their own CO_2 emissions from $308USD/Tonne to $93.00, after the carbon credit and capital cost of the ReductionTech Inc system is added, a 68% SAVINGS. Our team has to determine if the flue gas needs evaporative cooling which will add to the cost but still yield a savings for going carbon neutral at the plant.

For Steel making, where the flue is about 53% CO_2/vol, and 22% H_2O/vol, adding a stream of oxide will form 2OH with every H_2O molecule it reacts with, and that OH will react with the CO2 to form H_2CO_3 virtually instantly. The H_2CO_3 becomes a heavy molecule that is rained out of the atmosphere quite harmlessly. We are looking at scaled long term systems which could equal the current price of carbon in 2021, and no higher, so around $50USD /Tonne CO_2.

Our costs are so comparatively low because we have a low tech approach, that has no ungainly residues that require special handling, all done in one two stage, single step process.

We will seek out these industries to gauge interest, while we also work to scale up open air *and* direct air capture of all GHGs all at once for the scaled cost of $5/$CO_2$e, and $10/ CO2e respectively in government and other emergency markets.

More technical information is and will be made available for the Steel and Cement Industries on the ReductionTech web site in 2021.

"Residue Free, Low Tech-Low Cost Carbon Sequestration for Industry and the Planet"

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