IPIAC

CEMZERO
Green Eco Mix Solutions for the Cement Industry

MIX/SOLUTIONS

CONTRIBUTION TO THE DECARBONIZATION OF THE CEMENT INDUSTRY

IPIAC, Intends to contribute with a "MIX" of solutions, to make the cement sector decarbonized with solutions that will save on the energy consumption in order to reduce the level of emissions. Reduction of the clinker factor and capture of emissions by reusing to produce value-added products.

The "MIX" make cement plants sustainable.

GEMS

GREEN ECO MIX SOLUTIONS FOR THE CEMENT INDUSTRY

LC³

Up to 50% clinker substitution by Calcined Clay on the Cement Production

- *GGE emission reduction (Up to 38%)*
- *Fuel Reduction/ Cost Reduction*

SICO COMBUSTION TECHNOLOGY

Optimized Combustion by Hydrogen

- *Fuel Reduction*
- *GGE Emission Reduction*

EWL

CCU - Carbon Capture Use Capture of CO^2 with transformation on products of added value

- *Emissions Reduction (Up to 99%)*
- *Transformation into Comercial Products*

The "MIX" of solutions will allow cement plants to achieve a high degree of decarbonization, with a substancial cost reduction

Set of benefits, based on the innovation, make processes more efficient

- *Reduction of energy consumption*
- *Obtain gains by selling products resulting of CO2 capture (CCU)*
- *Reduction of emissions cost (carbon credits)*

ENVIRONMENT CLIMATE PROTECTION REQUIRES INNOVATION AND COOPERATION

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THE TRADITION THAT BETS ON INNOVATION

The **World Economic Forum** has published in November 2020 its latest report with the ranking of the ten emerging, most relevant and innovative technologies in the world.
www3.weforum.org/docs/WEF_Top_10_Emerging_Technologies_2020.pdf

Among these ten new technological applications, there are three in which IPIAC participates in their implementation and development with specific and active projects.

IPIAC has already built and started up the world's first "Green Field Plant", dedicated to the calcination of clays for the cement industry (**LC3 technology** developed by the Ecole Polytechnique de Lausanne - *www.lc3.ch* -) which optimizes costs of cement production (savings of up to 30%) and reduces CO2 emissions by up to 40%.

Likewise, IPIAC has signed an agreement as preferred manufacturing partner with the company **Ecological World for Life** (*www.anaccu.es*) for the capture and use of CO2 (CCU - Carbon Capture Utilization), a technology recognized by the **American Chemistry Society**, a Through the scientific publication *https://pubs.acs.org/doi/10.1021/acssuschemeng.0c07093* and patented in 54 countries, which represent more than 80% of global emissions.

This technology allows the capture and transformation of the total CO2 present in the gas column, before being emitted into the atmosphere, into solid minerals. These products are raw materials in a variety of manufacturing industries.

Finally, IPIAC, has established a collaboration as preferred manufacturing partner with the company FLOATING PARTICLE for the implementation of the **SICO** system (*www.floatingparticle.com*), dedicated to the optimization of combustion processes using green hydrogen, used to reduce combustion costs and reduce CO2 emissions.

The generation of green hydrogen is environmentally and economically sustainable, thanks to the use of biomass, alternative fuels (CDRs) and other processes.

IPIAC, a company with more than 160 years of history behind it, committed to the future of the next generations, the decarbonization of the planet and the fight against the causes of the climate crisis.

PAST, PRESENT, FUTURE!

www.ipiac-nery.com