



PRESS RELEASE

SisAl Pilot: A NEW EU INITIATIVE IN THE RAW MATERIALS FIELD

The EU-funded project aims at demonstrating a novel industrial process to produce silicon

Trondheim, 19 October 2020 - The SisAl Pilot project has been funded by the European Commission under the H2020 Funding Programme, topic CE-SC5-07-2018-2019-2020 *“Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes”*.

The main objective of this 4-year project is to demonstrate a patented **novel industrial process to produce silicon** (Si, a critical raw material), enabling a shift from today’s process to a far more environmentally and economically alternative: in SisAl Pilot quartz in slag is reduced through aluminothermic reduction that **utilizes secondary raw materials such as aluminium (Al) scrap and dross**, as replacements for carbon reductants used today.

Compared to the current silicon production, the SisAl process will be able to cut energy consumption by two thirds, eliminate direct emissions of CO₂ and other harmful pollutants, and operate at a considerably lower cost. The SisAl project represents a strong contribution to circular economy through industrial symbiosis.

Gabriella Tranell, the project coordinator, says: “The timing of SisAl Pilot is impeccable looking at the bigger perspective of an increased focus on circular economy and climate change, the difficulties in exporting aluminium scraps out of Europe and the increasing need for silicon in various European industries and products. With SisAl, all these challenges are turned into new European opportunities.

The project started on the 1st May 2020 and is being implemented by a first-class international consortium led by the Norges Teknisk-Naturvitenskapelige Universitet (NTNU). The SisAl Pilot project brings together raw material provider (Explotacion de Rocas Industriales y Minerales – Erimisa), silicon and aluminium key actors (Wacker Chemicals Norway, Elkem, DOW Silicones Corporation, Silicor Materials Iceland ehf., SiQAI, Hydro Aluminium AS, FUNDICIONES REY, Befesa Aluminio SLU, MYTILINEOS HOLDINGS S.A), SME’s/consultants/ equipment manufacturers (BNW-Energy AS, SIMTEC, CiaoTech Srl, Innovation Engineering srl and Silbucam S.L.) and research organisations (NTNU, RWTH Aachen University (RWTH), National technical university of Athens – (NTUA), Consorcio Instituto Tecnológico de Matemática Industrial (ITMATI), SINTEF Industry, Helmholtz-Zentrum Dresden – Rossendorf e.V. (HZDR), MINTEK) to demonstrate the SisAl process with different raw materials and product outputs in 4 different countries. These pilots will be accompanied by environmental, economic and technological benchmarking, and industrial business cases will be assessed for locations in Norway, Iceland, Germany, Spain and Greece.



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SisAl Pilot

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