



PRESS RELEASE

SisAl Pilot: IN ONE YEAR PROMISING EXPERIMENTS IN PLACE IN THE RAW MATERIALS FIELD

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

Trondheim, 25 May 2021 – The SisAl Pilot project - funded by the European Commission G.A. 869268 is implementing very promising experiments in the raw materials field after one year of activity”.

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.

“Already one year out of four has passed in SisAl Pilot and many achievements have been reached despite the COVID-19 pandemic” – Gabriella Tranell, the project coordinator, says. “We have all had different challenges within the consortium, such as lock down, delay in delivery of spare parts and materials and, last but not least, lack of social interaction. Frequent online discussions within and between all work packages, internal workshops, including a modelling workshop and a resource mapping workshop, as well as virtual project meetings have been the key for success to reach all goals during the first year”.

Challenging and promising experiments are now taking place at Elkem with the aim of testing different raw material mixes to target different Si and slag products. Charging, tapping and phase separation will be investigated along with refractory interaction and temperature behaviour.



This project has received funding from the European Union's Horizon 2020 Research and Innovation program under Grant Agreement n° 869268



The project started on 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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