FORNAX

Industrial research aimed at promoting the use of renewable hydrogen as fuel in heat treatment furnaces for stainless steels.

PROJECT DESCRIPTION

The main objective of the FORNAX project is to investigate the use of renewable hydrogen as an alternative to natural gas in thermal processes such as preheating and annealing in the manufacturing of stainless steels. The project aims to validate, both theoretically and experimentally, the operational feasibility, safety, energy efficiency, and impact on the properties of the treated material. To this end, computational models, innovative catalytic burners, pilot-scale facilities, and pickling strategies adapted to new atmospheres will be developed. The project includes studies on surface oxidation, refractory corrosion, and metallurgical characteristics of the treated steels.

Hydrogen is considered a key vector for the decarbonization of the steel sector. The project aligns with European sustainability goals, proposing innovative solutions that will reduce CO_2 emissions, improve energy efficiency, and support the development of cleaner and safer industrial technologies.

CONSORTIUM

Coordinator:

- ACERINOX EUROPA S.A.U.

Partners:

- REFRACTARIOS ALFRAN, S.A.
- TITANIA ENSAYOS Y PROYECTOS INDUSTRIALES S.L.
- TUBACEX INNOVACIÓN S.L.