



Research and Development Center

Mission

The mission of Acciaierie d'Italia Research & Development center is not only to **support the competitiveness of the Group's** product quality and process innovation but also to **accompany major ongoing transitions**, in energy, digital and environmental fields, through projects aimed at energy efficiency and decarbonization of industrial processes.



Acciaierie d'Italia Research and Development Center in Taranto



2,240 m²

Research and
Development Center size



25

Researchers



15

Laboratories

12

Laboratory technicians



A concrete path of innovation

ENERGY TRANSITION

The energy projects are aimed at **decarbonizing the production processes** of the Taranto plant and of the overall steel industry.

- **BIOCODE**: Vegetable biomass in partial replacement of coal
- **REFOS 2**: Solutions for the production of renewable energy
- **ELEVATE**: Capture of CO₂ from iron and steel gases
- **CARBONATAZIONE**: CO₂ mineralization

CIRCULAR ECONOMY

ADI is developing several procedures aiming at **reusing secondary raw materials and at enhancing by-products**.

- **POWERSLAG**: Use of by-products for sustainable water purification
- **ZINCVAL**: Treatment of residues for zinc removal and recycling
- **CATSCORIA**: Use of steelmaking slags as catalyzer to produce hydrogen and biofuels

The driver of a sustainable growth



14

Project submissions
in 2022



6

Activities to start
by April 2023

DIGITAL TRANSITION

The **digitalization activities** are crucial to support **decarbonization, energy efficiency** and **technological innovation processes**.

- **H2ENERGYNET**: Impact model of decarbonization processes on the electricity grid
- **DEBATE**: Machine learning for predictive maintenance of galvanizing processes
- **QUICK TAPPING**: Machine learning to improve the hot metal-steel conversion process

PRODUCT AND PROCESS DEVELOPMENT

The Group is always committed to study and supply **innovative and performing products** to address the **new needs of the various production sectors**.

- Production of pipes for **transport of hydrogen** and its mixtures
- Development of **products for the automotive** sector
- Development of **high resistance steel grades** for naval and infrastructure applications
- Support to operations for **process optimization** and product development



13

Research partners



12.5

Million euros investment



25

Internal activities for product and process development



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