

## **PRESS RELEASE**

### **European Commission Backs RINA's Hydra Project to Reduce Steel Emissions**

*Genoa (Italy), 10 October 2023* – The European Commission and the Italian Ministry of Enterprises and Made in Italy have backed the ambitious Hydra project led by RINA, a multinational engineering consultancy, inspection and certification company. By 2025, the research project aims to create a pioneering 100% hydrogen-fuelled pilot plant capable of producing up to seven tonnes of steel per hour, with a significant reduction in carbon emissions.

The steel industry currently accounts for approximately 8% of global carbon emissions. With each tonne of steel production releasing an average of 1.63 tonnes of CO<sub>2</sub>, there is a pressing need for more sustainable solutions. The open research Hydra project aims to reduce emissions to mere kilograms of CO<sub>2</sub> per tonne of steel and will make this world-changing technology available to the industry on the way to net zero.

Located at RINA's Centro Sviluppo Materiali (CSM) in Castel Romano, Italy, and funded through an €88M European Commission NextGenerationEU investment, the six-year Hydra initiative is part of the IPCEI (Important Projects of Common European Interest) programme and will involve a dedicated team of 120 people.

The project's innovation lies in its extensive use of hydrogen throughout the steel production process. By 2025, the facility is set to feature a direct iron ore reduction (DRI) tower, which will use hydrogen as its primary reducing agent, as well as an electric furnace and a reheating furnace.

Through a testing and qualification hub, the project will also characterise the materials, equipment and internal infrastructure required, including transportation and storage, by steel producers to transition to 100% hydrogen fuelled steel production.

**Ugo Salerno, Chairman and CEO of RINA**, reflected on the project's potential: "The Hydra project underscores our commitment to sustainable innovation. While it offers a technological shift, its unique open research nature ensures that its benefits can be shared across the steel industry. Our aim isn't just to benefit one player but to contribute to the industry's collective move towards more eco-friendly processes. This is why the Hydra project has been supported since its inception by leading European steel producers, plant suppliers, utilities and major stakeholders in the sector."

Furthermore, RINA, thanks to its experience in hydrogen-based decarbonisation technologies, among which the world's first test of a 30% gas-hydrogen blend in steel forging, plans to introduce a training centre as part of the Hydra project, focusing on the intricacies of their

application. This centre is expected to serve as an international hub, fostering collaboration and research among stakeholders in the steel and energy sectors.

As industries worldwide grapple with the realities of climate change and the push for decarbonisation, projects like Hydra signal a positive shift, and underscores the European Commission's commitment to the broader adoption of hydrogen as a sustainable energy source.

*RINA, leading certification company and engineering company in Italy, provides a wide range of services across the Energy, Marine, Certification, Infrastructure & Mobility, Real Estate and Industry sectors. With revenues in 2022 of 725 million euros, 5,300 employees and 200 offices in 70 countries worldwide, RINA is a member of key international organizations and an important contributor to the development of new legislative standards. [www.rina.org](http://www.rina.org)*

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