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News

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# The French Corrosion Institute and IFP Energies nouvelles sign a framework partnership agreement relating to the energy transition.

The French Corrosion Institute (IC), a subsidiary of RISE Research Institutes of Sweden, and IFP Energies nouvelles (IFPEN), through its IFPEN Ressources Energétiques Carnot Institute, have signed a 5-year framework partnership agreement. The agreement reflects a joint determination to develop collaborative research and innovation initiatives in the field of corrosion, a major energy transition challenge for more environmentally-friendly industrial production. Since it attacks equipment used by the energy industry, corrosion can have a negative impact on individual safety, the environment and the profitability of processes, equipment and infrastructures.

IC and IFPEN have identified the various fields of application covered by this agreement:
- New energy technologies, including geothermal energy, hydrogen, wind power, $CO_2$ capture, utilization and storage (CCUS) and associated energy storage;
- Oil and gas exploration and production with a view to minimizing operating risks.

The two partners' objective is to exploit their complementary know-how and experimental laboratories in the field of corrosion, as well as the results of their earlier joint research activities conducted since 2015 to reinforce their collaboration.

**Review of early collaborative activities**

IC and IFPEN began collaborative research activities a few years ago, drawing on their highly complementary expertise and laboratories at sites in Solaize, Saint-Etienne and Brest. For example, in 2019, IC and IFPEN's Scientific Division joined forces with 12 industrial partners to form the Fugacity fundamental research consortium (Joint Industry Project - JIP) to study the penetration of hydrogen resulting from steel corrosion in the presence of $CO_2$ and $H_2S$.

In 2019, they also created the Corrtex[1] research cluster in the field of corrosion with eight academic and private partners, leading to the inauguration of a high-pressure and high-temperature corrosion test loop making it possible to simulate a variety of corrosive environments. This loop, financed with the support of the Auvergne Rhône-Alpes region, is located on the Axel'One Innovative Process Platform at Solaize.

*(1) The Corrtex cluster brings together IC-RICE, IFPEN, Axel'One, CNRS, the École des Mines engineering school in Saint-Étienne, INSA Lyon, MECM and Lyon University.*

IC and IFPEN are thus set to pursue and reinforce their partnership in the field of corrosion, particularly within the context of the development of low-carbon energies. Among the new initiatives, in the second half of 2021, IC and IFPEN will be launching a study group (Membership Research Consortium – MRC) aimed at developing knowledge on the behavior of materials in the presence of hydrogen and uniting industrial partners around the theme.

*"We're delighted to be able to continue our partnership with the French Institute of Corrosion. This collaborative agreement enables us to channel our respective expertise into joint research for a better understanding of corrosion phenomena, with a view to prevention and correction",* underlines **Pierre-Franck Chevet, Chairman and CEO of IFPEN.**

*"Our collaboration with IFPEN, based on complementary expertise and facilities, has been extremely successful during many years. We are very pleased to take the next step through this partnership agreement, to work together for understanding and mitigating corrosion related to energy transition. Our new mutual member program related to hydrogen is a brilliant example of our joint efforts"* **specifies Olivier Rod, CEO of IC.**

**About the French Corrosion Institute (IC)**
The French Corrosion Institute has 45 employees on its two sites in France: Brest (French Brittany, headquarters) and Saint- Etienne (South-East France). We are part of the corrosion department of our mother company RISE located in Sweden and have together a team of around 100 engineers and technicians, which paces us among the largest laboratories in the field of corrosion and corrosion protection of materials in the world. www.institut-corrosion.fr

**About RISE**
RISE is Sweden's research institute and innovation partner. Through our international collaboration programs with industry, academia and the public sector, we ensure the competitiveness of the Swedish and European business community on an international level and contribute to a sustainable society. Our 2,800 employees engage in and support all types of innovation processes. RISE is an independent, State-owned research institute, which offers unique expertise and over 100 testbeds and demonstration environments for future-proof technologies, products and services. www.ri.se

**About the IFPEN Ressources Energétiques Carnot Institute**
The IFPEN Ressources Energétiques Carnot Institute, labeled in 2020, brings together 14 of IFP Energies nouvelles' Laboratories and conducts research to address the challenges of the energy transition. Drawing, among other things, on the opportunities provided by digital technology, its research activities focus on innovation within the framework of industrial partnerships with a view to developing competitive renewable energies, minimizing the climate impact of industrial activities and producing those fossil fuels that are absolutely necessary during this transition period in a more environmentally friendly manner.

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**For more information**
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