

Position Description

1. General information

Position code	IDOM-PF2: Advanced Decarbonisation Methods and Technologies in Iron and Steel
Research area	Developing practical and functional solutions to address decarbonisation challenges through the redesign and modernisation of industrial infrastructure and assets applicable to real-world contexts.
Research fields	Decarbonisation; Energy efficiency; Materials science; Hydrogen-based Reduction Processes
Supervisors	• Kalpesh Chinubhai Shah (IDOM) • Almudena Casado Chacón (IDOM) • Aaron Belbasis (Aurecon)
Available research capabilities	IDOM and Aurecon have strong expertise in engineering design and process analysis. While neither organisation operates laboratory facilities, they use desktop-based methods supported by industry data, modelling, and optimisation tools within multidisciplinary teams. Collaboration with research institutions may be considered for scheduled experimental validation where clearly justified and adds value.
Find out more about the research groups	• https://www.idom.com/en/sector/metals-minerals/ • https://www.aurecongroup.com/
Position funded by	• COFUND, Marie Skłodowska-Curie Actions (MSCA), Horizon Europe, European Union • IDOM • Aurecon
Employing entity	IDOM Consulting, Engineering, Architecture
Seconding entity	Aurecon
Foreseen start date	June 2026
Gross annual salary	37,000 EUR plus complements defined below

2. Expected Candidate Profile

Educational qualifications:

- Advanced degree (PhD) in Materials Science and Engineering, Chemical Engineering, Environmental Engineering, Mechanical Engineering, Energy Engineering, Industrial Engineering, Metallurgy, or Sustainability Studies.

Research experience:

- Proven track record of research in decarbonization technologies, preferably in the context of iron and steel production.
- Experience with hydrogen-based reduction processes and related technologies.

- Experience in improving industrial efficiency will be valued.
- Desirable experience in validating models and analyses, and preparing peer-reviewed papers for journal articles.

Communication:

- Strong ability to work collaboratively with multidisciplinary teams.
- Effective communication skills to present research findings to diverse stakeholders including industry partners, academic peers, and policymakers.
- Experience in elaborating technical reports with feasibility studies and ROI analysis.
- Experience in preparing decision matrices for technology selection and process flow diagrams and retrofit concepts.

3. Employment Conditions

IDOM offers a 36-month (3-year) postdoctoral full employment contract to work at its facilities in Bilbao, Spain as part of the AuSpire researcher training program, co-funded by the European Commission under the MSCA COFUND scheme. The total working hours per week are 40 and there is a probation period of 6 months.

The remuneration, in line with the European Commission rules for Marie Skłodowska-Curie grant holders, will consist of a gross annual salary of 37,000 EUR. The definite amount to be received by the Postdoctoral Fellow is subject to Spanish tax legislation.

The position will be jointly supervised by IDOM (Employing Entity) and Aurecon (Seconding Entity), where the Postdoctoral Fellow must undertake a secondment at the premises of the latter in Australia¹ for up to 12 months.

Additionally, the program includes compulsory annual in-person workshops at various locations across Spain, along with online training and networking activities.

Benefits include

- 4,000 EUR relocation for employment stipend to cover costs associated with taking up employment (flights, visa, insurance, etc.), to be distributed monthly as a top-up to the gross salary.²
- 9,000 EUR relocation for secondment stipend to cover compulsory project-related travel and accommodation costs (flights, visa, insurance, accommodation, etc.).²

¹ Secondment will take place at Aurecon facilities in either Melbourne, Sydney, Brisbane, or Perth. The decision will be based on the final research project and will be agreed upon at the time of the Postdoctoral Fellow's appointment.

² The definitive amount to be received by the Postdoctoral Fellow may be subject to Spanish tax legislation.

- 3,000 EUR travel stipend to cover flights and accommodation for participating in compulsory AuSpire training and networking events in Spain over the 3 years.²
- 314 EUR monthly family allowance offered to candidates who meet the criteria.^{2 3}
- Becoming a Marie Skłodowska-Curie fellow and be invited to join the [Marie Curie Alumni Association](#).
- Spanish Social Security coverage.
- Sick leave complemented by IDOM so that workers get 100% of their salary.
- Government parental leave, complemented by IDOM with extra pay after birth.
- 23 days of paid holiday leave.
- Access to all the necessary facilities at IDOM and Aurecon.
- Other benefits include a flexible timetable, remote working 1 day per week, summer timetable, tax breaks, long-term career path, free language classes (Spanish, English, French, German) and social activities for employees.

³ According to MSCA-COFUND requirements, Fellows with family obligations are entitled to a family allowance (i.e. persons linked to Postdoctoral Fellow by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognised by the legislation of the country or region where this relationship was formalised; or (iii) dependent children who are actually being maintained by the Postdoctoral Fellow).