

PRINCIPAL R&D ENGINEER (HIGH-TEMPERATURE HYDROGEN REACTORS)



THREE YEAR FIXED TERM, FULL TIME

JOB OVERVIEW: The Principal R&D Engineer (Hi-T H₂ Reactors) will contribute to the design and development of a novel high temperature process for hydrogen ironmaking in a major R&D project. Steelmaking is New Zealand's largest single source of industrial CO₂ emissions, but these could ultimately be eliminated through commercialisation of our 'hydrogen-DRI' process. Today, we are at the start of our 'scale-up' journey and this role is a key part of this exciting opportunity. As an experienced industrial process engineer in our growing team, you will be working with us to change the future of industrial steelmaking in New Zealand, and around the world.

KŌRERO MŌ TE TŪRANGA- ABOUT THE ROLE

As a senior team member helping the Chief of Materials, you will bring your industrial engineering experience to lead a workstream focussed on the future industrial scale-up design of an H₂-DRI reactor based on our technology. This will involve working closely with our larger team of experimental scientist and R&D engineers, and may include supervision and project management of some staff. This is a split role between Wellington UniVentures and the Robinson Research Institute utilising your industry expertise and knowledge to grow our project within the Robinson Research Institute Green Steel team.

Key responsibilities span project management, delivery of contract and health and safety.

This role has many key deliverables including contributing to the design of experimental reactors and incorporating new findings into scale-up designs. You will develop new concept designs for a pilot scale H₂-DRI reactor and plant, drawing on results emerging from laboratory-scale experiments undertaken by the wider team, and establish design principles for handling hot hydrogen streams within a future pilot plant site. You will monitor project progress, and establish technical risk mitigation strategies.

Ō PŪMANAWA - ABOUT YOU

Our ideal candidate will have the majority of the education, experience and knowledge listed below:

- Qualification in Engineering, at Honours level or above, in Chemical Engineering, Mechanical Engineering or Materials/Metallurgical Science
- A strong industrial engineering background with, at least 5 years industry experience in the design and build of high temperature process plant that utilise flammable gases (especially hydrogen)
- Technical competency in the mechanical CAD design of gas-phase reactors and pipework
- Comfortable working in an experimental R&D environment, and able to swiftly pivot thinking in response to new ideas and data.
- Working knowledge of fluidised bed design principles, or previous experience in the design and scale-up of chemical or metallurgical pilot plants.
- Familiarity with H&S requirements and engineering controls for plant utilising high temperature hydrogen.
- Demonstrated ability to maintain effective relationships with stakeholders, both managerially and externally



Mō Te Paewai - About Us



We are Wellington UniVentures and we're responsible for creating new ventures from Te Herenga Waka—Victoria University of Wellington's research.

Building on our purpose—to lift lives everywhere with knowledge—Wellington UniVentures works with our University innovators to shape their research into initiatives that create impact. We do this by connecting them with partners, industry and investors to enable the growth and development of their idea or invention. With time, development and Wellington UniVentures' support, these ideas can become life changing initiatives focused on solving problems and building stronger societies.

In return for your experience, Wellington UniVentures can offer you great benefits such as access to a wide variety of workshops for you to continue to learn and develop, subsidised onsite gym membership, free health and wellbeing events, and extra annual leave days.

Please find the role description [here](#).

If this role sounds like you and you're interested in joining a small, collaborative and busy team, please [apply now](#) with a cover letter and your CV – we'd love to hear from you right away!

We are committed to ensuring the health, safety and wellbeing of all our staff and contractors. As part of our broader COVID-19 management strategy and to further protect the wellbeing of our staff, customers and partners from COVID-19, we support and encourage all our staff to be vaccinated. If you have any concerns or questions about this, please talk to us.

Wellington UniVentures is committed to providing a working environment that embraces, values and reflects the diversity of the community it serves.

MORE INFORMATION

Find out more about working at Wellington UniVentures, contact our HR Manager.

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