Senior CFD Engineer

If you wish to apply please email your CV and covering letter to:
recruitment@rjm-international.com

Working Hours

Mon-Fri

Salary

Competitive

Location

Winchester / Hybrid

Contract Type

Full Time, Permanent

Why work with RJM?

RJM International is a world-leading, engineering technology business that enables energy producers to transition to efficient, reliable and cost-effective low carbon generation - and we looking to expand our team to meet market demand.

RJM's twin-track approach is to support existing assets which have decades of operating life remaining, by reducing their emissions and carbon footprint and to support the biomass and Energy from Waste sector to improve reliability and performance.

We are actively working with our customers in their efforts to reduce their carbon footprint, whether that is by improving efficiency, fuel switching such as from coal to gas or biomass co-firing / conversion. Our projects require bespoke solutions which demand technical and commercial creativity in order to meet our customers' needs. Over the years we have won many awards for innovation including "The Queen's Award for Enterprise: Innovation".

RJM works across several sectors, from utility generators to industrial energy users. We work on all types of plant and boilers from 1,000MWe power units to 100MW gas-fired boilers. Our knowledge base covers all types of fuels and all firing systems. We are also very active within the biomass and Energy from Waste markets where we resolve issues encountered in bubbling bed combustors/gasifiers and grate combustion units.

Through steady expansion, RJM has grown its expertise, technical ability, and knowledge to provide clients with a wide range of engineering-based products and consulting services. We operate globally and successful candidates will have the opportunity to work in different parts of the world on a range of exciting projects.

From our Head Office in Winchester, we also provide support to our offices in Singapore, Malaysia and the USA, and there are opportunities to work in these regions.

About the Job

Working within our CFD team, the role will primarily involve leading CFD analysis activities required for our power generation projects to develop new combustion equipment or retrofit designs to meet client needs. The CFD team works closely with the general engineering team (Process and Mechanical) to resolve combustion issues and develop solutions and improve plant design to meet emissions regulations. The role will also involve a limited involvement in site work, being part of the design team for a specific project and provide commissioning support where required. You will have the opportunity to work across every phase of the project to ensure its successful completion. As the Senior CFD Engineer, you will have the opportunity to propose R&D activities for the RJM's future combustion system development and to expand the business portfolio.

There will also be opportunities to work with the Business Development team, exploring new business opportunities and working with customers to develop the optimum solution for their plant.

Key Responsibilities

- To perform analysis of non-reacting and reacting fluid flow in combustion equipment to support project and customer requirements.
- To carry out fluid flow analysis using hand calculations and spreadsheets where required but principally using CFD.
- To liaise with customers, project teams and sub-contractors.
- To present results and recommendations of the analysis to the customer and internal project team.
- To help CFD team lead to prepare quotations and develop resource plans.
- To monitor CFD project progress and provide feedback to the management.
- To provide guidance to other members of the CFD team offering coaching and support where necessary.
- To help develop the companies CFD analysis capabilities and mentor junior engineers.
- To represent the analysis function in multi discipline engineering projects.
- Collaborate with mechanical design and process teams to confirm accuracy of the final product designs.
- Perform technical design reviews and recommend improvement.
- Work with the test team in developing and executing design verification plans and testing methods.
- To attend design reviews, layouts, HAZOPs, and 3D model reviews for mechanical designs.
- Lead development of new method and technology for CFD analysis.
- Maintain complete documentation for CFD analysis and engineering methods.
- Capable of performing hand calculations to provide initial design direction and confidence in simulation results.

Knowledge, Skills and Educational Requirements

If this role is of interest, but you do not meet all the criteria, please still get in contact. We would be interested to see what you can offer.

Required:

- A good degree in Chemical, Process or Mechanical engineering discipline with minimum 10 years of experience as a CFD Engineer, 7 of which is in an industrial environment, OR
- Post-graduate degree in Chemical, Process or Mechanical engineering discipline with minimum 7 years of experience as a CFD Engineer, 5 of which is in an industrial environment
- Relevant experience of applying CFD analysis techniques in an appropriate engineering environment.
- Good knowledge of CFD modelling techniques applied to gas, oil, and solid fuel combustion and emissions regulations.
- A high level of proficiency in a major CFD code preferably ANSYS FLUENT or Star CCM+ CFD suites.
- Expert level of computer literacy in Windows and Linux environments, including High Performance Computing (HPC) clusters.
- Knowledge of industry best practices and how to create and maintain a high level of knowledge base.
- Demonstrable ability of time and resource management to meet project delivery targets.
- Ability to present technical solutions to customer organisations at all levels
- Strong collaboration skills with the ability to interface at all relevant levels within the Company, with strong communication and presentation skills
- Good knowledge of Microsoft office and applications such as Word, Excel etc
- Chartered Engineer status, or working towards Chartered Engineer

Advantageous:

- Advanced knowledge of general engineering fundamentals, together with demonstrable numerical and analytical skills.
- Ability to read, understand and interpret engineering drawings. Working knowledge of geometric dimensioning and tolerancing.
- Knowledge of Engineering Programming Languages (FORTRAN, C, VB, or Python)
- Understanding of plant thermal performance and approaches to root cause analysis.
- Good grasp of design verification approaches and ability to define suitable test methods.
- Effective communicator. Able to present appropriate, concise, and accurate information in both written and verbal formats.
- Comfortable with multi-tasking, leading and prioritising activities. Setting and planning work effectively to ensure project deadlines are met.
- Capable of progressing tasks autonomously with a minimum of supervision.
- Good command of verbal and written English language preparing technical presentations and reports.
- Additional Language skills
- Full UK Driving License
- Ambitious and responsible with an appetite for self-development

Benefits

- Subsidised private healthcare
- Discretionary Bonus Scheme
- Pension
- Death in Service Benefit
- Opportunities for flexible working
- Continuous development opportunities

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