

JOB DESCRIPTION & PERSON SPECIFICATION

Job title:	Apprentice Design Engineer
Division/Department:	Research, Design and Technology (RDT)
Reports to:	Lead Engineer

The purpose of the job:	<p>Sheffield Forgemasters is currently looking for a highly motivated individual to support the R&D Design activities within the group. The post-holders will be working on a series of activities on R+D design projects and will assist the Lead Engineer and Design Team. The successful applicant will work closely with the technical departments at Sheffield Forgemasters. Applicants are expected to have a good working knowledge and practical expertise in the fields of mechanical/structural calculations and computer simulations.</p> <p>You will be required to work 7:45am till 4pm Monday to Friday.</p>
Learning Provided:	<p>Level 6 Mechanical Engineering Technology</p> <p>University attendance will be required at Sheffield Hallam University.</p> <p>Sheffield Hallam University is situated in central Sheffield and is accessible by car, bus and train.</p> <p>Duration: 48 Months (National Standard to be completed and End Point Assessment passed within 36 months to 42 months)</p>
The scope of the job:	<p>The successful candidate will be involved in the initial concept, design, development and management of projects in a range of sectors such as structural steel constructions for Oil and Gas, Floating Off Shore Wind, Civil Nuclear & Defence and the built environment, materials, software, components, machinery and vehicles.</p>
The responsibilities of the job:	<ul style="list-style-type: none"> • Comply with the company Health and Safety Regulations. • Comply with company Values and Behaviour • Attend to training sessions as required. • Assist the Lead engineer in the task below:
The tasks of the job:	<ul style="list-style-type: none"> • Support the Lead Designer on the provision of technical support to Customer Programs, Foundry Methods and Bids Team with the design of cost-effective castings. • Support the design team with optimal design solutions and Design for Manufacture input. • Support the development of a Quality System within the RDT department. • Assist on the development of designs for products for the offshore oil and gas/wind industries from conceptual to completion stages. • Collaborate with the different company areas to tackle development projects.

	<ul style="list-style-type: none"> • Assist in the design of manufacturing processes and the design of related items of plant and equipment. • Prepare analysis software runs, post processing, summarizing and presenting analysis results. • Self-check design solutions for completeness and correctness prior to formal review. • Support design/drafting group with development of assembly/fabrication drawings. • Search for, capture, store, and re-use knowledge relating to design activity. • Support the Lead Engineer on lifting activities with engineering calculations • Work as a team member and interact with the different company areas
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Person Specification:

Specific qualifications required for the role:	Essential	Desirable
At least two A-levels at Grade C or above in both a Mathematical based subject and a Science, Technology, Engineering or additional Mathematics related subject. Alternatively, 90+ credits in an Engineering BTEC at Level 3	Y	
5 GCSEs at Grade 5-9s or equivalent including Maths, English and a Science, Technology or Engineering related subject	Y	
Skills, attributes & knowledge required:	Essential	Desirable
Knowledge of structural mechanics i.e. Section Properties , Stress & Strain, Beam Theory.	Y	
Knowledge of computer simulations.		Y
Knowledge of Castings & Forgings.		Y
Knowledge of materials properties and Heat treatment (steel).		Y
Ability to tackle industrial problems using computer simulations and hand calculations.		Y
Ability to apply scientific principles, technical information and innovative ideas in the development of new and improved manufacturing processes and related items of machinery and equipment.		Y
Knowledge of drawing creation and interpretation.		Y
Type of experience required:	Essential	Desirable
Previous work experience in a manufacturing/engineering environment.		Y
Personal qualities:	Essential	Desirable
Ability to work independently and proactively with minimum supervision.	Y	
Problem solving skills plus a creative yet methodical approach.	Y	
Ability to produce and present professional presentations/reports.		Y
Good communication skills.	Y	
Ability to work to tight deadlines in a safe manner.	Y	



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Good organisational skills. Ability to prioritise workload and to manage multiple large complex projects simultaneously.		Y
Team player with flexible approach.	Y	
Customer facing attributes	Y	