first light

# Mechanical Design Engineer - Job Ref 138

## Job Description

We are looking for a Mechanical Design Engineer to join our growing Engineering Design Team. You will be responsible for the mechanical design of assemblies related to experimental campaigns on our electromagnetic launchers and light gas guns.

As an engineer in First Light Fusion you will be designing and building state of the art technology to help push the company towards achieving fusion for energy generation.

Projects will range from complex target design and development to upgrading our existing pulsed power machines to improve their performance.

We believe this is an exciting and varied role as you will operate in a broad range of core projects in a fast-paced environment.

Responsibilities will include:

- Working with our Experimental team and our Internal Workshop to develop target designs to a high level of accuracy and repeatability.
- Using 3D CAD to produce engineering drawings working to BS8888 following best engineering practice.
- Supporting the design process with technical specifications, design reviews and change management.
- Providing expert engineering input into multidisciplinary teams
- Leading root cause analysis and engaging with our internal fault management processes.
- Ensuring manufactured components are delivered on time and as specified.

Essential

- You will have an HND or degree (BEng) in mechanical engineering.
- Minimum of 2 years engineering design experience using a mainstream CAD system. Training on the system used by us (Solidworks) can be provided.
- Understand DFMA principles for low volume R&D design and manufacture.
- Extensive experience with Geometric Dimensioning and Tolerancing (GD&T) and performing tolerance stack analysis.
- Fast and effective problem-solving skills
- Ability to work under pressure to tight deadlines.
- Strong communication and interpersonal skills
- Focus on safety and environmental impacts of your designs.

Desirable

- Ability to perform FEA analysis and engineering calculations.
- Experience with a drawing management system such as PDM.

**First Light Fusion Ltd**

Unit 10, Oxford Pioneer Park
Mead Rd., Yarnton, Oxford
United Kingdom
OX5 1QU

Company No – 07555858
www.firstlightfusion.com

- Experience of designing in a research environment with some of the following technologies: vacuum systems, laser systems, pressure vessels, high voltage, laser systems, cryogenics, lifting equipment.
- Knowledge of precision manufacturing techniques.

## Benefits

- Competitive salary
- 25 days annual leave + bank holidays
- Free lunch, snacks, and soft drinks
- Cycle to work scheme
- Electric vehicle car scheme
- Relocation support
- Flexible working
- Generous share options scheme
- Health and wellbeing scheme
- 8% employer pension contribution without matching requirements
- Enhanced maternal / paternal and sick leave

## Additional information

### How to apply

Please send your CV to careers@firstlightfusion.com quoting the job title in the subject. If you don't hear back from us within four weeks, it means that unfortunately your application was unsuccessful at this time.

Informal enquiries can be sent to careers@firstlightfusion.com.

### Our recruitment process

- ✓ We typically conduct two separate interviews, each one about sixty to ninety minutes long. The first interview aims to understand how your skills match the requirements for the job. The second interview is more focused on your competencies, and your aspirations.
- ✓ We will try to understand the value you will add to First Light, and how you can thrive and be happy with us. There will be opportunity to ask us as many questions as you like.
- ✓ We do not have a dress code at First Light and regardless of seniority there is a good mix of t-shirts, trainers, shirts and blazers. For your interview, please dress in whatever makes you feel most confident and comfortable.
- ✓ To help with coordination issues, we may arrange so that the two interviews are organised on the same day. We will also reimburse reasonable expenses you incur to come to talk to us.
- ✓ If you are the successful candidate, we will send you an offer letter and, once agreed, a contract.

### Our commitment to equality, diversity, and inclusion

We are a small company with a huge mission. The only important aspect for the team, and for everyone, is the contribution they can make. Our selection process and requirements for career progression disregard gender, gender identity, race, disability, colour, religion, and all other aspects of diversity that make us all humans. Diverse teams have been proven to be better

and we strongly believe it. We are not perfect, but we strive to be.

Information for recruiters

We work with a trusted network of recruiters, therefore CVs sent by other recruitment agencies will not be considered. If the company receives a CV from both the direct applicant and a recruitment agency, the CV will be treated as a direct application by the individual only. Unsolicited contact from recruitment agencies will be disregarded.

## First Light Fusion

We are a lean, focused, and agile company researching energy generation by inertial confinement fusion. We spun out from the University of Oxford in June 2011 and are based near Oxford. First Light continues to collaborate closely with the academic community, both in the UK and internationally. The company is well-funded by both institutional investors and private individuals.

Inertial confinement fusion for energy generation is a well-established research field and is being pursued in many laboratories worldwide, most notably in the US at the National Ignition Facility. We are exploring a number of alternative research directions that harness the same fundamental physics, with the prime focus being power generation. Our work to-date has included theoretical analysis, detailed numerical simulation, and experimental validation. We have a clear vision of the pathway to a power plant.

We really believe fusion will be solved in the 2020s. If it is solved by us, fantastic, if it is solved by someone else, still great!

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