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## Mechanical Engineer

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### About ION Science Ltd:

ION Science has over 30 years of industry experience designing, manufacturing, and supplying PID gas sensors, gas detection instruments, and leak detectors for a wide range of industries and applications. We are an unrivalled worldwide Gas and Leak detection Company, with a Team of workers who strive to deliver exceptional product quality and customer satisfaction.

### MAIN PURPOSE OF JOB:

This role focuses on the design and development of world class gas sensors and instruments. The right candidate will take designs from concept and see it through to the manufacturing and finishing stage, whilst complying and passing all safety requirements.

### REPORTING TO:

You will report to the R&D Director (Research and Development)

### MAIN RESPONSIBILITIES:

- Design of gas detection sensors and instrumentation products throughout life cycle
- Compliance with ATEX/UL intrinsic safety standards and/or SIL functional safety standards.
- Support and enhancement of existing products, to meet new requirements and to eliminate malfunctions
- Incorporate new gas sensing technologies into production for new applications
- Work with stake holders and suppliers to ensure the best outcome for the product

### JOB ROLE:

- Electro-mechanical-pneumatic design of components and products in 3D Solidworks
- Working with suppliers and production to ensure that parts and components achieve form, fit and function
- To test and evaluate theoretical designs
- Produce prototypes for analysis
- As part of the product design, consider design failure modes and effects analysis, design for test, design for manufacture and design for assembly
- Problem solving complex pneumatic and electro-mechanical instruments
- Support ongoing production
- Jig and fixture design and manufacture

### SKILLS:

- Design of products compliant with Intrinsic safety (ATEX, IECEx) and CE mark
- Use of 3D CAD tool Solidworks and PDM works to generate 2D drawing pack
- Experience in a range of manufacturing processes including injection moulding
- Good understanding and practice of tolerance analysis (GD&T)
- Use of simulation tools (ideally Comsol or FEA) to support product development
- Material selection knowledge (ATEX specific ideal)
- Documentation of design evolution and capturing key design decisions



- Strong understanding of an NPD process
- Have excellent levels of attention to detail
- Be extremely motivated in mechanical design
- Be proficient in IT skills, Microsoft Office packages
- Methodical, logical and detail oriented whilst still getting things done.
- Be a team player
- High level of design skills from drawing to implementing product
- Excellent at building rapport with internal departments and external customers
- Possess high levels of organisation and prioritisation skills including version control
- Have a flexible approach
- To be able to work under pressure and meet work deadlines
- Effective and confident communicator

#### **EDUCATION, QUALIFICATION and EXPERIENCE:**

- Essential: Degree level qualified
- Essential: 2 years + engineering experience
- Desirable: engineering experience in sensors and instruments

#### **COMPANY BENEFITS:**

- 25 days annual leave + Bank Holidays (annual holiday increasing with service)
- Pension Scheme – Employer contribution of 8% following a successful probation
- Life Assurance Scheme
- Private Medical Scheme with AXA

#### **WORKING PATTERN:**

Monday to Thursday: 08:30 – 17:00

Friday: 08:30 – 15:45

Full time, permanent position

#### **LOCATION:**

This role is based at the ION Science head office, located in Fowlmere, 10 miles south of Cambridge.

#### **Our Core Values:**



**Fun**



**Embrace  
change**



**Respectful**



**Responsive**



**Challenge the  
status quo**



**Committed**

*Due to the high level of CVs that we receive, we regret that we will not be able to contact you unless your CV is being progressed to interview stage.*