



JOB DESCRIPTION: SENIOR ENGINEER – ANALYSIS

1. POSITION SUMMARY

JOB TITLE:	Senior Engineer – Analysis
EMPLOYMENT STATUS:	Permanent
LINE MANAGER:	Principal Engineer – Analysis
LOCATION:	Shoreham-by-Sea
STANDARD WORKING HRS:	37.50 hours per week between 9:00am and 5:30pm, Monday to Friday inclusive
SALARY RANGE:	£DOE
HOLIDAY:	25 days per annum
BENEFITS:	Company Pension Scheme, Health Scheme (BUPA), Life Cover, EAP (employee assistance programme), Enhanced Paternity Leave, Free Beverages, Discounted Gym Membership, Discounted Eyewear and Free Eye Test, Ride to Work Scheme, Electric Car Charging, Free Parking On-site.

We are currently recruiting a Senior Engineer – Analysis to join the Engineering department at our headquarters in Shoreham-By-Sea.

Over the last 13 years, Cox Powertrain have been on a mission to deliver a revolutionary new concept in ultra-lightweight diesel engines with their market revolutionising CXO300. Since 2007, Cox has successfully raised over £120 million of private investment, to bring the outboard from a dream to a reality. Having begun production in May 2020, the CXO300 is becoming hugely popular in the market and demand is on the rise.

2. JOB FUNCTION & RESPONSIBILITIES

2.1. JOB FUNCTION

- Assist the Principal Engineer – Analysis by planning some of the following day-to-day analysis team activities:
 - CFD
 - FEA
 - 1D simulation
 - Data Science
 - HiL/XiL simulation
 - First principles calculations
- Act as the project lead on nominated projects/tasks, liaising with key stakeholders, completing requirements capture, project management, carrying out supervision and any required training as appropriate.
- Analyse the various forms of data relating to Cox products to provide insight into their operation and provide suggestions on how to improve the design/manufacture/after-sales support as appropriate.
- Work alongside designers, systems engineers, after-sales engineers and more to produce project deliverables.
- Where required, develop and document new techniques for analysing data.
- Where necessary, work on tasks outside of the Analysis remit to help the overall delivery of the Engineering team.



2.2. KEY RESPONSIBILITIES

- Maintain oversight of the analysis request system as required.
- Allocate Project Leads and identify suitable/trained analyst(s) for each project.
- Maintain oversight of the sprint planning system as required.
- Collate key team stats weekly.
- Supervise activities of analysis engineers.
- Support direct reports in achieving their objectives and carry out monthly 1-2-1s.
- Plan agile work packages within a sprint framework.
- Undertake tasks and complete to agreed standards and timescales.
- Review work and reports of engineers within the analysis team.
- Validate simulation results against test data where it is available.
- Provide reports (written and verbal) into the business of work undertaken with particular focus on how to use the conclusions to guide design decisions.

3. STANDARDS

3.1. BEHAVIORAL STANDARDS

- To deliver analysis into the business using best practise and ensuring this is the case by keeping abreast with developments in the software tools they use as part of their analytical work.
- Critically review data provided for analysis and make appropriate assumptions where required.
- To demonstrate an appropriate work ethic.
- Maintain a professional relationship with all stakeholders, external and internal at all times.
- Demonstrate Cox Powertrain Behaviours:
 - Innovation
 - Constantly questions whether there is a better way that their work could be done.
 - Looks for ways of improving the components/systems they are working on.
 - Expertise
 - Capable of undertaking work with minimal day to day supervision.
 - Understands what is acceptable in both personal delivery and the performance of the part of the product they are engineering.
 - Tenacity
 - Committed to deliver to agreed CQT targets.
 - Highlights where current practises appear to be hindering delivery.
 - Rapidly communicates when there are external factors blocking delivery.
 - Tries different methods on own volition when others fail.
 - Honesty
 - Informs line management when they are aware that they will struggle to deliver.
 - Takes personal responsibility for the quality of their work.
 - Highlights when they find errors in their work and the work of their peers.
 - Respect
 - Works to support the rest of their team to deliver work into the company.



- Understands what junior members of the team are capable of and encourages them to develop.
- Acknowledges the achievements of team members.
- Where possible, works to fulfil the requests of the line management in an efficient manner.
- Integrity
 - Conducts themselves in a professional manner.
 - Demonstrates a strong desire to push forward their personal development.
 - Informs management if they believe something in the company is not working correctly.
 - Is someone junior colleagues can come to for professional support.

4. SKILLS AND EXPERIENCE

4.1. NECESSARY

- Master's degree or higher in engineering or a relevant scientific discipline.
- At least 4 years of experience working in an analytical capacity in an engineering environment.
- Proven ability of finite element analysis model setup, post-processing and interpretation of results.
- Experience in using some of the following:
 - NASTRAN/ANSYS etc
 - LMS Imagine Studio (AMESim)
 - LabVIEW
 - Converge CFD/OpenFOAM
- Proven ability to lead tasks and provide guidance to team members.
- A good understanding of material behaviour, thermo-mechanical fatigue, bolted joints etc.

4.2. ADVANTAGEOUS

- Good understanding of the function of an internal combustion engine and how components of the engine combine to deliver that function.
- Experience in developing combustion systems.
- Programming skills such as Python and C
- Background in statistics, data science and machine learning.

Why Cox Powertrain?

With a global reach of over 100 territories, you will be joining a business that puts innovation at the forefront of everything we do and aim to be leaders in our field. To achieve this, we are always on the lookout for new talent to join our team.

Join the team and be a part of revolutionising the marine industry