

Honda Racing Development UK Ltd

PERMANENT VACANCY

JOB TITLE: Senior Structural Engineer
REPORTING TO: Mechanical Engineering Group Leader
DEPARTMENT: Mechanical Engineering Group
APPLY TO: hondaracingjobs@uk.hrdeu.com

ROLE:

Honda is seeking an experienced Senior Structural Engineer to work within the Energy Storage System (ESS) design team working on the Honda Formula one project. The Senior Structural Engineer will be involved in supporting all aspects of ESS design, which involves creating linear elastic finite element models for both composite laminate and metallic race car parts, cooling system, including any manufacturing tooling required, experimental parts, rig testing and calculations/experimentation.

The Senior Structural Engineer will ensure that the structural designs are modelled and developed accordingly and tested under specified test condition. They will be responsible for ensuring that the ESS passes all essential standards and regulations.

MAIN RESPONSIBILITIES:

- Creating structured models and verifying they are representative of the structural behaviour of the ESS pack
- Determining stresses, deformations and extract loads especially near critical junctions
- Monitoring other engineering design activities and providing technical solution based on analysis results and use these to develop an optimal design
- Finding the best analytical methods and engineering tools for FEA and establishing procedures for best practise.
- Establishing methodology of CAE tasks and stored as knowledge
- Specification / design of test equipment required to prove out structural designs
- Finding new material and new analysis methodology for advanced technology and proposing them from FE points
- Liaising with other technical groups, including electronics and suppliers
- Reporting of results in a clear, concise and structured manner

KNOWLEDGE, SKILLS AND EXPERIENCE REQUIRED:

- Strong Degree in Mechanical Engineering or similar discipline or equivalent experience
- Previous experience of stress and fatigue analysis and the ability to FEA both metallic and composite structures in complex assemblies
- Knowledge of material properties and typical factors of safety to apply for various conditions
- Strong previous experience of working within motorsport (ideally Formula 1) or another cutting edge industry and knowledge of industry best practices
- Knowledge of material testing for both metallic and composites is advantageous
- Ability to use Catia V5 to scheme and design race car parts for FE analysis and drawing release is beneficial
- Previous experience of Hyper Works and Abaqus highly advantageous
- Good knowledge of ESS parts design and previous ESS experience beneficial
- Excellent document presentational skills
- An adept communicator be able to build good relationships across all cultures both internally and externally
- Fluency in spoken & written English is essential. Competence in Japanese or another European language is desirable
- Competence and licence to drive in the UK
- Travel within the UK and internationally may be required as part of this role.

- PC literate

PERSONAL COMPETENCIES:

- Strong technical ability, problem solving and decision-making skills
- Engineering enthusiasm
- Analytical, with high level of attention to detail
- Self-motivated and competitive
- Excellent communication and teamwork skills
- High integrity
- Flexible and able to plan, prioritise and manage own workload/projects

All employees must ensure compliance with the Company Health and Safety Policy, and all relevant other statutory Health and Safety legislation.

Please note that shift working, and weekend working may feature as part of this role. Domestic Travel and Travel overseas may be required.

This job description may not detail some fewer major duties allocated to the post holder, nor cover duties of a similar nature, commensurate with the role, which may from time to time be reasonably required by the relevant manager.