

Occupant Safety Simulation & Integrations, Crash & Safety

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Company: Alp Consulting Ltd.

Location: Madha

Category: architecture-and-engineering

Position Description Format

Position Name

ENGINEER OCCUPANT SAFETY SIMUL & INTEG(70036776)

Position level

L5

DEM position name

Dy. General Manager

DEM position level

L4

FEM position name

NA

FEM position level

NA

Purpose of the position

Why the positions exists

What will happen if there is no one in the position (no one performs the work)

This position exists for

Responsible for CAE input deck preparation for restraints, interior components, active safety components & output generation using the CAE software.

Responsible for CAE based optimization of restraints/vehicle interior components/active safety components for occupant injury control/collision mitigation-avoidance.

Responsible for DOE based analysis for restraints, vehicle interior components, vehicle structure, active safety technologies for overall system performance

Responsible for Restraints CAE process and capability development activities

Responsible for Restraints systems/active safety technologies integration on vehicle projects

Building the Madymo/LS dyna model for different load case for ECE/NCAP regulations.

If no one performs the work, then

If no one is appointed in this position then the team will not have direction to perform Occupant CAE simulations, perform detailed analysis of CAE results and provide solutions to meet performance target requirements. Also, there will be no one to liaison between CAE and other functions.

Dimensions of the position

Financial: Approximate:

Non-financial: Total reportee under this position: NA

Communications

Stakeholder

Internal/External

Nature of relations

Frequency

Head Crash & Safety

Internal

Restraints CAE analysis reviews

Process document reviews

Capability project reviews

High

Safety integration team

Internal

Restraints CAE simulation schedule discussions

Restraints CAE simulation planning

High

Restraints team

Internal

Restraints CAE data sharing for restraints simulations

High

Structural CAE team

Internal

Test Vs CAE correlation study

Medium

Methods development team

Internal

Capability development related work

Medium

COC, Design teams, System suppliers

External

Attending design reviews

Medium

Personal Profile

Education

Graduate / Post graduate in Mechanical, Automobile Engineering

Competencies (Example)

Behavioural : -

Drive for results

People development

Functional excellence

Innovation management

Taking ownership

Customer focus

Functional: -

Knowledge of vehicle construction & principles in design

Knowledge of safety regulations of India and Europe.

Knowledge of Global NCAP and EuroNCAP protocols.

Knowledge of Restraints CAE simulation tools and techniques (LS Dyna, Hypermesh, Primer, Lspre Post).

Knowledge of IPR

Knowledge of EPS and 8D tools.

Knowledge of occupant and pedestrian safety in different types of accident scenarios.

Knowledge of ORS systems

Knowledge of occupant & interiors safety tools & process

Relevant Experience :

6-12 years of experience in the field of Occupant safety CAE

Key Responsibilities:

S.N.

Key Responsibility & Key Tasks

Measures

1

Responsible for CAE input deck preparation for restraints, interior components, active safety components & output generation using the CAE software.

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Responsible for DOE based analysis for restraints, vehicle interior components, vehicle structure, active safety technologies for overall system performance

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Responsible for Restraints systems/active safety technologies integration on vehicle projects

Building the Madymo/LS dyna model for different load case for ECE/NCAP regulations

35

2

Activities Which Aid Primary Tasks

Possessing adequate knowledge of Madymo/ls dyna and FE modeling & analysis of Occupant Safety and Restraint Systems

Possessing adequate knowledge of Pre-scan

Possessing adequate knowledge of DOE methods & DOE application like Mode-frontier/Hyperstudy

Possessing adequate knowledge of Easi-Crash Madymo & Madymo Exchange

Possessing adequate knowledge of Hypermesh & Matlab, ls dyna, Primer

Possessing adequate knowledge of vehicle safety requirements for occupant injury controls

Possessing adequate knowledge of restraints systems/active safety systems & technologies

Possessing adequate knowledge of post processing applications Hyperwork/MadPost/ls dyna

Development of new systems, policies, procedures, concepts:

Generating work guidelines for CAE modelling processes

Generating work guidelines for DOE processes

Generating work guidelines for CAE model build & output accuracies

Providing design solutions for achieving performance targets

Working on CAE modelling & analysis based on project requirements using Hypermesh, Primer, Is dyna.

Working on restraints capability improvement initiatives

Analysing the CAE results and sharing and discussing the feedbacks with the concerned teams.

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