Hritik K

Summary:

- I am a graduate Mechanical engineer with 3.0 years of experience in CAE field especially in Automotive Durability from last 1 years predominantly working on Analysis using Abaqus. Apart from this, I am working as a project coordinator for different OEMs.

Software Skills:

Pre-Processor	ANSA, Hypermesh, Generator G4
Solver	Abaqus, Considerable knowledge of pam crash
Post-Processor	HYPERVIEW
Other Software	Python, MS-Office

Experience: GNS engineering India Pvt. Ltd. |CAE engineer NOV' 2021 - Present

- **Roles and Responsibility:**
  - As a project coordinator my role is to co-ordinate with customer regarding technical discussion.
  - The main responsibility was to co-ordinate with the offshore customer and guiding the team for executing the assigned tasks smoothly.
  - Estimating the total work and planning project accordingly. Ensuring quality checking, delivery dates and utilizing available resources effectively.
  - Final checking of all parts done by engineers and assemble all together. Checking and fixing all intersections and penetration as per customer requirement.
  - To build model from checked mesh for Crash as per the reference or as per connectionCAD.
  - Delivering the complete model to customer within timeline.
  - Analysis: Solving the model which includes linear or non-linear behavior and variety of load steps as per customer requirement of assessment and reference.
  - **Post-Processing:** Preparation of report mentioning the accurate results and suggestions based on the observations.

Projects executed in GNS Engineering India Pvt. Ltd.

A) Analysis Projects:

1. Torsional Stiffness calculation for BiW assembly.

Tool Used: Abaqus, HyperView, Hypermesh and Ansa.

Components analyzed: BIW Full Vehicle.

Objective: To calculate Torsional and Bending Stiffness.

Description: FE model was received to find out Torsional and vertical bending stiffness of the BIW. Linear analysis was carried out to simulate the behavior of the BIW while it is subjected to twisting moment when car is moving through potholes. Stiffness targets were set for all front, rear and vertical bending and analysis was carried out. This also gives initial idea about how would BIW react to service loadcases. Weaker stiffness, worst would be reaction to service loads. Hence stiffness performance is achieved as priority

2. Door sagging analysis

Tool Used: Abaqus, HyperView, Hypermesh and Ansa.

Components analyzed: Front door

Objective: To calculate door sag for open position.

Description: Sag Analysis is carried out to check feasibility of door closing under the event of sag loading. To evaluate same we received CAD data from Designer. Performed meshing as per the required quality criteria. All spot welding, bolting, hemming connections were given according to design data. Boundary Conditions was applied on cut-section of BIW and loads were applied according in following sequence

a. Gravity Load

b. Sagging Load

c. Unload

Deformation in results were observed and reported. Recommendations were given in order to achieve the target.

3. Modal analysis of Full Vehicle:

Tool Used: Abaqus, HyperView, Hypermesh.

Components analyzed: Vehicle Assembly and subassemblies.

Objective: To perform modal analysis

Description: Any assembly/subassembly have its own frequency of vibration called as natural frequency which is subjected to resonance if source of excitation frequency matches with the natural one. Hence modal analysis of every assembly meshed is carried out to know frequencies of vibration and corresponding mode shapes. Modal analysis also gives more insight into missing connections which can be highlighted for any further work on assembly.

4. Oil canning and denting assessment on skin panels

Tool Used: Abaqus, HyperView, Hypermesh.

Components analyzed: Closures.

Objective: To find oil canning and denting performance of assemblies.

Description: Skin panels are exposed to outer environment where it may subject to unexpected small loads e.g. lean on door by a customer which may lead to dent on outer skin. Hence oil canning and denting analysis is carried out in order to overcome such conditions. Oil canning gives idea about buckling of panel due to load and denting avoids any permanent set. This assessment is carried out all over skin panels at numerous locations such as body side outer, door, tailgate and bonnet.

B) Model Building:

- **Vehicle sub system:** - HUT, Platform, closers- door, bonnet, tail gate, fender.
- **Tools:** - Ansa, Hypermesh.
- **Solver:** - Crash, Abaqus.

Education:

Examination	University	Academic Year	Percentage	Division
MBA (Business Analytics)	ASM'S Institute,Pimpri (SPPU)	2021 - 2023	7.4	1st Class
B.E (Mechanical)	RSCOE, Tathawade (SPPU)	2018 - 2021	8.61	1st Class with Distinction
Diploma (Mechanical)	PCP, Akurdi (MSBTE)	2015 - 2018	81.02	1st Class with Distinction

Personal information:

- Name : Hritik Dattatray Kokare
- Date of Birth : 25 Dec 1999
- Gender : Male.
- Marital Status : Single.
- Address : Flat No.2 Kate Building Near Suryamukhi Ganesh temple, Akurdi gaothan, Akurdi-411035
- Languages Known : English, Hindi and Marathi.

Declaration:

I here by declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Date:

Place:

(Hritik Kokare)