SREEHARI.G
B.E (Mechanical Engineering)

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PROFESSIONAL SKILLS SUMMARY

Professional Qualification   :   Bachelor of Engineering (Mechanical).

Software Proficiency   :   Hypermesh, Ansys (Mechanical APDL and workbench), Optistruct & Hyper view.

WORK EXPERIENCE

Organization	Position	Duration (5 years)
Cyient Limited, Hyderabad	Senior Design Engineer	May 2018 - Present
Designtech Systems Ltd, Hyderabad	Stress Engineer	May 2015 – May 2018
Essential Engineering Solution Pvt. Ltd., Bangalore	Design Engineer, Trainee	Aug 2014 – Jan 2015
TVS-Sundram Fasteners, Hosur	Graduate Engineer Apprentice	Sep 2012 – Sep 2013

RESPONSIBILITY

- Performing Finite Element Modeling, maintaining mesh connectivity, mesh quality as per customer requirements.
- To assess component stresses of aero engine assemblies for achieving LCF Lifing and Stress margin against increased load under various mission conditions.
- Offshore reviewer for certification and non conformance of Low Pressure Compressor cases and 2.5 Bleed Valve assemblies.
- Performing Linear/ Non linear static analysis of Aero engine components, dynamic analysis of automobile and heavy engineering components.
- Post processing and Justification of analysis results using ANSYS APDL, Workbench and Hyperview tool.
- Modifying and reading Models in NX 9.0 for Analysis.
- Providing Training to new associates on process and tools

PROJECT EXPERIENCE

Project: Stress Analysis of 2.5 Bleed valve assembly

The project involves the certification stress analysis of 2.5 Bleed Valve Assembly. This assembly is located between Low pressure compressor and intermediate compressor of aero engine and operated during start up and cruise condition.

Client: IHI, Japan.
Tool Used: Hypermesh & ANSYS APDL.

- Built FE Model of 2.5Bleed Valve assembly as per IHI Standards.
- Meshing is modeled as per the client quality requirement & standards. Mostly Hex mesh is used.
- Performed steady state stress analysis with non linearity for max actuator and Surge loads.
- Improved durability of 2.5Bleed Valve Assembly against Increased Actuator Load by introducing changes in geometry.
- Assessed redesign of component stresses for achieving LCF Lifing under increased actuator loading and Stress Margin against UTS under Surge Loading.

- Confirmed positive seal compression throughout Valve circumference for redesigned 2.5 Bleed Valve assemblies under various mission conditions.
- Performed Modal analysis and determined fundamental frequency for redesigned 2.5Bleed Valve assembly and checked its margin against resonating frequency.
- Assessed 2.5 Bleed Subcomponents (Bell Crank & Bracket, Idler Link &Bracket) for LCF Lifing under reaction loading of redesigned 2.5 Bleed Valve Max Actuator Global Model and for Stress Margin against UTS under reaction loading of Global Surge Model.

Project: Stress Analysis of Low Pressure compressor cases.

Client: IHI, Japan.
Tool Used: Hypermesh & ANSYS APDL.

- Built FE Model of Low pressure compressor cases.
- Meshing is modeled as per the client quality requirement & standards. Mostly Hex mesh is used.
- Performed steady state stress analysis with non linearity under normal, limit and FBO loads of aero engines. Redesigned component at critical locations (undercut, different fillet radius, compound fillet), for the identified critical load cases.
- Mapped Boundary conditions (Forces, displacement) from global model and performed analysis on full ring model with optimized design under different loading condition and determined the critical sector angle/Model.
- Sector models with Fine mesh were built at critical location from full ring load distribution and load condition wise and checked for lifing and strength requirement as per IHI Standards.

Project: FE modeling, Design Analysis of Screw type Pumps.
Client: DRDO
Tool Used: Hypermesh & ANSYS APDL.

- Project responsibilities included meshing motor & pump assembly with various types of elements (Hex, Tet & Shell) based on requirement. Bolt connections modeled using rigid and beam elements, defined boundary conditions w.r.t equipment application.
- Performed Modal analysis rigidly and also with shock mounts to determine the vibration characteristics of the equipment.
- Proposed design improvement to avoid mechanical failure and reduce vibrations which are under the influence of resonance.
- Correlated analytical results with noise & vibration data from OEM (Post Processing-Vibration levels in dB(A) plotted against 1/3rd Octave Vibration band, evaluated overall vibration levels at bearing locations and Noise levels). The levels obtained are checked against the acceptable levels as per naval standards.
- Static, Transient Dynamic and harmonic analysis were performed to determine the strength of the equipment under various static and dynamic loading.

Project: Modal and Frequency Response analyses for Head Lamps and Tail Lamps of Vehicle.

Client: Magneti Marelli.
Tool Used: Hypermesh & ANSYS.

- Project responsibilities included meshing of full lamp assembly, maintaining mesh quality criteria and connecting the various components as per customer requirements.
- Performed Modal and frequency response analyses to determine dynamic behavior of equipment and to overcome resonance.
- Stresses and displacements are reviewed at peak frequencies to determine the structural integrity. Prepared detailed report on the obtained results

Project: FE Modeling of Mobile crane and crane cabin assemblies.

Client: Mahindra & Mahindra Ltd.
Tool Used: Hypermesh & Nastran.

- Project responsibility includes meshing of crane components (Boom, Chassis, Main frame and cradle) with connections.
- The task was to deliver FE Model for Linear analysis with no penetrations, creating sub –assemblies with quality check parameters maintained as per client requirement.

- ➢ Worked as Design Engineer Trainee (FE Modeling (Hex Mesh) of Anti – Vibrating Components of Engine Mounts) at **ESSENTIAL ENGINEERING SOLUTIONS PVT LTD, BANGALORE** from Aug 2014 to January 2015.
- Hexahedral Meshing of Engine mounts, transmission mounts, and suspension mounts with restrictive mesh criteria in terms of element quality / grid flow and element distribution.
- ➢ Worked as Graduate Engineer Apprentice at **TVS-SUNDRAM FASTENERS,** from Sep 2012-13.

EDUCATION

EXAMINATION	BOARD/UNIVERSITY	INSTITUTE	YEAR	Percentage
Graduation	Anna University, Chennai	SSM College of Engineering, Nammakal	2012	81.6%
Intermediate	State board	Maharishi Vidya Mandir, Hosur	2008	85.83%
Matriculation	CBSE	Maharishi Vidya Mandir, Hosur	2006	71.2%

PERSONAL DETAILS

FATHERS NAME   : Govindan.k

GENDER   : Male

DATE OF BIRTH   : 19-10-1991

ADDRESS   : Plot No: 33, New Indira Nagar,
                   Indian bank line, Gachibowli – 500032

NATIONALITY   : Indian

MARITAL STATUS : Unmarried

LANGUAGES KNOWN : Malayalam, Tamil, Hindi and English

PASSPORT NUMBER   : N6734754

DECLARATION:
I hereby declare that the above mentioned details are true to best of my knowledge.

PLACE: Hyderabad
DATE: (SREEHARI.G)