

Summary

Project Name: Tooling :Lifting Devices Design & Certification

Scope: Lifting Devices Design & Certification

Software: Inventor, Ansys

Scope:

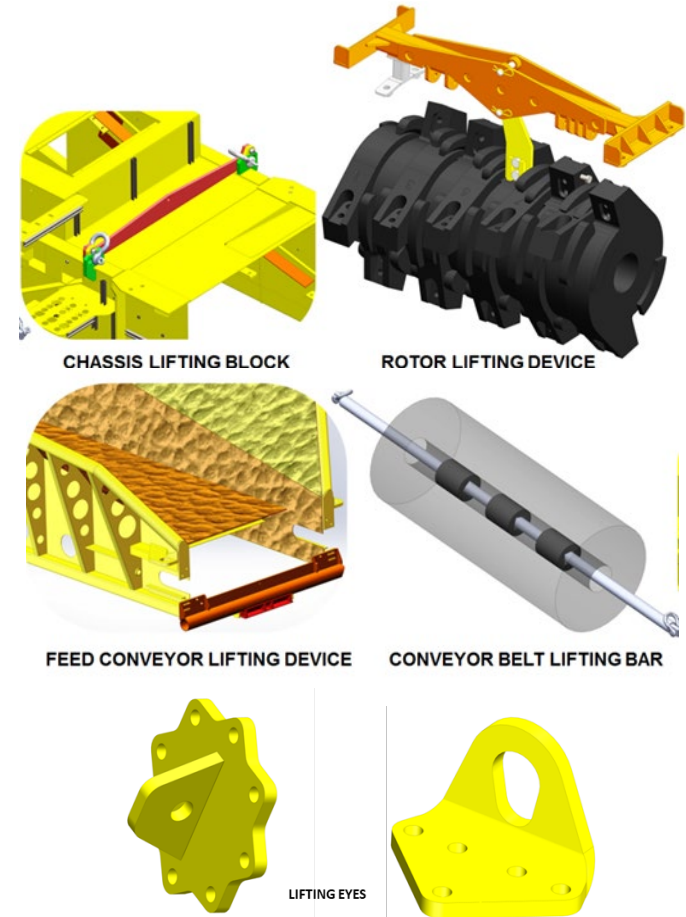
- Redesign and do validation of the below the hook lifting devices.
- The lifting Device 3-D model will be created and will be redesigned per specific requirements from ME.
- Lifting Device would be Digitally validated through FEA and hand calculations per ASME-B30-20 & ASME-BTH-1.
- A detailed validation Report will be created each device.
- Detailed drawings for Assembly and piece parts will be created.
- Finally all the drawings and Validation Report will be submitted to a PE to stamp the Design before it gets tested and prototyped.
- There will be total 20-25 Devices which need to be validated.

Solutions :

- Each of the lifting Device design is optimized in terms of load rating .
- Provided solutions which could be easily manufactured in house with standard available material.

Achievements:

- Certification of tool from the PE is easier and takes less time.
- Carried out FEA for all Devices(Sample attached for Reference).
- All the lifting device we did validation have passed PE level for certification.



Summary

Project Name: Tooling :Lifting Devices Design & Certification

Scope: Lifting devices for MTS – Redmond

Software: Solidworks, Ansys

Scope:

- To design under the hook lifting devices for 4 different cylinders & 2 fabrications with specific unloading requirements.

Challenges :

- To design scissor type lifting device which is compact and meet Genie safety requirement.
- To calculate the inclined unloading angles for Long link & Big cylinder devices.
- To understand each specific requirement and take care during designing.

Solutions :

- Able to achieve the requirements by conducting brainstorming sessions.
- By performing complex calculations and able to come out with justified designs.
- Continuous communication with the team helped to understand the requirement in a better way .

Achievements:

- Prepared a standard designing guide to design any scissor lifting device, which is well appreciated by the team.
- Design is validated by qualifying in FEA & Proto testing.

