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2pm

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Advanced Stress Analysis & FEA
1503528

Q2) Steps during Pre-Proc stage? ~~would be~~ (10)

Introducing the SIMPLE Plan to ensure as much can be done early in Project to avoid delays.

Split - Whether 1D, 2D, 3D elements are required will affect run time and accuracy. Defining the cross section etc. Reduce degrees of freedom.

Interpolate geometry - Ask if all visible geometry is required. Can any be removed to create a lighter and more efficient solution.

Material information - ^{asses if} ~~with~~ FE model ^{will} be static or dynamic, linear or non linear, how will Young's modulus be affected? *

Loading - Check what forces will be on the component, what equations need to be used for beams etc. Will components be in compression or tension? Assess how that material will react. Load steps.

Evaluation of results - Not Pre-processing, this is Post Processing, however if results aren't as expected then Pre Process needs to run again to ensure continuity.

* Also consider Fatigue life, Ultimate (tensile) Strength, maximum deflection.

This can be run on ^{software} platforms including Hypermesh and Solidworks.