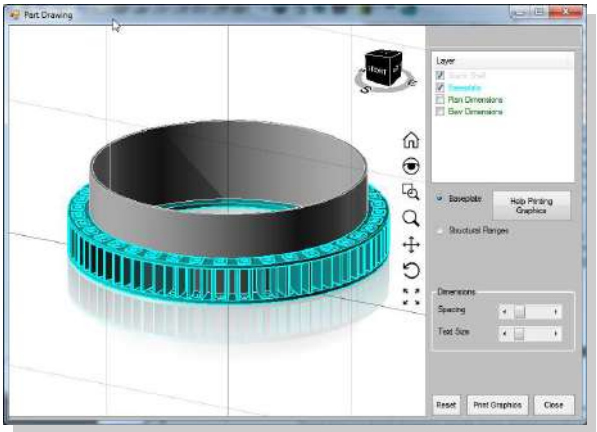
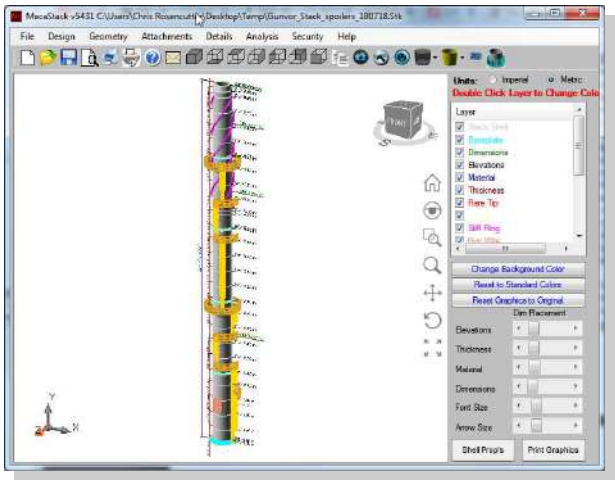
MecaStack Software

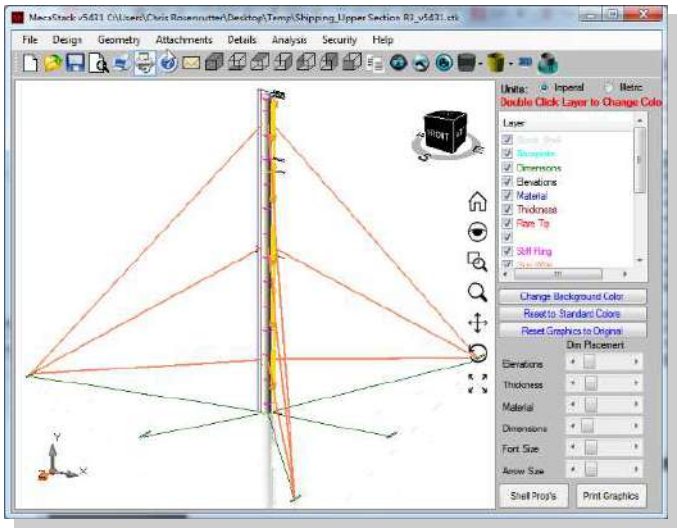
MecaStack is the most widely used software in the world for designing self-supported and guy wire supported steel stacks. An easy to use Windows based interface allows designers to quickly model a stack. A 3D model of the stack is automatically displayed on the screen providing a quick visual check of all information entered. The user has complete control over the codes that are used for Along Wind, Across Wind, Stress and Fatigue. Load combinations and factors can be customized as needed. The output is easy to navigate, problem areas may be located quickly, and the designer may select the calculations that are presented to the client.

Software Features

- 3D Graphics
- Customizable Load Combinations
- Specify Grade Elevation
- P-Delta Analysis & Baseplate Design
- Guy Wire and Lug Design
- Lifting Analysis of Stack
- Toggle Between Imperial & Metric Units
- Calculate Frequency for Higher Modes

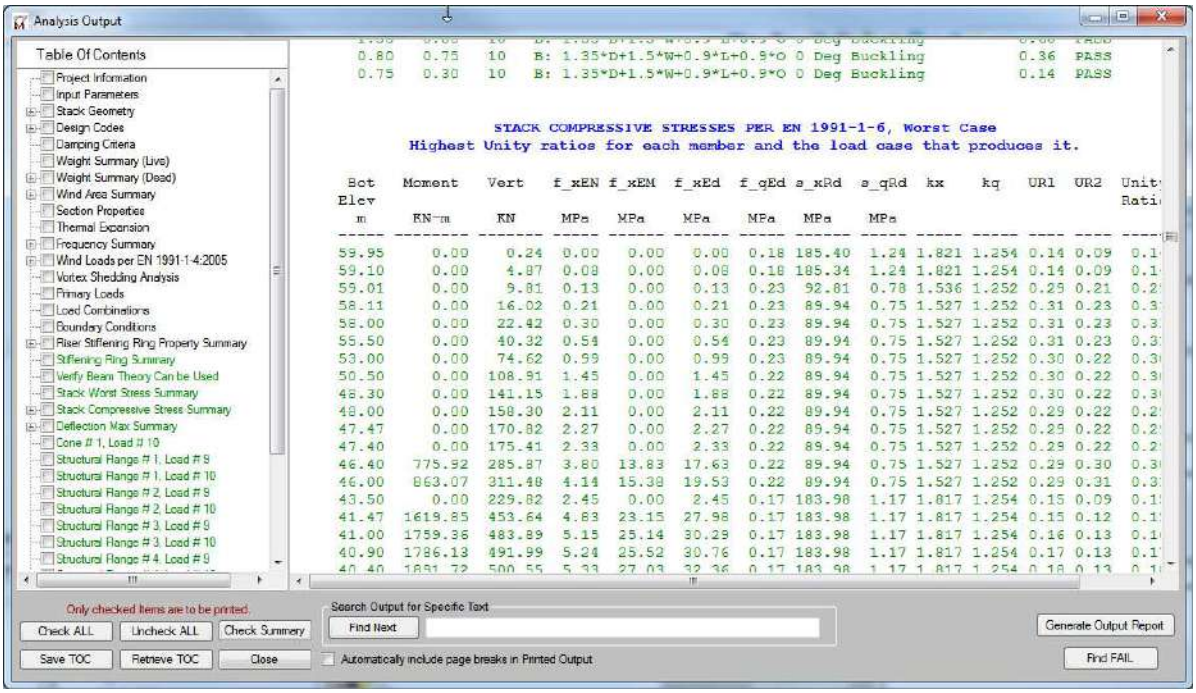






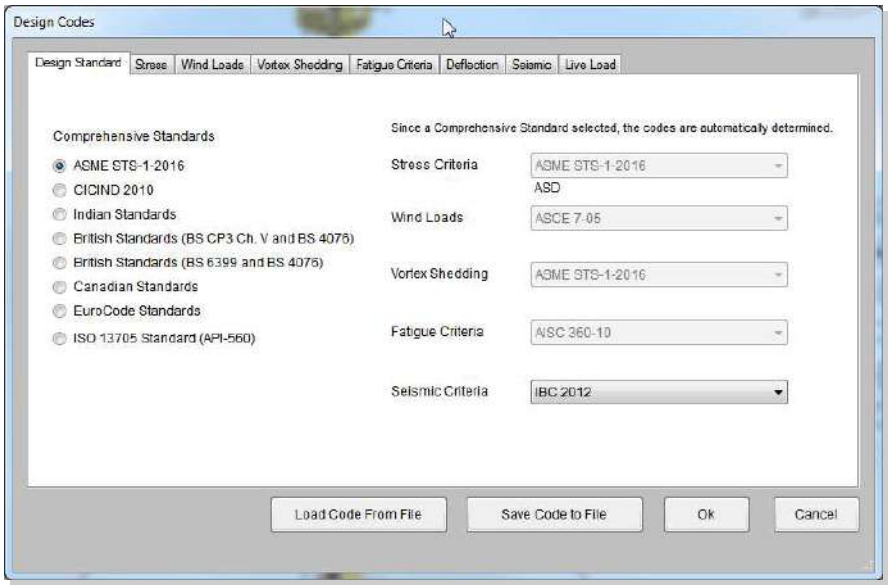
Guy wire supported stack design can be extremely complicated. The designer must consider the nonlinearity of the cables as well as all combinations of load direction, corrosion and temperature in order to find the worst case for each element of the design. Most general purpose structural programs (StaadPro, Risa, etc..) simply don't handle guyed stack design adequately, or they make it extremely difficult and time consuming.

MecaStack not only makes modeling a guyed stack simple, but it automatically constructs an array of load cases to ensure that the worst case scenarios for each element of the design is captured. It also helps with the selection of the appropriate guy wire hardware. The design of one guyed stack usually saves enough time to recover the cost of the software.



Outputs are customizable in MecaStack. The user may select which output is displayed before anything is analyzed. Then once the analysis is run, the user can select from a table of contents which items are going to be presented in the final report. Also, clicking on any of the table of contents will take the user directly to that section. Sections involving "Pass" or "Fail" criteria are displayed with the colors GREEN (everything passing) and RED (at least one item fails). This allows the user to quickly determine if there are any problems in the stack.

Design Codes



Seismic

-Indian (IS 1893)

-UBC 97

-Manual Entry

-International Building Code (IBC 2012)

-Response Spectrum Analysis

-National Building Code of Canada (NBCC 2010)

-Euro Norm (EN 1998-6)

Steel Stack Design Codes

The user has complete control over the design codes that are used for Along Wind, Stress and Fatigue. In addition, the load combinations and factors can be customized as needed or auto-populated per the design code selected. There are several comprehensive steel chimney design codes available within the MecaStack design software:

- American Standard: ASME STS-1
- CICIND
- Indian Standard
- British Standard
- Euro Standard
- Canadian Standard
- Brazilian Standard (NBR 6123)
- ISO 12705 (Formerly API-560)
- Mexican Standard CFE 2008