SDC VERIFIER

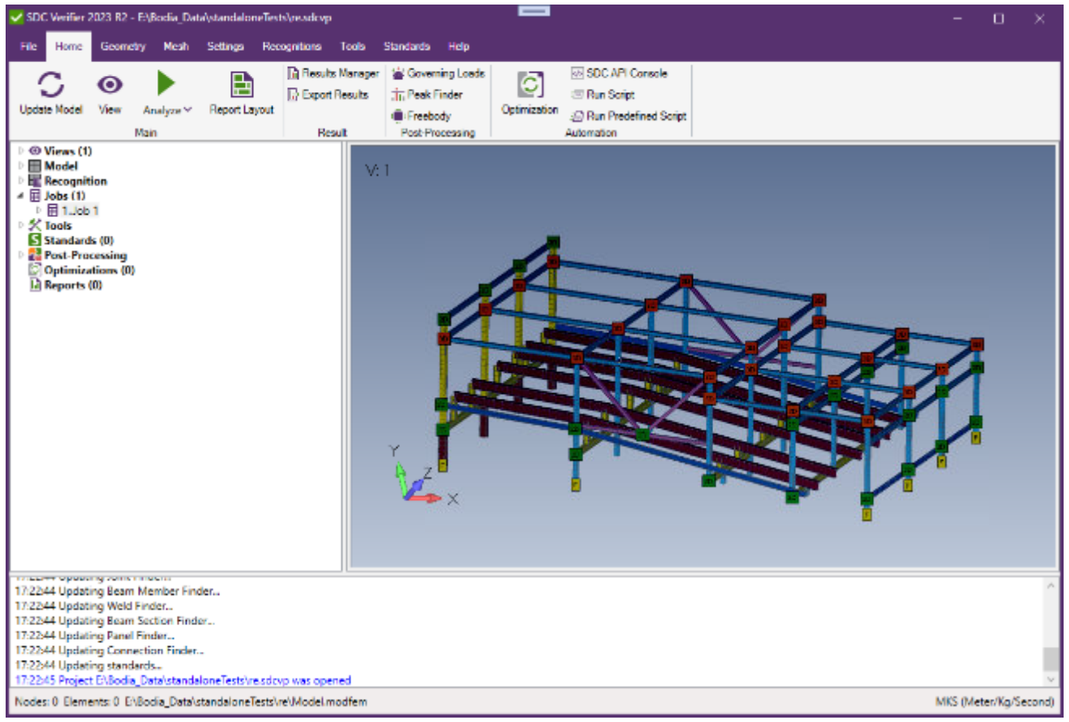
SIMULATION FIRST

All-in-one software solution for structural design, simulation, optimization, and verification according to standards

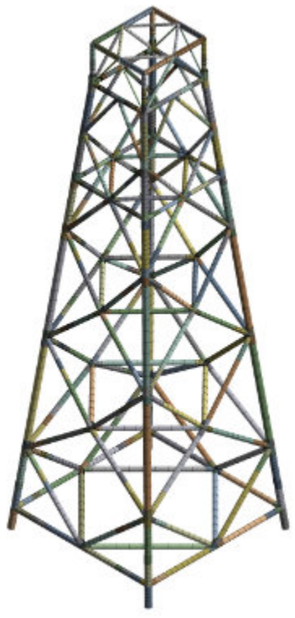
- *The new philosophy of FEA analysis*
- *No more multiple models in different CAE software*
- *Focus your workflow around simulation with SDC Verifier*

MODERN FEA INTERFACE

Import your drawings, 3D file, or existing FEA model from any other FEA software. Or build your own design with a modern and intuitive graphical interface.

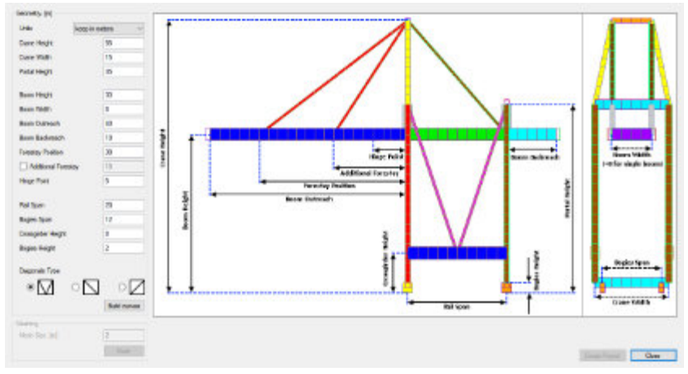


PARAMETRIC MODELING



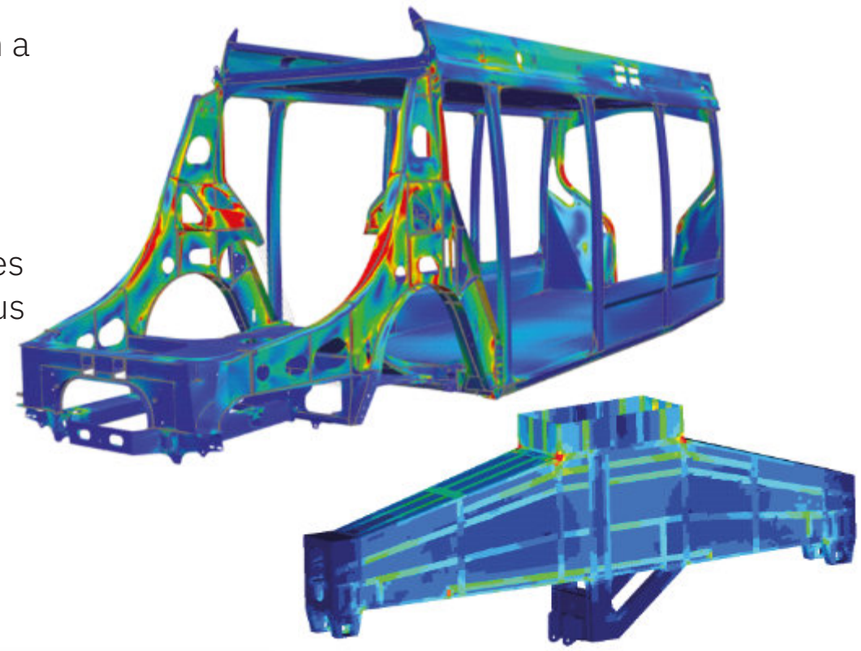
Create an original design with finite elements simply and effectively.

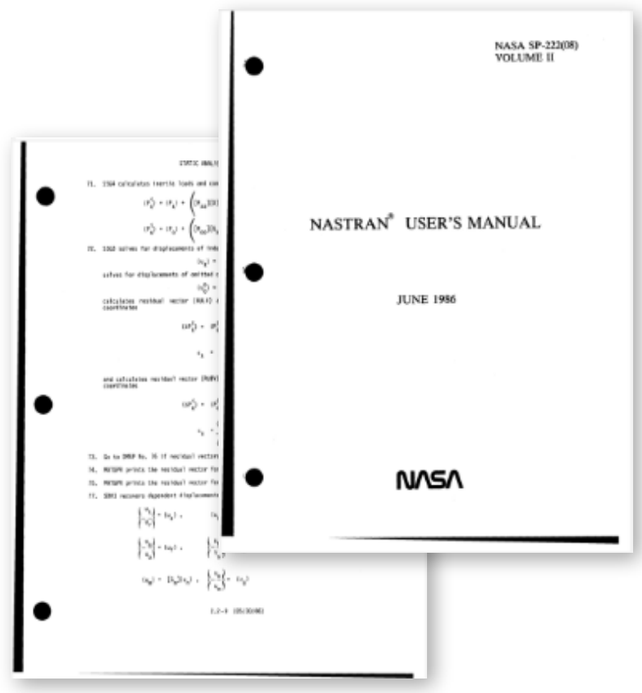
Parametric Modeling is quick and easy way to build a predefined model for prototyping by changing only the necessary input.



POWERFUL NASTRAN SOLVER

Analyze your design with a remarkable NASTRAN solver. A renowned simulation application combined with SDC Verifier's features enables engineers to cover various tasks with a few button clicks.

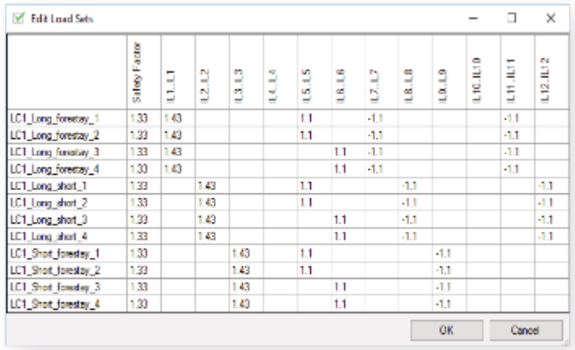




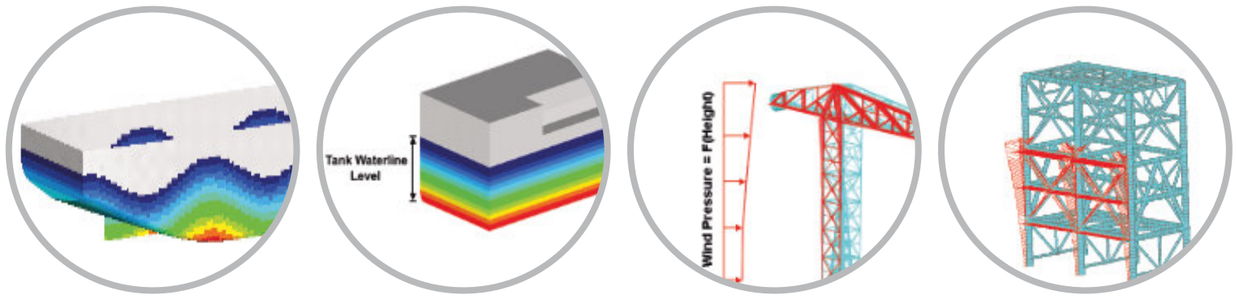
With 50 years of history, NASTRAN, developed for NASA, gained trust among engineers worldwide.

LOADS AND COMBINATIONS

SDC Verifier brings to the users an interface to combine all the design loads into **load combinations** in a quick and convenient way.



SDC Verifier automates the application of the following loads:



Buoyancy – a water pressure acting on a construction (e.g. ship hull) including wave parameters.

Tank Ballast – fluid level based on a mass content transferred into a pressure level on a tank surface.

Wind – height dependent pressure applied to the model taking into account the element area exposed to the wind direction.

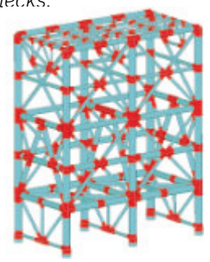
Wave and current loads – apply force and pressure based on wave parameters (height, length, crest, amplitude, etc.).

AUTOMATIC DETECTION OF STRUCTURAL ITEMS

Automatically recognize joints, connections, beams, welds, plates, and other structural items.

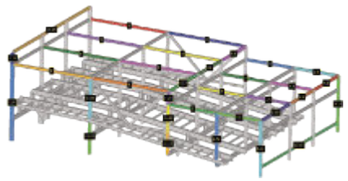
Joint and Connections Finder

Joint and Connections Finder recognizes the different types of connections in 1D models to determine buckling length and further use in Joint Checks.



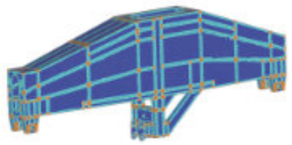
Beam Member Finder

Beam Member Finder detects beam members' lengths in 3 directions (Y, Z, and Torsion). Buckling length is calculated between the joints and does not depend on the model mesh.



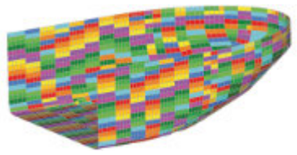
Weld Finder

Weld Finder detects welds and automatically transforms the stresses from the element's local coordinate system into the weld direction for further use in fatigue and weld strength calculations.



Panel Finder

Panel Finder automatically recognizes sections, plates, and stiffeners with the dimensions (length, width, thickness, and orientation) used in plate buckling calculations.



CHECKS ACCORDING TO STANDARDS

SDC Verifier checks your model according to numerous standards from the built-in library or custom ones. SDC Verifier's library contains 30+ different standards and continuously grows.

AS 3990 (1993)

AIJ (2005 Edition, 2017)

DIN 15018

NORSOK N004

AISC 89 & 2010

FEM 1.001

Eurocode 3

ISO 19902

FKM (5th (2003); 6th(2012) editions)

DVS 1608 (2010); DVS 1612 (2014)

DNV 1995 & 2010

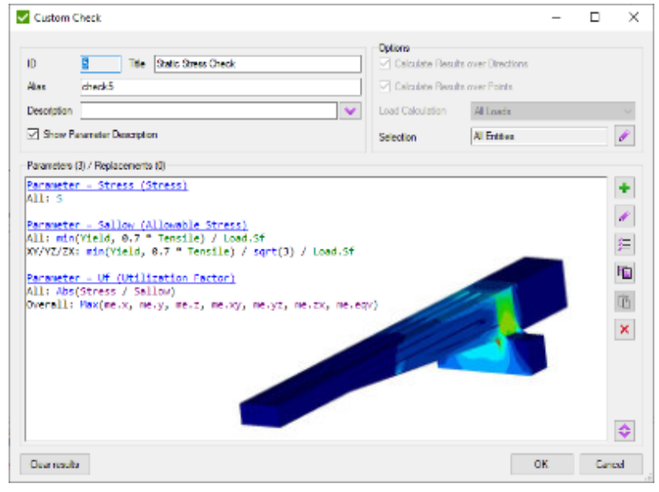
ASME VIII (Div2, 2010); ASME B31.8-2018

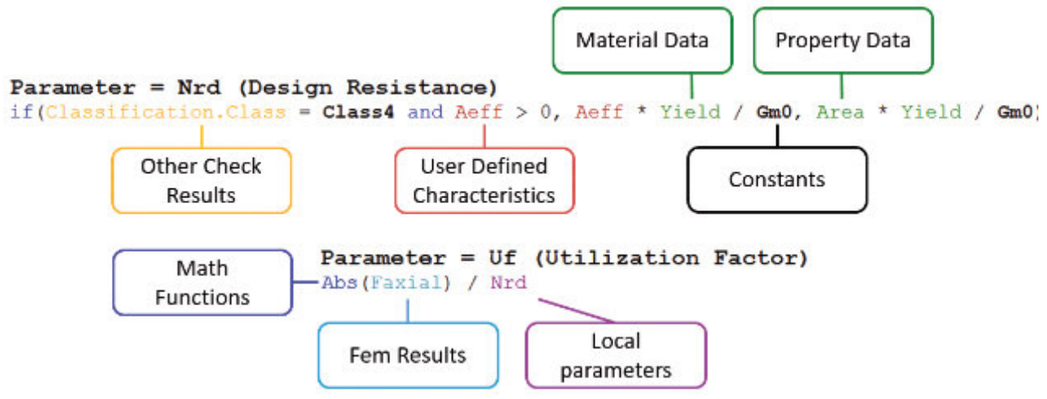
API 2A RP

EN 13001

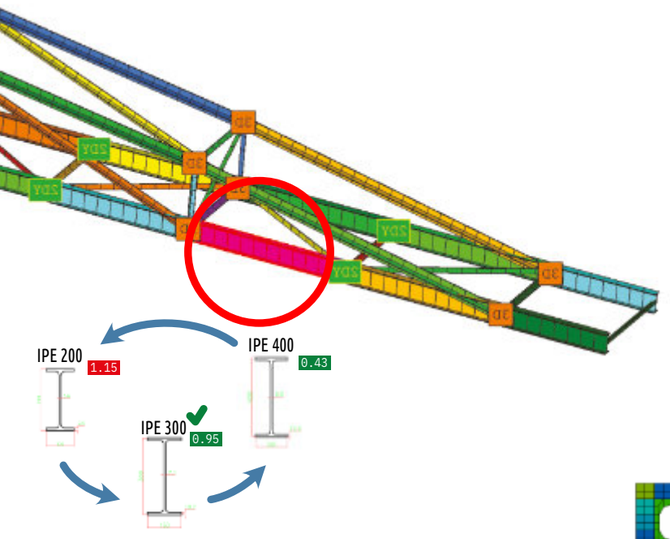
ABS 2004 & 2014

The checks in SDC Verifier are completely customizable. With the help of the formula editor, user-defined formulas can be created based on results, model properties, and recognized dimensions.

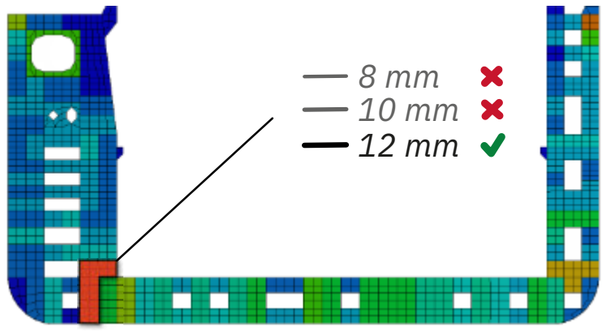




DESIGN OPTIMIZATION



The **Optimization module** helps to take the best possible design decision acquired from code-checking results. Optimization can be based on Cross Section, Weld Type, Yield Stress, and Plate Thickness parameters.

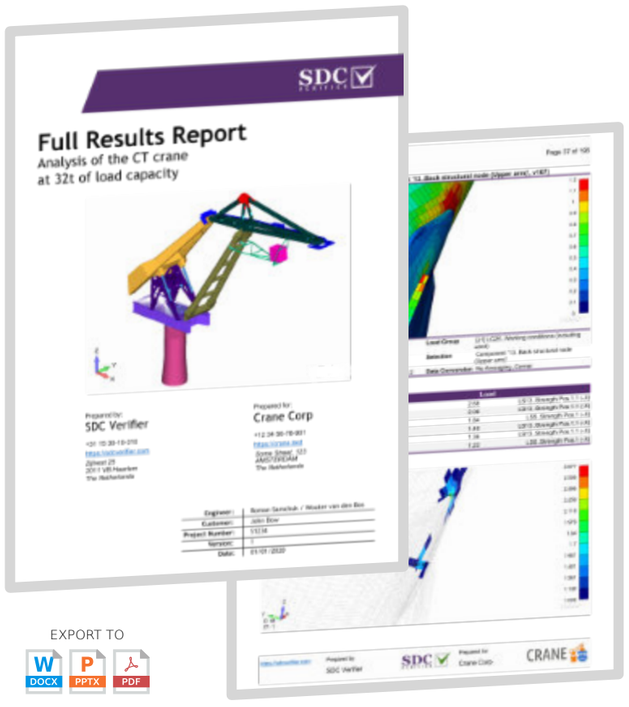


Optimization can save time on repetitive tasks by calculating different combinations of design input and also help make the structure more cost-effective by adjusting the existing model parts for specific terms of usage.

APPLICABLE IN FOLLOWING INDUSTRIES

- OFFSHORE AND MARITIME
- OIL AND GAS
- HEAVY LIFTING
- MACHINERY EQUIPMENT
- CIVIL ENGINEERING
- PIPES AND PETROCHEMICAL
- AEROSPACE
- RENEWABLE ENERGY

AUTOMATIC REPORTING

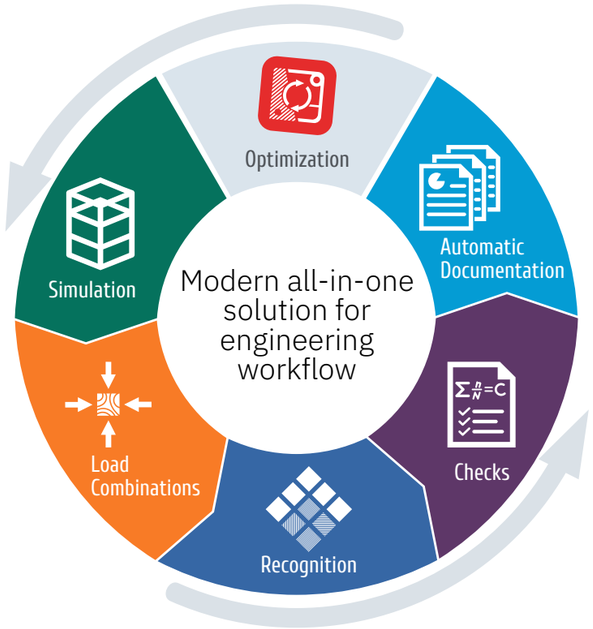


Report Designer is an advanced tool for automatic reports generation. Reports in SDC Verifier have a template-based structure and contain model setup, model description, and calculated results presented as plots and tables. In case of any changes in the analysis process, all results could be regenerated with one click.

It is possible to preview and print the report in Report Designer or export to Microsoft Word, PowerPoint or Adobe PDF format for further editing.

Automatic report generation can save a lot of time for preparing and presenting the calculation results.

SCALABLE WORKFLOW



SDC Verifier works independently, offering modeling, simulation, calculation, code checking, and import/export capabilities.

Skip multiple transitions between dedicated modeling, simulation, and verification programs with SDC Verifier.

There are 3 levels available:

- **Beams only**: 1D with one or multiple codes
- **Beams and Plates**: 1D + 2D with one or multiple codes
- Upgrade to **FULL FEA** with Ansys, Femap, Abaqus or other tool for unlimited functionality

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