

Ship Information Navigator

Finite Elements Computation Models Checking

S.I.N. (Ship Information Navigator) is a naval-oriented tool dedicated to finite elements computation models checking. It is used, before computation, to allow stakeholder checking the model adequacy versus real structure and physical phenomenon to compute. It is used, as a post-processor, to gain an easy and powerful access to usual results of a structural analysis and to avoid using general purpose post-processing tools that are usually complex to use.

Applications

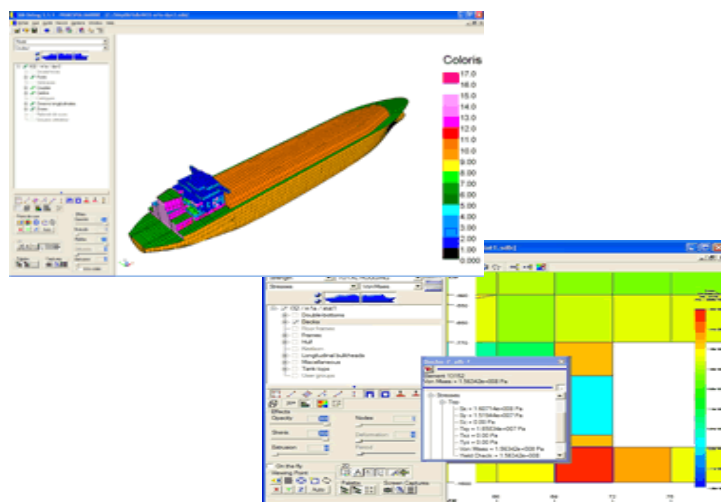
SIN is dealing with models constituted of plate and beam elements. SIN supports static analyses (displacements and stresses), eigenmodes problems (frequencies and mode shapes) and forced response problems under harmonic excitation (display of amplitude and phase values for displacements, speeds and accelerations). SIN is focusing on shipbuilding industry but its principles are relevant for any kind of complex industrial products.

User Environment

SIN uses a typical Windows® user interface driven by menus and buttons to launch immediate actions or, as a maximum, a settings dialog box. It is easy and fast to learn. This interface is available in French and English languages.

Hardware Configuration

SIN is provided as a Windows® application and does not require large hardware capacities (processor, memory or disc). Data can be accessed even using a laptop.



Main features

SIN includes a set of specific functions:

- Hierarchic representation of the structure in a usual way for designer,
- Splitting primary and secondary stiffeners,
- Access to values associated to elements and nodes by a simple click,
- Display of stress values against rule criteria,
- Automatic computation of cell buckling criteria (with choice of Rule set),
- Ability to take corrosion into account,
- Making "envelop" result cases from computed results,
- Frequencies "scan" function on one or more node components for forced responses,
- 2D view with automatic display of scales (frame number along X, longitudinal bulkhead position along Y and deck name along Z),
- Ability to create custom elements groups,
- Function to automate images creation.

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