The offer of the CTO S.A. Numerical Analysis Team

guide for 2021

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FEM calculations in the field of shipbuilding and offshore

1. Analyses of natural and forced vibrations
2. Global, zonal and local analyses of ship hull strength
3. Analyses of the launching process of the ship
4. Shock resistance analysis of the ship's hull
5. Shock resistance analysis of ship equipment
6. Selection of ship’s structure framings

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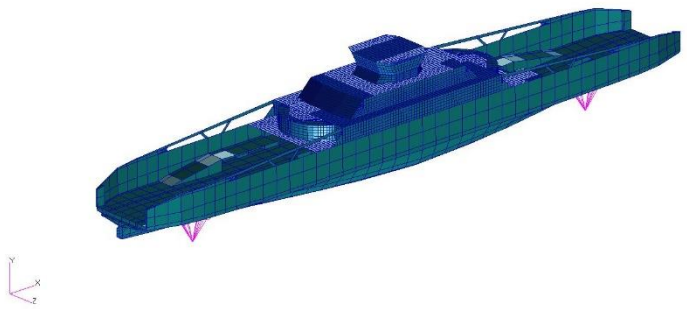
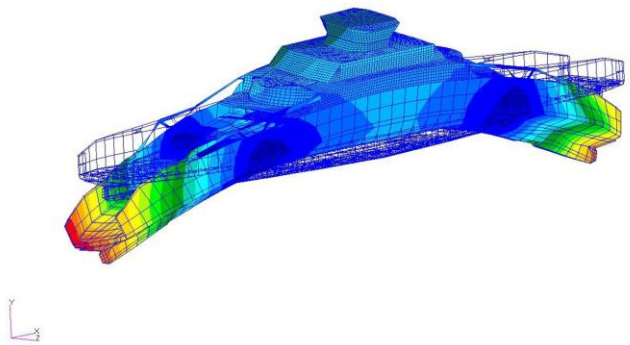
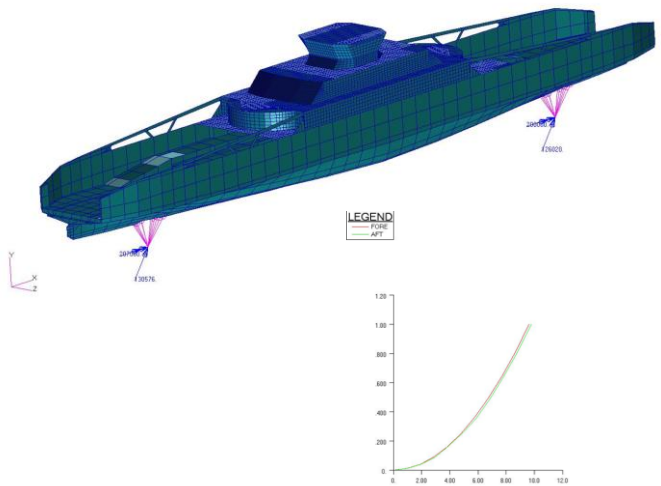
Example FEM model of the ferry



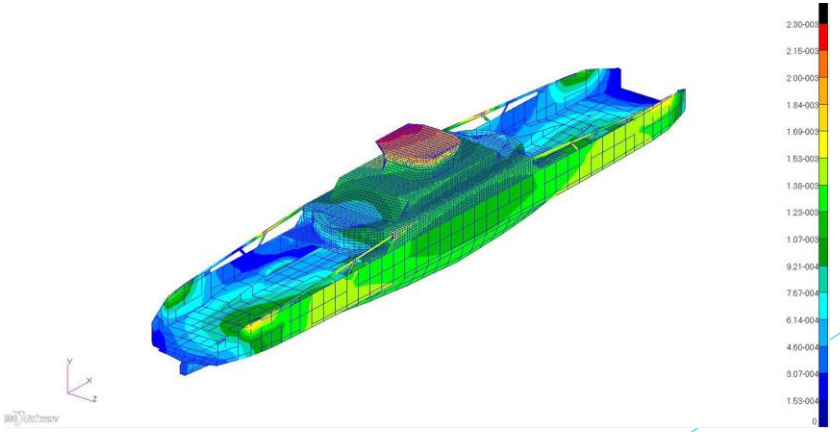
Natural form of vibrations



Load the FEM model with forces and moments



Velocity fields as a response to a given extortion



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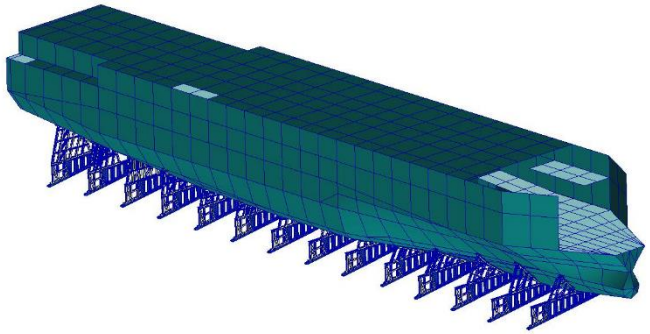
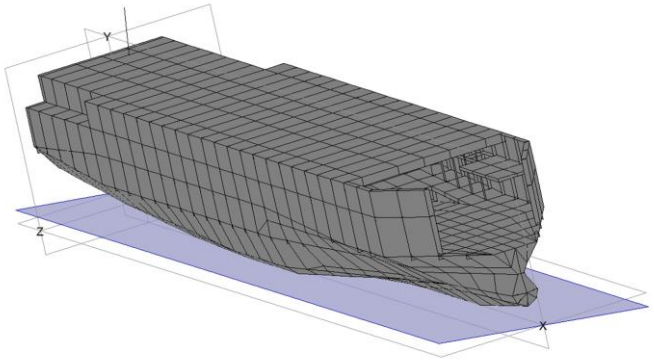
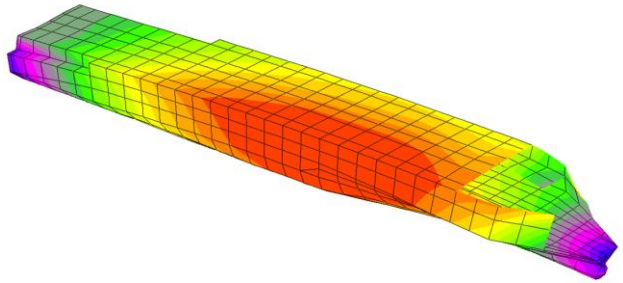
Example FEM model of the ferry together with the launching support



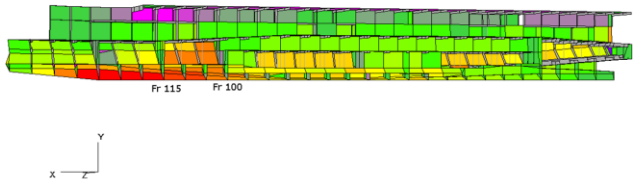
Simulation of side launching



Hull deformation during side launching



Stresses in the hull during side launching



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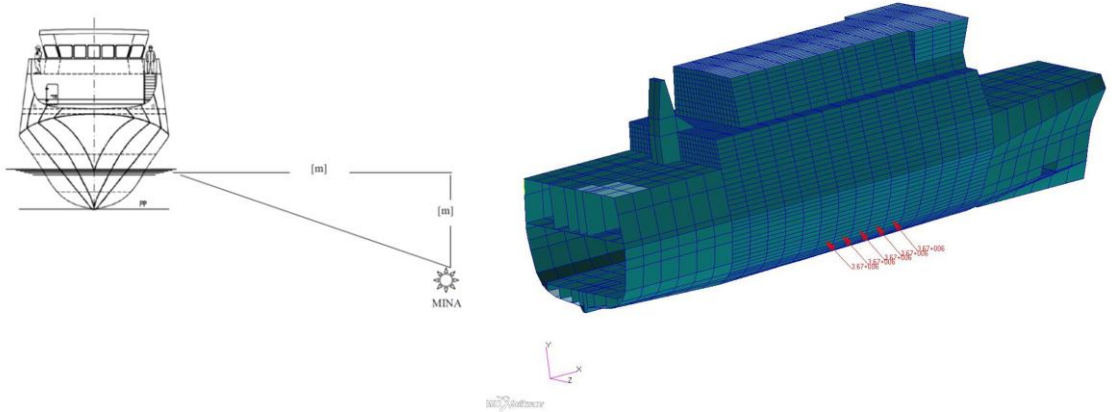
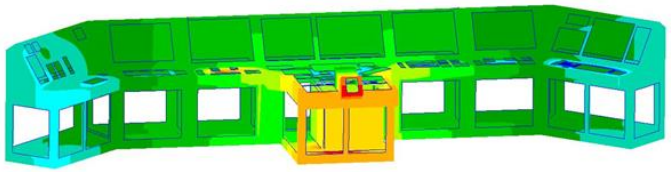
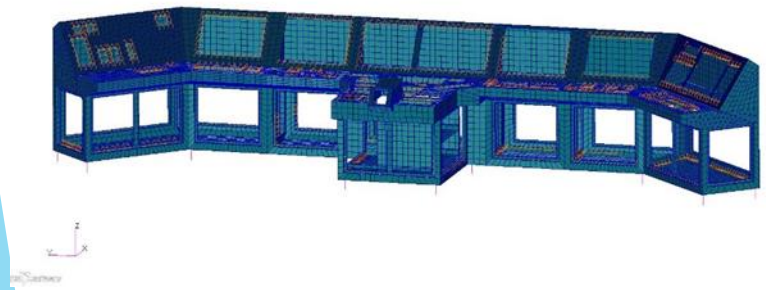
Example of Shock analysis



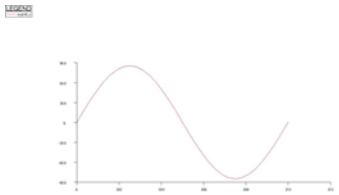
Acceleration field results as a function of time

FEM model of the navigation bridge desktop





Forcing signal



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FEM calculations in other engineering fields

1. Vibration analysis
2. Strength analyses
3. Analysis of seismic resistance
4. Thermal analysis

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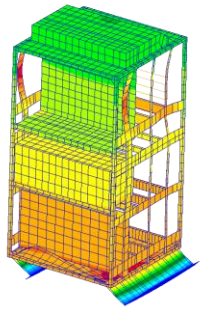
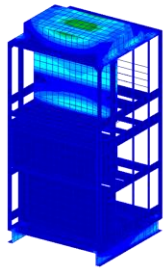
EXAMPLES

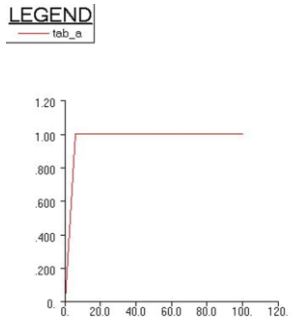
Natural forms of low voltage switchgear



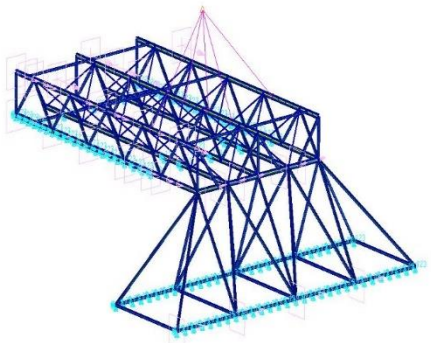
Response to extortion, Von Mises stress



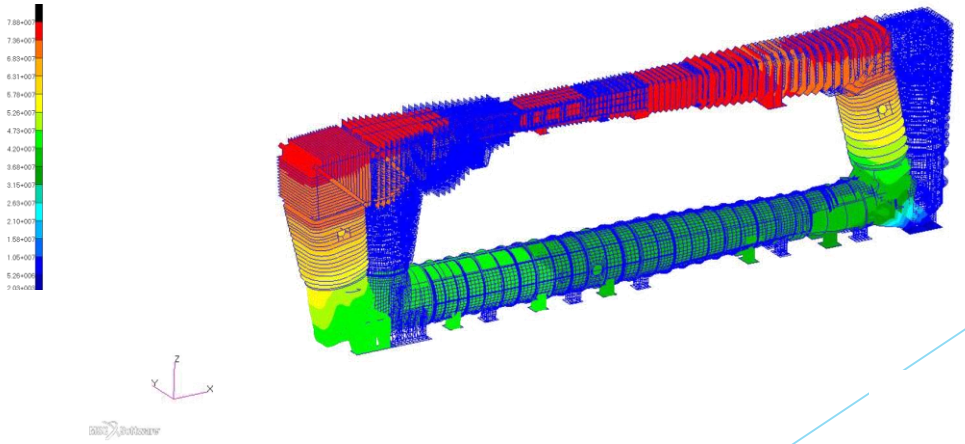
Forcing signal in the form a, v = f (t, f)



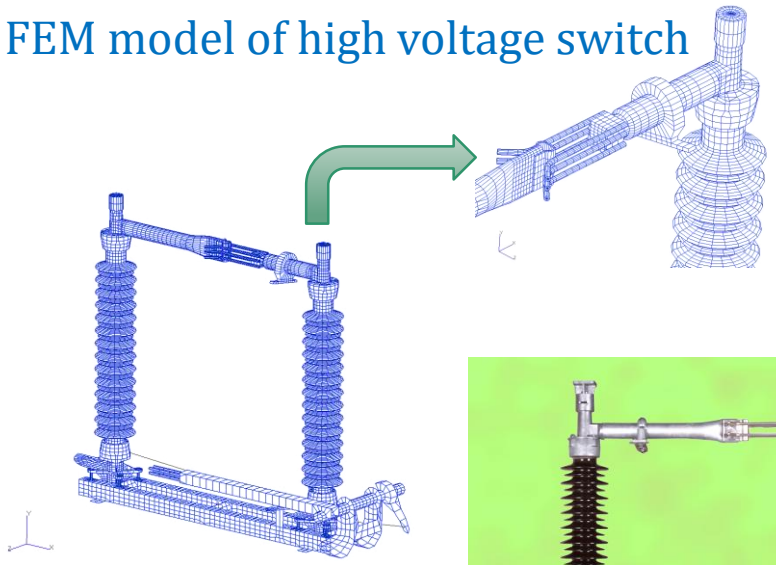
Truss structures



Natural forms of a cavitation tunnel

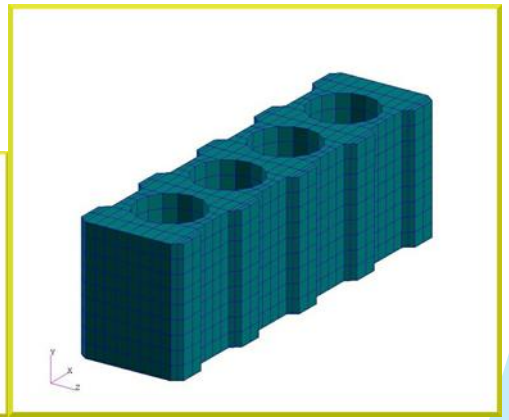


FEM model of high voltage switch

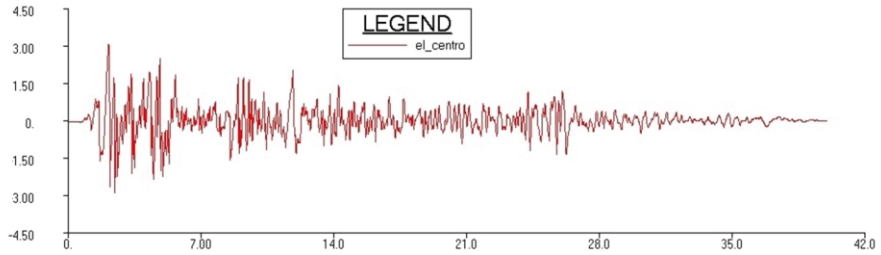


Thermal analysis of the engine cylinder head

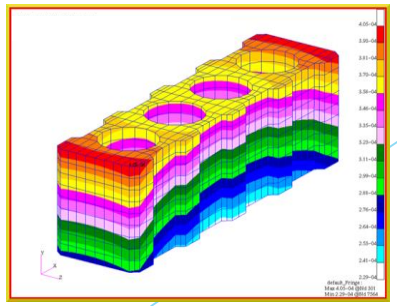
FEM models of the engine body



Record of acceleration of seismic course



Thermal deformations of the cylinder head body



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FEM training

1. General training in issues and theory of strength of ship structures (including assessment criteria), including FEM applications

2. General training in issues and theory of vibration resistance of ship structures (including assessment criteria), including FEM applications

3. Practical training in the use of engineering tools (FEM software) in numerical analyzes

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