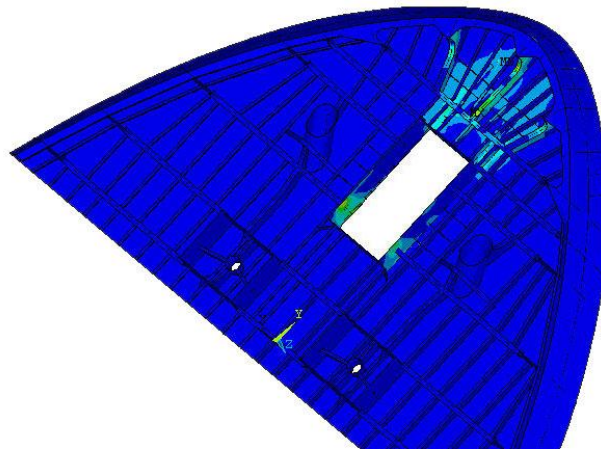


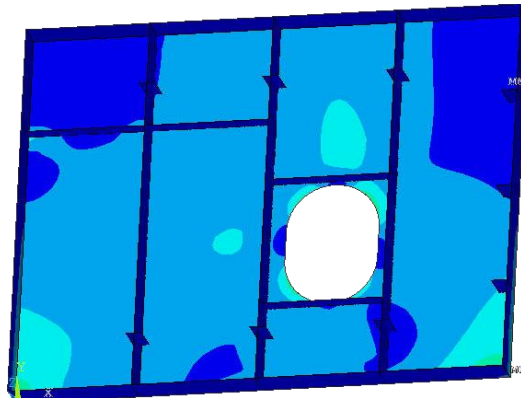
Structural Design & Analysis

We specialize in design and analysis of structures through the use of analytical methods, Rules and Standards and the Finite Element method (FEM). We study the mechanical, wear and thermal properties of structures made by metallic (steel, aluminum, titanium, etc.), composite (Carbon fiber reinforced plastics –CFRP, Glass fiber reinforced plastics- GFRP) and textiles (e.g. aramid fiber reinforced elastomer matrices). Our portfolio includes the following:

- Ship and marine structures with metallic and composite materials
 - Structural design and analysis of ship details using FEM.

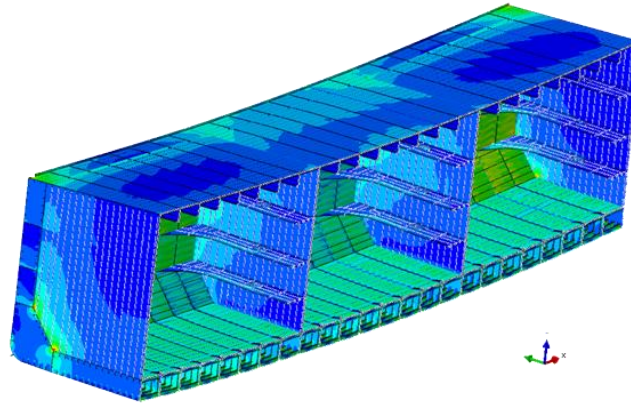


Forecastle in simulated dynamic loading

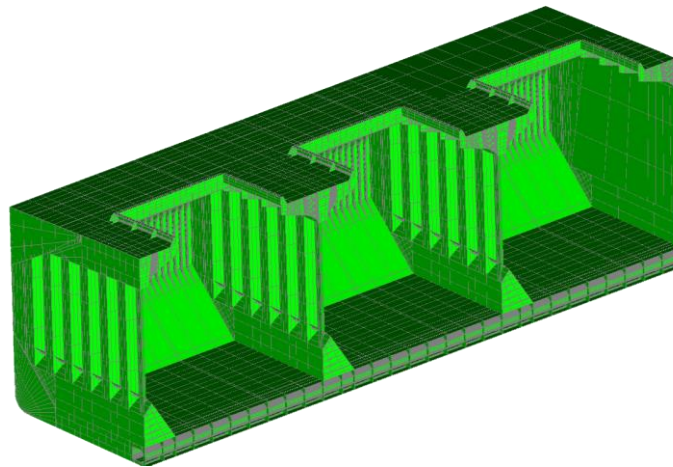


Web plating in double bottom, studying stress concentration in opening

- Analysis of ship structures through CSR and real time loading (deflections and/or bending moments) on three compartment models

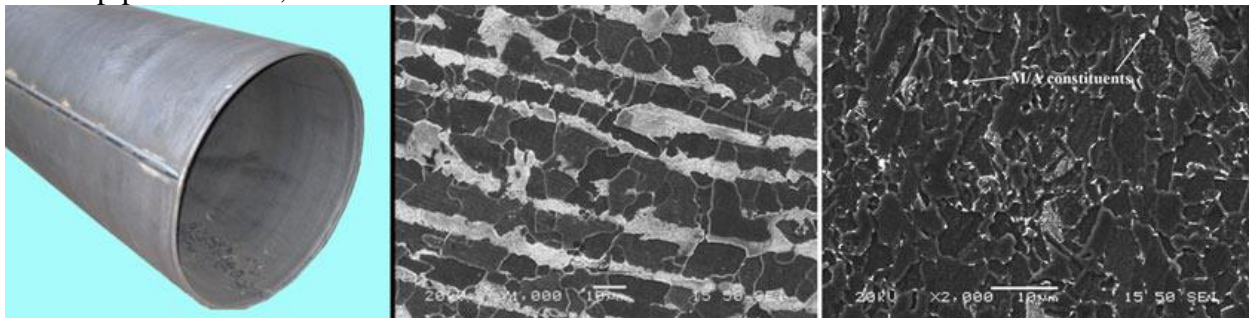


AFRAMAX TANKER 3 COMPARTMENT MODEL

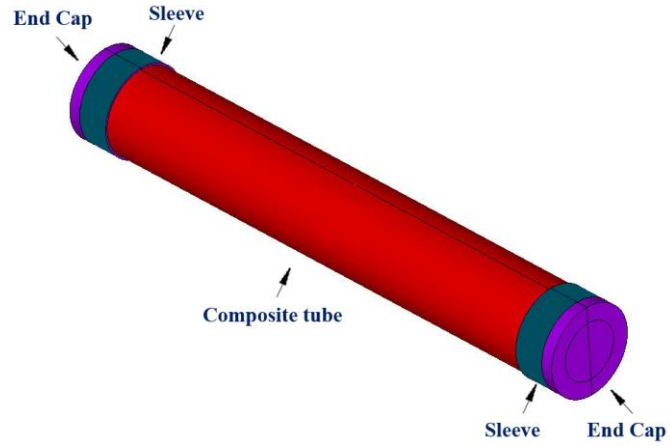


BULK CARRIER 3 COMPARTMENT MODEL

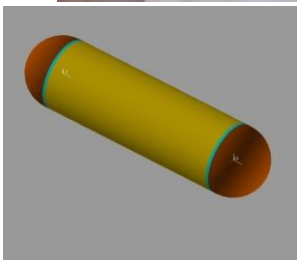
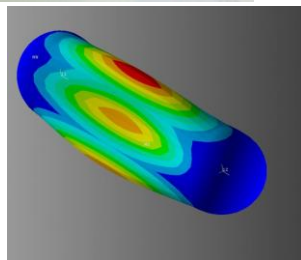
- Pipeline engineering, corrosion resistance studies and prevention, effect of hydrogen environments (H₂S, near neutral pH environments, offshore pipeline grids, etc.) on pipeline steels,



- Deep ocean and large sea depths structures such as pressure housings, AUVs and submarines



- Carbon Fiber Reinforced Plastic or Glass Fiber Reinforced Plastic composites, with advanced strength, fracture toughness, heat and cold resistant etc., for marine, underwater and offshore applications



- Type III and IV pressure vessels for (Compressed Gas Hydrogen) hydrogen storage applications

