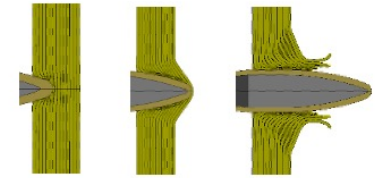


Structural integrity under extreme loads

Topic: High fidelity models

TITLE: Develop high-fidelity structure and material modelling techniques for naval platform



RESEARCH BACKGROUND:

Models will be investigated for intact and damage conditions and will exploit state-of-the-art approaches concerning modelling materials and structures under extreme loading conditions based on updated information about loads and material condition.

RESEARCH ACTIVITIES:

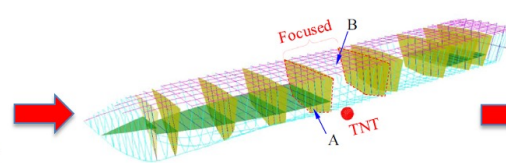
1. The high-fidelity Finite Element Models (FEM) will be defined to be effective in providing relevant data to be exploited as database for remote damage assessment therefore
2. models will be developed both for normal and damage conditions
3. stepwise evolution of the damages themselves (i.e., progressive reduction of the structural integrity).

METHODOLOGY: Analytical-Numerical

DURATION: 6-9 months

CONTACTS:

andrea.manes@polimi.it
marco.giglio@polimi.it



Detonation point

- Material properties
- Loads

FEM Solver

Nodal displacements, stress, strains, damage

