



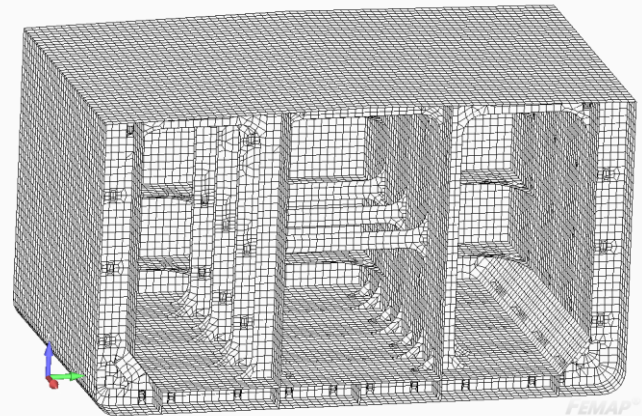
### Marine technology engineering & support

Cron dall Energy can provide a full range of design, engineering and analysis services within the areas of naval architecture, structural analysis and marine engineering. Our engineering capability includes:

- Vessel hull design (lines development);
- Stability (intact and damage stability);
- Hull (and topsides) structures
  - Rule based scantling development using e.g. DNV Nauticus, BV Mars;
  - Full FE analysis e.g. FEMAP/NASTRAN;
- Moorings and risers (separate or combined mooring and riser analysis):
  - Mooring analysis using Arianne;
  - Combined mooring/riser analysis using Orcaflex;
- Marine systems design and equipment specification;
- Vessel motions:
  - Analysis using Hydrostar;
  - Model testing programme development and supervision.

Cron dall Energy can also carry out inspections on existing vessels:

- Tankers as conversion candidates;
- Existing FPSOs for redeployment;
- Existing FPSOs for upgrades.



### Case Study: Inspections on a conversion candidate

Cron dall Energy has carried out a number of inspections of vessels as potential conversion candidates.

As part of a West African FPSO development, Cron dall Energy inspected all tanker conversion candidates as part of the tender evaluation process.



Providing the full range of marine technology design and analysis capabilities.