

courtesy of METALCOOP SCaRL

# MAESTRELLI LUCIANO engineering



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## Company profile

**Maestrelli Engineering** is a multidisciplinary engineering consultancy that excels at solving complex challenges in engineering. Our skills range from new ideas to upgrade products using leading technologies in design and manufacturing processes.

The firm operates in the Virtual Prototyping arena using the up to date leading technologies.

Our great experience of working in many different industries enables us to transfer unique skills across different markets to benefit our clients.

Innovative technology such as carbon fiber design, new manufacturing process, robotics and mechatronics application are daily faced.

A wide range of expertise in mechanical design is committed to product innovation ranging from Aerospace, Defense, Oil&Gas, OffShore, Automotive, Naval, Railway, Industry, Power, Transportation, etc.

A wide-ranging knowledge in Finite Elements Analysis Simulation was gained with a continuous work in this field since 1988 within all most innovative industrial sectors. FEM models preparation and simulation are supported in all mechanical and thermal areas.

A long-lasting experience throughout challenging projects have been gathered and permits us to face innovation in the daily work.



courtesy of SIPA SpA

## Services

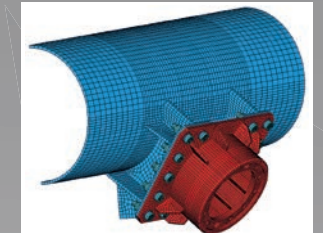
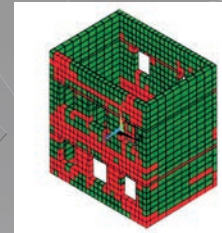
**Maestrelli Engineering** consultancy services are at leading edge of respective sector such as:

- ▶ Finite Element Analysis Simulations
- ▶ Mechanical Design
- ▶ Product Innovation
- ▶ Process Innovation
- ▶ Lifting Appliance Design
- ▶ Pressure Vessel and Equipment Design with PED EN 13445-3 and ASME VIII
- ▶ New Material Applications (Carbon Fiber, GRP Glass Fiber, etc.)
- ▶ Assistance to manufacturing processes from prototypes to the final production line
- ▶ Feasibility Studies and New Configurations Development
- ▶ Specification Definition according to most know worldwide standards (ASME, PED, EN Eurocodes, DNV, MIL, etc.)

## Expertises and skills

**Maestrelli Engineering** Expertise and Skills are based on both a very long experience gained in all mentioned fields:

- ▶ FEM Models and Simulation
- ▶ Oil&Gas and Offshore Design and Structural Verifications
- ▶ Lifting Appliance Design in Offshore, Railway, Steel Plants Industry, etc., according to FEM 1001, DNV, including fatigue and dynamic loads.
- ▶ Aerospace Instruments design and structural verification: fatigue, dynamic and thermal analyses
- ▶ Military and Defense appliance mechanical and functional design
- ▶ Electronic equipment mechanical design
- ▶ Radar, antenna, radome mechanical design and FEM model simulation analyses
- ▶ Automotive frames and components mechanical design and FEM model simulation analyses
- ▶ Railway locomotives and passenger rolling stock maintenance equipment design
- ▶ Carbon fiber design and Finite Element Simulation of aerospace and avionics components, industrial components, bike race frame, naval components, and others consumer goods.
- ▶ Railway Vehicle Bodies and Bogies structural verification and general railway appliance design check according to UNI EN 12663, UNI EN 15527, UNI EN 13749, UIC 515, etc



## Working tools

**Maestrelli Engineering** has a large knowledge and very long time usage in both CAD e Finite Element instruments such as:

- ▶ Finite Element Analysis and Simulation codes:
  - ▶ ANSYS suite, CLASSIC Interface and WORKBENCH platforms and WORKBENCH platforms
  - ▶ MSC suite including the following products: NASTRAN, PATRAN, MARC,
  - ▶ Multibody ADAMS and Explicit DYTRAN
- ▶ CAD for 3D Design codes:
  - ▶ Dassault CATIA V5
  - ▶ PTC CREO and WILDFIRE platforms
  - ▶ Dassault SOLIDWORKS
  - ▶ Autodesk INVENTOR

