

PROCESS UNITS & EQUIPMENT



**Process Units & Equipment
Division**

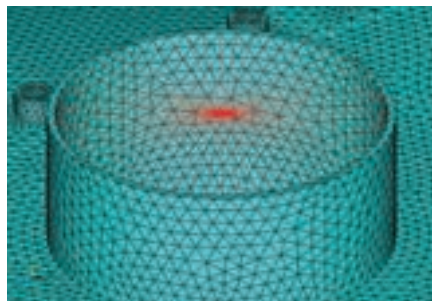
EUROGUARCO SpA
Italy



Process Skid Packages

Euroguarco Process Units & Equipment Division has been established with the scope to provide a global solution for medium size EPC projects, with no border limitation, offering Basic and Detailed Engineering, Procurement, Construction and Assembly of Pressure Equipment and Process Packages, for the following industries:

- Oil & Gas.
- Petrochemical • Chemical.
- Power Plants.
- Water Treatment.
- Renewable Energy.
- Other Industrial sectors.



Main Process Packages / Systems

- Oil and Gas Separation & Treatment (Trains & Packages).
- Fuel Gas Conditioning/ Treatment Packages.
- Electrostatic Dehydrators (Desalters).
- Gas Dehydration and Regeneration Packages.
- Gas Sweetening and Regeneration Packages.
- NGL Recovery Systems.
- Hydrogen Packages.
- Oily Water Packages.
- Hot Oil Systems.
- Direct Fired Heaters& Indirect Fired Heaters.
- Chemical Injection Packages.
- Water Injection Systems (Trains& Packages).
- PigTraps Packages.
- Manifolds Packages.
- Lube Oil Packages.



La Spezia, Plant 1



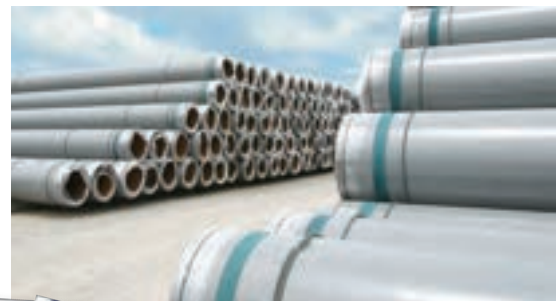
The Company

Established since 1958 in La Spezia by Luciano Ghirlanda, the company has gradually developed to become a trustworthy reference point in the global market, where it operates directly and through distributors and agents.



La Spezia, Plant 2

The activity is mainly focused on the production of products for various industrial fields such as Oil & Gas, Marine, Rail, Mechanical and Chemical. Besides the company distributes semi-finished products to various processing and installation industries.



Quality System

Euroguarco works in Quality Assurance System Certificate:

- ISO 9001.
- ISO 3834-2.
- ISO/TS 29001.
- API 6D license.
- EN 9100 (Aeronautical Industry).
- 2014/68/UE (PED) .
- ATEX.



Cremona, Plant 1



Engineering Activities

Basic Engineering

- Conceptual Design Development.
- Feasibility Studies.
- Basic Design Development.
- H&MB, PFD and P&ID Preparation.
- Design and Control Philosophy.
- Functional Specifications for Process Systems.
- Process Data Sheets.

Main Engineering Software

Process

- AspenTech AspenOne.
- AspenTech Hysys.
- HTRI.

Detailed Engineering up to as-built

- Piping & Layout.
- Civil & Structural.
- Electrical.
- Instrumentation & Automation.
- Technical Specification.
- Bid Technical Evaluations.
- Follow up of suppliers activities and vendor drawings.
- Permitting Engineering.
- Operating, Safety and Maintenance Manuals.
- Commissioning, Start up and Shut Down Procedures.

Piping & Layout

- Aveva PDMS.
- Intergraph PDS.
- Intergraph Smart Plant 3D.
- Coade Caesar II.
- Autodesk / AutoCad / Inventor.
- Autodesk Inventor PRO.
- PTC Creo ProE.
- NX Siemens.

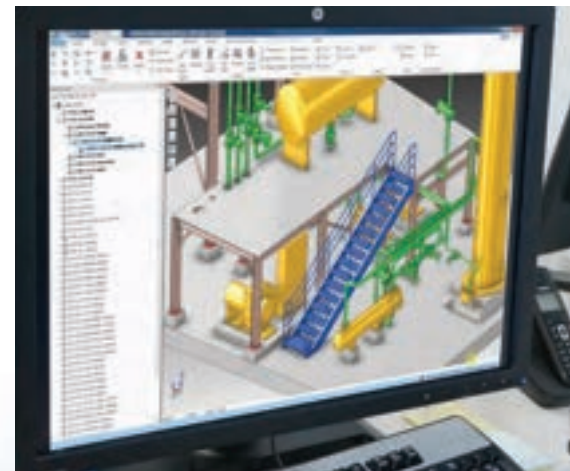
Civil & Structural

- Harpaceas Tekla.
- SAP 2000.
- ROBOT.

Electrical & Instrumental

- Aveva Instrumentation.
- Intergraph INTOOLS.
- ZEUS 2.

Other Software are available as per Customer Requirements.



Pressure Equipment

- Pressure Vessels.
- Slug Catcher (vessel/finger type).
- Pig Traps.
- Heat Exchangers.
- Gas Scrubbers.
- Condensers.
- Boilers.
- Economizers.
- Sieves.
- Columns.

Designed in full accordance with Customer Specifications and International standards: ASME, PED, API, TEMA, GOST, etc.

Materials of Construction: Carbon Steel, Stainless Steel, and other as per Customer Requests.



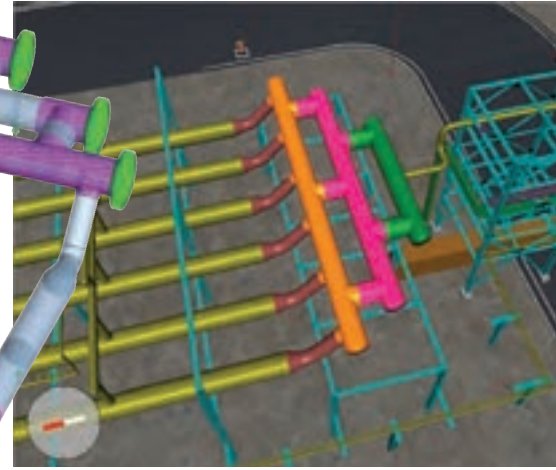
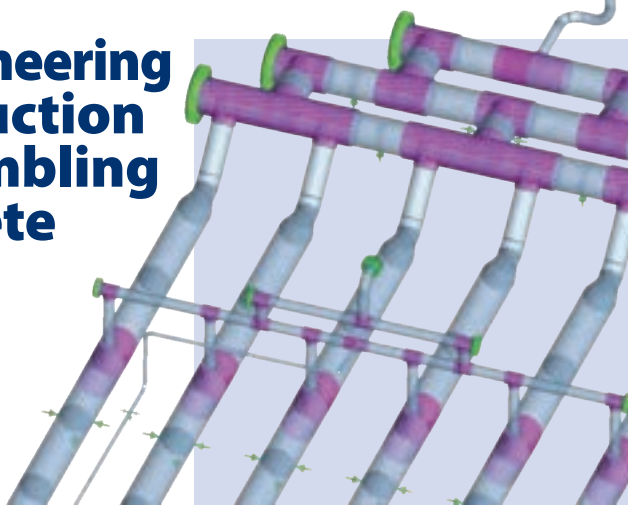
Instrumentation Packages

- Metering Systems (Custody and Non Custody, Orifice, Coriolis, Ultrasonic).
- Prefabricated Shelters (Control Rooms, Electrical Rooms, Analyzing Shelters).



From Engineering to Construction and Assembling of Complete Packages

Slug Catcher



Chemical Injection



Manifold





Quality Control & Testing

Quality control procedure and testing are carried out in strict compliance with relevant standard or according to additional client's requirement. **Euroguarco** can satisfy all testing requirements, whether by in-house facilities or from external qualified laboratories next to the factory:

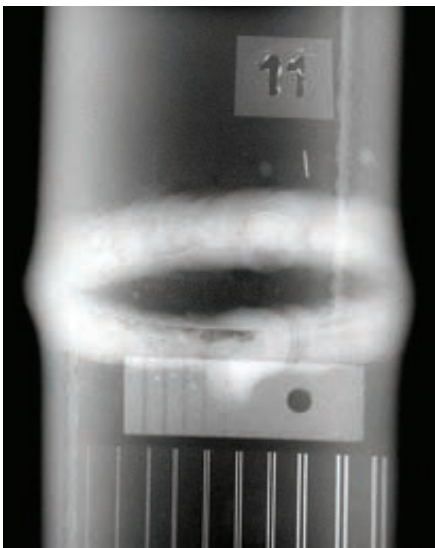
- Chemical Analysis (Positive Material Identification including Carbon Content when required).

- Mechanical Tests (Hardness and Impact Test).
- Visual and dimensional Examin.
- Hydraulic test of Pressure Equipments (ASME VIII or per client's request).
- Hydraulic test of Piping Spools (ASME B 31.3 or per Clients Request).
- Magnetic Particle (MP) Examin.
- Liquid Penetrant (LP) Examin.
- Ultrasonic Penetrant (UT) Examin.
- Radiographic (RT) Examin.
- Phased Array Ultrasonic Examin.
- Inspection of coated and painted surfaces.
- Factory Acceptance Test (FAT).



Special Tests

- HIC & SSCC for Sour Service.
- Low Temperature Test for Cryogenic Service.
- Gas Test.
- Any other NDE on Request.
- Other Tests per Customer Request.



Certification

Euroguarco Process Units & Equipment Division is an ISO 9001 ISO 3834-2 Certified Company for the Design and Supply of Oil&Gas Plants. CE, Atex, ASME U/U2/R stamps can be provided.



Selected References

- ABB (Italy)
- Merak (Spain)
- ADOC Japan (UAE)
- Midland Refinery (Iraq)
- Agip KCO (Kazakhstan)
- Ministry of Defence (Italy)
- AGOCO (Libya)
- Mitsubishi (Italy)
- Amreya Petroleum (Egypt)
- National Refinery (Pakistan)
- Ansaldo Energia (Italy)
- NIGC (Iran)
- ASRY Shipyards (Bahrain)
- North Oil Company (Iraq)
- Attok Refinery (Pakistan)
- NPCC (UAE)
- Bangladesh Gas Field Co. (Bangladesh)
- Officine Resta (Italy)
- Banias Power Co. (Syria)
- Olmi - Alfa Laval (Italy)
- Banias Refinery (Syria)
- OPET Petrol (Turkey)
- Bateman-Litwin (France)
- ORYXGAS (Switzerland)
- Belleli (Italy)
- PDI-Pemex (Mexico)
- BP (Iraq)
- Petrojet (Egypt)
- Brega (Libya)
- Qatar Gas (Qatar)
- Cairo Refining (Egypt)
- Ras Gas (Qatar)
- CERN (Switzerland)
- Saipem (Italy)
- Daura Refinery (Iraq)
- Saras (Italy)
- Dongang Boiler Group (China)
- SCOP (Iraq)
- Eastern Refinery (Bangladesh)
- Skoda Transportation (Czech Republic)
- EcoPetrol (Colombia)
- Sirte Oil Co. (Libya)
- Edipower (Italy)
- Snam (Italy)
- ENEL (Italy)
- Solvay (Italy)
- ENI (Italy)
- South Oil Company (Iraq)
- Enppi (Egypt)
- SGS Oil & Gas (Czech Republic)
- Fincantieri (Italy)
- KalaNaft (Iran)
- Fondital (Italy)
- Kordestan Petrolchemical (Iran)
- Foster Wheeler (Italy)
- MAPNA (Iran)
- Gas Transmission Co. Ltd (Bangladesh)
- Nargan (Iran)
- GAZPROM (Russia)
- Patentes Talgo (Spain)
- GE Nuovo Pignone (USA, Italy)
- POGC (Iran)
- Hitachi Rail STS (Italy and UK)
- PDO (Oman)
- Homs Refinery (Syria)
- Pentair (USA)
- Jordan Petroleum Refinery (Jordan)
- POGC (Iran)
- Leonardo Finmeccanica (Italy)
- Yara (Italy)
- Maersk Oil (Kazakhstan)
- SungKyong (South Korea)
- Magotteaux (Belgium)
- Tecnimont (Italy)
- Mangiarotti (Italy)
- Tehran Refinery (Iran)
- Mari Gas Co. (Pakistan)
- Termomeccanica (Italy)
- McDermott (USA)
- Trenitalia (Italy)
- Mellitah Oil & Gas (Libya)
- Waha Oil Company (Libya)
- Warri Refinery (Nigeria)



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