

Petrochemical Powergen Processindustry

O&G. division

PACKAGE AND TURN-KEY APPLICATIONS

PIPING PACKAGES

SKIDS & CABINETS

GAS STATIONS TURN-KEY UNITS

OFFSHORE MODULES

PETRO CHEMICAL TURN-KEY UNITS

POWER GENERATION PLANTS

turnkeyvaluechain



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PETRO CHEMICAL TURN-KEY UNITS

POWER GENERATION PLANTS

TURN-KEY & PACKAGE INTEGRATION

TURN-KEY SKIDS & UNITS / OFRA S.R.L.

PIPING PACKAGES & FORGED FITTINGS / CHERO PIPING SPA

SPECIAL EQUIPMENTS COMPANIES

SCRUBBERS & HEAT TREATMENT and CRITICAL ALLOYS WORKSHOP / NICRO SPA

PRESSURE & CRYOGENIC VESSELS, REACTORS, COLUMNS / DELTA ENGINEERING SRL

MULTIDISCIPLINARY ENGINEERING SERVICES / TECNO & TEAM ENGINEERING SRL

CARBON STEEL WORKSHOP / D.M. SRL





Is the italian partnership between highly specialized manufacturers in turnk-key O&G plant engineering and construction, piping packages and special equipments, allied to supply international EPC Contractors in high demanding worldwide projects

About

Founded in 2017, O&G Alliance serves the leading EPC Contractors and Oil companies worldwide counting on the partnership between its nine Italian partner companies, higly well-known in the piping packaging, plant engineering and turn-key construction.

The Alliance

Highly specialized and independent Italian companies, partnering to seve joint engineering integration and turnkey construction in piping packages, skids up to 30 meters and 200 tons, onshore gas stations, pressure vessels and heat treatment special equipments, with 40 years of solid references in the O&G environments.

The integration Yards

Beside every company's workshops and manufacturing yards, O&G Alliance has its registered office in Modena and integration workshops at OF.RA Srl from Ravenna City, Alliance's EPC assembly company, based at the industrial city port on upper Adriatic Sea; and Chero Piping Spa, critical piping package integrator and Alliance co-founder, based in the closest Carpaneto Picentino (city of Piacenza, North Italy). The Alliance coordinates the joint engineering and constructions stages able to provide turn-key projects procurement, prefabrication, assembly, commissioning, maintenance.

Turn-key Valuecha INTEGRATION: OFRA SRL CONTRACTOR: DAEWOO-FLUOR JV CLIENT: SHELL NIGERIA DESCRIPTION: N.2 TEG gas dehydration packages, composed contactors dia. 2.7 x h 10.7 m. thick. 100 mm, glycol regeneration package with electrical heaters, glycol pumps flow rate 19.400 kg/hr - Dew point 0°C @ 90 bara. - Gas flow rate 14.800.000 Sm3/day each Destination: GBARAN UBIE - NIGERIA Year: 2007 Activities: Engineering, project management, construction (JV with Benelli Ravenna S.p.A.)



O&G application



aluminiumOleodynamics

skid "MEG Regenaration" per PX Limited presso il sito Breagh Field – Teesside – UK

specific machines





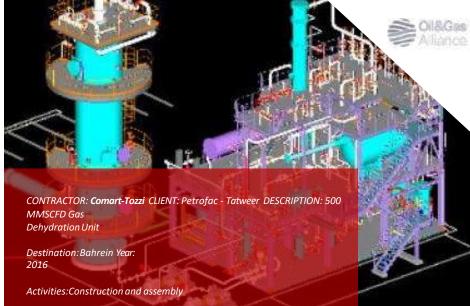


















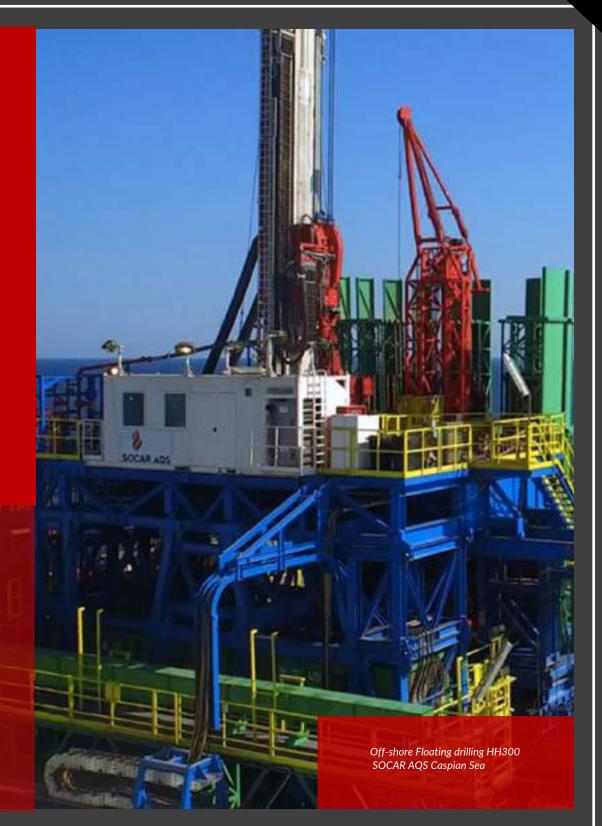
Off-shore





The general orientation in the design of modern systems is aimed at establishing assemblies of welldefined process parts pre-installed on transportable structures called skids or packages, depending on the different choices and technical needs of the process. The practicality of prefabrication and on-site installation gives countless advantages, including a more economical, functional and faster manufacturing system. Together with the numerous and important curricular references, place our Group among the most important companies in the sector

Engineering // the Alliance companies background allows even nowadays to be able to continuously make available a whole series of engineering activities qualitatively compliant with the standards of the sector, having great experience in the application of the plant engineering methodology of the chemical plants in general, due to the presence of the historical and most important international companies of the chemical pole, located in the operational areas of our companies.









CONTRACTOR: **SADELMI** – **AIR LIQUIDE**

CLIENT: ARLIQUIDO
Lda - Portugal
DESCRIPTION:
Process skids A an M for
hydrogen production
plant
Destination: Estarreja - Portugal
Year: 2008

Activities: Detailed engineering,

project management, procurement

and construction

















Ola Grande Adjunction of the Control of the Control

EGCS Marine Exhaust scrubber



For SNC Lavalin / Sonatrach - Rhourde Nouss Project (Algeria)



Furnaces, belts, special alloy cworkshop



Nr. 1 Tail Gas Drum in SA-516 Gr.70, L = 30.000 mm, OD = 3.875 mm, Thk = 15 mm For UOP (process licensor)

LG Coalescers + Platforms In SA-516 Gr.70, H = 6.700 mm, OD = 1600, Thk = 60 mm For Storengy – Stublack Gas Storage Project Phase II (UK)



O&G companies



Allied Companies

Heat treatment

Pressure & Cryogenic Vessels

Piping package

Engineering

Turn-key Units

O&C Division aggregate turnover €/yr

65.000.000

CHERO PIPING

Piping packages



Scrubbers, heat & exhaust treatment equipments





Turn key Gas units, skids, modules Integration





Multidisciplinary Engineering



Pressure & cryogenic vessels



OFRA



Mechanicals

The Mechanical and Maintenance Divisionis specializes in ordinary and extraordinary maintenance and assistance on construction sites, both on Italian and foreign soil, for lifting machines of all types, starting from workshop overhead cranes and hoists, up to port, naval and platform cranes, passing through earthmoving machinery.

CONTRACTOR: **UOPN.V** CLIENT: KNPC DESCRIPTION: 3x N2 treatment and PSA Unit

Destination: Kuwait Year: 2017

Activities:Construction and assembly

CONTRACTOR: **UOP LLC**CLIENT: Pemex - Mexico
DESCRIPTION: 2 x 10bed
PSA+

1x 6bed PSA\alve skids

Destination: Rafineria de Dos Bocas

- Mexico

Year: 2021-22

Activities:Procurement, construction, assembly and testing





PSAUnit

Destination: Jazan Refinery - KSA Year: 2014

Activities:Project management, procurement and construction





CONTRACTOR: Baker Hughes – N. Pignone

Construction

The Engineering and Construction Division is dedicated to the design, supply and construction of package plants for the chemical and petrochemical industry, such as natural gas treatment plants, hydrogen filtration and purification plants, gas and cryogenic compression plants, chemical injection plants, plants for the capture and conversion of CO2. All systems are completely built and tested in its own workshop, and are then shipped to the site ready for installation. OF.RA. also designs and manufactures Local Control Cabins certified for fire resistance according to the main international standards, equipped with air conditioning, gas detection and fire prevention systems, suitable for installation into classified areas.









- OF.RA SRL / Gas units , skids, modules Integration, turnk-key plant stations, Skids and modules up to 30 m / 200 tons
- ☐ Integrated systems for the treatment and separation of gases and oils / Package systems for the production and separation of technical gases
- ☐ Cryogenic systems for LNG treatment
- ☐ Cabin control structures and advanced instrumentation for measurement systems
- ☐ Equipment, such as reactors, columns, liquid and process separators, direct flame heaters, energy recovery units, heat exchangers
- ☐ Energy production plants, like cogenerators, recovery units, biomass boilers, burners and afterburners

Energy

The Energy Division was created for the design, construction and marketing of thermal equipment and systems in the industrial sector. The applications cover the generation of heat, heat recovery, cogeneration and gaseous waste treatment through thermal oxidation. Some of our main products for gas and liquid heating are industrial ovens and boilers, both classic and recovery and biomass, burners, heat exchangers and indirect generators. As for energy recovery and production, we are able to deliver turnkey biomass cogeneration plants, waste incineration plants and heat recovery plants.







CHERO PIPING



- CHERO PIPING SPA / Pipelines packages (piping, forged fittings, valves)
- ☐ Forged fittings
- ☐ Branch outlets
- ☐ Heavy wall fittings (Tees, Wyes, Lateral Tees)
- ☐ Customs designed flanges
- ☐ (anchors, orifice, swivel, misaligned)Nozzles (flanged and not flanged)Forged pipe
- ☐ Mechanical forged components Insulating joints (monolithic and flanged) Cladding

Power **Generation**

Power Generation:
Supply of critical
Forged components for
High Temperature/High
Pressure flow
applications and
subject to Creep. Low
and Chrome-Moly
Alloy (F11, F22, F91F92...) applications.









Decades of offshore experience in design, testing and manufacturing of components such as Lateral Tees, Forged Barred Tee, slip on and weld on Buckle Arrestors, Swivel flanges, Anchor flanges. Typical use of High Yield Steel and Duplex/Super Duplex Material.



Forged fittings

ASME B16.11 BS 3799. finished products in carbon, low temp, low alloys stainless-steel Grades materials. super duplex, nickel

Specialty products

Desoigned for critical applications like Subsea, Thermo-Power Plants and Urea Plants. Among those: Heavy wall fittings (Tees, Wyes, Lateral Tees); Custom designed flanges (Anchors, Orifice, Swivel, Misaligned); Nozzles (flanged and not flanged);

Chero Piping manufactures and stocks selfreinforcing set-on Branch Outlets in adherence to MSS-SP97 industry standard, in both 90° and inclined configurations. Fittings are available in butt weld, socket or threaded ends. Chero Piping can design project Alloys and other metallic materials. Flanges specific Branch Outlets as well as set in Insert Branch Outlets in adherence with the most stringent industry Codes (i.e. ASME

B31.3, B31.1, B31.4, B31.8, EN13480, Div. VIII etc.). Our Branch Outlets are manufactured in a complete range of Carbon Steel, Stainless Steel, Duplex and Super Duplex Stainless Steel, Chrome Alloys, Nickel









Monolithic
Insulating Joint (MIJ)
are pipeline
components used to
provide high
electrical resistance
without
maintenance costs.
The combination of
these features
makes MIJ a perfect
product for cathodic
and safety
protection systems
for gas, oil and

water pipelines.
This will grant great
savings on long
period capital
investments. MIJ are
long lasting solutions
against stray
currents and their
major effects such
as cathodic
corrosion and
electric arc
generation.





















As a result of increasingly **stringent** regulations im-posed on shipping companies that use HFO (heavy fuel oil) in order to limit pollutant emissions into emission control areas (ECA), the company has begun to gradually approach the marine sector. More specifically, **Nicro manufactures** components for systems that purify the pollutants contained in exhaust gases of marine diesel engines of large ships, such as cruise liners, cargo ships and ferries.

Established in 1976 to fabricate special equipment and fixtures for heat treatment furnaces, over the years, NICRO has expanded its market by opening up to new sectors, such as metallurgical, chemical and petrochemical, pharmaceutical and marine.





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AISI 309	W.1,4828	UNS S309
AISI 310	W.1.4845	UNS S310
AISI 310s	W.1.4845	UNS S310
AISI 321	W.1.4541	UNS S322
Alloy 330	W.1,4864	UNS N08330
Alloy 600	W.2.4851	UNS N06600
Alloy 601	W.2.4851	UNS NO6601
Alloy 602	W.2.4833	UNS N06025
Alloy 800H	W1.4876	UNS NO8810
Avesta 253MA	W.1.4835	UNS 530815

Fibver 40 years **NICRO** has been working in the de-velopment and fabrication of components made in **steel alloys** with **high nickel content**, particularly suitable for high temperatures and corrosive environments used in different industrial applications.

Our **skilled technical staff** and a know-how acquired in the manufacturing of **custom-made** components enable us to help

customers in the very early stage of prototyping and construction drawing development. We also collaborate to suggest modifications to reach better performances and a long lasting life, through the re-search in alternative materials. On the other side our technical department can do reverse engineering of used components without a constructive drawing.









Heat treatment & furnaces

Over 40 years in the development of steel alloys components with high nickel content, suitable for high temperatures and corrosive environments

Marine scrubbers

These systems are specifically designed to remove SOx (sulphur oxides), in order to control the emissions of the various pollutants in the air and in water and to help lower the levels of sulphur dioxide, hydrocarbons, heavy metals, carbon dioxide, soot and ash.









Formerly located in its historical headquarter in Via Sabbio 93, Dalmine (Italy) since 1981, starting from middle of 2016, Delta Engineering and related subsidiaries move to a brand-new plant located in Via Bastone 148/150, Dalmine (Italy).

Activities are developed in a 30.000 sqm area, which includes main office building and Nr. 3 workshops:

- •7.000 sqm of Covered Area for Carbon Steel;
- •2.000 sqm of Covered Area for Stainless Steel;
- •1.000 sqm of Covered Test Area;
- •700 sqm of Offices Area;
- •20.000 sqm of Open/Uncovered Area.

PRESSURE VESSELS MANUFACTURING: OUR CORE BUSINESS SINCE THE 80'S

Delta Engineering is able to perform in-house mechanical design, calculation and all related manufacturing and testing activities of the following Pressure Vessels:

- •High and Low Pressure Spherical / Horizontal / Vertical Dampners;
- •Pig Launching and Receiving Traps;
- •Indirect Water Bath Heaters;
- Deaerators;
- Induced gas flotation (IGF);
- Combustion Chambers and Burners;
- Reactors;
- •Columns;
- •Cryogenic;
- Housings for Cartridge / Basket Filters;
- •Housings for Steam Separators;
- •Housings for Double Barrel Separators;
- •Housings for Three-phase Separators;
- Atmospheric Tanks.

Thanks to Stamp "U2" certification, Delta Engineering is able to cover high pressure applications where relevant thickness (up to 200 mm) is involved.









N°21 Heat Exchangers HAIRPIN type (Various Sizes) MOC: Carbon Steel / SS321 / H2 Service / UOP licensed For Jebel Ali Refinery Expansion Project - Technip FMC / ENOC

Shell & Tube Heat Exchangers

- Carbon Steel for Low and High Temperatures
- Austenitic Stainless Steel
- Duplex and SuperDuplex
- Nickel and Copper-nickel Alloys
- Low Alloys and High Alloys Steel
- Hastelloy and Incoloy
- Carbon Steel base Cladded
- Stainless Steel base Cladded







- ISO 9001:2008
 - ISO 14001
- ISO 18001
- Designator "U" Certified by **ASME**
- Designator **"U2"** Certified by **ASME**
- Designator "S" Certified by ASME
- Designator "R" Certified by ASME
- NB Authorization to Register
- CE Marking acc. to PED 2014/68/EU
- ISO 9001:2008 Certified by API
- API Specification Q1 Certified by API
- API-12K Monogram Certified by API
- **API-12J** Monogram Certified by API

Pressure Vessels











SHELL & Tube Heat Exchangers

Heat Exchangers Hairpin type

Heat Exchangers Rod Baffle type

Pressure Vessels

Reactors / Column

Cryogenic Vessels and Exchangers

Deaerators

Filters (for Gas and Water)

Indirect Water Bath Heaters

Pig Launcher and Receiver Traps

Skid / Packages

Special Piping

PROCESS DESIGN OF:

Shell & Tube Heat Exchangers

Heat Exchangers Hairpin Type

Heat Exchangers Rod Baffle Type

Gas Filters (cartridges / coalescers / double barrel / multicyclones)

Nr. 3 Deaerators

Drum L = 7925 mm, OD = 2528 mm, Thk = 14 mm + Tower 2000x4115 For Macchi / AMEC / NEOS - Chocolate Bayou Cogen Project (USA)

Water Self-Cleaning Filters

Water Filters (basket / cartridges)

Steam Separators

Deaerators

Indirect Water Bath Heaters







O&G Offshore

Design of new plants and maintenance of existing ones assisted by the inspection activity of our technicians

Drilling Rigs

Feasibility studies, structural calculations and design of entire systems including all mobile auxiliary equipment & 3D animation

Shipbuilding

Caspian Sea

Ballast & EGCS systems feasibility studies, general plant engineering activities, from the earliest stages, on-board inspections by laser scan

Chemicals & Onshore

Drilling Offshore platform SOCAR AQS

Design of processing, sludge and gas treatment plants, and related transport (slug catchers, manifolds, pipelines, refining and petrochemical storage)







Energy

Hydroelectric, Cogeneration and trigeneration plants

Skids & Packages

Design & engineering of well-defined process parts pre-installed on transportable structures on different choices and technical needs

PROCESS ENGINEERING

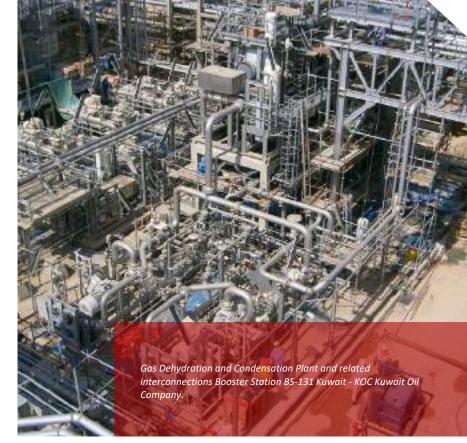
AQS Caspian Sea

- CIVIL AND STRUCTURAL ENGINEERING
- PIPING ENGINEERING
- ☐ FIRE AND SAFETY ENGINEERING
- MACHINERY AND EQUIPMENT ENGINEERING
- LASER SCAN SURVEYS
- ELECTRICAL-INSTRUMENTAL-AUTOMATION-PROTOTYPING ENGINEERING
- STANDARDS AND SPECIFICATIONS









SOLARIUS	AUTOCAD FULL	PDMS
PRIMUS	MECHANICAL DESKTOP	E3D
INTEGRA	INVENTOR	PIPEPLUS
SPAC START IMPIANTI	ADVANCESTEEL	CAESARII
TNEVIP	RECAP 360	PV ELITE
MC4SUITE	ESAPRO	PIPINGOFFICE
MC4SUITE CPIWIN	ESAPRO POINTSENSE	PIPINGOFFICE
CPIWIN	POINTSENSE	PIPEMILL

& TEG regeneration installed on the FPSO SMART-1 - on behalf of AKER FLOATING PRODUCTION.





TEAM ENGINEERING



ELECTRICAL ENGINEERING

INSTRUMENTAL ENGINEERING

THERMOMECHANICAL ENGINEERING

AUTOMATIO

CLASSIFICATIONS | EVALUATIONS ATEX

FIRE PREVENTION

ENERGY CERTIFICATE

SUPPLY OF AUTOMATION PANELS

SYSTEM TESTING

ELECTROMEDICAL

PRE-COMMISSIONING | COMMISSIONING

SITE MANAGEMENT

PHOTOVOLTAIC PERFORMANCE

TRAINING









ENGINEERING SERVICE

- design, construction management and testing of civil and industria works, technological systems, consultancy for fire prevention, safety, assistance and training courses related to the aforementioned materials;
- site management and project management activities;
- refurbishments in the energy saving and energy management sector;
- acquisition of maintenance and / or construction contracts for civil and industrial plants, to be managed through the use of third-party companies and / or suppliers.

The knowledge of the chemical processes related to the "Oil & Gas" plants applied in the o-shore design, allowed to take advantage of the experiences gained over the years, at sea too, in the development of projects aimed at the On Shore sector. More precisely for the design of sludge treatment systems and the design of gas treatment systems; We also design the relative transport and processing facilities, such as slug catcher, manifolds, pipelines and so on is part of the petrochemical rening and storage facilities.









DM OFFICINE SKIDS & SPECIAL PIPING CARPENTRY WORKSHOP

Medium/heavy carpentry structures in accordance with UNI EN 1090 or the AWS code Piping prefabrication in accordance with the UNI EN code or the ASME code Tanks up to diameter 3000 mm max weight 15 Ton in agreement to the ASME code Pressure vessels and equipment in accordance with the ASME code or the PED regulation Construction and assembly of process plants (skids)



For companies product catalogues and more informations please contact our Commercial Team at:

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