



O&G  marine
A L L I A N C E

Scrubbers & BWTS systems
Piping & valves packages
Top decks process skids
Structural carpentry

turn-key **projects**



A ship is a complex system of systems that requires multidisciplinary excellence from shipbuilding expertise to critical plant engineering

O&G MARINE Alliance

We are the alliance between leading Italian shipbuilding workshops for naval installations and offshore plants suppliers, able to offer to shipowners and shipyards among 50 years of reliable expertise approved by the main shipping and oil companies worldwide.

Retrofit, Decarbon systems & special vessel projects

Talking about ship retrofitting and decarbonisation projects, new deck equipments for FPSO/FLNG and tankers vessels, We provide to shipowners and shipyards turn-key projects, in the fields of onboard critical plant engineering and naval installations, assuring the perfect coordination to reduce downtimes.

Our Alliance between the leading Italian O&G and Marine suppliers performs turn-key solutions to shipyards, EPC and shipowners high demanding projects carrying out turn-key projects for naval decarbonization, watergas treatment, naval building and system maintenance;

Construction, assembly and onboard installation of scrubber units and BWTS from any brand / designer worldwide

Production of piping systems, exhaust gas pipes, filters & valves packages in corrosion resistant alloys, fiberglass and carbon products

Topdecks tanks and piping skids packaging, engineering and construction for FPSO / FLNG vessels, tankers and offshore operation units.

Workshops for structural carpentry and naval maintenance, also in heat treatment special alloys and for submarine units..

Yard complete services on on-board and electrical systems, screeds and flooring, sandblasting, crate cleaning, insulation & metallisation and submarine heavy hull / outer hull and lightweight hull.

TURN-KEY PROJECTS

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CARPENTRY HEAT TREATMENT
MARINE SCRUBBER CONSTRUCTION



CORROSION RESISTANT & CRITICAL FASTENING



CRITICAL PIPING, FITTINGS & VALVES PACKAGES
FLOATING & TOPDECKS CONTRACTOR

CHERO PIPING

NAVAL & SUBMARINE STRUCTURAL SERVICE
SCRUBBERS & BWTS INSTALLATION
CARPENTRY, SHIPBUILDING & MAINTENANCE



ENGINEERING & FEASIBILITIES, LASER 3D SCAN SCRUBBERS,
BWTS, TOPDECK PIPING SKIDS



CARPENTRY OFFSHORE, FLOATING & TOPDECKS, SKIDS
ASSEMBLY



ON THE SOUTHERN GATEWAY TO EUROPE

Genoa | Trieste | Ravenna
PORT SYSTEMS



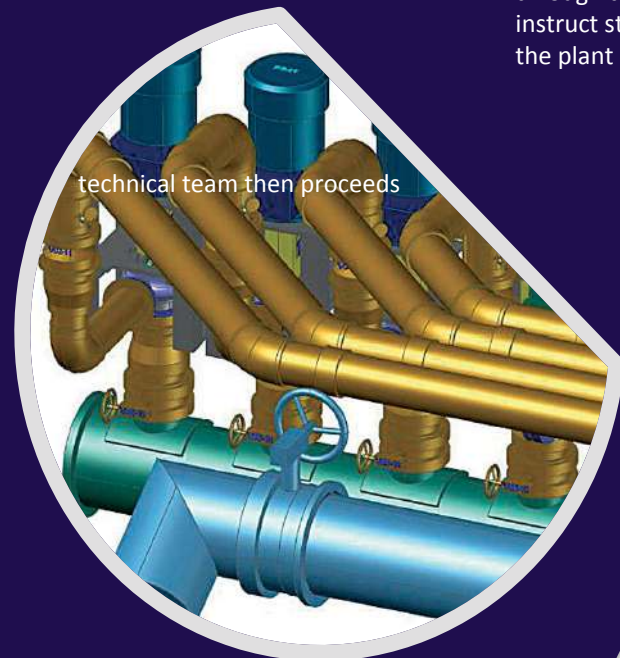


TURN-KEY PROJECTS & SHIP SERVICE

Engineering services

Starting from a simple idea or need, we develop feasibility studies with a systematic assessment of specifications and cost/benefit analysis, allowing us to recommend the most suitable project/final product. We achieve this using the most advanced engineering systems on the market. It all starts with the design study, carried out by our technical office. After determining the most optimum solution, the installation environment is captured using a 3D laser scanner, which can detect any environment or surface and reproduce it photographically. Armed with this data, the

technical team then proceeds with developing the system. Operations are only started after receiving customer approval, at which point we begin the nesting, material cutting and construction phases, and finally assembly. Every manufactured product is subjected to our quality control process; our experts certify the quality and precision of the finished item which will be tracked both during the project and after completion. At the end of production, our teams, assisted by the technical staff, begin the installation phase. This can be achieved anywhere in the world, whether on land or at sea. Once installation has been completed, our commissioning technicians assist the customer through the delivery phase and instruct staff on how to operate the plant or product.



TURN-KEY PROJECTS Construction & installation

- ① SCRUBBERS PRODUCTION & INSTALLATION (OPEN/CL LOOP)
- ② FPSO / FNLG & OFFSHORE VESSELS SKIDS ASSEMBLY
- ③ ENGINEERING & CARPENTRY
- ④ BALLAST WATER TREATMENT SYSTEM INSTALLATION
- ⑤ PIPING PRODUCTION & VALVE PACKAGES
- ⑥ DIESEL SKID FUEL PLANTS
- ⑦ GRAY BLACK WATER LINE
- ⑧ BILGE PLANTS & MINIMIZATION
- ⑨ PE-PP PLASTIC PIPE
- ⑩ COMPRESSED AIR PLANTS

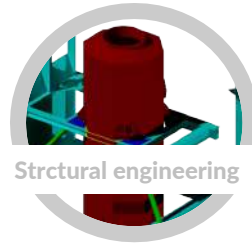


PIPING SKIDS ASSEMBLY



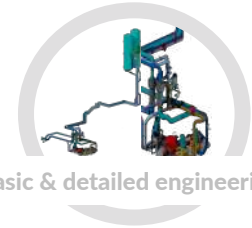
TURN-KEY SYSTEMS

Feasibility, engineering installation
3D Laser Scan – FEM analysis –
Strees analysis – Retrofit



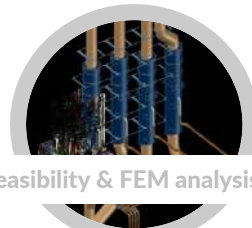
Strctural engineering

Construction & workshop
Brand licensed & outsourcing
production for third parts



Basic & detailed engineering

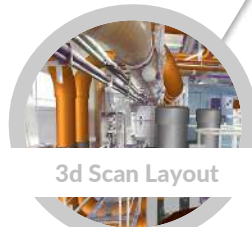
Piping & special parts package
Pipes, fittings, fastening & special
equipments production



Feasibility & FEM analysis

MARINE SCRUBBER

Turn-key projects



3d Scan Layout

Turn-Key Scrubber Projects installation carried out in operation on board of cruise and merchant ships, also during the dry dock and for new building in shipyard, managing all the phases of the realization: from the design of the project, to the production of all the components and their assembly, up to the transport and installation.



Special parts production

- FEASIBILITY STUDIES
- MEASUREMENTS AND 3D LASER SCANNING
- COMPLETE SYSTEM ENGINEERING
- PRODUCTION AND ASSEMBLY
- DOCUMENTATIONS FOR REGISTERS APPROVAL
- COMMISSIONING TECHNICAL ASSISTANCE
- SYSTEM INSTALLATION ON BOARD AND IN-SERVICE SHIP



Tower onboard installation



NAVAL CARPENTRY

Equipments & service

CONSTRUCTION OF:

- EXHAUST GAS DUCT
- SCRUBBER
- COLLAR
- FLANGES
- STANDS
- MECHANICAL PARTS
- SEAWATER INLET FILTERS

PROCESSING OF:

- INOX CARPENTRY
- PLASMA CUTTING
- HULL REPAIR
- SHEET METAL CHANGES

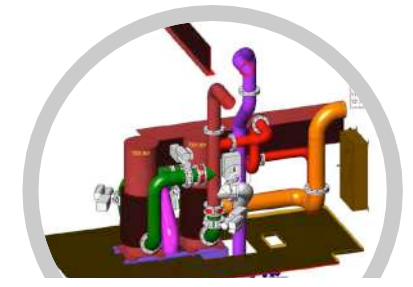


BWTS BALLAST SYSTEMS

Turn-key projects

Feasibility, engineering installation

3D Laser Scan – FEM analysis –
Strees analysis – Retrofit



3d Scan Layout

Construction & workshop

Brand licensed & outsourcing
production for third parts

Piping & special parts package

Pipes, fittings, fastening & special
equipments production



BWTS Installation



Column and interconnecting at Tatweer Petroleum / Central Gas Dehydration – Kingdom of Bahrain



skid “MEG Regeneration” per PX Limited presso il sito Breagh Field – Teesside – UK



Off-shore Floating drilling HH300 SOCAR AQS Caspian Sea

Living deck, Heli platform, Mud Mats, Piles Sleeves and Grouting System / AGIP Lybia



MOUNTED SKIDS FPSO / FNLG & Floating Vessels

- ❑ On-offshore modules & packaged units construction and assembly
- ❑ Assembly and prefabrication of packaged units including E&I system
- ❑ Platform & shelving steel structures
- ❑ Safety infrastructures and storage platforms
- ❑ On-site maintenance services
- ❑ Design and manufacture of pressure vessels to PED Directive or ASME Code
- ❑ Manufacture mono or multidisciplinary skid mounted plant and equipment
- ❑ Manufacture piping in carbon, alloy steel, stainless, duplex, superduplex steel, aluminium



- ❑ Construction of both naval and submarine blocks.
- ❑ Construction of sub-assemblies and bases, winches and hatches.
- ❑ Construction of protective shields and caps, made from metal or composite materials.
- ❑ Metallisation of hulls, decks or shields.
- ❑ Reconstruction of flight decks and internal and external flooring.
- ❑ Precision machining.
- ❑ Installation of electronic and electrical equipment.
- ❑ Sandblasting and painting certified by the international inspector NACE at Level 3.
- ❑ Construction and repair of carbon and fibreglass products such as antennas and external cladding panels for submarines.
- ❑ Cleaning of crates and subsequent treatments.
- ❑ Installation of anti-pollution systems for exhaust gases or ballasts.
- ❑ 3D orthophotos and scans.
- ❑ Availability of 24/7 service anywhere in the world.

NAVY & SUBMARINES

Submarines & military Units

OUTER HULL AND LIGHTWEIGHT HULL

- ❑ Construction and installation of the external hull panels made from carbon or fibreglass.
- ❑ Shaping and pinning.
- ❑ Sandblasting and painting the hull.
- ❑ Lightweight hull construction with special alloys and sub-assemblies.
- ❑ Construction and installation of hoists and winches.
- ❑ Construction and installation of exhaust gas pipes.

HEAVY HULL

- ❑ High-efficiency nesting with minimum waste.
- ❑ Waste-free calendaring of sheet metal.
- ❑ Certified welding with TIG, MIG and electrodes on amanox, aluminium and titanium, according to WPS and WPQR standards.
- ❑ Construction of rings and subsequent assembly in sections.
- ❑ Construction and finishing of all parts of the hull and bases.
- ❑ Construction and installation of rudders and doors.





PACKAGES

Piping, Fittings, Strainers

Bolts & Nuts



Studbolts

DIMENSIONS: 3/8" – 5" aANSI/
ASME M8 – M125ISO



Custom made

DIMENSIONS: 3/8" – 12" ANSI/ASME
M8 – M300ISO



Bolts & nuts

Imperial Range 5/16" - 5"
Metric Range M6 - M125



Filters & Strainers

- Threaded Y-type filters
- Flanged Y-type filters
- Threaded filters
- Flanged filters
- Simplex filters
- Duplex filters

Pressure Rates

- PN 6, PN 10, PN 16, PN 40

Available in

- Cast iron
- Nodular cast iron
- Cast steel
- Stainless steel
- Bronze RG5 and RG10

Options

- Y-type filters threaded
- Y-type filters flanged
- Bronze filters threaded
- Bronze filters flanged
- Simplex filters
- Duplex filters



Pressure ranges

- PN 6/10/16/25 and PN40
and ANSI class 150# and 300#.

Fittings, Custom fittings & Piping packages



Lateral Tees



Orifice flanges



Spherical Wye pieces



Anchor flanges



Custom designed 90° and lateral



Urea plant Fittings

PACKAGES

Valves

Shipbuilding Valves

- Storm Valves
- Mudboxes
- Quick-closing valves
- Fire fighting valves
- Self closing valves
- Sounding cocks
- Discharge valves
- Line blinds

Available in

- Cast iron
- Nodular cast iron
- Bronze RG 5 and RG 10
- Cast steel
- Stainless steel

Pressure Rates

- PN 6, PN 10, PN 16



DIN Ball valves



Available in

- Cast iron
- Nodular cast iron
- Cast steel
- Stainless steel
- Bronze
- Brass

Options

- Threaded (bsp / npt) / flanged
- Fullbore / Reduced bore
- Electric or pneumatic operated
- ANSI execution

Pressure Rates

- PN 10, PN 16, PN 40, PN 64, PN 100

- 1 piece, 2 piece and 3 piece ball valves
- Wafer type ball valve
- Brass threaded ball valve
- Bronze ball valve
- 3 way ball valves
- Fire safe ball valves

JIS Valves

Options

- With thread or flanges
- S(crew) D(own) N(on) R(eturn) execution
- With or without positioner

Available in

- Cast iron
- Cast steel
- Bronze
- Malleable iron globe valves

- Globe valves / angle
- Gate valves
- Butterfly valves double flanged
- Butterfly valves wafer / LUG type
- U-Type butterfly valves
- Y-strainers
- Lift check valves
- Swing check valves
- Storm valves
- Sounding cock valves



Pressure Rates

- JIS 5K
- JIS 10K
- JIS 16K
- JIS 20K
- JIS 30K
- JIS 40K

ANSI Space valves



The Space Valve brand is the recognized leader in the Marine Valve Industry. This reputation is earned because of serving our customers with reliable and high quality products which are designed for the rigorous conditions of the marine industry.

Space Valves are available from stock from our warehouses in the USA. Our valve shop can modify and customize the Space products for you with indicators, by-passes, reach rod systems, actuators and many other options.

Space Valves are an ABS approved product. We can also furnish certification like DNV, LRS and GL with in-house testing in our facilities worldwide.

Space Valves have a proven track of reliability and performance. This reputation plus our commitment to provide an excellent product that meets the requirements of the Maritime Industry, makes Space Valves a logic choice for meeting your Maritime requirements.

- Gate valves
- Globe valves
- Check valves

DIN Vvalves

DIN Gate valves



Options

- Threaded or flanged
- With bronze or stainless steel
- Inner parts
- Metal or soft seated
- Single or double threaded
- With open-close indicator
- With rising or non-rising handwheel
- F4 and F5 length
- Electric or pneumatic operated

DIN Globe valves



Options

- Threaded or flanged
- S(crew) D(own) N(on) R(eturn)
- With regulation cone
- Bellow seated
- With bronze or stainless steel inner parts
- Metal or soft seated
- Electric or pneumatic operated

Available in

- Cast iron
- Nodular cast iron
- Cast steel
- Stainless steel
- Bronze RG5 and RG10

Pressure Rates

- PN 6, PN 10, PN 16, PN 40

DIN Butterfly valves



Liners

- NBR
- EPDM
- Teflon

Types

- Wafer type
- Mono flange
- Lug type
- Double flange
- High performance

Options

- Pneumatic, electric or hydraulic controlled
- Hand lever
- Gear box
- Electro hydraulic actuator
- Fire safe execution
- Triple eccentric high performance

- Wafer type butterfly valve
- Mono flange butterfly valve
- Lug type butterfly valve
- Double flange butterfly valves
- High performance butterfly valve

Pressure rates

- PN 6, PN 10, PN 16



THE ALLIANCE



RM Marine Yard / System installations & naval carpentry

- ❑ INSTALLATION OF BALLAST SYSTEMS WATER TREATMENT & SCRUBBER SYSTEMS
- ❑ ON-BOARD & ELECTRICAL SYSTEMS
- ❑ STRUCTURAL CARPENTRY & BLOCK CONSTRUCTION
- ❑ CONSTRUCTION & INSTALLATION OF EXHAUST GAS PIPES.
- ❑ CONSTRUCTION OF PIPES AND FIBERGLASS AND CARBON PRODUCTS
- ❑ SANDBLASTING AND PAINTING
- ❑ CONSTRUCTION AND REPAIR OF SCREEDS AND FLOORINGS MADE WITH RESIN OR TRADITIONAL MATERIALS
- ❑ CRATE CLEANING
- ❑ INSULATION, METALLISATION, SANITIZATION



Ballast & Scrubber systems installation

installation of turnkey Scrubber projects, which are implemented on board while in operation or during dry docks.



Exhaust fiberglass

using any type of reinforced plastic material, from simple piping to anti-jetstream shields or consoles, with both manual and autoclave production.



Navy & Submarine service

Heavy ,outer and lightweight Hull services for over 15 years on ITALIAN NAVY surface & submarine Units



Structural carpentry

Repairing structures, reconstructing elements, replacing sheets (whether external, internal or in crates).



Maintenance & Service

SANDBLASTING & PAINTING (from Sa 2.5 to Sa 1 grade) up to 3000 bar // NACE technicians



Electrical & On-board systems

RM drafts designs for electrical systems, does preparatory work, develops installation plans, and also carries out inspection and maintenance of on-board electrical systems and equipment.



CRATE CLEANING, INSULATION, METALISATION, SANIFICATION



Tecnoteam / Multidisciplinary engineering

ENGINEERING & FEASIBILITIES, LASER 3D SCAN SCRUBBERS, BWTS, TOPDECK PIPING SKIDS

- ❑ PROCESS & PIPING ENGINEERING
- ❑ MACHINERY AND EQUIPMENT ENGINEERING
- ❑ LASER SCAN SURVEYS
- ❑ ELECTRICAL-INSTRUMENTAL-AUTOMATION-
- ❑ STANDARDS AND SPECIFICATIONS

SOLARIUS	AUTOCAD FULL	PDMS
PRIMUS	MECHANICAL DESKTOP	E3D
INTEGRA	INVENTOR	PIPEPLUS
SPAC START IMPIANTI	ADVANCE STEEL	CAESAR II
TNE VIP	RECAP 360	PV ELITE
MC4 SUITE	ESAPRO	PIPINGOFFICE
CPIWIN	POINTSENSE	PIPEMILL
EC700	PROE - CREO	PROSAP
SPAC AUTOMAZIONE 2018	SOLIDWORKS	SAP2000
AUTOCAD LT	SOLID EDGE	STAAD

Software

Drilling Offshore platform
SOCAR AQS Caspian Sea

Drilling Rigs

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

Scrubbers & BWTS engineering

Offshore platform SOCAR
AQS Caspian Sea

O&G Offshore

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

Scrubbers & BWTS

CARNIVAL
EGCS piping & installation design

Tatweer Petroleum / Central
Gas Dehydration –Bahrain

Chemicals & Onshore

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

COSTA MAGICA
EGCS piping & installation design

MEG Regeneration” per PX Limited
Breagh Field – Teesside – UK

Skids & Packages

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

COSTA MEDITERRANEA
EGCS piping & installation design

www.nicro.itt



Nicro Spa / Marine scrubbers & heat treatment equipments

CARPENTRY HEAT TREATMENT
MARINE SCRUBBER CONSTRUCTION

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.

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 S321
Alloy 330	W.1.4864	UNS N08330
Alloy 600	W.2.4851	UNS N06600
Alloy 601	W.2.4851	UNS N06601
Alloy 602	W.2.4833	UNS N06025
Alloy 800H	W1.4876	UNS N08810
Avesta 253MA	W.1.4835	UNS 530815

Grades & standards

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.

Marine scrubbers



Flares O&G equipments

Made of special steel, the flare is used to burn waste gases of the production process



Muffle & Retorts

Nicro is a premium partner thanks to decades of experience. Failing the construction drawing, we can use reverse engineering to measure the dimensions and collect all the necessary data to produce a new muffle.

Radiant Tubes

Advanced pressing / bending machines, laser-cutting and equipment for assembly and automated welding

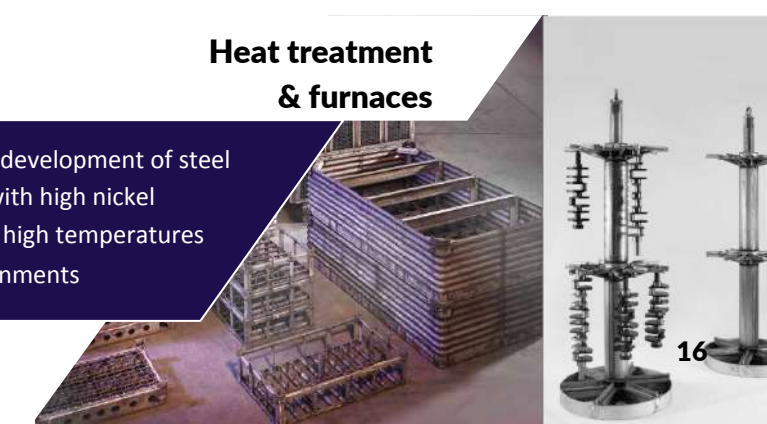


Bells Bases & diffusers for furnaces

For coil annealing in bell furnaces, Nicro is able to provide the complete unit, consisting of the base, plenum, bell, diffusers and fans.

Heat treatment & furnaces

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



Chero Piping Spa / corrosion resistant piping packages

CRITICAL PIPING, FITTINGS & VALVES PACKAGES
FLOATING & TOPDECKS CONTRACTOR

- Forged fittings
- Branch outlets
- Heavy wall fittings (Tees, Wyes, Lateral Tees)
- Custom designed flanges
- (anchors, orifice, swivel, misaligned)
- Nozzles (flanged and not flanged)
- Forged pipe
- Mechanical forged components
- Insulating joints (monolithic and flanged)
- Cladding



Forged fittings

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



Specialty products

Designed 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);



Lateral Tees



Orifice flanges



Spherical Wye pieces



Anchor flanges



Custom designed 90° and lateral



Urea plant Fittings

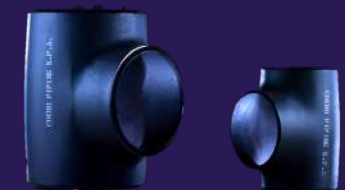


Branch Reinforced outlets

Custom made design

Chero Piping manufactures and stocks self-reinforcing 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 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 Alloys and other metallic materials. Flanges



Insulating joints

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.





Ofra Srl / skids & modules assembly workshop

CARPENTRY OFFSHORE, FLOATING & TOPDECKS, SKIDS ASSEMBLY

- ❑ 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.



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.



Mechanicals

The Mechanical and Maintenance Division 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.





Steel grades

oxidation – resistance, nickel based alloy. High toughness and strength in the temperature range cryogenic to 1000°C. The alloy as excellent fatigue strength and stress corrosion cracking resistance to chloride ions.

ALLOY 925
Is as age-hardenable nickel-iron-chromium alloy. Is used in various applications requiring a combination of high strength and corrosion resistance.

ASTM A453 660 /1.4980
Highly creep and corrosion resistant, precipitation hardening austenitic steel. Scaling resistance in air up to appr. 800°C.

MONEL 400
Is a solid-solution alloy that can be hardened only by cold working. It has high strength and toughness over a wide temperature

UNS S32760 / ASTM A182 F55
Ferritic-austenitic stainless steel. Excellent corrosion resistance against general corrosion, stress corrosion cracking, corrosion fatigue, pitting, crevice and erosion corrosion and possessing very high mechanical strength properties.

MONEL 500
Is a nickel-copper alloy with combines the excellent corrosion resistance of Monel 400 with the added advantages of greater strength and hardness. The increased properties are obtained by adding aluminium and titanium to the nickel-copper base by heating.

ALLOY 718
High temperature, precipitation hardening, nickel-base alloy with particularly high hot strength and yield strength up to 750°C, and excellent creep behaviour up to 700°C. The markedly higher hot strength compare with normal hot work steels in particularly noticeable when used for hot work tools with high mechanical and thermal stresses.

DUPLEX
Ferritic-austenitic stainless steel also referred to as DUPLEX STAINLESS STEELS, combine many of beneficial properties of ferritic and austenitic steels. Due to the high content of chromium and nitrogen, and often also molybdenum, these steels offer good resistance to localised and uniform corrosion. The duplex microstructure contributes to the high strength and high resistance to stress corrosion cracking.

ALLOY 625
Is a non-magnetic, corrosion and

SUPERDUPLEX
A Super Duplex stainless steel is a type of Duplex stainless steel with enhanced corrosion resistance which is categorised by its PREN being greater than 40. The Pitting Resistance Equivalent Number (PREN) is widely used as a means of comparing the relative corrosion resistance of different steel grades.

ASTM A193
Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications.

ASTM A320
Standard Specification for Alloy-Steel and Stainless Steel Bolting for Low-Temperature Service.

ASTM F467
Standard Specification for Nonferrous Nuts for General Use.

ASTM F468
Standard Specification for Nonferrous Bolts, Hex Cap Screws, Socket Head Cap Screws, and Studs for General Use.



Bolts & Studbolts



Custom made

Studbolts

DIMENSIONS: 3/8" – 5" aANSI/ASME M8 – M125ISO

The stud bolts that are manufactured by Bea are suitable for several needs and are made with all types of materials, from the smallest (5/16" or M6) to the largest (7" or M180).



Custom made

DIMENSIONS: 3/8" – 12" ANSI/ASME M8 – M300ISO

Eight CNC machines, two semiautomatic milling machines and a machining centre allow Bea to manufacture items to the customer's specific drawings.



Nuts

Indicator Bolts

The function of the Indicator Studbolt is to evidence at all times the dynamic stresses that it undergoes and if these stresses are within the limits of the design of the system.is a direct relation of temperature and pressure. To satisfy these requirements the Indicator Studbolt must be constructed as follows:



Bolts & nuts

Imperial Range 5/16" - 5"
Metric Range M6 - M125

To complete the range of customers' requirements, Bea supplied bolts (Hex head bolts, round head socket cap-screws) made primarily in with special materials.





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

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