Tosto Group
PRESENTATION

2024

The Group

Tosto Group

tosto Srl
Holding Company - Italy (Chieti)

100%

BELLELI ENERGY Critical Process Equipment
Company specialized on engineering and production of critical Items
Italy (Mantova)

Oil & Gas
Fertilizier
Gas Monetization
Nuclear & Power
BiG Science

30%

70%

YOUR WAY ON LEISURE FLIGHT SRL
Renting and leasing of air, sea and river transport equipment
Romania (Bucharest)

100%

walter tosto
Company specialized on engineering and production of critical Items
Italy (Chieti)

Chemical Petrochemical
Fertilizier
Refining
Storage Tanks
Gas Process
Power
Big Science
Food & Pharma
LPG Domestic tanks

Maraldi
Storage tanks & Shperes

100%

WTSGAS LA FIAMMA DELL'INNOVAZIONE
Commercial Company
Italy (Chieti)

LPG Domestic tanks
LPG Business Tanks
LPG Distribution
Project & Design of LPG plants

100%

tosto IMMOBILIARE
Small Real Estate Company
Romania (Bucarest)

Total Employees 1.300

100%

walter tosto wtb
Company specialized on Oil&Gas products and Nuclear components
Romania (Bucarest)

Chemical Petrochemical
Fertilizier
Refining
Storage Tanks
Gas Process

49%

51%

seastock
Oil & Gas Storage Plant

Depositi Costieri Trieste
Italy (Trieste)

100%

GRIVITA ROSIE GRIRO
Company specialized on Oil&Gas products and Nuclear components
Romania (Bucarest)

Chemical Petrochemical
Fertilizier
Refining
Storage Tanks
Gas Process

100%

walter tosto wtr
Commercial Company
Turkey

Tosto Group

780.000 sqm Workshops

Over 220 ml € Turnover

1.300 Employees

Tosto Group

Sea/River Front Workshops

Wide Machine Park

70+ Years Experience

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Tosto Group

Facts and Figures

Employees:
1.300

Turnover: over
220.000.000 €

Assets:
400.000.000 €

Investments:
75.000.000 € in 5 years

Equity and Reserves:
150.000.000 €

Order Portfolio at September 2023:
700.000.000 €

Company Markets

Refining

Crude Oil Distillation unit

Vacuum distillation unit

Naphtha hydrotreater unit

Catalytic reforming unit

Alkylation unit

Isomerization unit

Distillate hydrotreater unit

Amine gas treater, Claus unit, and tail gas treatment

Fluid catalytic cracking (FCC) unit

Hydrocracker unit

Visbreaker unit

Delayed coking

Chemical & Petrochemical

Ethane cracking: PE/HDPE/LDPE/PP

EB/SM Styrene

Ethylene Oxide (EO)

Ethylene Glycol (EG)

PVC

Propylene Oxide (PO) and

Tertiary Butyl Alcohol (TBA)

Ammonia

Methanol

Urea

Gas Process

Natural GAS Processing (NGL)

Liquefied Natural GAS (LNG)

Gasification Plant

LPG Storage

GAS to Liquid (GTL)

Coal Gasification

Power and Big Science

Conventional

Nuclear

Renewable

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Licensors

Refining

- T.EN TECHNIP ENERGIES
- Chevron
- LUMMUS TECHNOLOGY
- TOPSOE
- ExxonMobil
- Axens IFP Group Technologies
- UOP A Honeywell Company
- Shell Global Solutions
- wood.
- KBR

Chemical & Petrochemical

- Badger
- T.EN TECHNIP ENERGIES
- SD Technology Excellence
- KBR
- CASALE
- JM Johnson Matthey Inspiring science, enhancing life
- Air Liquide
- DOW
- TOPSOE
- ShinEtsu
- Linde
- BOREALIS
- INEOS THE WORD FOR CHEMICALS
- Stamicarbon pure knowledge
- BASF We create chemistry
- eni versalis
- LUMMUS TECHNOLOGY

Gas Process

- Axens IFP Group Technologies
- sasol
- Shell
- AIR PRODUCTS
- ConocoPhillips
- KBR
- BLUEWATER PETROLEUM CORP.
- SBM OFFSHORE
- thyssenkrupp

Power

- AREVA
- Enel
- ANSALDO ENERGIA
- GE ALSTOM
- EDF
- KEPCO
- HITACHI
- SIEMENS

Products

HYDROCRACKING/ HYDROTREATING REACTORS

UNITS: Over 250 units built since 1988
Over 100 Units in modified Cr-Mo-V

MAXIMUM DIMENSIONS: Shell Thick 350 mm Dia. Up to 6 mt.

DESIGN CODES: ASME, AD-Merkblatter, BS5500, Stoomwezen, Finnish Code, EN 1445

WEIGHT: From 200 tons to 2000 tons

MATERIALS: 2.25 Cr 1 Mo Standard
2.25 Cr 1 Mo Enhanced
2.25 Cr 1 Mo 0.25V Modified
12 Cr Mo 9 10

PROCESS LICENSORS: UOP, CLG, ExxonMobil, AirLiquide/Lurgi, Axens, KBR, Haldor Topsoe, Shell Global Solutions

HIGH PRESSURE VESSELS & COLUMNS

UNITS: Over 750 units built since 1966

DESIGN CODES: ASME, AD-Merkblatter, BS5500, Stoomwezen, Finnish Code, EN 1445

PROCESS LICENSORS: ExxonMobil, CLG, BP, Shell Global Solutions, ConocoPhilips, UOP, Axens, Haldor Topsoe, Foster Wheeler, Technip, Saipem, KBR, Linde, Casale, Toyo, CB&I, Air Liquide, ThyssenKrupp/ Uhde, Davy Process.

WEIGHT: From 10 tons to 1400 tons

MATERIALS: Carbon Steel
1.25 Cr 0.5 Mo
2.25 Cr 1 Mo Standard
2.25 Cr 1 Mo Enhanced

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Products

BREECH LOCK HIGH PRESSURE HEAT EXCHANGER

DESIGN: Breech Lock (proprietary design)
Bolted In, Combined Breech Lock-Bolted In

UNIT: Over 220 units built since 1980

WEIGHT: From 20 tons to 200 tons

MATERIALS: 1.25 Cr 0.5 Mo
2.25 Cr 1 Mo Standard
2.25 Cr 1 Mo Enhanced
2.25 Cr 1 Mo 0.25V Modified (+ 60 units)
12 Cr Mo 9 10

MAXIMUM DIMENSIONS: Tube length: >10.000 mm.
Shell Diameter: up to 1.700mm.

PROCESS LICENSORS: Chevron, UOP, CLG, Exxon, Axens, KBR, Shell

SHELL & TUBE HEAT EXCHANGER

DESIGN: Up to Three-Stacked Exchanger

WEIGHT: From 30 tons to 800 tons

MATERIALS: 1.25 Cr 0.5 Mo
2.25 Cr 1 Mo Standard
2.25 Cr 1 Mo Enhanced
2.25 Cr 1 Mo 0.25V Modified
12 Cr Mo 9 10

PROCESS LICENSORS: Chevron, UOP, CLG, Exxon, Axens, KBR, Shell

UNITS: Over 950 units built since 1980
> 60 units modified Cr-Mo-V

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Products

TUBULAR REACTORS

UNITS: Over 30 units built since 1989

WEIGHT: From 900 tons to 1160 tons

MATERIALS: Carbon Steel, Micro-Alloyed (high strength) steel, Low Alloy steel, 300 Series and Duplex Stainless steel

PROCESS LICENSORS: Shell, KBR, BASF, Scientific Design, Lurgi, Toyo

MAXIMUM DIMENSIONS: Reactor Length: 30.000 mm
Shell Diameter: 7.200 mm
N. Of Tubes: 29.400

METHANOL REACTORS

DESIGN: Methanol Process

UNITS: 30 Large Units built since 1989, including
N.2 Water Cooled
N.1 Gas Cooled

PROCESS LICENSORS: Haldor Topsoe, Air Liquide/Lurgi, Toyo, Davy Process Technology.

MATERIALS: Carbon Steel, Low Alloy Steels, 300 series and Duplex Stainless Steel

MAXIMUM DIMENSIONS: Max Tube Length: 10.500 mm
Shell Diameter: 5.470 mm
N.Of Tubes: 6.400

WEIGHT: From 100 tons to 475 tons

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Products

UREA EQUIPMENT

DESIGN: Urea Stripper, Carbamate Condensers, Scrubbers, Urea Reactors

WEIGHT: From 25 tons to 500 tons

PROCESS LICENSORS: Stamicarbon, Snamprogetti, Toyo Engineering

UNITS: > 50 units built since 1980

MATERIALS: High Strength Carbon Steel, 316 L Urea Grade Stainless Steel, 25-22-2 High Alloy Steels, Safurex, Duplex Steel

AMMONIA EQUIPMENT

DESIGN: Ammonia Converter, Ammonia Converter Baskets, Waste Heat Boilers, Gas-Gas Exchanger

WEIGHT: From 25 tons to 400 tons

MATERIALS: High Strength Carbon Steel, 0.5 Mo Low Alloy Steels, 1.25 Cr 0.5 Mo Steels 2,25 Cr 1 Mo, 2.25 Cr 1 Mo 0,25 V steels

UNITS: over 70 units built

PROCESS LICENSORS: Haldor Topsoe, KBR, Snamprogetti, Ammonia Casale, Thyssen-Krupp/Uhde

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Workshops

The combined three plants capacity is 158.000 m² Workshop covered area and 490.000 m² of Workshops uncovered area, with more than 1000 people and an overall capacity of 900 000 Manhours/Year.

BELLELI ENERGY Critical Process Equipment

Mantova - Italy
Covered Area: 60.000sqm
Uncovered Area: 280.000 sqm

Maraldi SINCE 1947

walter tosto WTB

Bucharest - Romania
Covered Area: 25.500 sqm
Uncovered Area: 15.500 sqm

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Chieti- Italy
6 workshops
Covered Area: 91.000sqm
Uncovered Area: 340.000 sqm

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Ortona - Italy
Sea Front Workshop
Covered Area: 9.000sqm
Uncovered Area: 20.395 sqm

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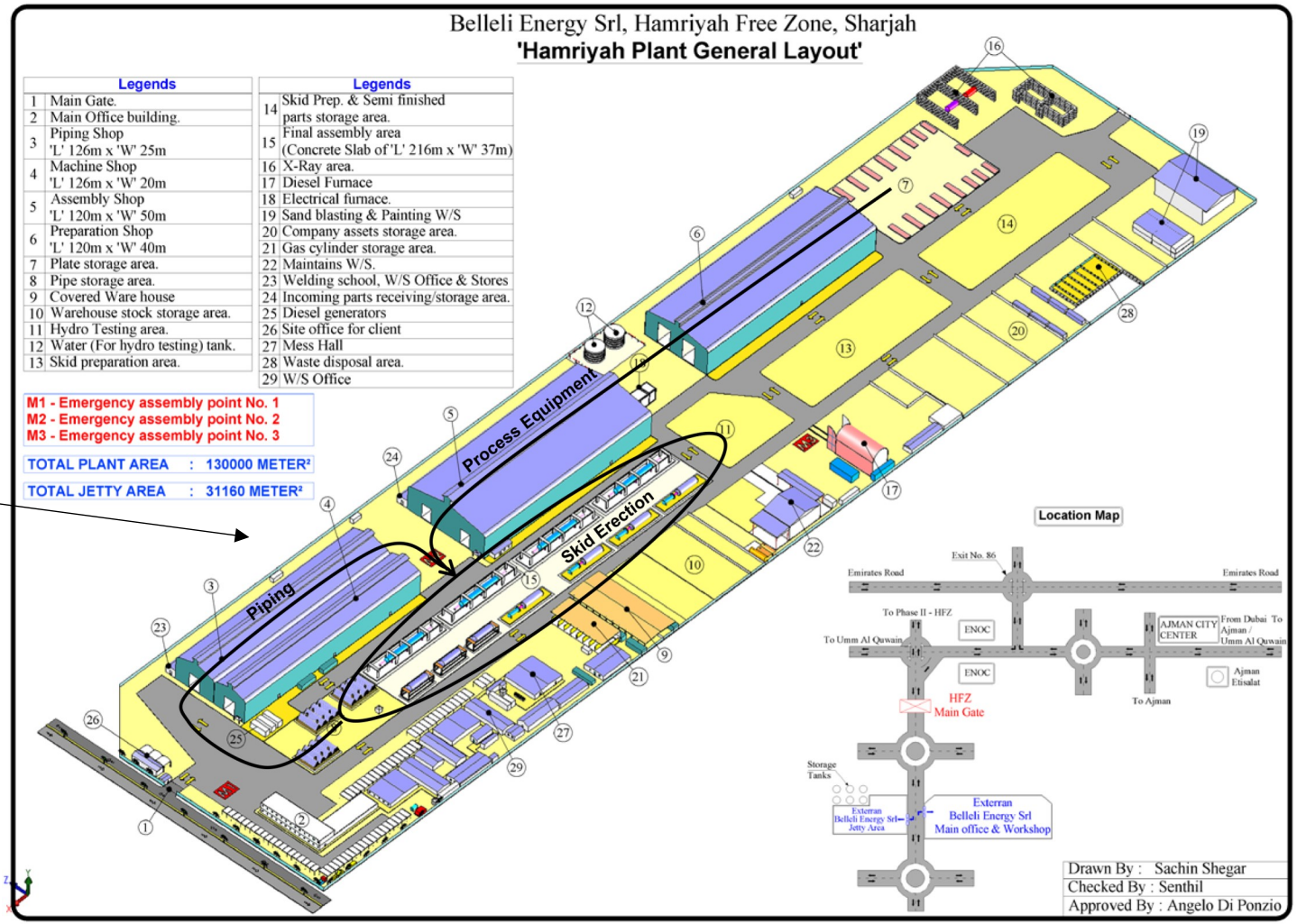
Oltenita – Romania
River front workshop

Workshops

HAMRIYAH WORKSHOP



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The Company

Workshops

ITALY - Chieti

The company carries out its activities on a total area of over 300.000 sqm. With eight workshops, six of which are located in Chieti Scalo and a workshop that is located directly on the Adriatic sea, in the port of Ortona, which allows the direct shipment of the items with no limitations.

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Workshops

ITALY – Ortona Sea Front Workshop

Walter Tosto Spa owns one sea-front workshop (WT6) directly located in the Ortona Port, on the Adriatic Sea, where there are 3 quays with the following features:

- RIVA : Height: 1.60 mt, Water Depth: 6.00 mt
- RIVA NUOVA : Height: 2.00 mt, Water Depth: 6.00 mt
- NORD NUOVA : Height: 2.00 mt, Water Depth: 7.00 mt

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Refining

End user: Thai Oil JV Petrofac/Samsung/Saipem

Plant type: Refinery Thailand DAO LC-MAX

Diam: 4.900 - Thk: 279+5 - Weight: 2.034.100

Refining

1° and 2° Stage Reactors
Technip Italy
Bapco – Bahrain
Weigth 1.331.500 kg

Refining

PHILLIPS 66 - WOOD RIVER REFINERY

Roxana, Illinois (USA)

Weight = 1.458.860 kg

Internal Diameter = 5486.4 mm

Thickness = 222.3 + 4.5 WO mm

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Refining

Hydrocracking Heavy Wall Reactors

Foster Wheeler USA – Barrancabermeja Refinery – Colombia

Weight 1.001.500 Kg

Refining

Vacuum Column

Bechtel Corporation – Cop Wood River Project (USA)

Gas Process

Polymerisation Reactor

Zapsib 2 Pe Plant

Western Siberian Complex – Russia

Diameter: 9.200 mm

Weight: 397.000 kg

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Gas Process

LPG Bullets

Braskem Idesa Sapi - Etileno XXI Project
Diameter: 7.400 mm
Weight: 108.070 kg

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BELLELI
ENERGY Critical Process Equipment

The Company

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Workshops

ITALY – Belleli Mantova

Founded in 1947, Belleli Energy CPE defines solutions for critical process equipment for the refining, chemical, petrochemical, gas monetization and power industries.
The in-house design, engineering and manufacturing allow the company to ensure integrity of materials, processes and products from raw materials through fabrication, to completed products.

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

H-OIL Reactor – Lukoil Bourgas
Diameter: 4.900 mm
Weight: 1.380.000 Kg

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

Breech Lock Heat exchangers – USA
SHELL MOTIVA - Three-Stacked configuration

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

Ammonia Converter – KBR
Diameter: 3.250 mm
Weight: 698.000 Kg

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

Deisohexanizer Column – ENOC
Diameter: 8.900 mm
Weight: 581.368 Kg

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

EO Reactors - Pars Phenol Company
Diameter: 6.130 mm
Weight: 888.000 Kg

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

HPS Reactors (tubular) per Qatar Shell GTL
Weight 112.500 Kg
Diameter 7.032 mm

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

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BELLELI ENERGY Critical Process Equipment

Belleli Energy CPE

H.P. Scubber - Egypt Fertilizer Company, Egypt
Weight 4.230 Kg
Diameter 1.050 mm

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BELLELI ENERGY Critical Process Equipment

The Company

Workshops

ROMANIA - Bucharest

Walter Tosto WTB's in Bucharest is the largest and most powerful manufacturing workshop in Europe with unique machinery and facilities

Covered Area : 32.500 sqm
Uncovered Are : 87.500 sqm

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Workshops

ROMANIA - Bucharest

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Workshops

ROMANIA - Oltenita

We own a private River Port in Oltenița where we're currently building a new workshop with a covered area of 7.700 sqm and uncovered areaof 72.000 sqm. All logistics are carried out by self-propelled trailers and mobile cranes, and our own access ramps to the river for roll-on and roll-off operations.

tosto Srl

walter tosto wts

Workshops

ROMANIA – WTO Oltenita

We own a private River Port in Oltenița where we're currently building a new workshop with a covered area of 7.700 sqm and uncovered areaof 72.000 sqm. All logistics are carried out by self-propelled trailers and mobile cranes, and our own access ramps to the river for roll-on and roll-off operations.

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WTB

LP/HP Methanol Converter
USA – Methanex
Johnson Mattey Davy Technologies

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WTB

LP/HP Methanol Converter
USA – Methanex
Johnson Mattey Davy Technologies

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WTB

3 Methanol Reactor
Nakhodka Fertilizer Plant
Haldor Topsoe

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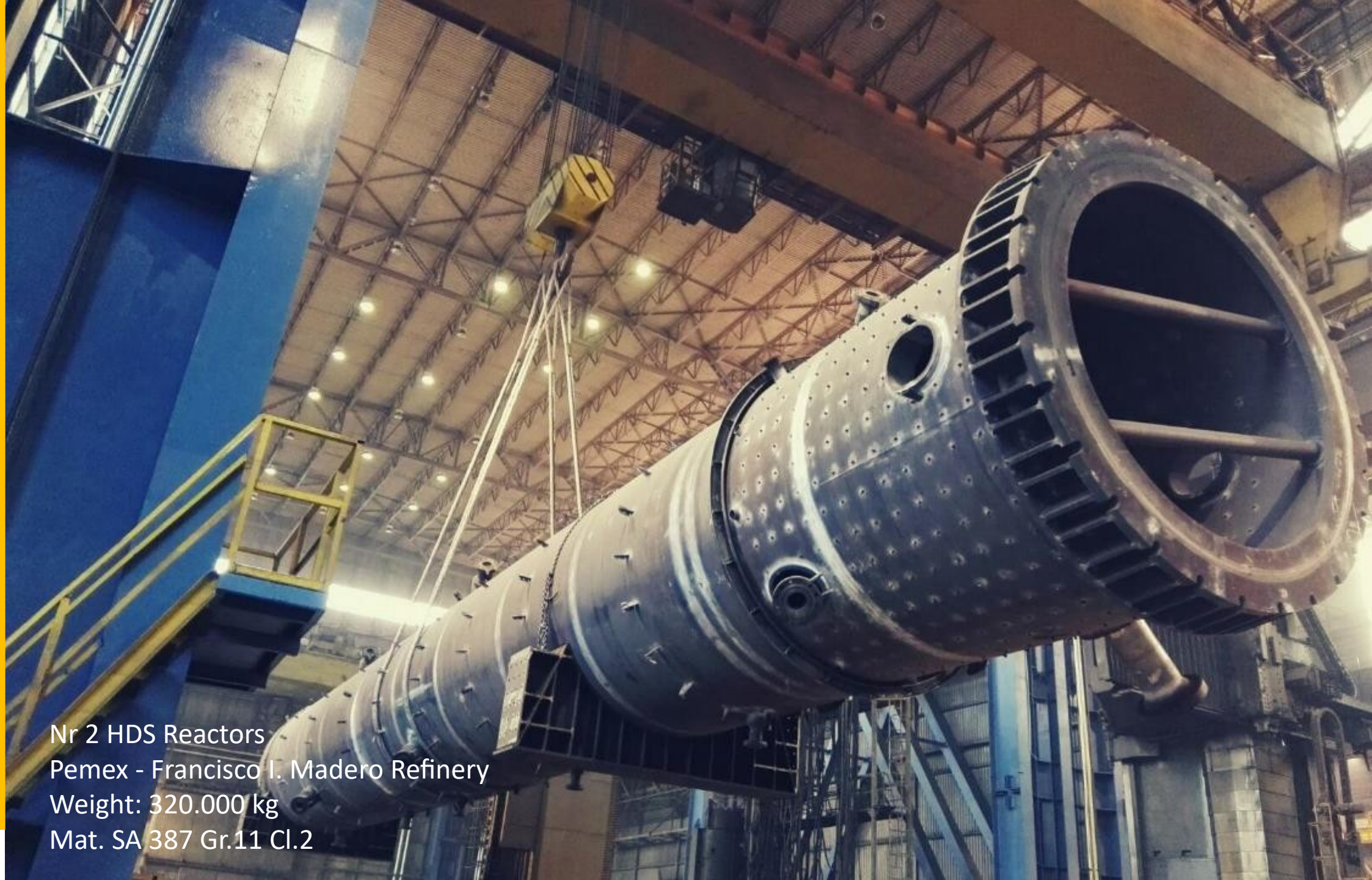
WTB



Nr 2 HDS Reactors
Pemex - Francisco I. Madero Refinery
Weight: 320.000 kg
Mat. SA 387 Gr.11 Cl.2

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WTB

Mozyr Refinery - Belarus
Nr 4 Pre-Reforming Reactors
Diameter (mm) 2.200
Weight 64.000 kg
Mat SA 336 F22 / SA 387 Gr.22 Cl.2

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WTB

Reactor – Mozyr Refinery Belorus
Diameter 2.200 mm
Weight 64.087 kg

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WTB

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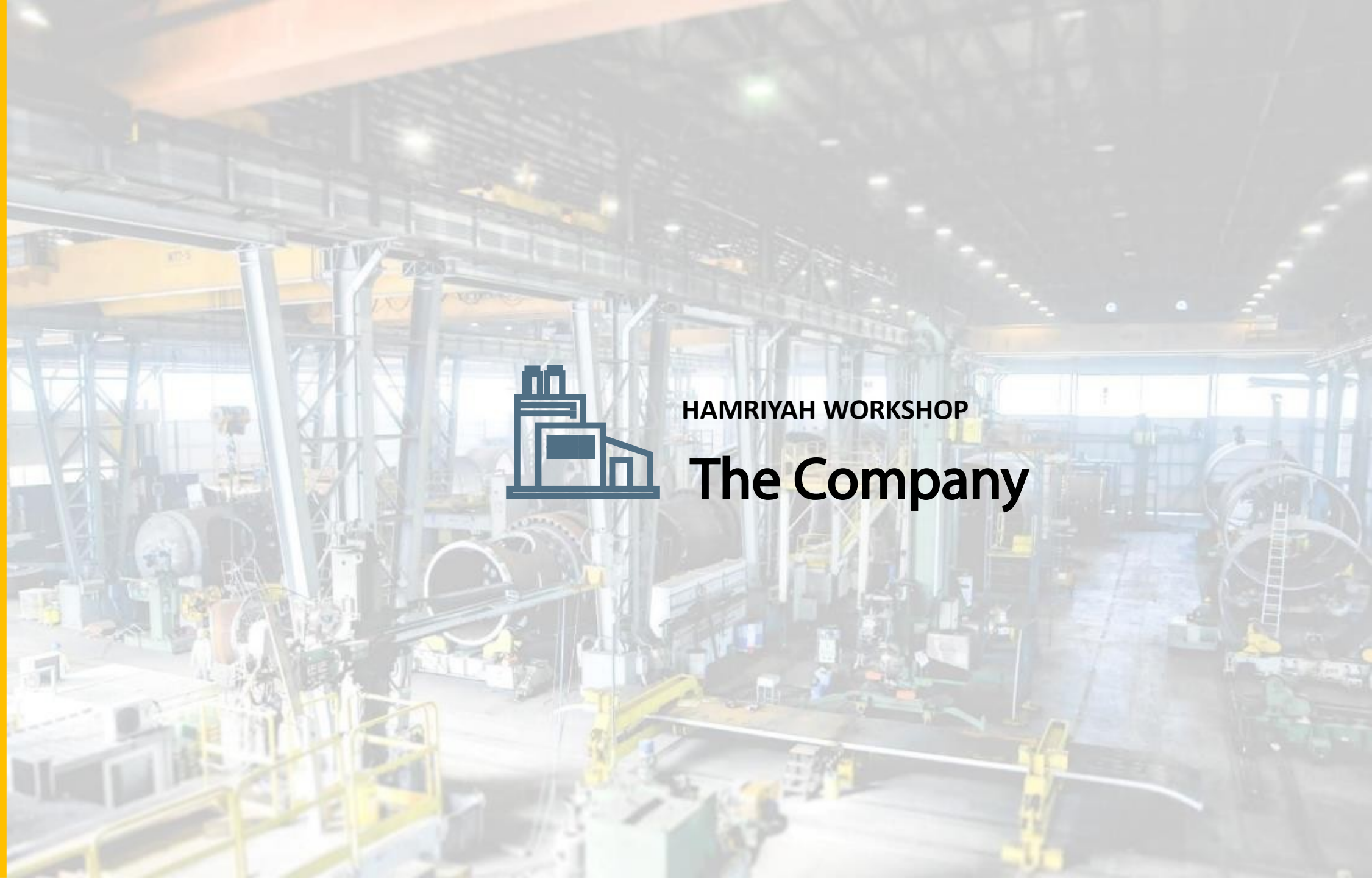
WTB

Tubular Reactor under construction



HAMRIYAH WORKSHOP

The Company

HAMRIYAH MANUFACTURING FACILITY

PRESSURE VESSELS

Materials : CS, LAS, SS, CLAD
Weight : Up to 1000MT
Size : Up to 10M dia, 70M Lg, 300mm Thk

PIPE SPOOLS

Materials : CS, LAS, SS
INCOLLOY, MONEL

- ID Overlay & Cladding (2"~24")
- Automatic Cutting & Welding
- Pneumatic & Hydrostatic Testing

PROCESS SKIDS

- Water Injection
- Gas Treatment
- Gas Compression
- Sulfur Recovery (SRU)
- Triethylen Glycol (TEG)
- Oil Separation and Dehydration

SERVICES UNDER ONE ROOF

- Design & Detail Engineering
- Supply Chain & Logistics
- Manufacturing
- Heat Treatment
- Non-Destructive Examination
- Painting, TSA Coating
- Insulation, Refractory Lining
- Electricals & Instrumentation

CAPABILITIES

Open Area : 110,000 Sq.Mtr.
Covered Area : 20,000 Sq.Mtr.
Workshops : 3 Nos.
Open Yards : 4 Nos.

Piping : 20,000+ Inch Dia / Month
Monthly : 120,000+ Man-hours

- Blasting & Painting Shops
- Radiography Bunkers
- Cranes & Boogies
- Operational 24x7

WELDING CAPABILITIES

More than 2,000 qualified welding procedures. Team of 300+ qualified welders.

ESW Welding Overlay

Automatic Pipe ID Overlay

Petal to Petal SAW Welding

Automatic Tube to Tubesheet Welding

Narrow Gap SAW Tandem Welding

SAW Nozzle Welding

PIPING & MACHINE SHOP

MACHINE SHOP

- Tube-Sheet & Baffles Drilling
- Horizontal Boring Machine
- Vertical Boring Machine
- Lathes, Milling & Drilling Machines
- CNC Machines

PIPE SPOOL SHOP

- Maximized automatic welding
- ID overlay from 2" to 24" diameter
- Pipes sizes from ½" to 50" diameter
- Exotic materials like Inconel, Monel, SS, Super Duplex & Clad pipes

ASSEMBLY SHOP

- Heavy Rolling Machine up to 125 mm thick
- EOT crane Lifting capacity up to 175 MT
- Long Furnace up to 750˚C

PREPARATION SHOP

- 200MT Press for Bending Pressing up to 40mm thickness
- CNC Cutting machine
  - 200mm Carbon Steel
  - 80mm Stainless Steel

- Columns
- LPG Bullets
- Pressure Vessels
- Heat Exchangers
- Heavy Wall Vessels
- Compression Equipment Packages

- CNC Beveling machine
  - Single V
  - Double V
  - J Groove
- Medium Rolling Machine up to 40mm thick

PORT & LOADOUT FACILITY

Heavy Lift and RO-RO Load Out Capability	Hamriyah Port
Water Depth & Draft (Meter)	14 M & 12.5 M
Linear Meter (LM) of Bulkhead	4 L, 180 W, 15 D
Ocean Access Routing	Ship & Barge

PRESSURE VESSELS



SKIDS & PROCESS MODULES

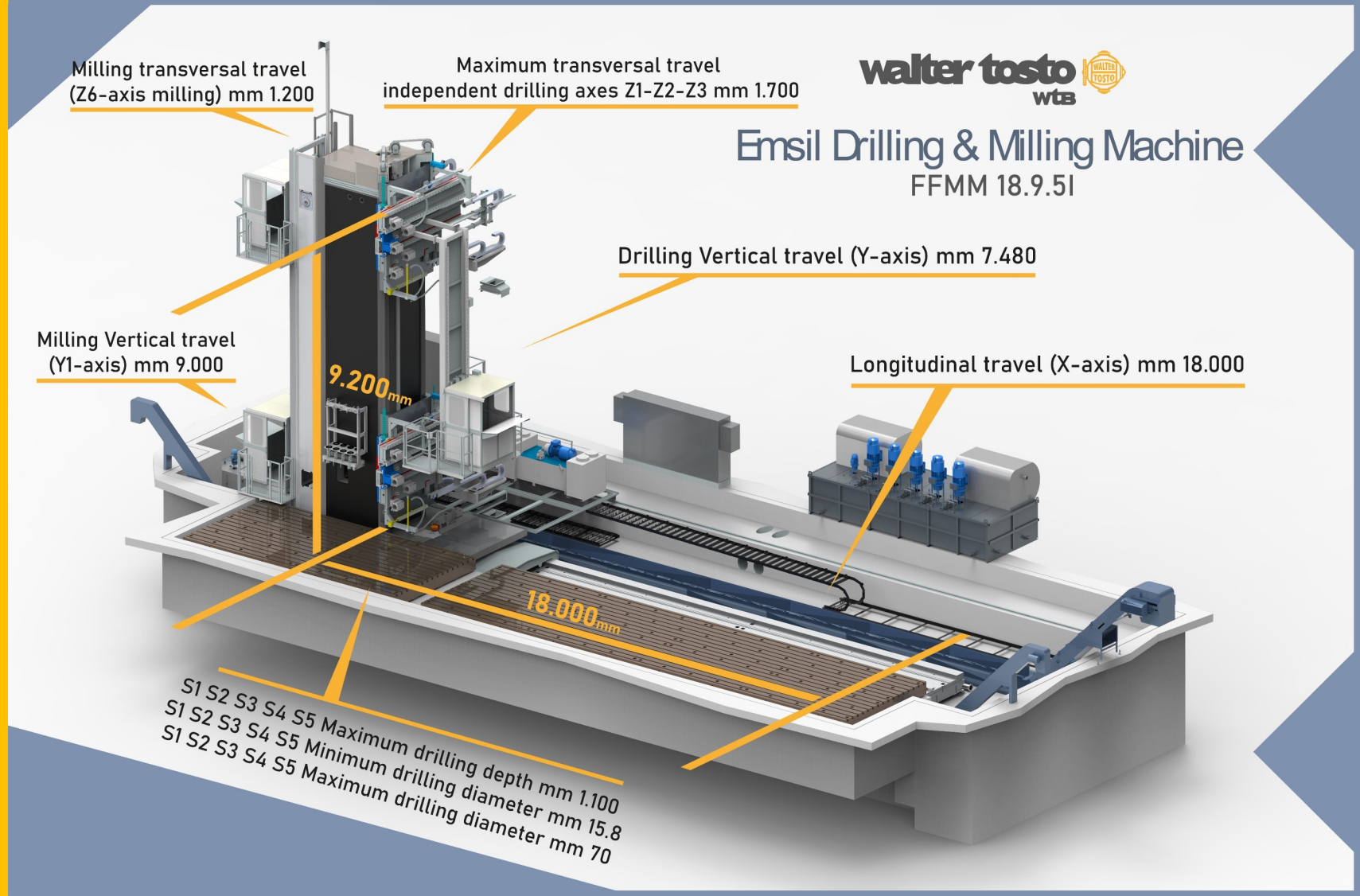
MAJOR CLIENTS

- Acciona
- Alstom
- Arabtank Terminals Limited (ATTL - Yanbu)
- Basrah Gas Company
- CMI Belgium (Currently John Cockerill)
- China Petroleum Engineering & Construction Corporation (CPECC)
- Crescent Petroleum
- Daewoo E & C
- Dana Gas
- DUGAS
- Emirates General Petroleum Corporation
- Fisia Italimpianti
- Flour Corporation
- Hitachi Zosen Corporation
- Horizon Djibouti Terminals Ltd
- Jacobs Engineering Group
- JGC Corporation
- KazakhOil Aktobe LLP
- Kuwait Oil Company
- Lukoil
- Maersk Oil
- Occidental Petroleum (Oxy)
- Pearl Petroleum Co. Ltd
- Petrobas
- Petrofac
- Petronas
- Petroleum Development Oman (PDO)
- Saipem
- Saline Water Conversion Corporation (SWCC)
- Samsung Engineering
- Saudi Aramco
- Sharjah National Oil Corporation (SNOC)
- Shell
- Sidem
- Socar Aurora
- SPETCO International Petroleum Company
- Tatweer Petroleum
- Tecnicas Reunidas
- Technip Engineering Company
- Thermo Design Engineering Ltd (TDE)
- TOTAL
- Toyo Engineering Corporation
- VOPAK Horizon Fujairah
- Zakum Development Company (ZADCO)
- Zhaikmunai LP

$ New Investments

New Investments

New Drilling Machine Zeus 9000



Main Details

The Emsil FFMM 18.9.5I machine is equipped with a 5 spindles drilling unit plus an independent ram with a milling spindle.

The 5 spindles drilling unit is designed for drilling deep holes on tubesheets for the nuclear industry by means of STS drilling system (BTA).

The pitch between drilling spindles can be adjusted automatically.

Three of those drilling spindles are independent and two spindles move simultaneously with lateral spindles.

The machine is equipped with Siemens Sinumerik 840D SL numeric control which can manage 16 axes and 6 spindles.

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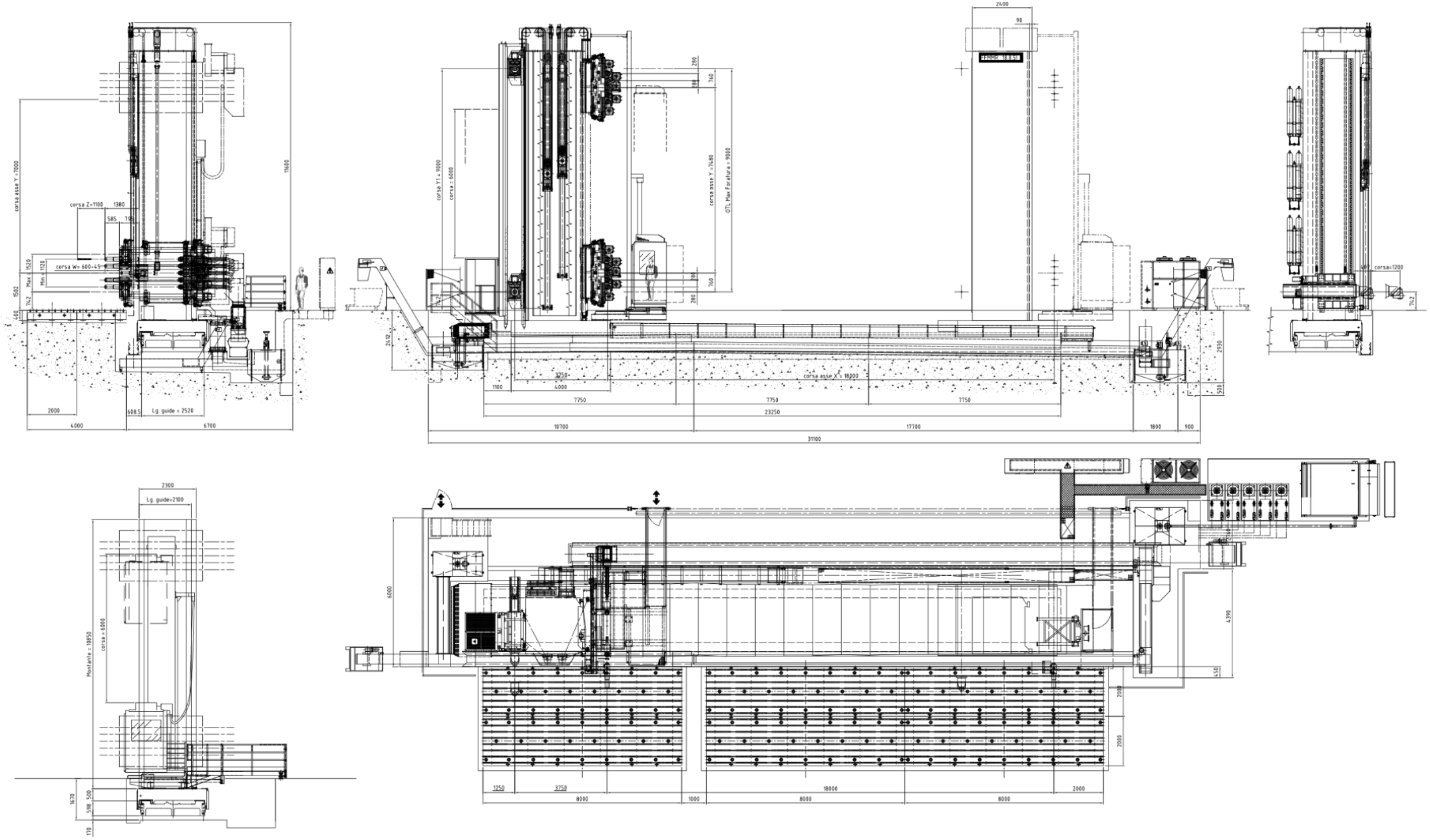
New Investments

New Drilling Machine Zeus 9000



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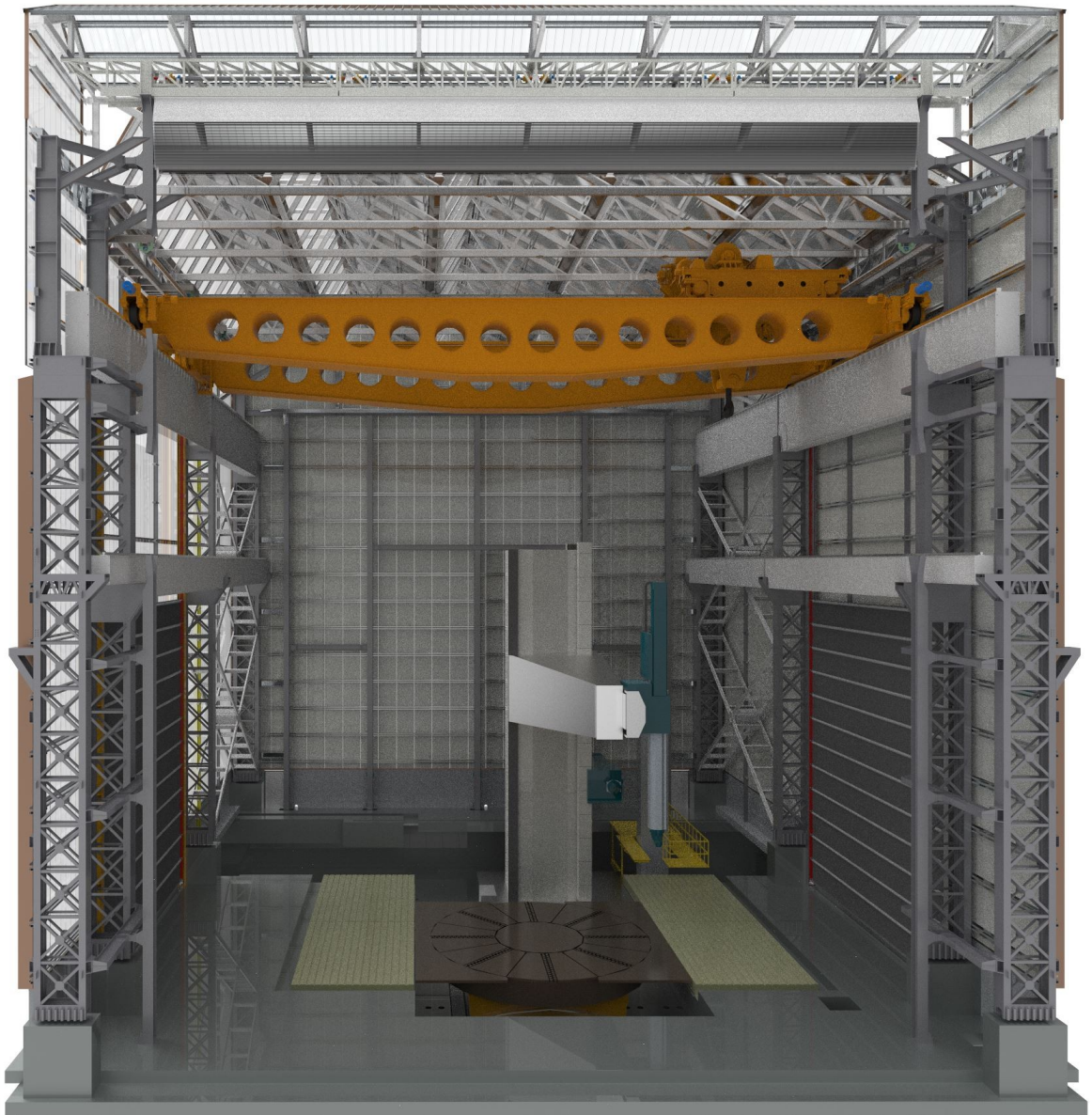
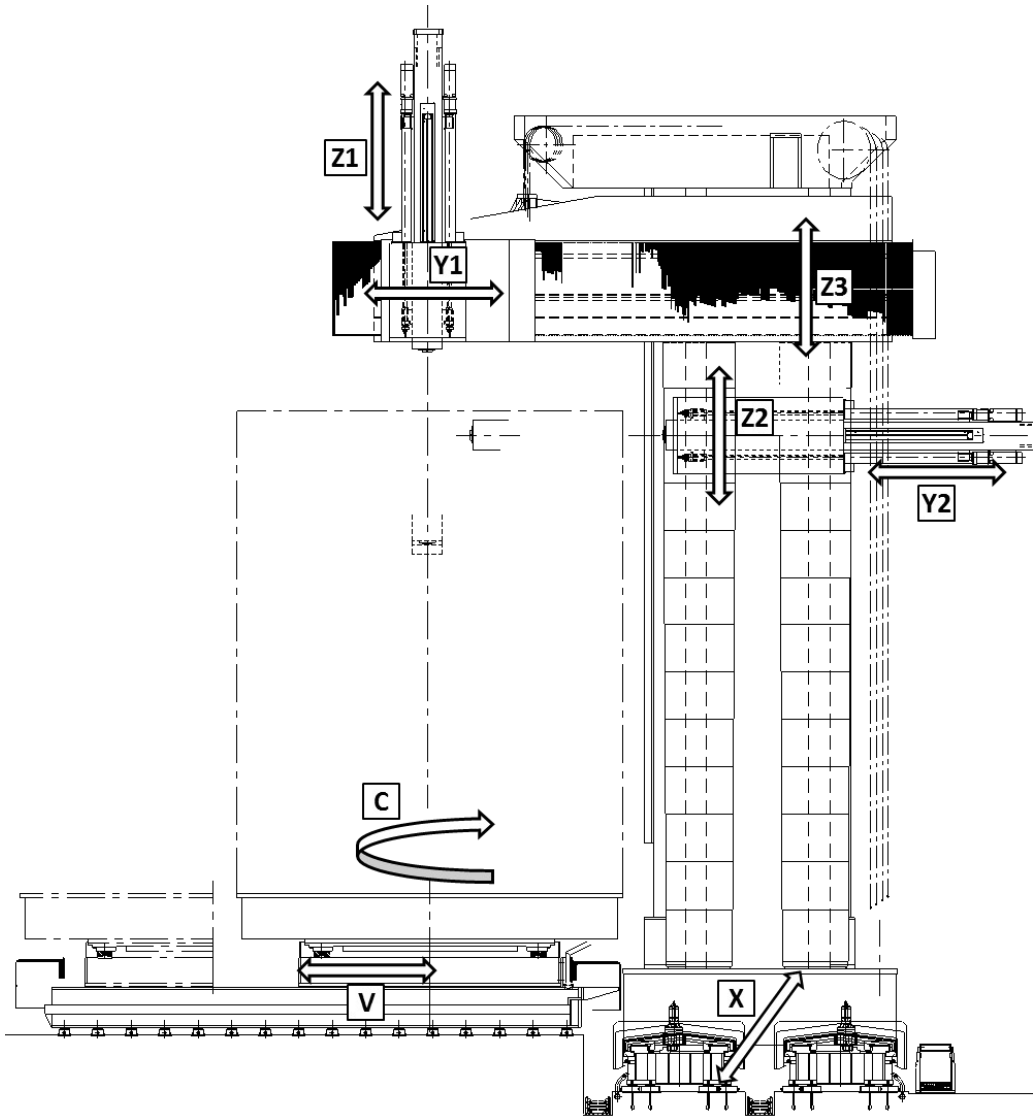
New Investments

New Milling Machine INNSE

Y1 Axes 5000mm
V Axes 4500mm
Z2 Axes 9000mm





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New Investments

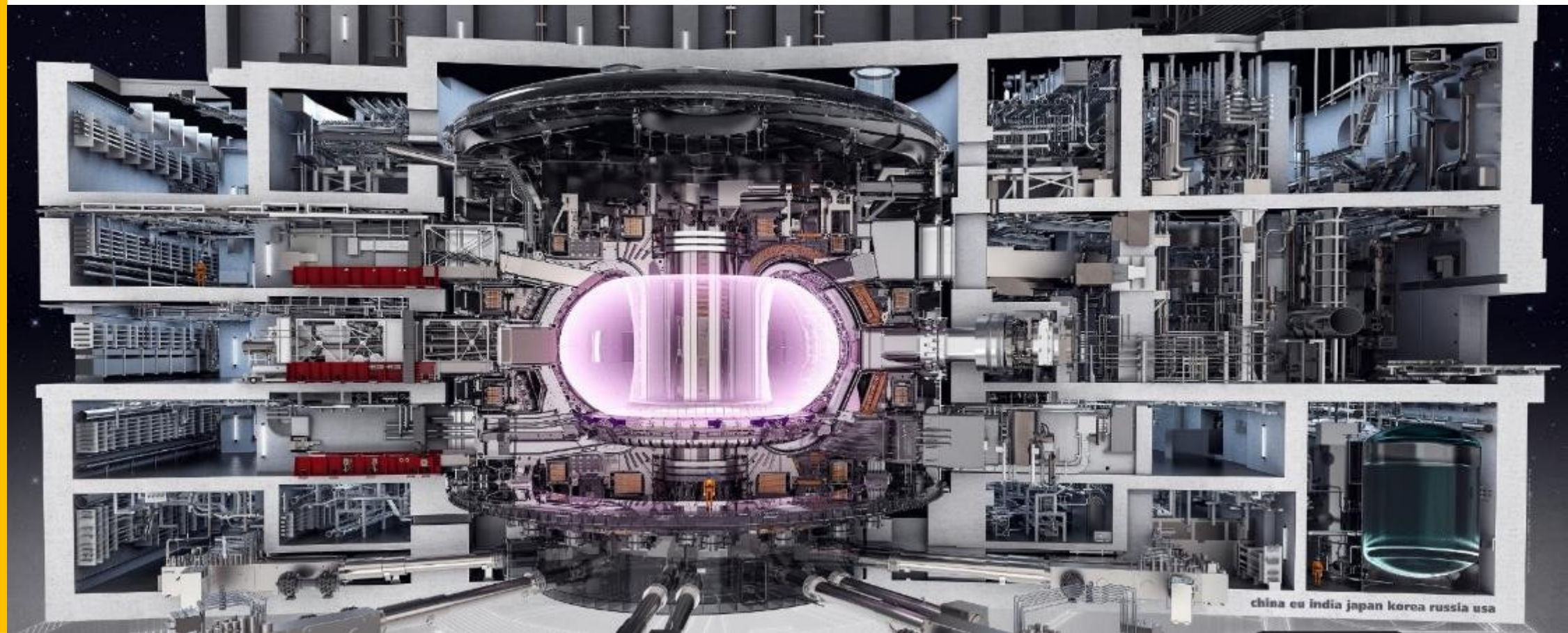
WT7 Workshop Expansion

Big Science

Big Science

The ITER Project

The ITER vacuum vessel is located inside the cryostat of the ITER device and its basic function is to operate as the chamber that hosts the fusion reaction. Within this torus-shaped vessel, plasma particles collide and release energy without touching any of its walls due to the process of magnetic confinement. The vacuum vessel is composed of nine sectors made of thick special grade stainless steel and each sector is 11 metres high, 6.5 metres wide and 6.5 metres deep. All of the sectors are similar and are built with double-walls containing the bolted- on shielded plates with a pressured inter-space which combine to attenuate the thermonuclear flux so as to avoid overheating of the superconducting coils.
The weight of each sector is approximately 500 tonnes and the weight of the entire component, when welded together, will reach an impressive total of 5000 tons which is equivalent to the weight of the Eiffel Tower.



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Big Science

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Big Science

The ITER Project

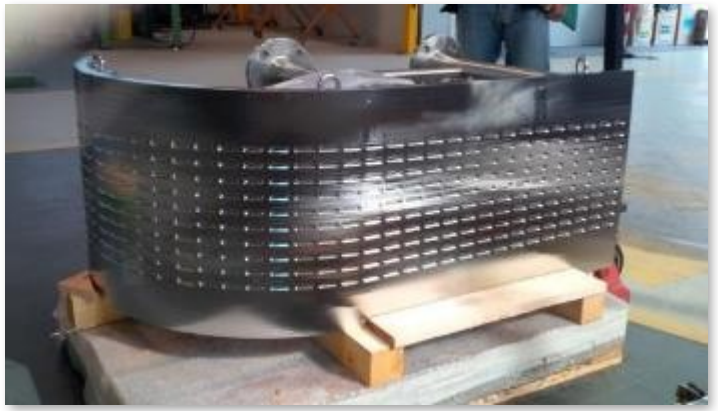
The ITER device promises to be the largest and most powerful fusion reactor in the world today. The ITER project has global significance and is sponsored by the European Union, Japan, Russia, the United States of America, China, South Korea and India.

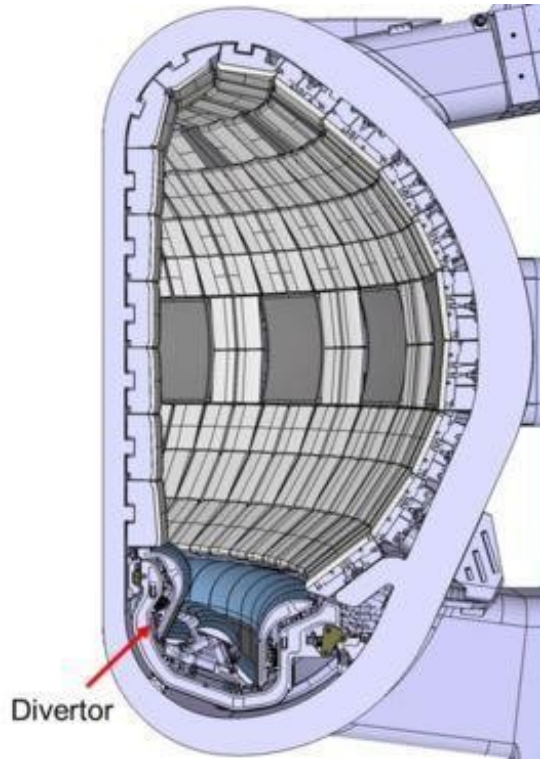
The AMW Consortium is responsible for the supply of the EU Vacuum Vessel Sectors (5 out of 9). The ITER Vacuum Vessel is a hermetically sealed steel container that confines the plasma. It is one of the most important and technologically challenging components of the ITER project in view of its complexity, its size, the degree of precision and the amount of welding required.

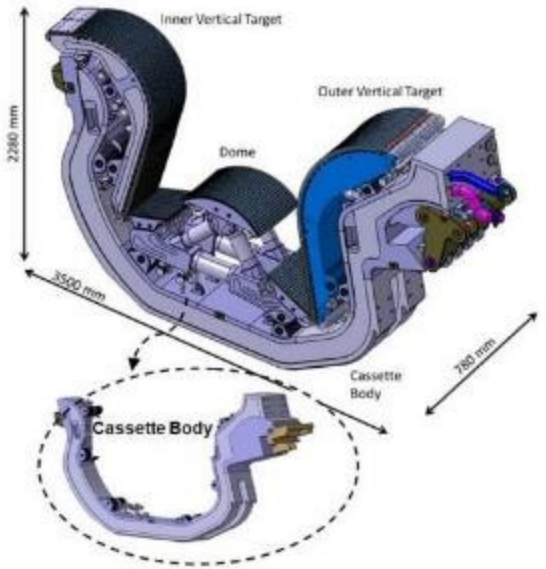
Big Science

The ITER Cassette Body is located at the bottom of the vacuum vessel. It extracts heat and ash produced by the fusion reaction, minimizes plasma contamination, and protects the surrounding walls from thermal and neutronic loads.

Walter Tosto has designed and manufactured a Cassette Body Prototype for a possible series of 58 items.







Big Science

ITER Vacuum Vessel
ITER Project - Caradache - Francia

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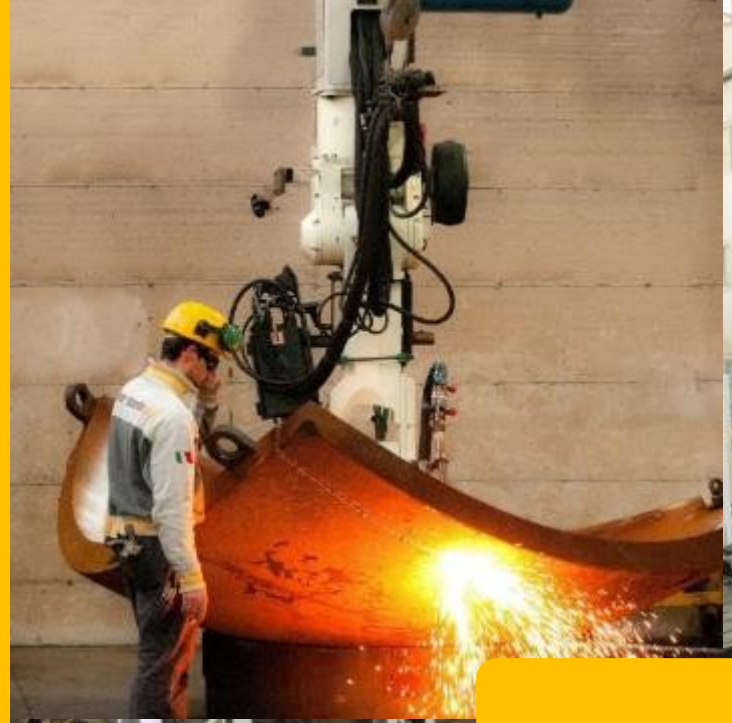
Main Equipment & Capability



Wide Machine Park

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Engineering & Design

SOME OF THE APPLICABLE DESIGN CODES AND STANDARDS

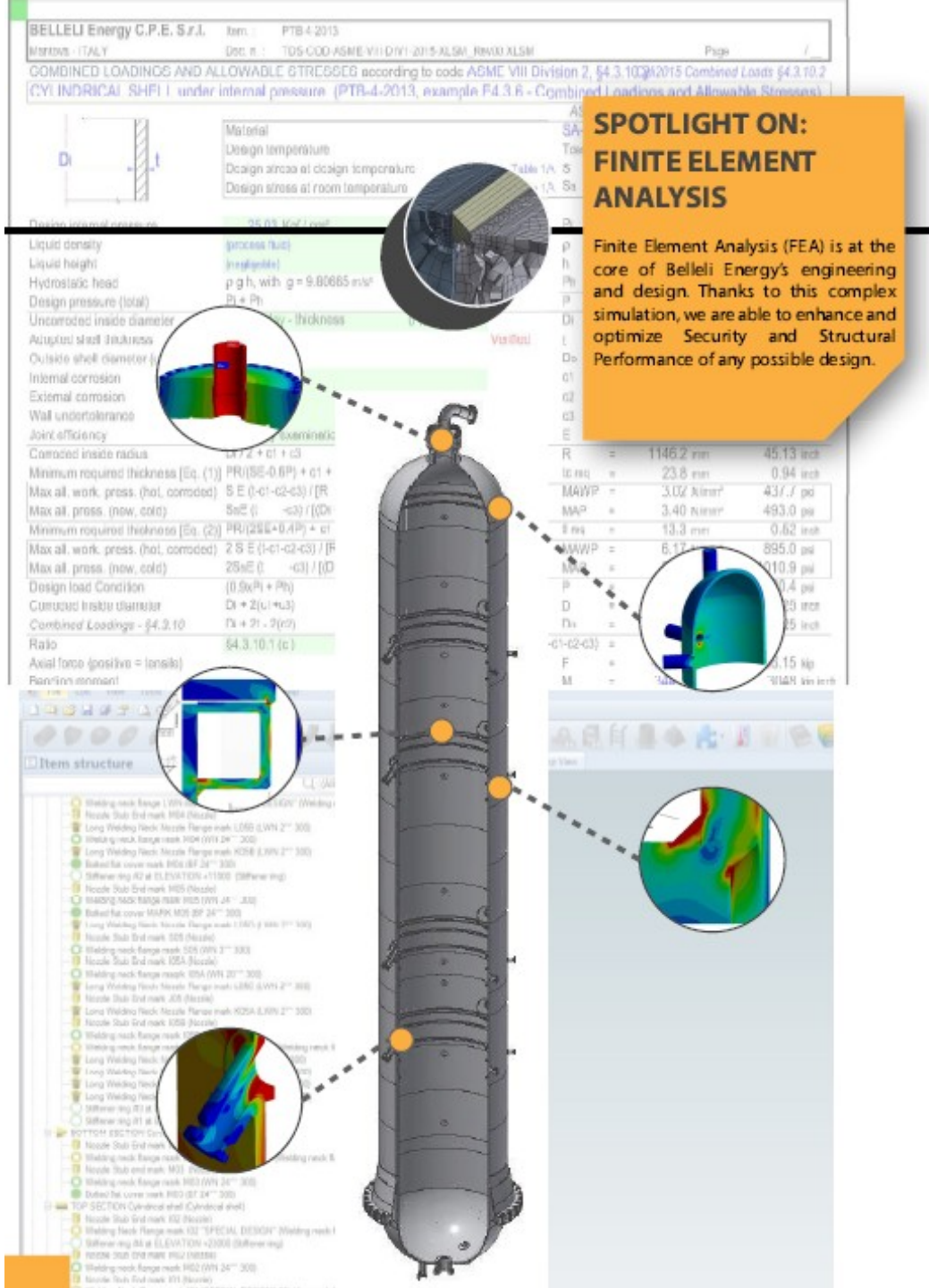
- ASME III	- ACI	- UNI-ISO
- ASME VIII Div. 1	- API	- TEMA
- ASME VIII Div. 2	- AS	- KTA
- PD5500	- ASCE	- GOST
- AD2000-Merkblatt	- EN13445	- DTU

COMPUTER AIDED DESIGN SYSTEMS

System Name	Purpose	Developer
- AutoCAD	2D Drawing	Autodesk
- Inventor	3D Drawing	Autodesk
- ANSYS	Finite Element Analysis	ANSYS
- NEXTGEN	Mechanical Calculation Software	Sant'Ambrogio
- Xhpe, Xist, Xjpe e Xvib	Thermal Calculation Software	HTRI
- Aspen	Thermal Calculation Software	Aspentech

The full knowledge and familiarity with all main design codes allow us to develop the best design from a mechanical point of view.
In addition to the mechanical design we are able to provide a detailed thermal and flow analysis, strongly believing that a solid in-house design capability is one of the main roots for clients' satisfaction.

Everything, from nozzle loads to fundation design, is deeply checked and researched from our technicians and engineers, supported by Finite Element Analysis and software calculations. Belleli Energy's extensive experience and immense database simplify the hard design challenges that we face in every project, letting our engineering department succesfully overcome even the most complex design requirements.



Engineering & Design

Materials

Carbon Steel (CS)
Fine-grain Steel/Normalized

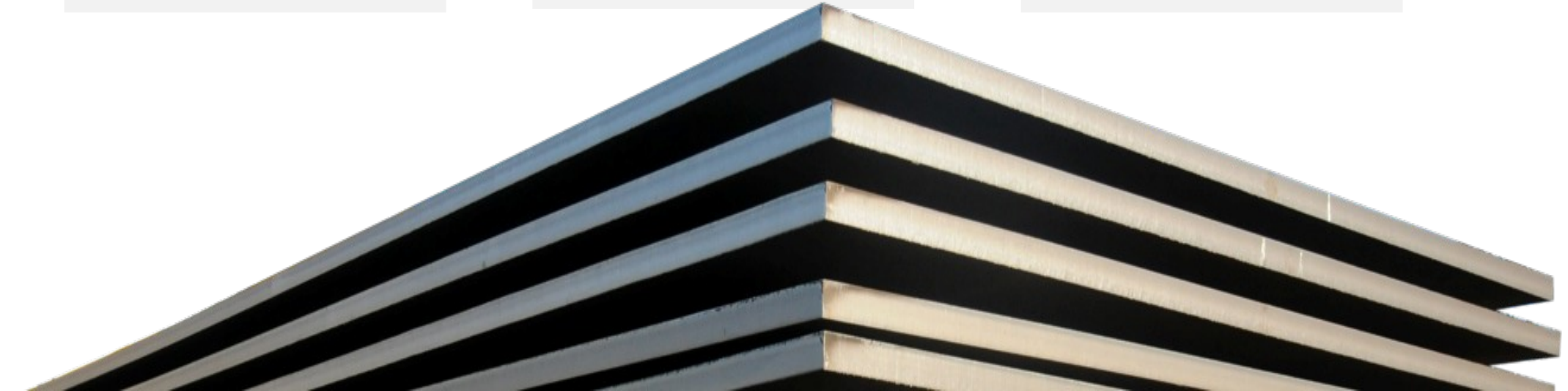
Cr – Mo alloys
0,5 Mo
1 Cr – 0,5 Mo
2,25 Cr – 1 Mo
2,25 Cr – 1 Mo 0,25V

Ferritic Austenitic Steel Duplex
S 31803
S 32205

Ni – Alloyed Steel
0,5 Ni
3,5 Ni

Stainless Steel
Ferritic
Austenitic
Alloy cladded

Non Ferr. Materials
Ti-Gr I/Gr. II
Copper Alloy
High Nickel Alloy



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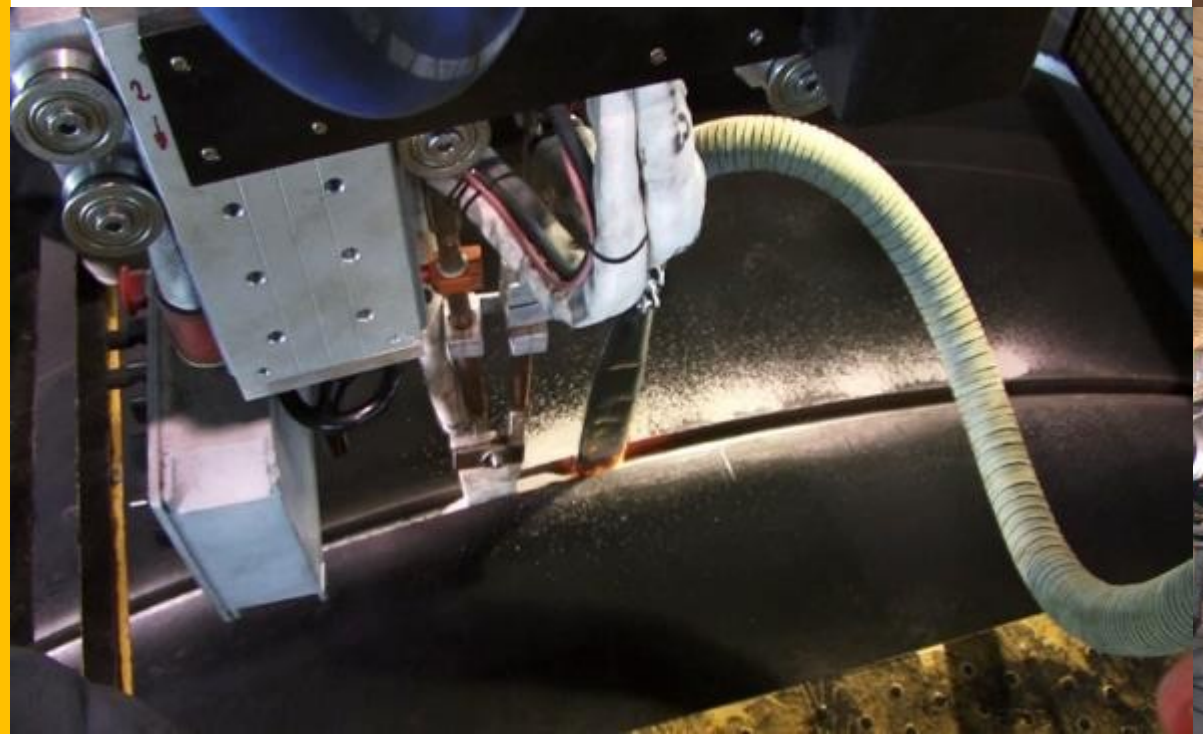
Welding

Welding process employed		Manual	Automatic
SMAW	Shielded Metal-Arc welding	X	
SAW	Submerged-Arc Welding		X
SAW STRIP	Subm.-Arc Weld. with strips		X
SAW Tandem	SAW Double Wire		X
GMAW	Gas Metal-Arc Welding	X	X
GTAW	Gas Tungsten-Arc Welding	X	X
FCAW	Flux-Cord Arc Welding	X	X
ESW	Electro Slag Welding		X
PAW	Plasma-Arc Welding		X



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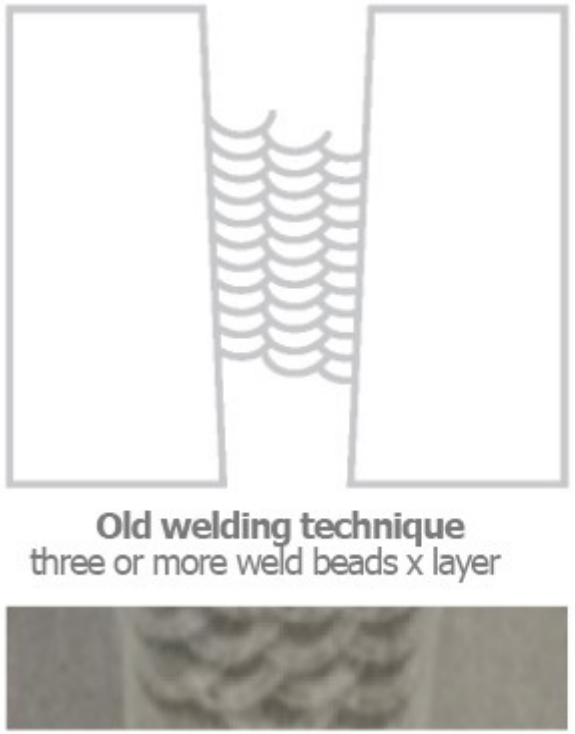
Welding

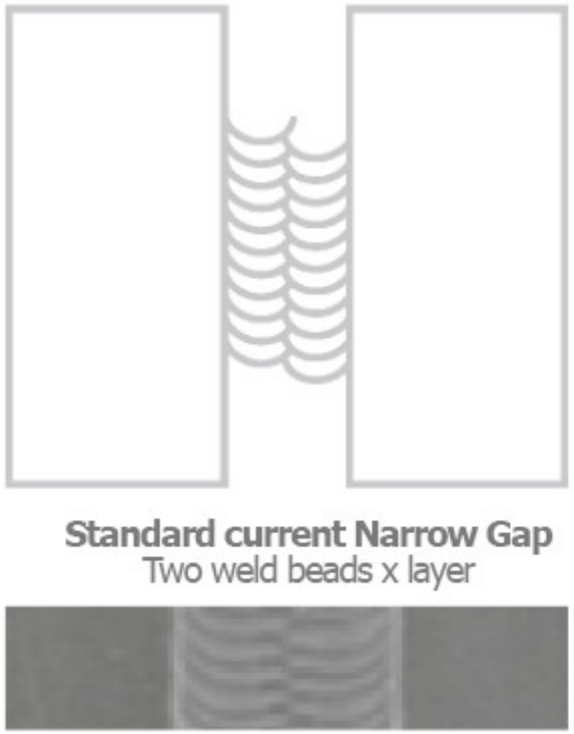
MONOWELD

A revolutionary solution for heavy-wall equipment

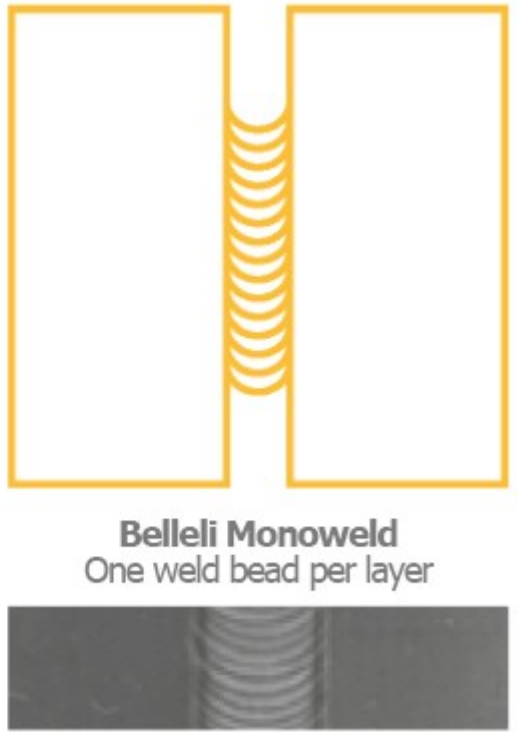
Belleli Energy CPE developed a new revolutionary welding technology, applicable to Cr Mo and Cr Mo V low alloy steels, designed for high temperature application and creep range service. The new technology, for which a Patent is pending, is based on a proven and reliable welding process such as Submerged Arc Welding but with a specifically designed weld joint and inherent dedicated welding sequence. The research has investigated the possibility to carry out an heavy wall weld based on One weld bead x layer sequence, defined as “MONOWELD Technology” while currently, a Narrow gap based on Two weld beads x layer is commonly adopted.



Old welding technique
three or more weld beads x layer



Standard current Narrow Gap
Two weld beads x layer



Belleli Monoweld
One weld bead per layer

tosto Srl WALTER TOSTO

Welding

MONOWELD

A revolutionary solution for heavy-wall equipment

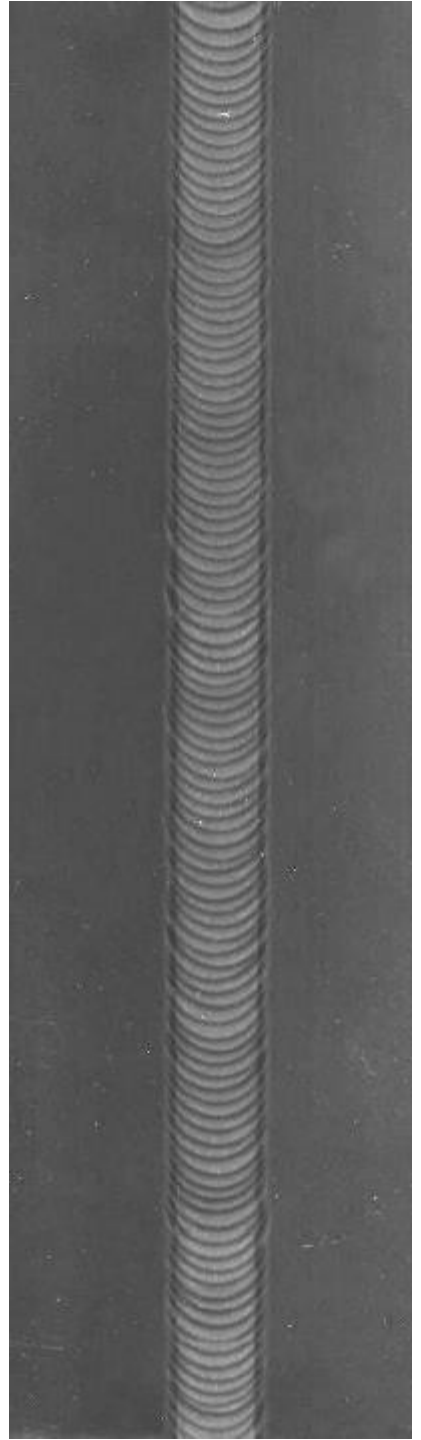
The MONOWELD technology was validated by the execution of several production weld such as circumferential weld joint-thickness 284 mm and longitudinal weld joints thickness 140 mm. These welds were subjected to the required examinations including ultrasonic examination both manual and mechanized TOFD (Time of Flight Diffraction) according to the ASME Code Sect. VIII Div. 2, paragraph 7.5.5, with fully satisfactory results. A further examination was carried out according to API RP 934 A, Annex A, with no defects detected.

CREEP RESISTANCE BEHAVIOUR IMPROVED
Thanks to a higher uniformity of mechanical properties

POTENTIAL WELD DEFECT OCCURRENCE REDUCED
Precisely controlled welding technique, with dedicated and refined welding parameters

-30%

-30% WELD VOLUME AND -30% WELDING TIME REDUCED
Narrower weld joints leads to reduced weld consumables cost and equipment delivery time



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Synergies

COLLABORATION AMONG THE COMPANIES FOR MEGA-PROJECTS

This sections highlights how the three Companies of the Tosto Group, Walter Tosto Spa, Belleli Energy CPE srl and Walter Tosto WTB have achieved a concrete synergy that allows the Tosto Group to operate as a major Player for all worldwide mega-projects.

Thanks to the several past and on-going collaborations on strategic projects in the Oil & Gas and Petro-Chemical Industry, the Companies have in fact increased their own know-how and improved their performances; therefore, they are capable to offer the market state-of-the-art manufacturing capabilities together with most competitive pricing and delivery terms.

Advantages of co-production

Possibility to acquire large orders in terms of:

- economic value;
- scope of work;
- complexity and/or technology requirements;

On-time delivery

The joint manufacturing capabilities of the three Companies allows the Tosto Group to condense the fabrication schedules and optimize the manufacturing process in order to guarantee on-time deliveries for large packages of critical process equipment.

Overall Cost reductions

Signfi cant benefits from:

- Sharing of all key sub suppliers among the three Companies;
- Cost savings due to higher bargaining and negotiation power thanks to increased volumes of raw materials to be procured.

Added value for the Client:

The final result from the collaboration between the three Parties is better than the result of three single Companies operating on their own.
The systemic work between the three parties lead to a greater performance of each Company.
Each manufacturer's know-how, design and production experiences are made available and shared for the overall benefit of the Project.

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Synergies

KEY FACTORS OF A SUCCESSFUL COLLABORATION

Flexibility
On the type of contract most suitable for Client requirements.

Similarity of the companies
ThethreeCompaniesarecharacterized by an identical organization, they are tied by similar procedures and the same philosophy of work.

Identical modus operandi
That guarantees the uniformity of the manufactured products; the Client will receive a fi nal Product with uniformity characteristics, independently from which of the three companies manufactured the goods.

No Risk Approach
The three Companies offer a redundancy of machinery and manufacturing resources to ensure an appropriate and safe execution of the Project. This unique feature is the best solution to mitigate any potential risk during the Project execution.

Coordination
Of all the functional areas with particular attention to the project management, design and purchasing.

Co-engineering
Based on the number of items to be supplied, one of the three manufacturers is selected as leader for all detail engineering activities. The design activities are subsequently developed jointly with the other partners in order to increase the efficiency of the engineering process.

Procurement
Communication among procurement managers; Sharing of Vendors lists; Coordination on the delivery of materials in order to best accommodate Project's requirements and the production needs of each Company.

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Synergies

KEY FACTORS OF A SUCCESSFUL COLLABORATION

Manufacturing

Integration of the production processes; The sharing of strategic information related to the manufacturing experiences of each company in order to pursue the common goal of maximizing the fin al result; The split of the scope of work is based on the characteristics and Client's quali cation of each Company.

Logistics integration

Each company benefits from workshops with direct access to the Adriatic Sea:

- Venice-Porto Marghera (Belleli)
- Ortona (Walter Tosto)
- Danube River/Black Sea (Walter Tosto WTB).

Such strategic positions foster the connection for the transportation of products and materials, by reducing the transport time and allowing the transportation of oversized items from one company to another.

Customer Management

Activities managed by three project managers, one for each company; The Client communicates through a Single Point of Contact (SPOC) who reports and transfers all the information to the other parties.

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Thank you for your attention