F.B. S.P.A.

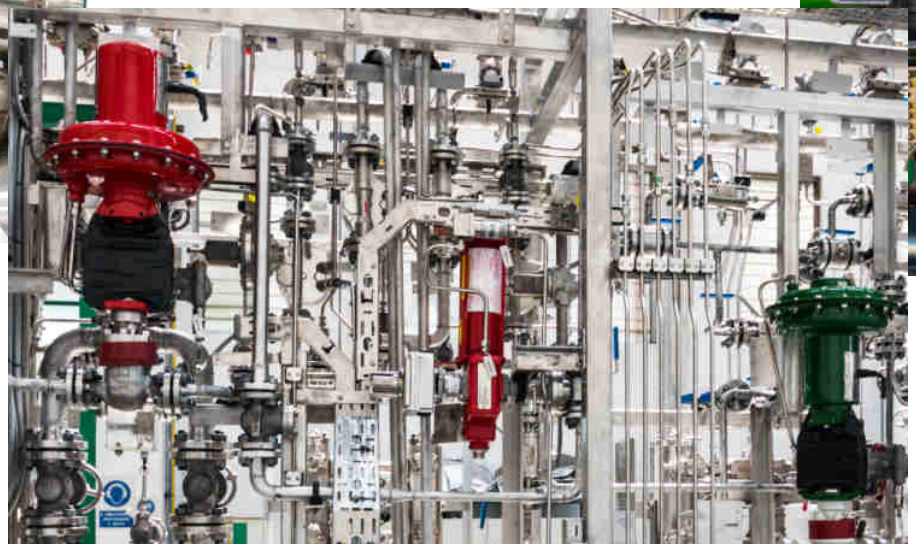
IMPIANTI TUBAZIONI MONTAGGI INDUSTRIALI

CUSTOMIZED PACKAGES

60
YEARS OF
EXPERIENCE

THE WORKSHOP

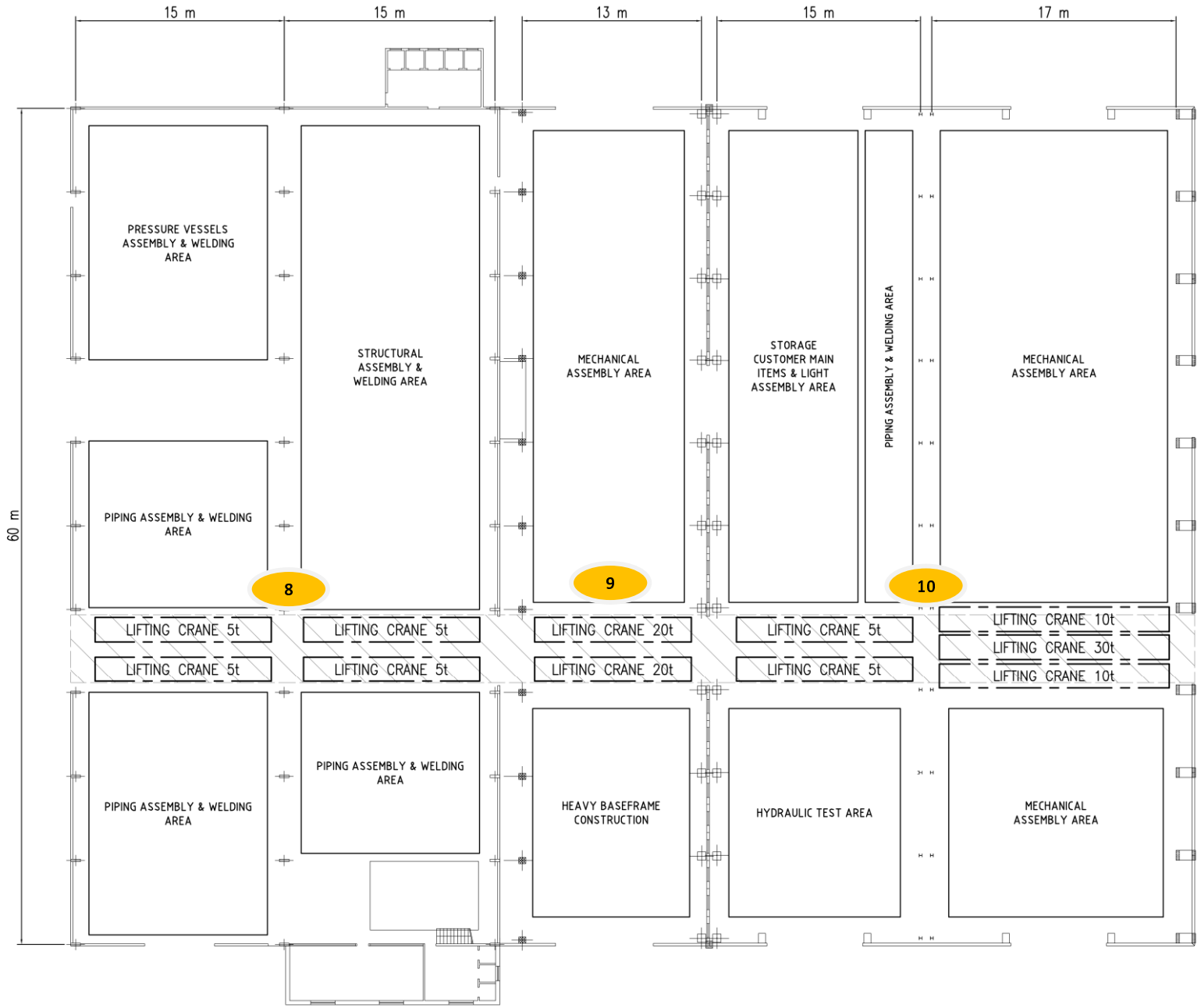
1. FACTORY PRESENTATION (sh. 3 ÷ 28)
2. PRODUCT PRESENTATION (sh. 29 ÷ 40)
3. PRODUCTION CAPABILITY (sh. 41 ÷ 42)
4. HUMAN RESOURCES (sh. 43)
5. SKID ASSEMBLY AND TOOLS (sh. 44 ÷ 45)
6. COMPANY CERTIFICATIONS (sh. 46 ÷ 47)
7. MAIN PARTNERSHIPS (sh. 48)



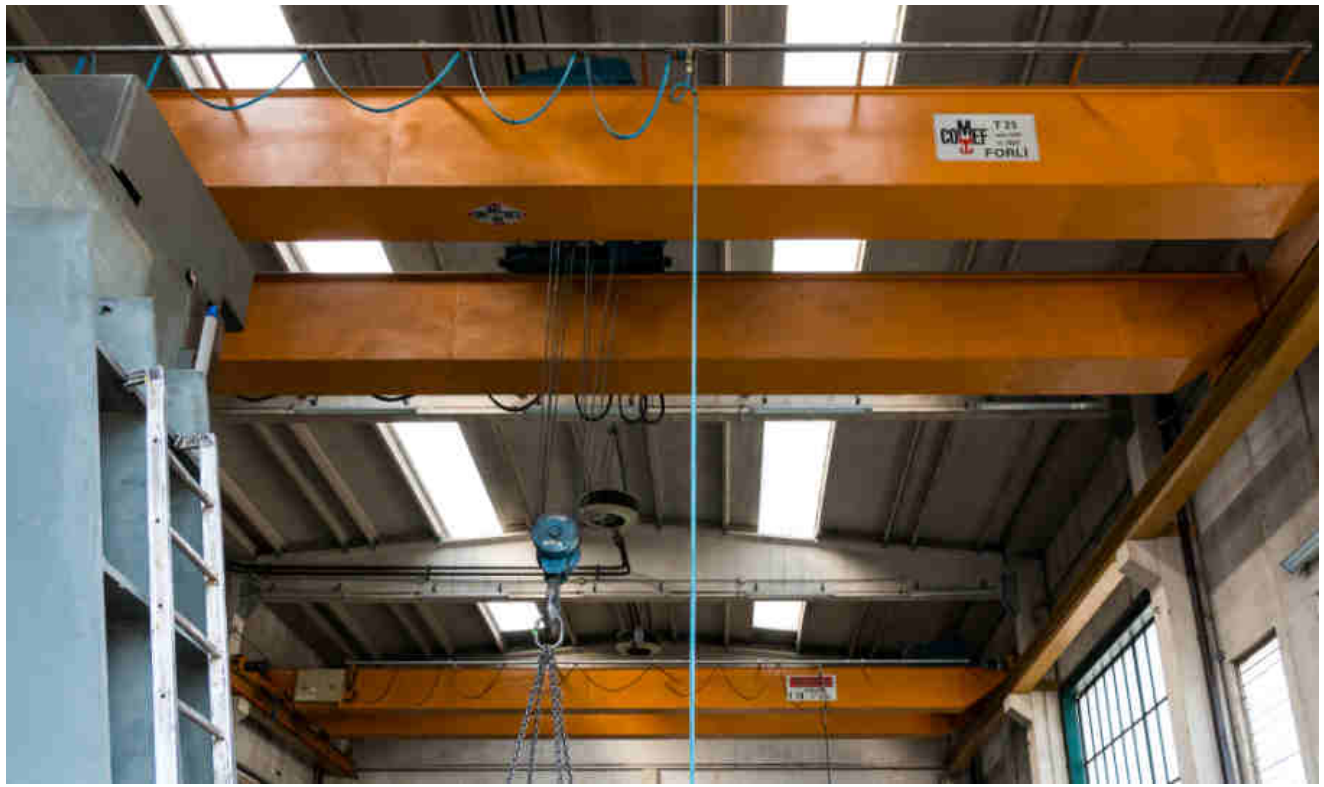
FACTORY PRESENTATION

1 ADMINISTRATIVES OFFICE
2 TECHNICAL OFFICE & QUALITY
3 BUNKER & DARK-ROOM
4 PRECISION MECHANIC JOBS
5 SHOT BLASTIC AND PAINTING
6 WAREHOUSE (1)
7 WAREHOUSE (2)
8 PIPING & STRUCTURAL STEEL FRAMES CONSTRUCTION
9 BASE FRAMES & PACKAGES ASSEMBLY
10 PACKAGES ASSEMBLY
11 TEST -BENCH AREA
12 PAINTING STORAGE
13 UNCOVERED STORAGE AREA

WORKSHOP LAYOUT COVERED AREAS



BRIDGE CRANE LIFTING CAPACITY



Departments	Capacity	
Bunker	N.1	2 tons
Precision Mechanic Jobs	N.2	10 / 25 tons
Painting	N.1	15 tons
Piping & Str. Steel Frame	N.4	5 tons
Baseframe Assembly	N.2	20 tons
Package Assembly	N.5	5 / 10 / 30 tons

BRIDGE CRANE MAX HEIGHT

Departments 8-9-10	**Max Height**
Piping & Str. Steel Frame	7.6 m
Baseframe Assembly	9.0 m
Packages Assembly	8.3 m

MOBILE CRANES & OTHER LIFTING SYSTEMS

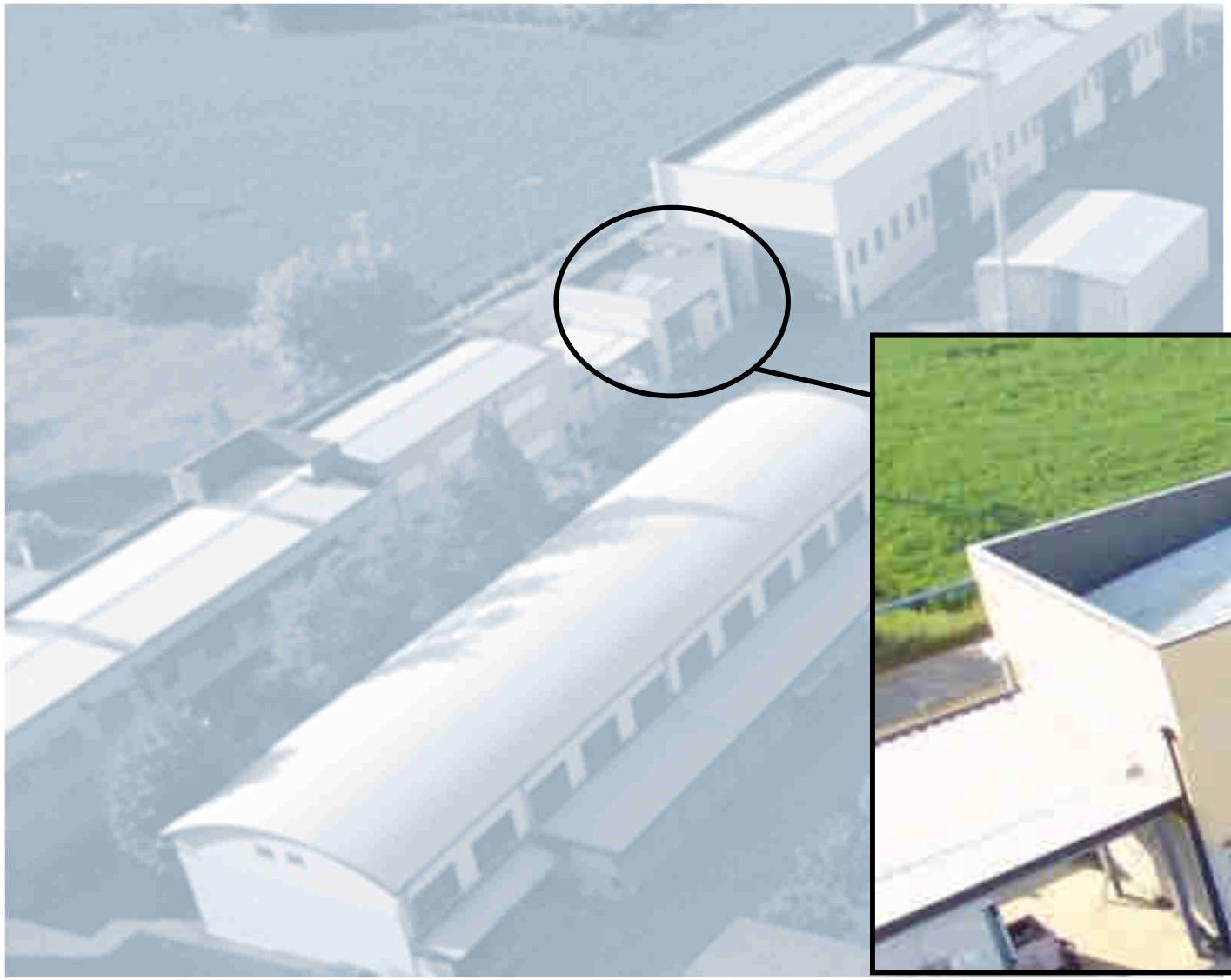
MOBILE CRANE
No. 6 from tons. 15 to 35
Jib length available m.20 ÷ 40

No. 4 from tons. 0.5 to 12
Jib length available m.4 ÷ 25

PLATFORM CARS
No. 6 from tons. 10 to 100

FORKLIFT TRUCK
No. 4 from tons. 2.5 to 5
No. 1 - 14 tons

3 - BUNKER & DARKROOM



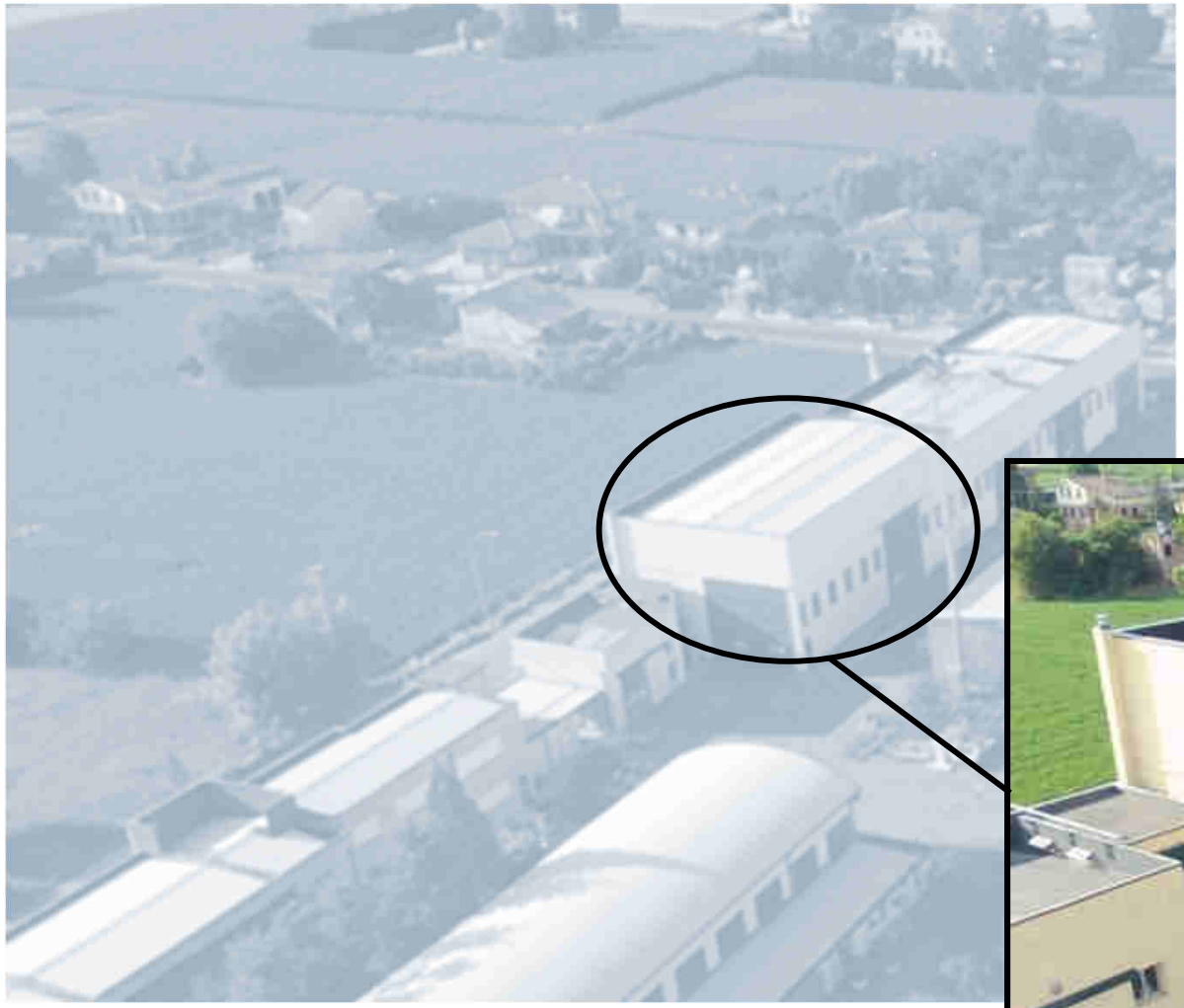
AREA

60 m^2

3 - BUNKER & DARKROOM

No. 2 X-RAY apparatus
Type GILARDONI MHFM – 300/3 (Kv/mA)

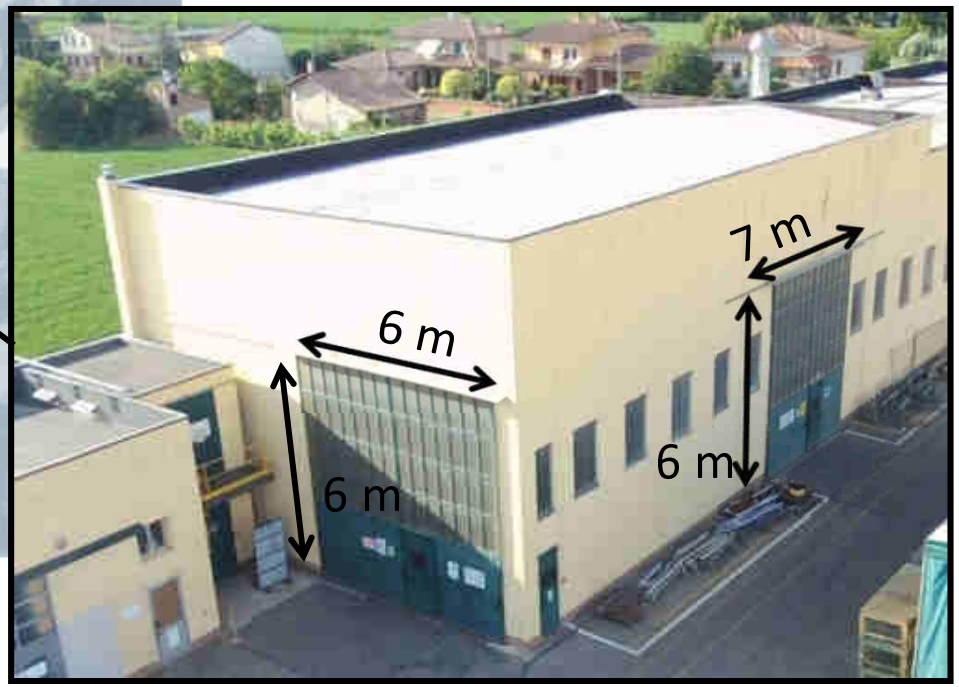
No. 2 Iridium Rγ IR 192
Type GAMMAMAT B/89/B(U) - 96
Capacity: 3TBq=80Ci



AREA

390 m^2

LARGE SLIDING DOORS
OPENING DIMENSIONS
From 6 x 6 m to 7 x 6 m



4 - MECHANIC JOBS

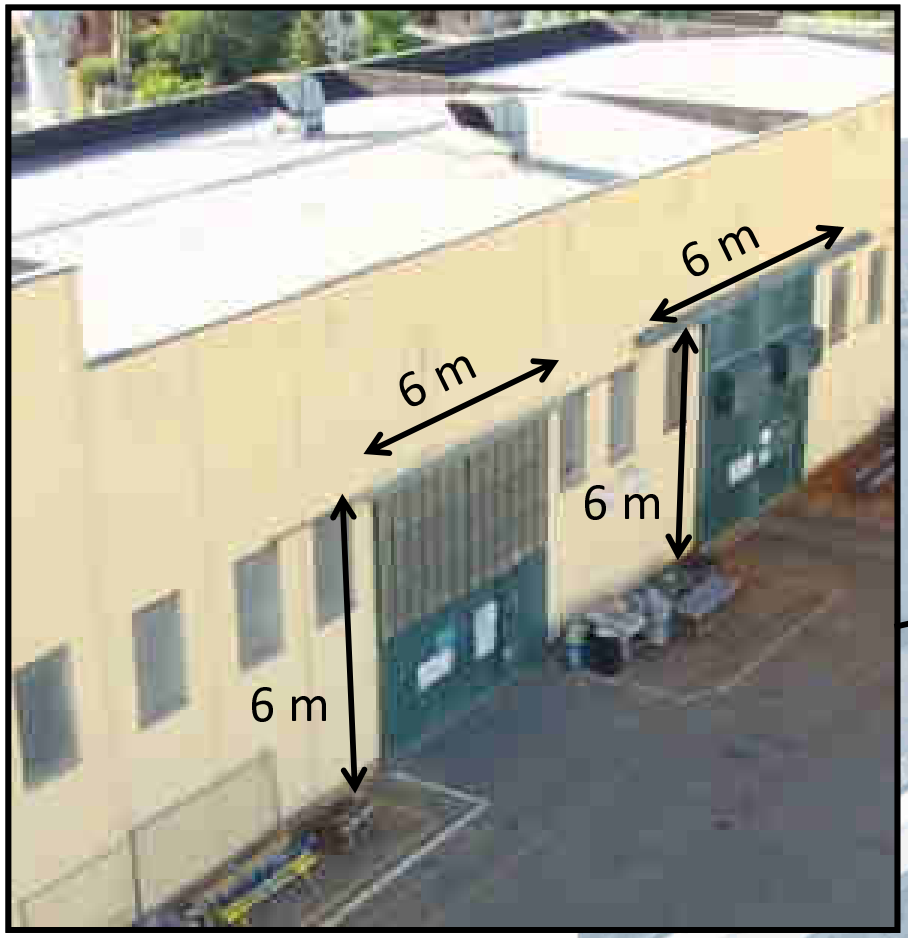
Universal “FRORIEP” a fully automated milling and boring machine, CNC controlled and operating on three axis, allows the machining of items with considerable dimensions in length, height and width (approx. 11m x 4,5m x 1.4m), and weight up to 50÷70 tons. The machine is completed with several special tools for milling, drilling, trading, boring and lapping.

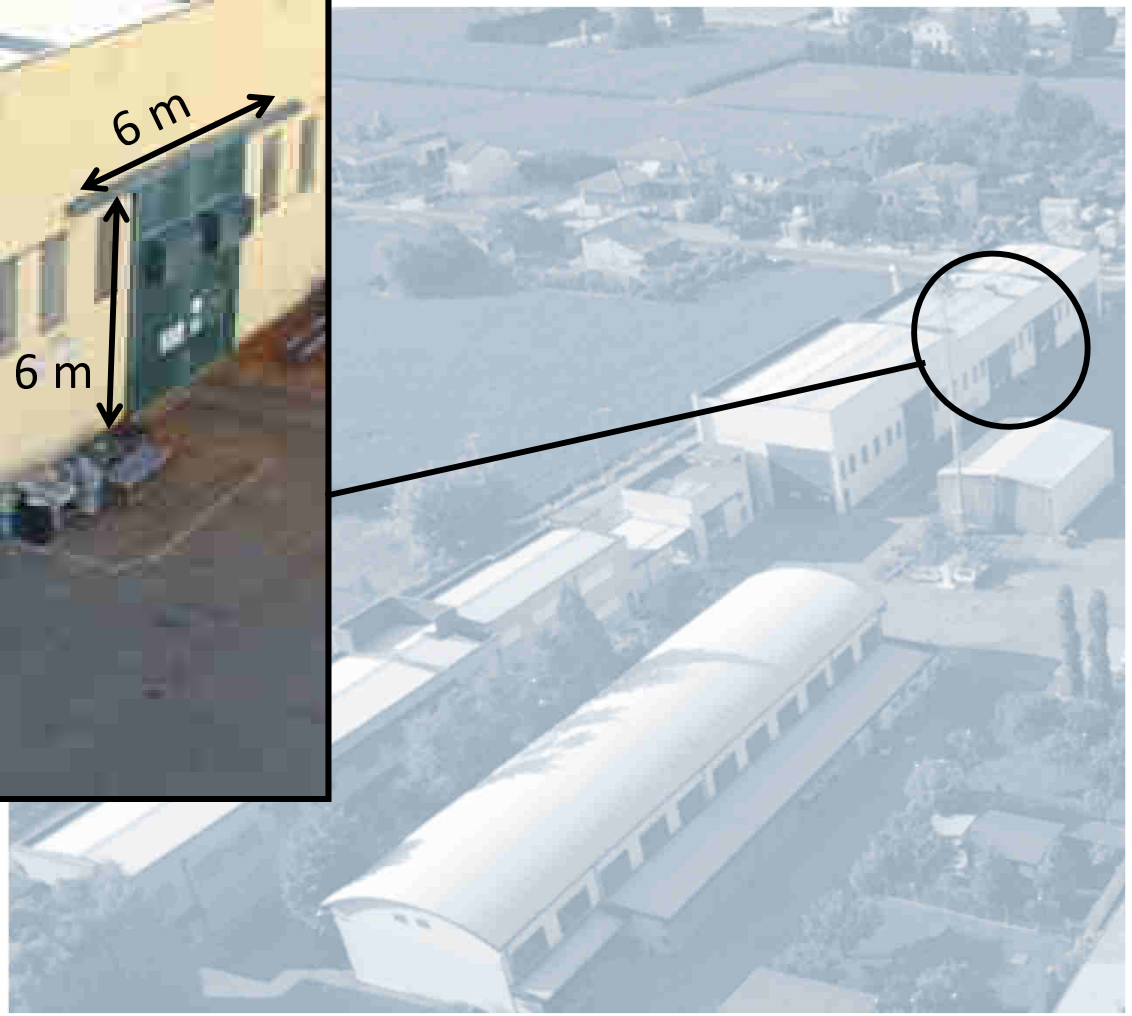
Boring machine “KOMPAKT”
Milling fixed worktable
Dimensions 2m x1m x1m (h)

5 - SHOT BLASTING AND PAINTING

AREA

400 m^2





LARGE SLIDING DOORS
OPENING DIMENSIONS

6 x 6 m

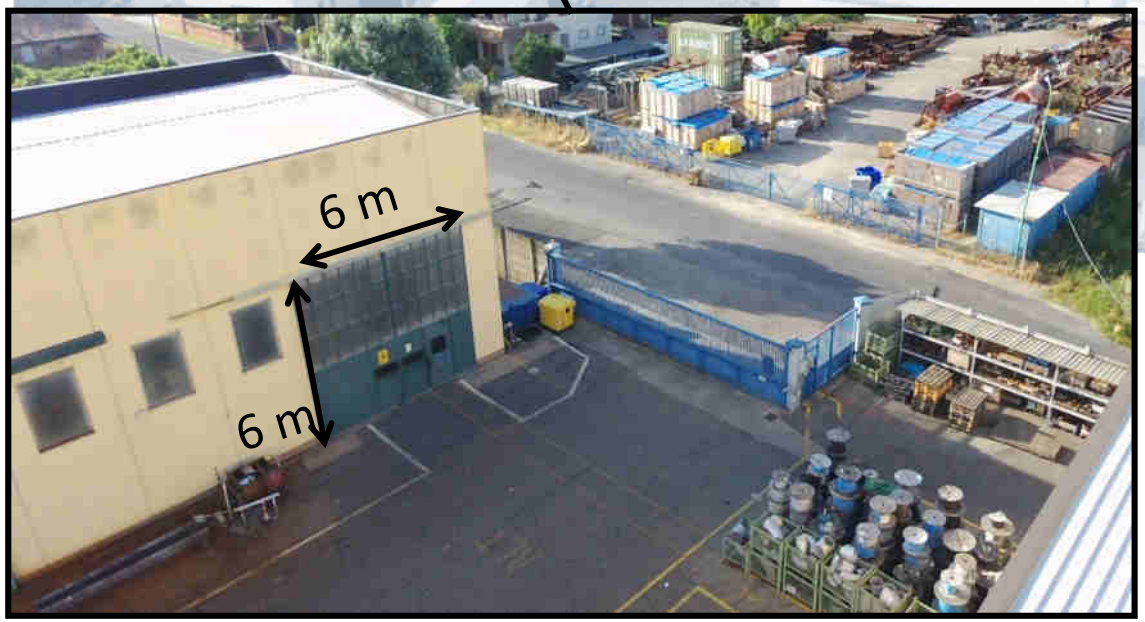
5 - SHOT BLASTING AND PAINTING

The shot blasting shop consists of an area of 100 m2, complete with dust blasting system recovery and testing devices according to current codes. The shot blasting system uses cast steel sharp metallic grit, for the preparation of surfaces as required by applicable painting cycles.

The painting shop consists of an area of 300 sq. meters, fully equipped with floor grids and dry filtering suction system. All in full compliance with local environmental regulations and provided with accurate tools like Pin Hole, Cross Hatch Cut and adhesive paint testing methods. We can execute protective treatments on the basis of the different purposes and conditions of use of the product, such as corrosion, high temperature, oil dripping, abrasive action, etc.

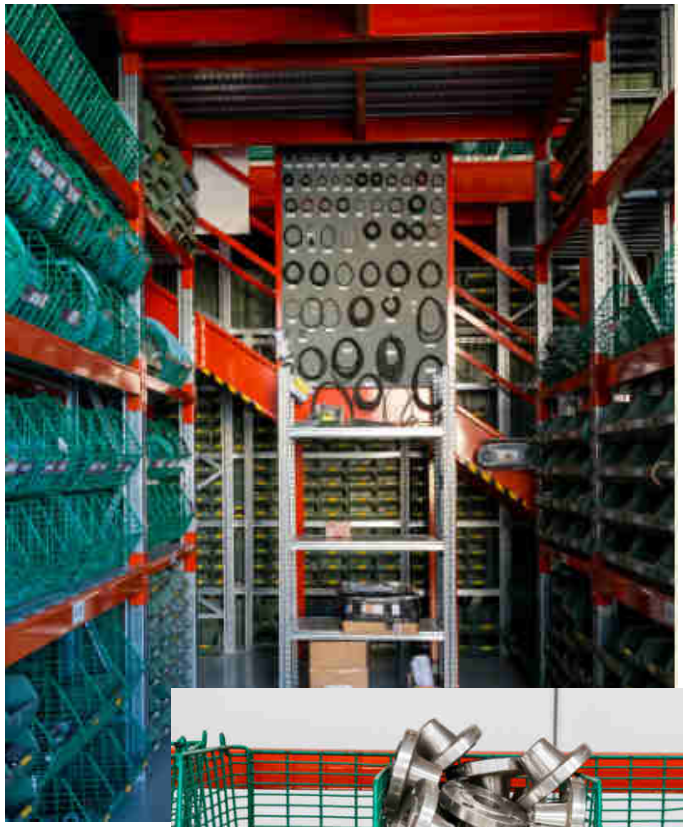
The characteristics of the surrounding area, verified by means of thermo-hygrometer, assure a proper protection against climate conditions, dampness and temperature changes for the whole application and drying cycles. F.B. is qualified according to NORSOK coating procedure (M501 rev.6 cycle 2A, 6B and 6C) and level II inspector FROSIO certified for painting and coating (NS 476).

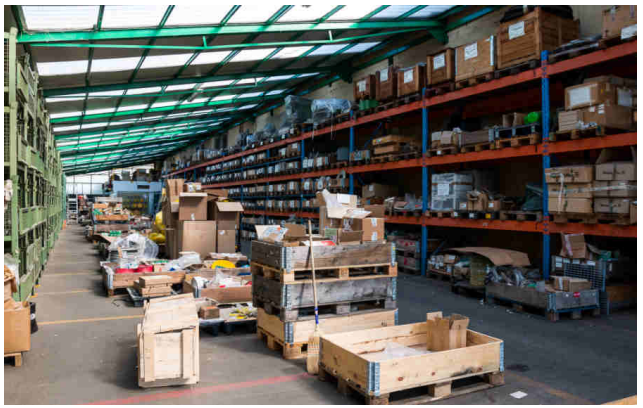
6/7 - WAREHOUSES

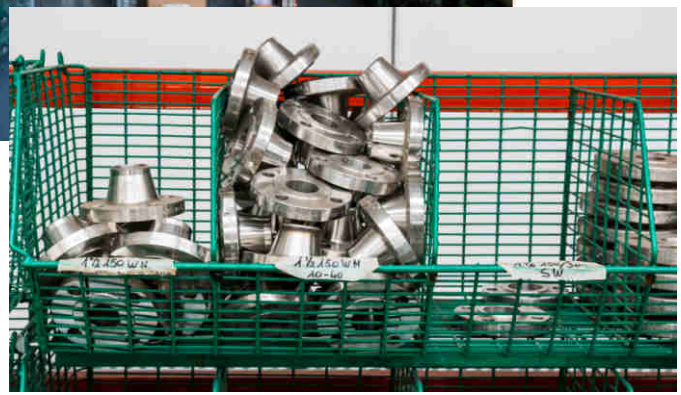


LARGE SLIDING DOORS
OPENING DIMENSIONS
6 x 6 m

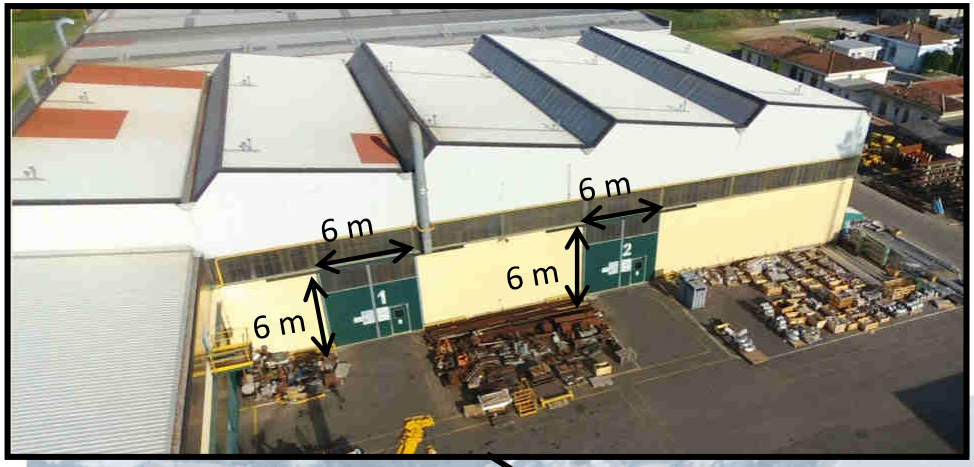
6/7 - WAREHOUSES







8 - PIPING & STRUCTURAL STEEL FRAMES CONSTRUCTION



LARGE SLIDING DOORS
OPENING DIMENSIONS

5 x 6 m to 6 x 6 m

AREA

1800 m^2

8 - PIPING & STRUCTURAL STEEL FRAMES CONSTRUCTION

9 - BASEFRAMES & PACKAGES ASSEMBLY

AREA

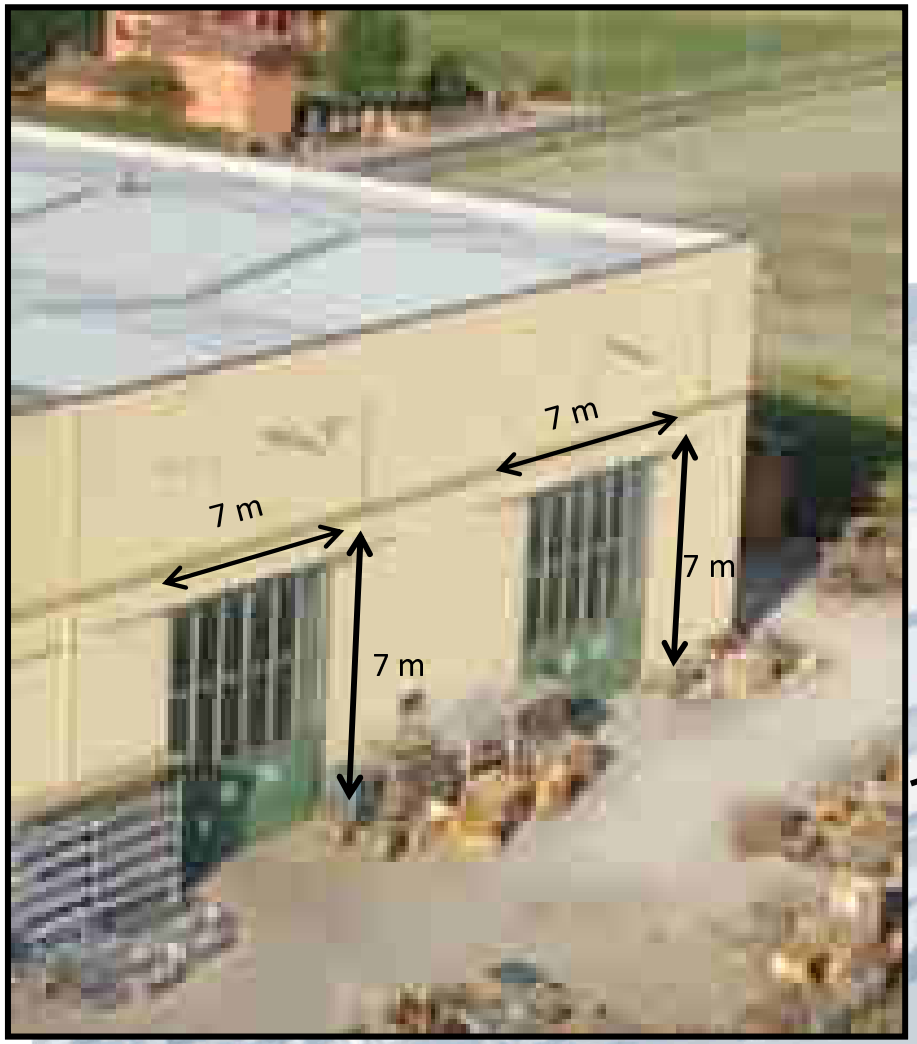
960 m^2

LARGE SLIDING DOORS
OPENING DIMENSIONS

7 x 7 m

9 - BASEFRAMES & PACKAGES ASSEMBLY

10 - PACKAGES ASSEMBLY



LARGE SLIDING DOORS
OPENING DIMENSIONS

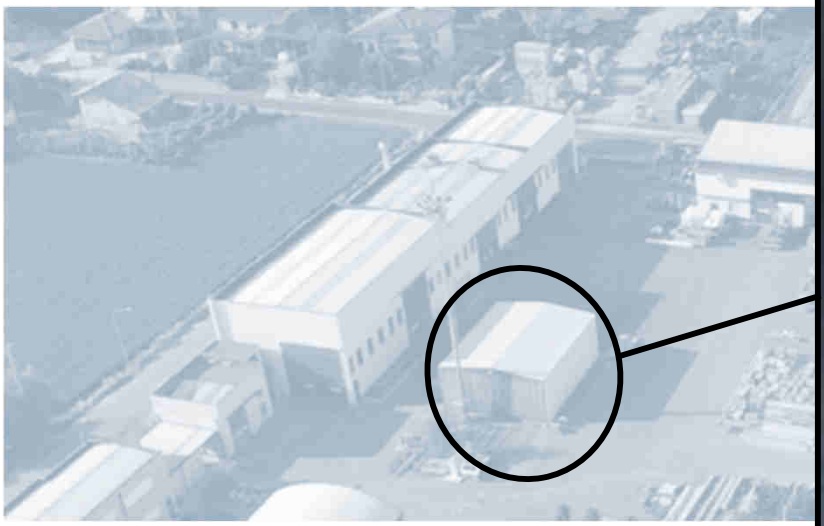
7 x 7 m

AREA
2100 m^2

10 - PACKAGES ASSEMBLY

11 – OUTDOOR TEST-BENCH AREA

AREA 225 m^2
Dim. 15 x 15 x 5 m

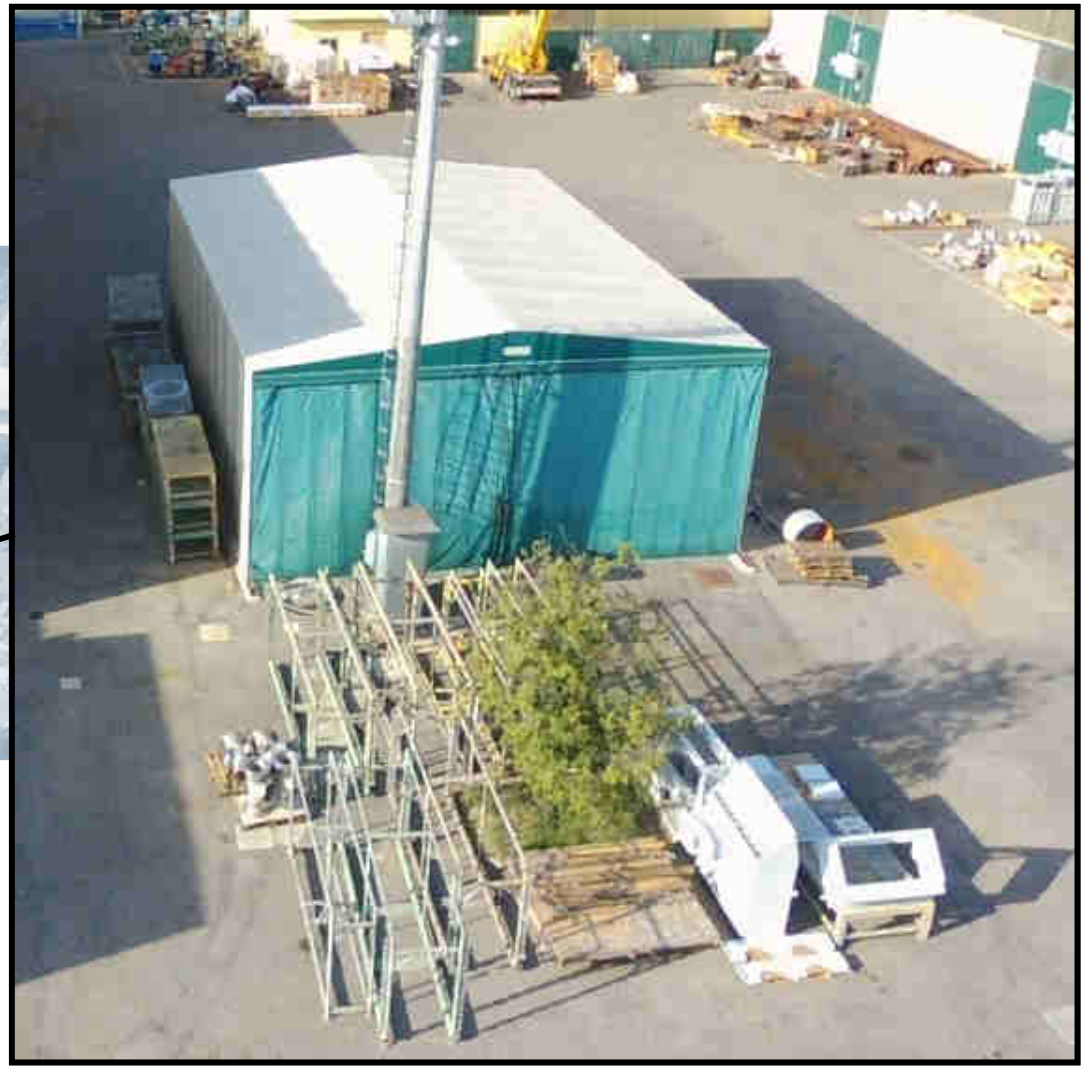


TYPE OF TESTS

RUNNING & FULL-LOAD

VOLTAGE : 6000 V

POWER: 1000 KW



11 - OUTDOOR TEST-BENCH AREA

Centrifugal compressor full load test electric motor driven 1300 kW - 10000 V - 50 Hz
with external generators

11 - OUTDOOR TEST-BENCH AREA

Performance test-run
Six rows reciprocating compressor & auxiliaries

11 - OUTDOOR TEST-BENCH AREA

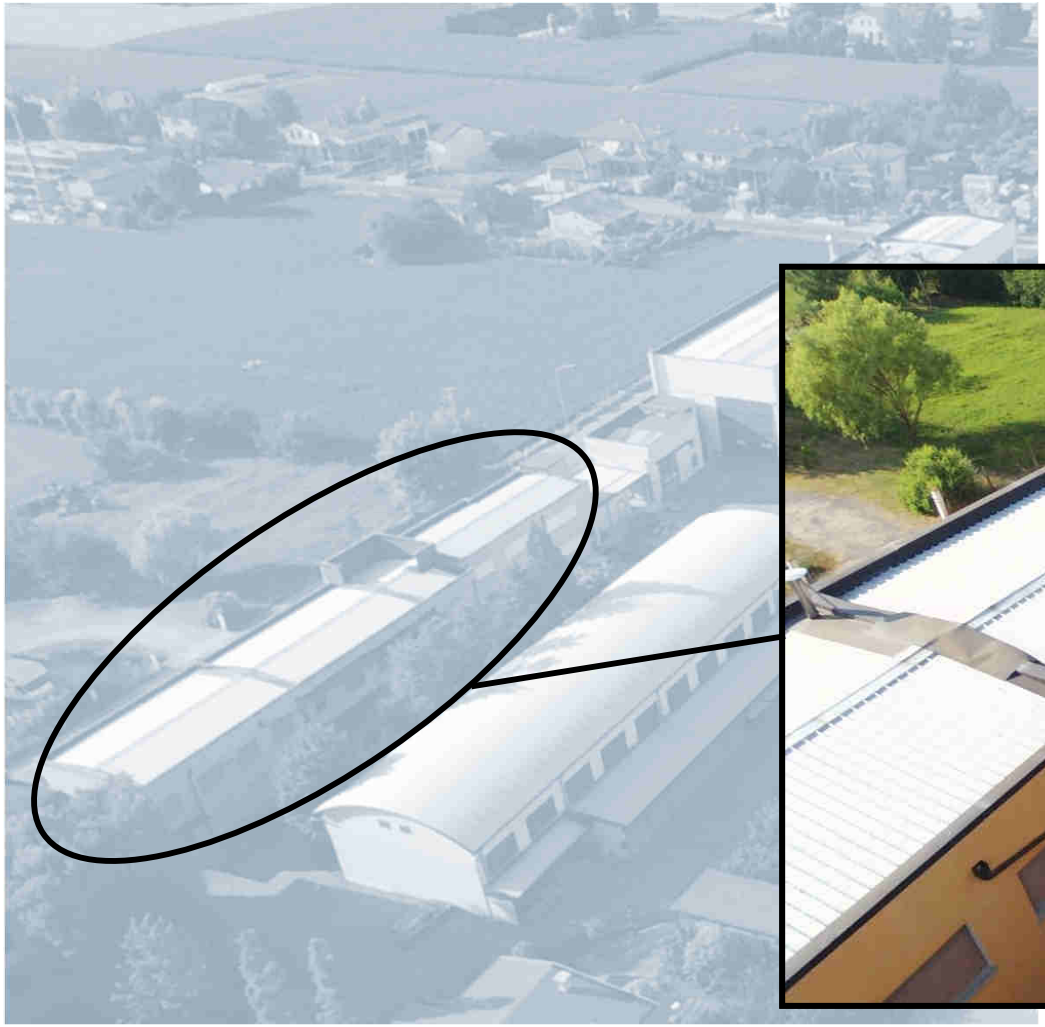
Test-bench internal view
(liquid ring compressor)

13 - UNCOVERED STORAGE AREA

AREA

4000 m^2

ADMINISTRATIVES / TECHNICAL & QUALITY OFFICES



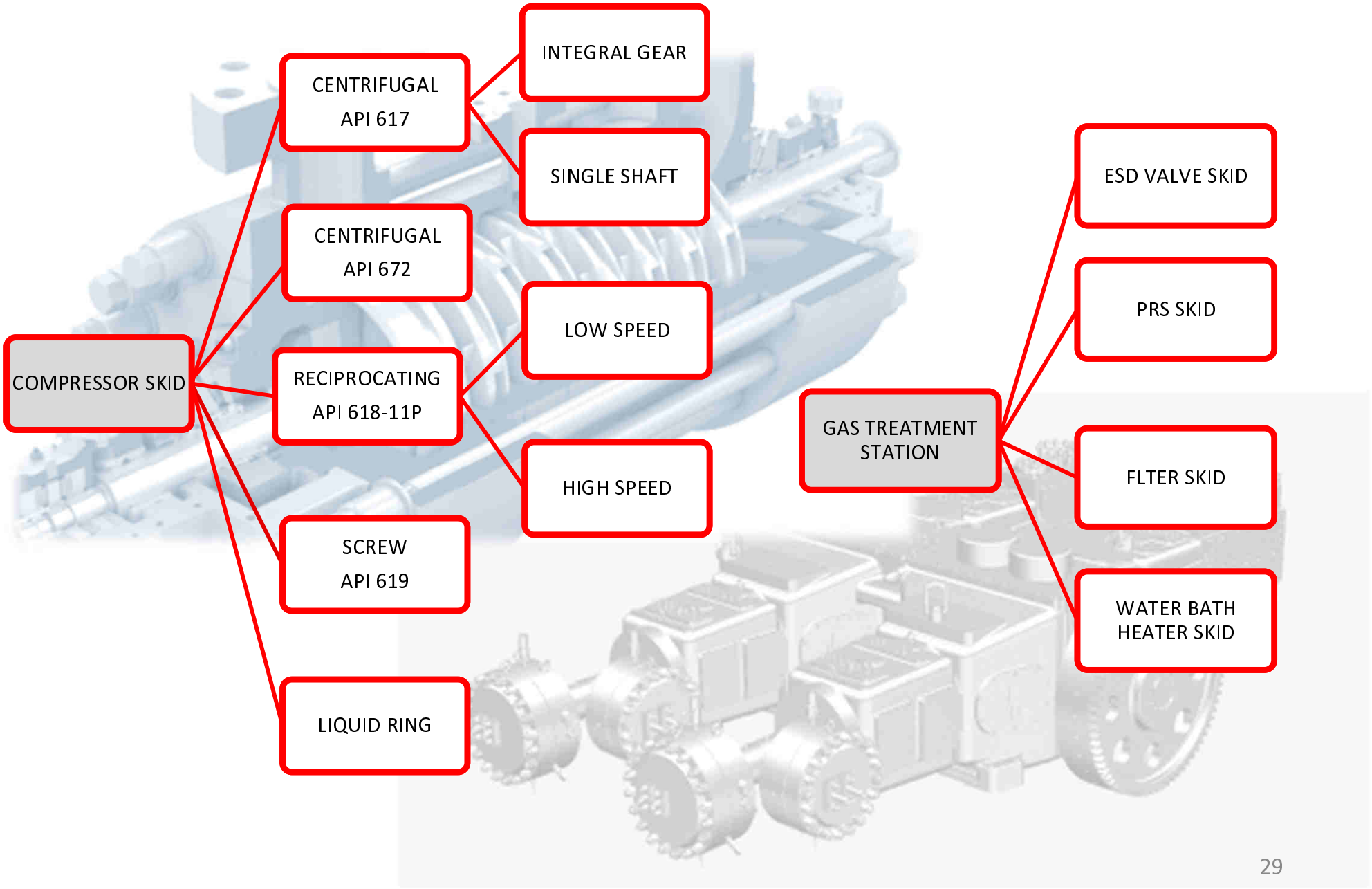
AREA

500 m^2

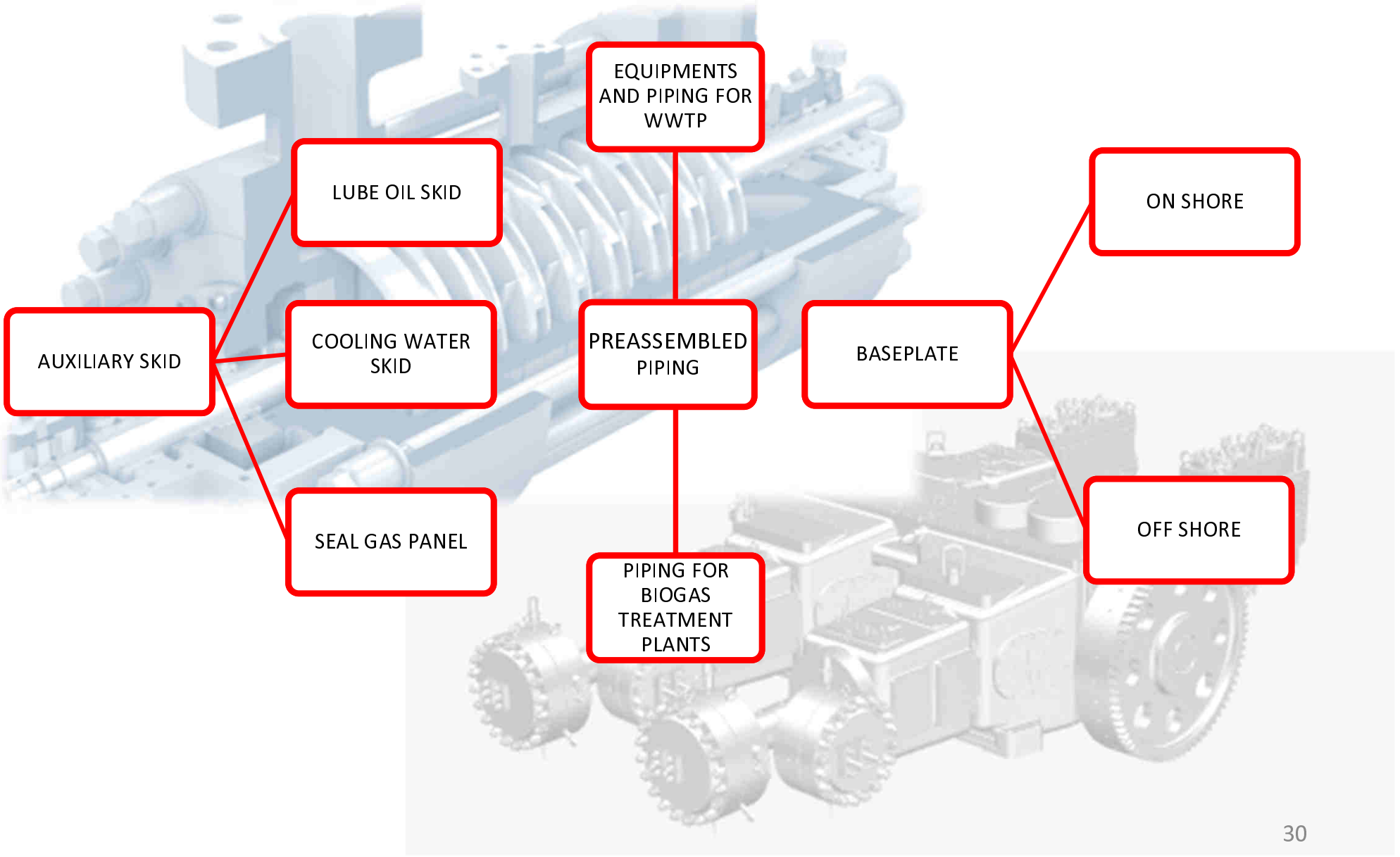
TECHNICAL & QUALITY OFFICES

F.B. introduced in its organization a system able to offer valuable technical support for advanced engineering and design activities.
The staff employed for these activities include qualified engineers and technicians, supported by outsourced consultants, focused on the special requirements of each project.

SKID


COMPRESSOR SKID
CENTRIFUGAL API 617
INTEGRAL GEAR
SINGLE SHAFT
CENTRIFUGAL API 672
RECIPROCATING API 618-11P
LOW SPEED
HIGH SPEED
SCREW API 619
LIQUID RING
GAS TREATMENT STATION
ESD VALVE SKID
PRS SKID
FLTER SKID
WATER BATH HEATER SKID

AUXILIARY


AUXILIARY SKID
LUBE OIL SKID
COOLING WATER SKID
SEAL GAS PANEL
EQUIPMENTS AND PIPING FOR WWTP
PREASSEMBLED PIPING
PIPING FOR BIOGAS TREATMENT PLANTS
BASEPLATE
ON SHORE
OFF SHORE

CENTRIFUGAL COMPRESSORS PACKAGE 250 UNITS

STATOIL - Johan Sverdrup Phase 1 - NORTH SEA

SBM - Baleia Azul – brazil

IBERDROLA– CCGT Project in Lithuanian Power Plant

L&T - Bibiyana South 400MW CCPP - BANGLADESH

RECIPROCATING COMPRESSORS PACKAGE 400 UNITS

ENAGAS / FLUOR - Regasification plant Huelva – SPAIN

PETRONAS - Rapid HDPE P27 Pengerang – MALAYSIA

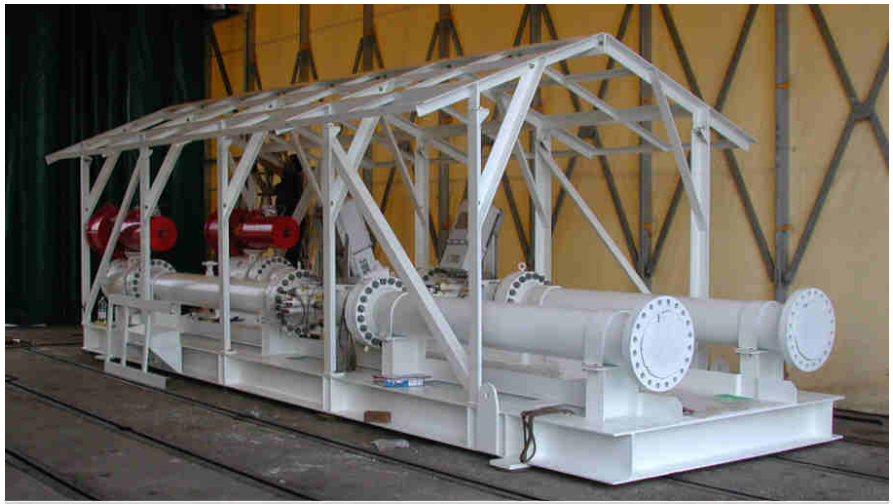
QCON-QP - Halul Island – QATAR (UAE)

ENPPI - Asorc Napha Complex Project (ISBL) - EGYPT

GAS TREATMENTS STATION SKID

Lebanon Gas Pipeline – SYRIA

Stazione di misura di Masera - ITALY



Barka Oil Fields - OMAN

HOWI BROS. - Syria Lebanon Gas Pipeline

SCREW OIL FLOATED PACKAGE
LIQUID RING COMPRESSORS PACKAGE

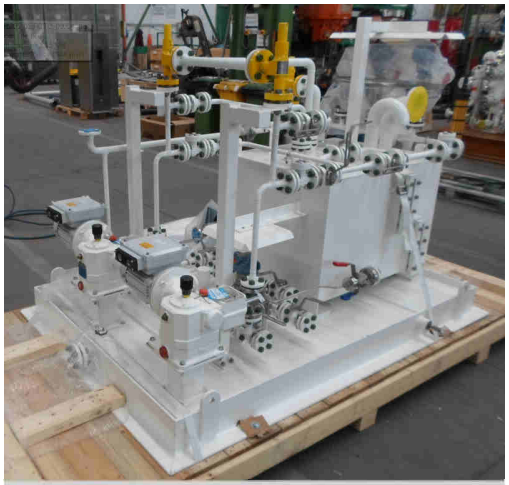
Screw Compressor - WARTSILA – New Shuttle Spirit Tankers Project - CHINA

Liquid Ring Compressor – Petroleum Development OMAN LCC Lekhwair AGMP AP Gas Recovery Project - OMAN

COOLING WATER SKID

SFERA LLC - Mosenergo Power Plant (TPP-16) – RUSSIA

JGC - BAPCO - BAHRAIN



RHIP Project - OMAN

ORPIC - LIWA PP/PE2 - OMAN

LUBE OIL SKID

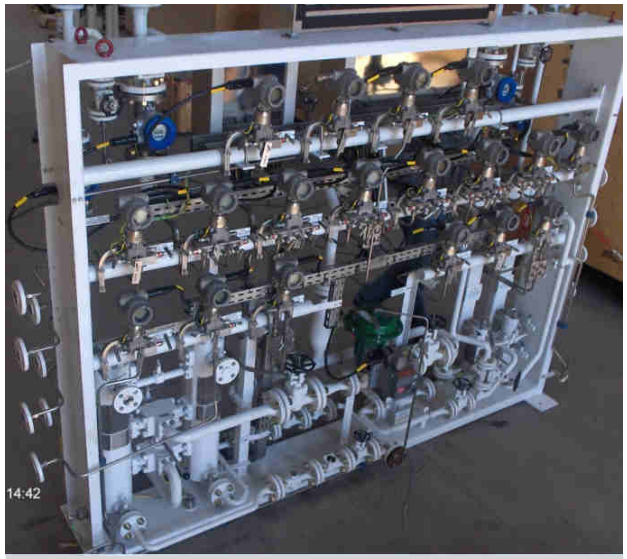
ADMA/OPCO – SARB Project - UAE

LUKOIL -Volgograd - RUSSIA

ORPIC - LIWA PP/PE1 - OMAN

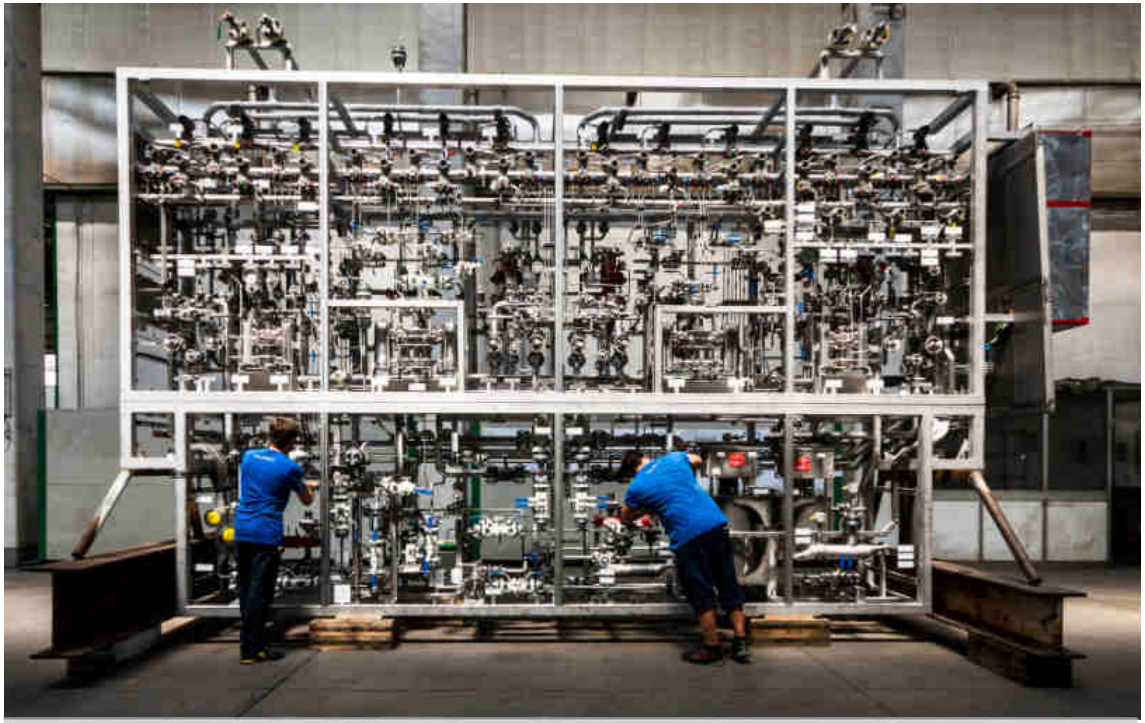
ORPIC - LIWA PP/PE2 - OMAN

SEAL GAS PANEL



FLUOR/RASGAS - ***RL(3) Common OFFPLOT Project*** - **QATAR**

GASCO - Ruwais 3rd NGL Train Project – ABU DHABI



STATOIL - Johan Sverdrup Phase 2 Project - North Sea

BS140/BS150 - Kuwait

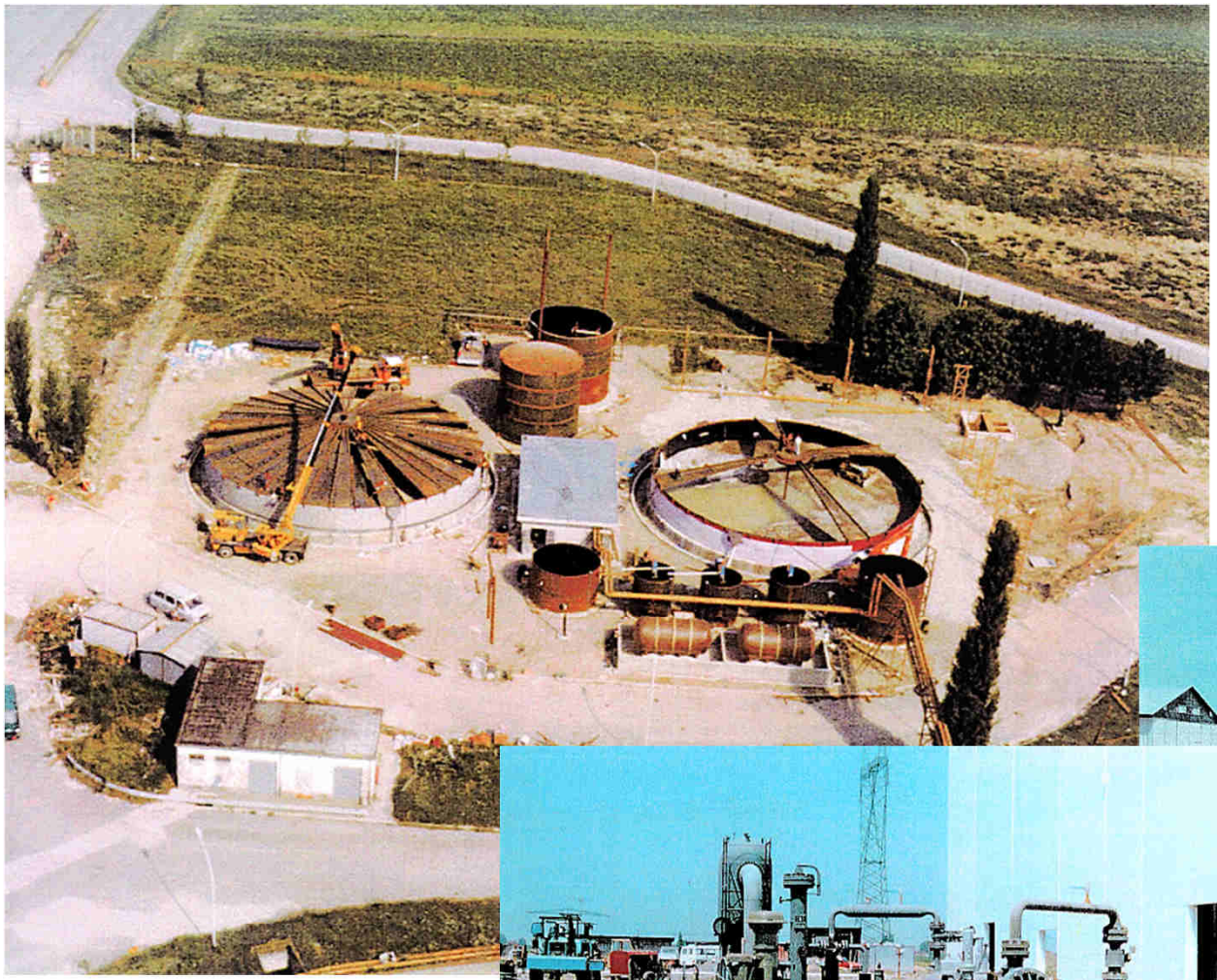
PREASSEMBLED PIPING

POLSKIE KONSORCJUM CHEMICZNE SP. Z.O.O - PALDISKI / PUIATU Project - BALTIC

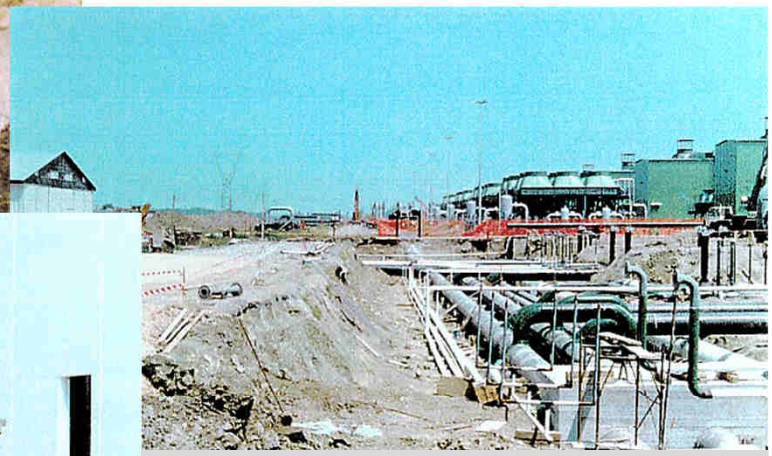
TECHINT - Dunkerque LNG-03 Project – Dunkerque FRANCE

SHELL U.K. – St. Fergus Compression Station – SCOTLAND U.K.

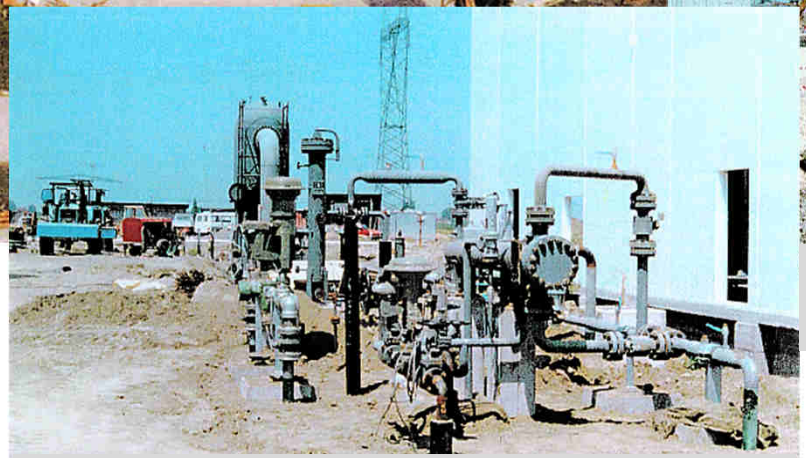
RENEWABLES



Piping and Equipments for Biogas treatment, recovery and distribution, Waste Water treatment plants (WWTP).



SNAM Minerbio Plant – Distribution Station (manufacturing at site)



SNAM Minerbio Plant – Distribution Station

BASEPLATE ON SHORE / OFF SHORE

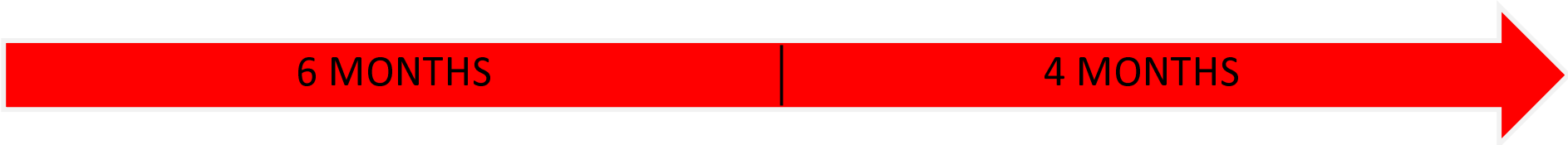
GASCO - Taweelah Gas Compression Station Project - UAE

ADCO NEAD BU HASA - ABU DHABI

Maxus - INDONESIA

COMPRESSOR PACKAGES DELIVERY TIME

DELIVERY TIME: 10 MONTHS AFTER P.O.



ENGINEERING

PROCUREMENT

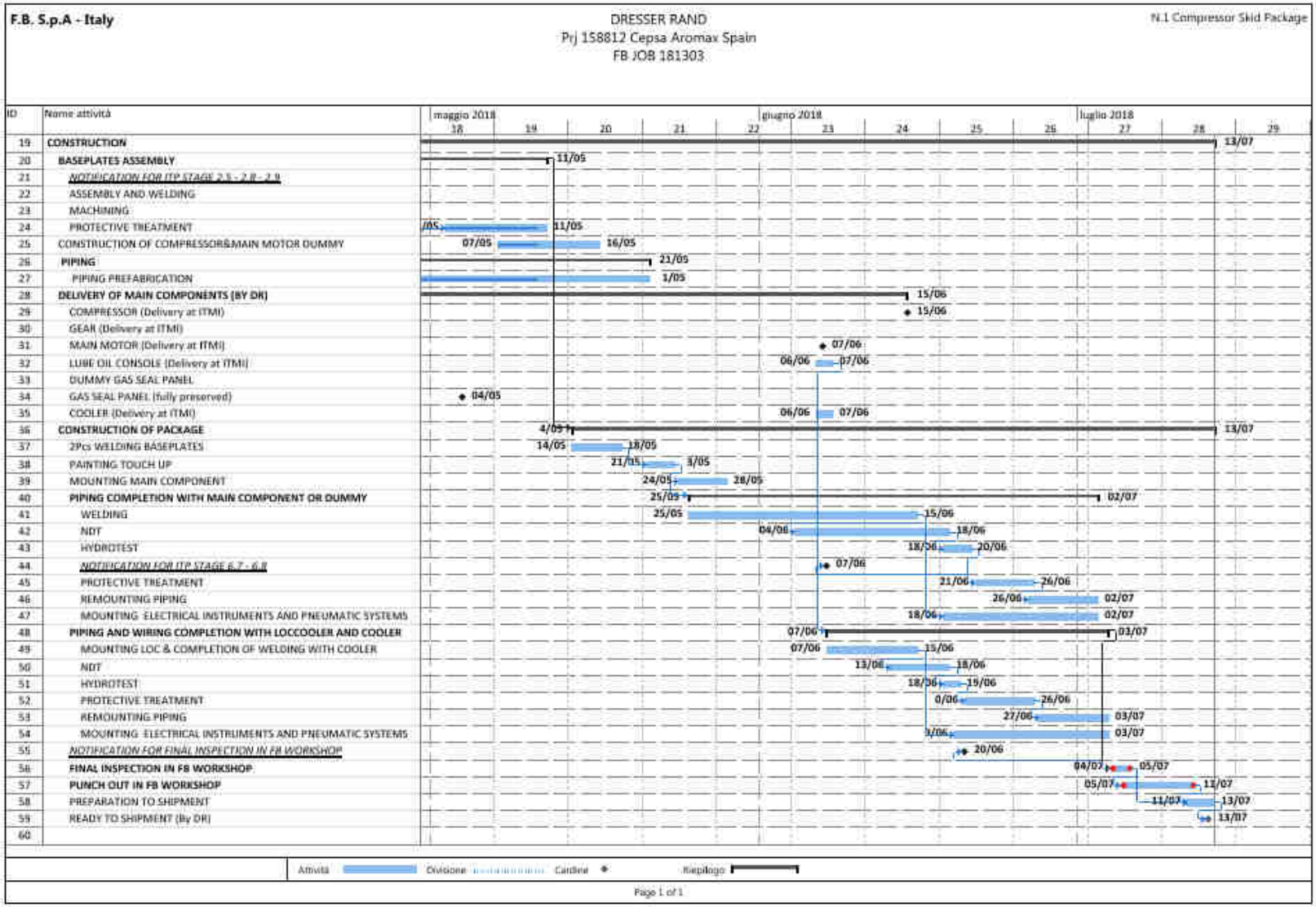
MAIN COMPONENT

CONSTRUCTION & ASSEMBLY

TESTS

PACKING

PRODUCTION PLANNING



HUMAN RESOURCES

ORGANIGRAMMA DELLE FUNZIONI AZIENDALI
FUNCTIONAL ORGANIZATION CHART

- DIREZIONE GENERALE / *GENERAL MANAGER* [DIGE]
  - RESPONSABILE ASSICURAZIONE QUALITÀ ISO 9001 e PED [RAQ] e ASME U/U2 [QCM] *QUALITY CONTROL MANAGER*
    - COORD. ATTIVITÀ DI SALDATURA *WELDING COORDINATOR* [SCS]
    - STAFF CND INTERNO *NDT INTERNAL STAFF* [CND]
  - RESP. SERVIZIO PREVENZIONE E PROTEZIONE & AMBIENTE *HSE MANAGER* [RSPP & AMB]
  - RESP. SISTEMI INFORMATICI *SYSTEM ADMINISTRATOR* [SA]
  - UFFICIO PERSONALE *HUMAN RESOURCES* [UPERS]
  - RESP. UFFICIO AMMINISTRATIVO *ACCOUNTING MANAGER* [RAMM]
  - RESP. UFFICIO ACQUISTI *PURCHASING MANAGER* [RACQU]
  - RESP. MAGAZZINO *WAREHOUSE MANAGER* [RMAGE]
  - RESP. COMMERCIALE *SALES MANAGER* [RCOMM]
  - RESP. UFFICIO TECNICO *TECHNICAL MANAGER* [RUTEC]
    - PROJECT MANAGERS *PROJECT MANAGERS* [PM]
    - RESP. PROGRAMMAZIONE *PRODUCTION PLANNING MANAGER* [RPIAN]
    - CONTROLLO QUALITÀ *QUALITY CONTROL* [QC]
    - RESP. PRODUZIONE OFFICINA *MANUFACTURING MANAGER* [RPROD]
      - RESP. REPARTO CARPENTERIA E CALDARERIA *PRESSURE VESSEL AND STEEL STRUCTURES MANAGER* [RRCC]
      - RESP. REPARTO LAVORAZIONI MECCANICHE *MILL MACHINING MANAGER* [RRLM]
      - RESPONSABILE REPARTO ASSEMBLAGGIO *ASSEMBLY MANAGER* [RRA]
      - RESP. REPARTO ELETTRO-STRUMENTALE *ELECTRO-INSTRUMENTATION MANAGER* [RRES]
      - RESP. REPARTO SABBIATURA-VERNICIATURA *SANDBLASTING & PAINTING MANAGER* [RRSV]
      - RESP. REPARTO PREFABBRICAZIONE TUBAZIONI *PIPING PREFABRICATION MANAGER* [RRPT]

OUR DESIGN & TECHNICAL APPLICATIONS

AUTODESK

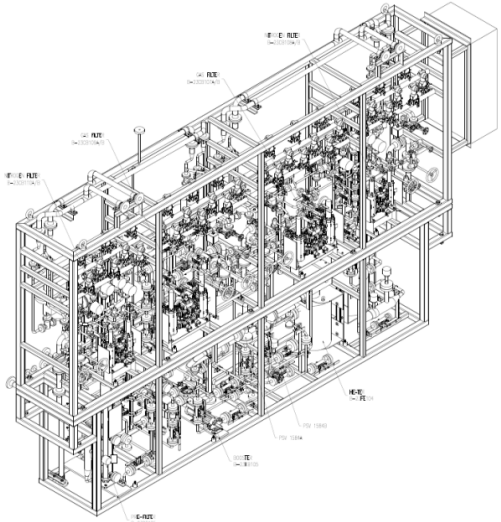
AUTODESK®
AUTOCAD®

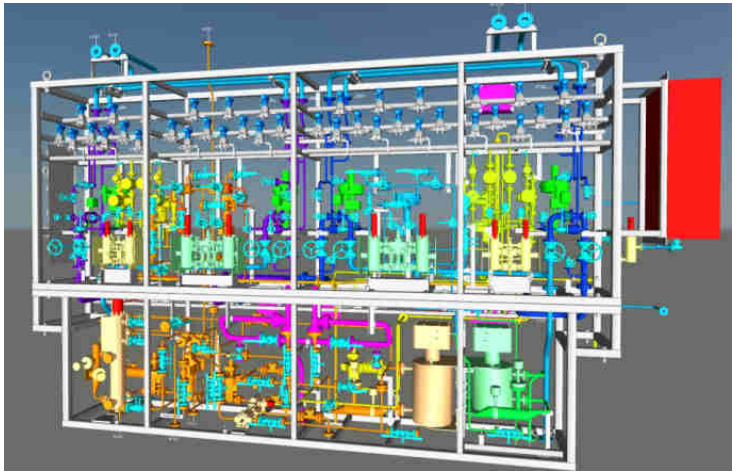
AUTODESK®
INVENTOR® PROFESSIONAL

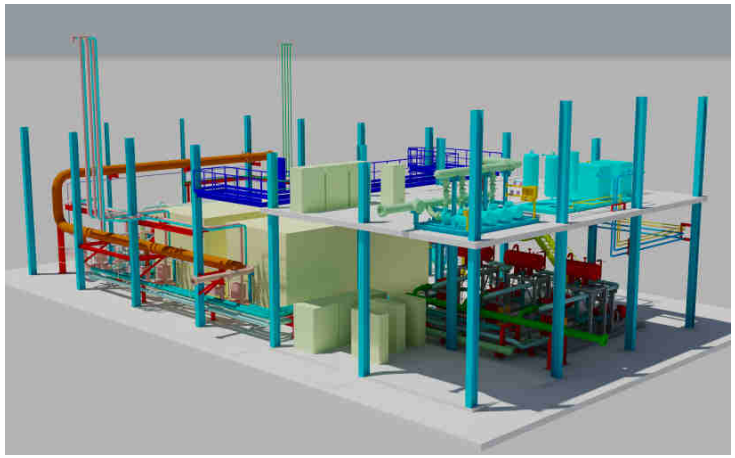
ESA pro ISOMETRICO

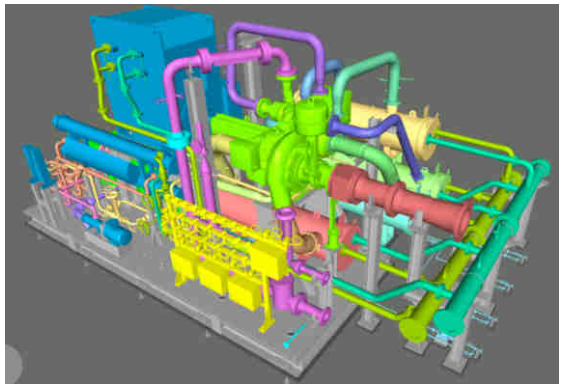
ESA pro 3D PIPING

SAM ERP2









Customer P.O.

Input: process data, specification
Output: Enginering

B.O.M. / DWG.

MAIN COMPONENTS
Bare Compressor, Electric Motor, Coupling, Cooler, Process valves

Package
Piping, Base plate, manual valves, instruments,

Warehouse

PRODUCTION

Packing
SHIPPING

THE MANUFACTURING PROCESS

COMPANY CERTIFICATION

BUREAU VERITAS Certification

F.B. S.p.A

Via Cristofori, n° 2 - 44042 ALBERONE DI CENTO (FE) - ITALY

Certified site:

Via Cristofori, n° 2 - 44042 ALBERONE DI CENTO (FE) – ITALY

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification

Design and production of base plates for gas turbine, boiler and pipelines, cooling and lubrications, filtering and separation systems, assembly of compressors, gas indirect heaters finished with electropneumatic systems.

Bureau Veritas Italia SpA is a *Notified Body under the number 1370*

BUREAU VERITAS

ACCREDIA

CERTIFICATO DI APPROVAZIONE DEL SISTEMA DI QUALITA

CERTIFICATE OF QUALITY SYSTEM APPROVAL

N° CE-1370-PED-H-FBI 001-17-ITA

Bureau Veritas Italia SpA, agendo nell'ambito della notifica (numero dell'organismo notificato 1370), attesta che il sistema di qualità applicato dal fabbricante per la progettazione , la produzione, l'ispezione finale e le prove sull'attrezzatura a pressione identificata di seguito è stato esaminato secondo le prescrizioni del modulo H dell'allegato III della direttiva « Attrezzature a Pressione » n. 2014/68/UE ed è conforme alle disposizioni della stessa.

Bureau Veritas Italia SpA, acting within the scope of its notification (notified body number 1370), attests that the quality system operated by the manufacturer for design, manufacture, final product inspection and testing of the pressure equipment identified hereunder has been examined against the provisions of annex III, module H, of the Pressure Equipment Directive n° 2014/68/EU, and found to satisfy the provisions of the directive which apply to it.

Fabbricante (Nome) / *Manufacturer (Name):*	FB S.p.A.
Indirizzo / *Address:*	Via Cristofori, 2 44042 Alberone di Cento (FE) Italy
Nome - Marchio commerciale: *Trading Name - Mark*	FB S.p.A.
Descrizione dell'attrezzatura / *Equipment description:*	Pressure Vessel; Interconnecting Piping; Assembly Skid.
Identificazione delle attrezzature (o elenco allegato ove necessario): *Identification of equipment concerned (or list on the back or attached where necessary)*	See Annex

BUREAU VERITAS Certification

CERTIFICATE OF CONFORMITY OF THE FACTORY PRODUCTION CONTROL

Certificate number **1370-CPR-0524**

In accordance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (Construction Products Regulation - CPR), this certificate applies to the construction product:

PRODUCTS	STRUCTURAL COMPONENTS FOR STEEL STRUCTURES
CHARACTERISTICS*	Execution Class: up to EXC 3 included CE Marking Method: 3a, 3b

placed on the market under the name or trade mark of:

MANUFACTURER	**F.B. S.p.A.** **HEAD OFFICE:** **Via Cristofori, 2 – 44042 ALBERONE di CENTO (FE) – ITALY**

and produced in the manufacturing plant:

MANUFACTURING PLANT	Via Cristofori, 2 – 44042 ALBERONE di CENTO (FE) – ITALY

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard:

EN 1090-1:2009 + A1 :2011 - Execution of steel and aluminium structures

under system 2+ are applied and that **the factory production control is assessed to be in conformity with the applicable requirements.**

THE NATIONAL BOARD OF BOILER & PRESSURE VESSEL INSPECTORS

Certificate of Authorization to Register

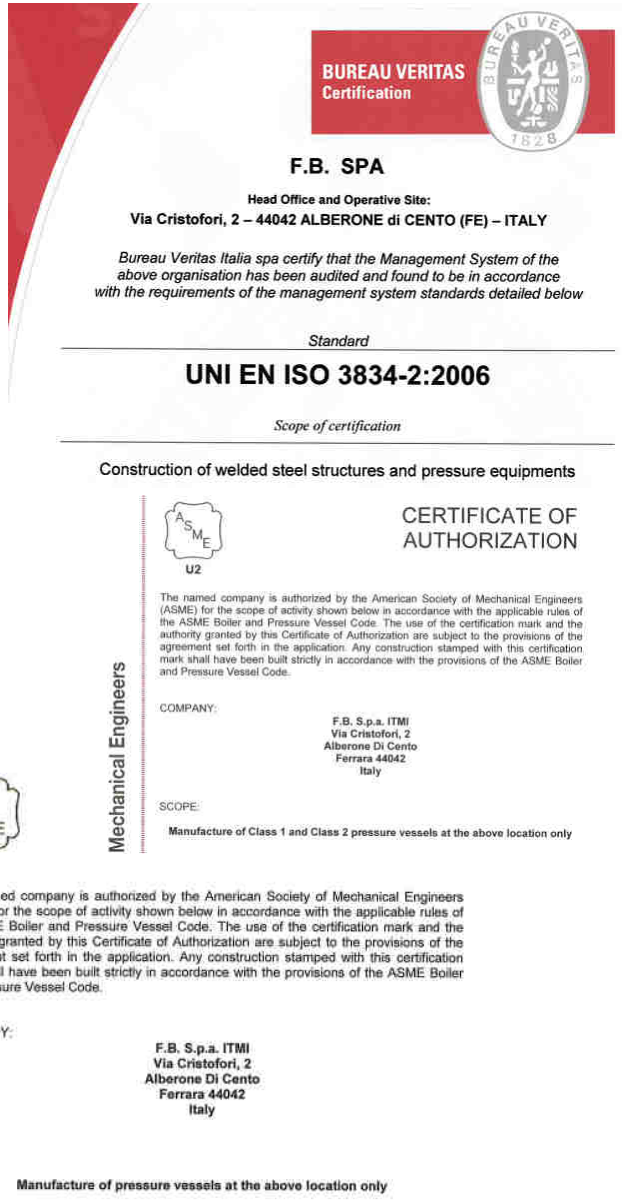
This is to certify that

F.B. S.p.a. ITMI
Via Cristofori, 2
Alberone Di Cento
Ferrara 44042
Italy

is authorized to apply the "NB" mark and register boilers, pressure vessels or other pressure retaining items with the National Board.

The scope of Authorization is limited to items manufactured in accordance with:

ASME Designator(s): U, U2



BUREAU VERITAS Certification

F.B. SPA

Head Office and Operative Site:

Via Cristofori, 2 – 44042 ALBERONE di CENTO (FE) – ITALY

Bureau Veritas Italia spa certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standard

UNI EN ISO 3834-2:2006

Scope of certification

Construction of welded steel structures and pressure equipments

U2

CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the certification mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this certification mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

F.B. S.p.a. ITMI
Via Cristofori, 2
Alberone Di Cento
Ferrara 44042
Italy

SCOPE:

Manufacture of Class 1 and Class 2 pressure vessels at the above location only

Mechanical Engineers

U

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the certification mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this certification mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

F.B. S.p.a. ITMI
Via Cristofori, 2
Alberone Di Cento
Ferrara 44042
Italy

SCOPE:

Manufacture of pressure vessels at the above location only

COMPANY CERTIFICATION

BUREAU VERITAS Certification

F.B. S.p.A

Via Cristofori, n° 2 - 44042 ALBERONE DI CENTO (FE) - ITALY

Certified site:
Via Cristofori, n° 2 - 44042 ALBERONE DI CENTO (FE) – ITALY

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification

Design and production of base plates for gas turbine, boiler and pipelines, cooling and lubrications, filtering and separation systems, assembly of compressors, gas indirect heaters finished with electropneumatic systems.

BUREAU VERITAS Certification

CERTIFICATE OF CONFORMITY
OF THE FACTORY PRODUCTION CONTROL

Certificate number 1370-CPR-0524

In accordance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (Construction Products Regulation - CPR), this certificate applies to the construction product:

PRODUCTS	STRUCTURAL COMPONENTS FOR STEEL STRUCTURES
CHARACTERISTICS*	Execution Class: up to EXC 3 included CE Marking Method: 3a, 3b

placed on the market under the name or trade mark of:

BUREAU VERITAS Certification

F.B. SPA

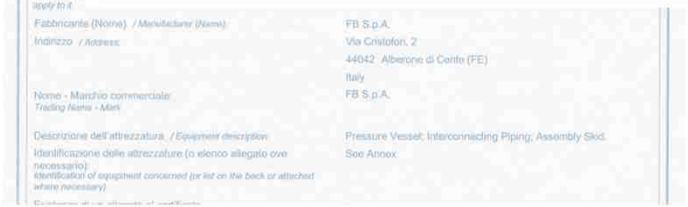
Head Office and Operative Site:
Via Cristofori, 2 – 44042 ALBERONE di CENTO (FE) – ITALY

Bureau Veritas Italia spa certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standard

UNI EN ISO 3834-2:2006

Certification	Scope	Year of first audit
ISO9001	Design, construction, inspection and testing of piping and pressure equipments, skid mounted industrial equipments and releveant instrumental systems. Design and construction of steel structures.	2004
EN1090	Structural Components for Steel Structures	2013
PED MOD.H	Pressure Vessel, Interconnecting piping, Assembly Skid	2009
UNI EN ISO 3834-2	Construction of welded steel structures and pressure equipments	2013
ASME U	Manufacture of pressure vessels	2000
National Board - AUTH	Authorization to apply the National Board mark and register boilers and pressure vessels	2000


Fabbricante (Nome) / *Manufacturer (Name)*: FB S.p.A.

Indirizzo / *Address*: Via Cristofori, 2
44042 Alberone di Cento (FE)
Italy

Nome - Marchio commerciale: / *Trading Name - Mark*: FB S.p.A.

Descrizione dell'attrezzatura. / *Equipment description*: Pressure Vessel; Interconnecting Piping; Assembly Skid.

Identificazione delle attrezzature (o elenco allegato ove necessario): / *Identification of equipment concerned (or list on the back or attached where necessary)*: See Annex

This is to certify that

F.B. S.p.a. ITMI
Via Cristofori, 2
Alberone Di Cento
Ferrara 44042
Italy

is authorized to apply the "NB" mark and register boilers, pressure vessels or other pressure retaining items with the National Board.

The scope of Authorization is limited to items manufactured in accordance with:

ASME Designator(s): U, U2

authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this certification mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

F.B. S.p.a. ITMI
Via Cristofori, 2
Alberone Di Cento
Ferrara 44042
Italy

SCOPE:

Manufacture of pressure vessels at the above location only

MAIN PARTNERSHIPS

Nuovo Pignone S.r.l.

Mayekawa Italia S.r.l

Via Cristofori, 2 - 44042
Alberone di Cento (FE)
ITALY

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