S.T.P. Studi Tecnologie Progetti S.p.A.
Engineering & Contractor

COMPANY PRESENTATION

www.stpitaly.eu

COMPANY HIGHLIGHTS

- S.T.P. Studi Tecnologie Progetti S.p.A. is a General Contractor operating worldwide for EP, EPC, EPCM and Integrated Projects implementation to Oil Refining, Gas Processing, Petrochemicals, Chemicals and Pharmaceuticals, Power Industry.

- STP provides full integrated services for Feasibility Studies, FEED, EPC, EPCM, PMC Projects including technology and financing facility.

- The Company provides proprietary technology and know how for Refinery Upgrading, Gas Treatment, Lube Oil Plants, Used lube oil Rerefining and Chemicals distillation.

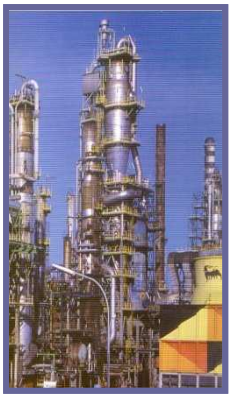
- The Company maintains high standards for safety, quality and environment protection to manage projects within budget and schedule.

- The Company is staffed by highly qualified personnel, with extensive background and consolidated experience in the execution of industrial projects.

NUMBERS & FACTS

Company	Joint stock Corporation founded in 1990
History	25+years of global experience
Target Industries	Oil & Gas, Lubricants, Petrochemicals, Chemicals & Pharmaceuticals, Power
Track record	A successful standing of more than 180 projects in 40 countries through affordable and reliable state of the art technologies. Member of EFCA, OICE,ANIMP and AIDIC, European & Italian Engineering Association Registered Contractor of major Oil players
QA/QC policy and HSE priority	ISO 9001/2008 Certification by Bureau Veritas and commitment to HSE mandate and Procedures
Mhrs Turnover	
Head quarter	more than 200,000 per year
Representative offices	Rome, Italy France, Egypt, Iraq, Kuwait

MARKET SECTORS



Oil & Gas

- Oil Refining
- Gas processing

Lubricants & Re-refining

- Lube Oil production
- Lube Oil blending
- Used Lube Oil Rerefining

Petrochemicals Chemicals

- Aromatics Plants
- Chemical Units
- Solvent distillation
- Pharmaceutical production modules

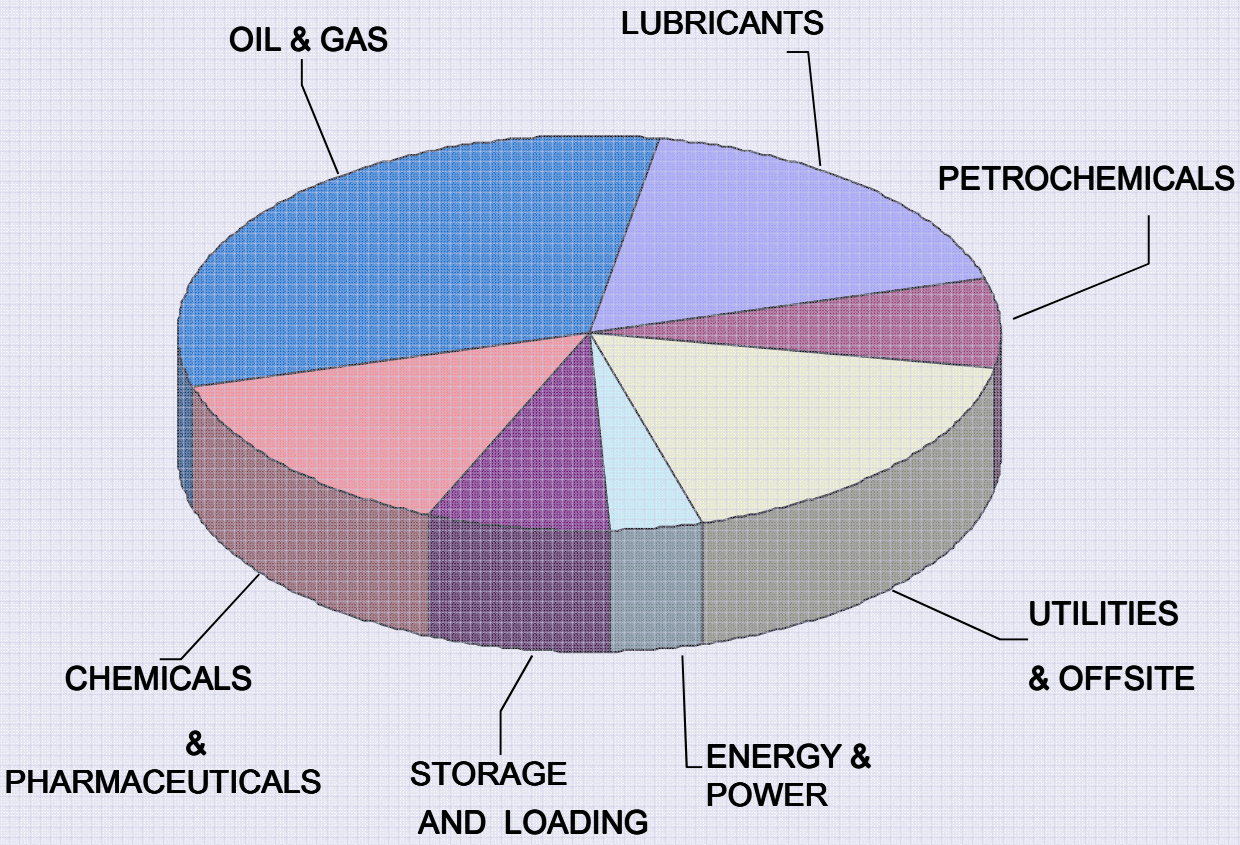
Power Utilities & Offsites

- Power plants
- Utility systems
- Offsite facilities
- Storage and loading

Plants Dismantling & Relocation

- Deconstruction
- Re-erection
- Refurbishment

MARKET SECTORS



WORLDWIDE BUSINESS AREA

Major projects executed in:

Algeria, Brazil, Canada, Egypt, France, Kuwait, Iraq, Iran, Ireland, Italy, Pakistan, Tunisia, Turkmenistan

COMPANY EXPERTISE

OIL & GAS

- Oil Refining Units :
  - Crude and Vacuum Distillation
  - Hydrotreating & Hydrodesulphurization
  - Gasoline enhancing
  - Isomerization and Cat Reformer
  - FCC
  - Visbreaking
  - Asphalt Blowing
- Gas Processing & Treatment

LUBRICANTS

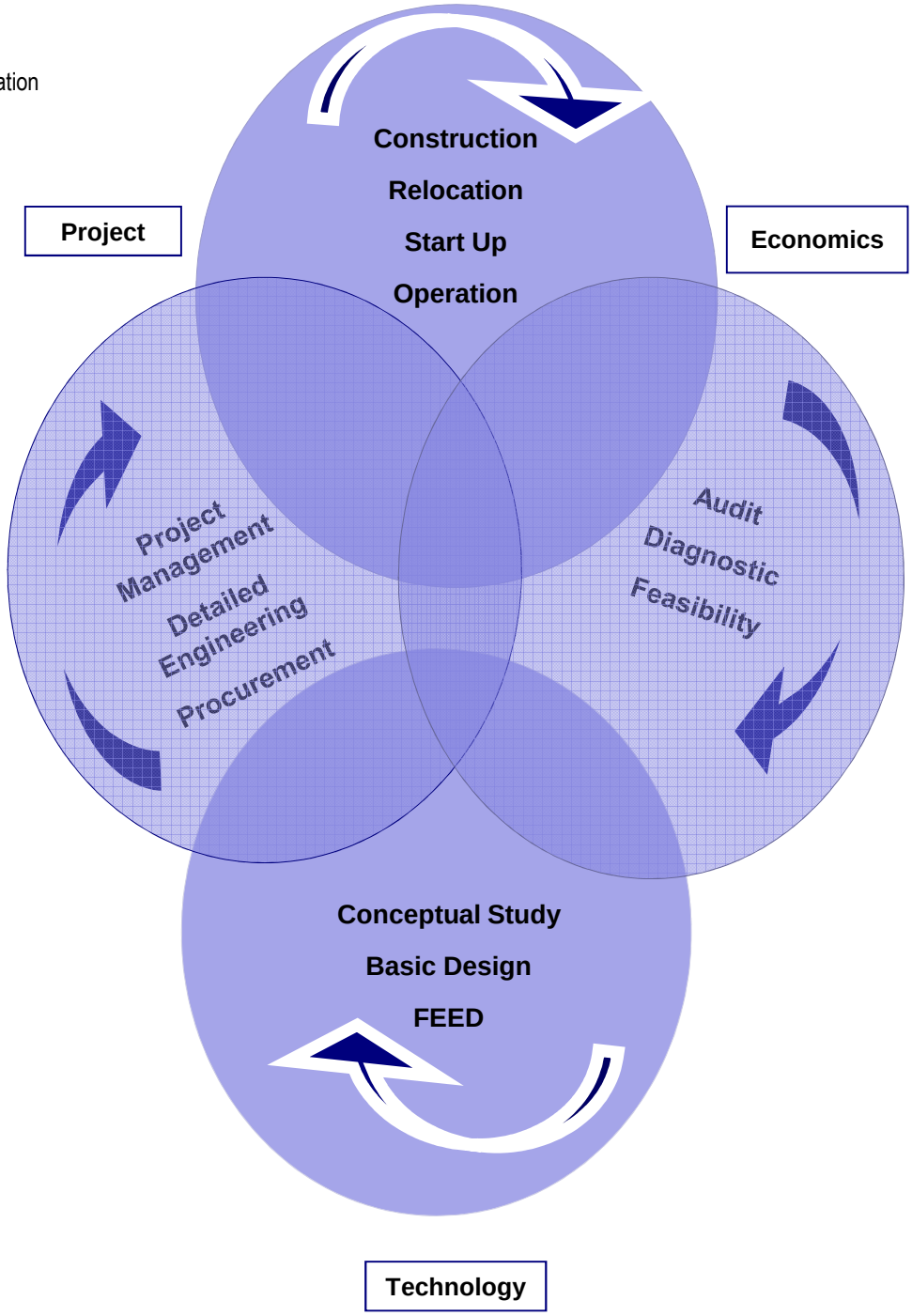
- Lube Oil Production & Blending
- Used Lube Oil Rerefining

PETROCHEMICALS, CHEMICALS

- Aromatics Plants
- Chemical Units
- Solvent Distillation
- Pharmaceutical Production Modules

POWER / UTILITIES / OFFSITES

- Power Plants
- Utility Systems
- Offsite Facilities
- Storage and Loading



OIL REFINING

S.T.P. longstanding experience and references in Oil Refining Project is based on the following Company's skills:

- Full knowledge and optimization of Refinery processes
- Mastership of open art not licensed Refinery Units and close working with technology Licensors
- Set up and guidance in the selection of Refinery scheme
- Refinery revamping and upgrading for capacity increase and improvement of conversion, products yield and quality, energy saving

Other Company's expertises are in the following areas:

- CDU – VDU integration, Preflash, heat recovery pinch optimization
- Low DP structured packing and stripping steam saving at CDU and VDU
- Deisopentanizer to recover i-C_5 and prepare feed to Isomerization
- Stripping and filtration of CLO from FCC settler pro Carbon Black specification
- Gasoil HDS to 10 ppm Sulphur content
- Vacuum tower on VBU bottom pro VGO to FCC
- Provision of suitable solvent for Refinery gas cleaning
- Replacing NMP/Furfural extraction & MEK Dewaxing by Hydrocracker in Lube Oil Plant
- Automation of in-line Mogas and in-line Lube Oil blending

GAS INDUSTRY

S.T.P. capabilities and references in Gas industry include:

- Gas pipelines
- Gas compression stations
- Gas underground storage
- Gas processing and treatment (Cleaning, Drying, Turboexpander)

S.T.P. capabilities in the Gas Industry also include LPG recovery from Natural Gas and LPG Storage.

S.T.P. references have been broaden in the recent years through long tem cooperation with Snam Rete Gas S.p.A. (ENI Group) Italian Company of gas transmission to provide PMC Chief Engineering Services, Safety organization and Site Management Services to Gas Projects .

Some outlines of these last projects are given below:

- Gas compression station (4 x 20 MW upgraded turbo-compressors + 2 x 30 MW new turbo-compressors) – Messina, Italy
- Gas underground storage and compression station (2 x 10 MW turbo-compressors) – Sabbioncello, Italy
- Grass-root gas compression station (3 x 15 MW turbo-compressors) – Sergnano, Italy
- Upgrading and relocation of gas pipelines, ranging from 4” to 36” size, length 25 Km, Pressure up to 75 bar – North of Italy

ALTERNATE ENERGY AND COGENERATION PLANTS

S.T.P. business area includes power and cogeneration plants up to 50 MW.

Renewable sources, biomass and RDF (Residue Derived Fuel) in particular, are the proposed technology alternative to oil & gas.

It is an ethical commitment, aimed to decreasing the green-house effect and feeding industrial and agricultural plants, buildings, commercial centers, with Power generation and Thermal energy (heat and refrigeration).

Such a commitment will combine the protection of the environment with the production of useful energy and heat.

USED LUBE OIL RE-REFINING

S.T.P. is pioneer on Used Lube Oil Re-refining since more than 25 years.

S.T.P. has implemented several Re-refining Plants worldwide ranging from 15,000 Ton/year to 120,000 Ton/year capacity.

S.T.P. is providing the last generation Re-refining Process based on High Vacuum Distillation with Film Evaporator and Hydrofinishing to produce base oils Group I or Group II according to market specifications.

SERVICES PROVIDED

S.T.P. provides Customers with Feasibility Studies, FEED, EPC, EPCM and PMC services either stand-alone or fully integrated as appropriate.

S.T.P. scope in Projects implementation includes:

GENERAL STUDIES

- Feasibility studies
- Process optimization
- Revamping, expansion and debottlenecking
- Environmental impact evaluation, Risk analysis, HAZOP, Safety Report

PROJECT MANAGEMENT SERVICES

- Project Management
- Project Planning and Control
- Document Management System

SERVICES PROVIDED

ENGINEERING SERVICES

- Process Engineering
- Basic Engineering
- FEED
- Detailed Engineering (Mechanical, Machinery, Fired Heaters, Civil & Structures, Piping, Electrical, Instrumentation & Automation)
- Constructability Engineering

GLOBAL PROCUREMENT SERVICES

- Requisitioning
- Purchasing
- Expediting
- Inspection and shipping coordination

SERVICES PROVIDED

EPC AND EPCM PROJECTS

- SUPPLY OF EQUIPMENT AND MATERIAL
- CONSTRUCTION AND ERECTION WORKS
- PLANT PRECOMMISSIONING AND START UP
- TRAINING OF PERSONNEL
- MAINTENANCE SERVICES
- TECHNICAL ASSISTANCE
- PLANTS DISMANTLING & RELOCATION
- FINANCING FACILITY

ENGINEERING SOFTWARES

Process Design

■ Process simulation	ASPENTECH HYSYS V8.4 CHEMCAD 5.2.0
■ Sweetening plant simulation	ASPEN HYSYS AMINE
■ Hydraulic calculation	L SIZE 1.03 (*)
■ Process line list	PUMA 5
■ Steam Network calculation	GATE CYCLE
■ Flare/Blow down calculation	ASPEN FLARE SYSTEM ANALYZER V8.4 CHEMCAD 5.4

Equipment Sizing

■ Equipment Process sizing	D SPEC (*)
■ Vessel process calculation	DRUM (*)
■ Pump calculation	P SPEC (*)

Tower Design

■ Towers Trays and internals	SULPACK 3.1 KG TOWER 5.1

Heat Transfer

■ Heat integration	AUTOPINCH (*)
■ Thermal rating calculation	ASPEN HTFS+ V8.4
■ Air cooler calculation	ASPEN AIR COOLER EXCHANGERS

(*) In house software

ENGINEERING SOFTWARES

Aspen ONE Engineering Softwares

Process Simulation - General (Common to Chemicals, Refining, EP, and Midstream)
- Aspen Properties®
- Aspen Properties Mobile™
- Aspen Custom Modeler®
- Aspen Flare System Analyzer
- Aspen Energy Analyzer

Process Simulation - Chemicals
- Aspen Plus®*
- Aspen Plus Dynamics
- Aspen Rate-Based Distillation
- Aspen Polymers
- Aspen Adsorption
- Aspen Distillation Synthesis

Process Simulation - Energy (Common to both Refining and E&P)
- Aspen HYSYS®*
- Aspen HYSYS Crude
- Aspen HYSYS Amines
- Aspen HYSYS Dynamics
- Aspen HYSYS Dynamics Run-Time
- Aspen HYSYS Thermodynamics COM Interface
- Aspen EO Modeling Option

Process Simulation - Refining
- Aspen HYSYS Petroleum Refining
- Aspen HYSYS Reformer
- Aspen HYSYS Hydrocracker
- Aspen HYSYS CatCracker

Process Simulation - E&P
- Aspen HYSYS Upstream
- Aspen HYSYS Upstream Dynamics
- Aspen Conceptual Design Builder

Process Simulation - Batch/Pharma
- Aspen Batch Process Developer (formerly Aspen Batch Plus®)
- Aspen Batch Distillation
- Aspen Chromatography®
- Aspen Process Manual
- Aspen Process Tools

Model Deployment
- Aspen Model Runner
- Aspen Online Deployment
- Aspen Simulation Workbook

Exchanger Design & Rating (EDR)
- Aspen Shell & Tube Exchanger*
- Aspen Shell & Tube Mechanical*
- Aspen Air Cooled Exchanger*
- Aspen Plate Fin Exchanger*
- Aspen Fired Heater*
- Aspen Plate Exchanger*

Economic Evaluation
- Aspen Capital Cost Estimator*
- Aspen In-Plant Cost Estimator*
- Aspen Process Economic Analyzer*

Energy Management
- Aspen Utilities Operations
- Aspen Utilities Planner

Engineering Work Group Tools
- Aspen Search
- Aspen Basic Engineering*

ENGINEERING SOFTWARES

Engineering Design

3D Plant Modeling	CADMATIC 6.1.4
2D Design	AUTOCAD 2013
Structural Design	SAP IV
Piping stress and flexibility analysis	TRIFLEX
PVHE Mechanical Design	ASPEN HTFS TEAM 2006 MT-VESS
Piping material management	PUMA 5
Control valves calculation	QUICK SIZE 3.5
Flow element calculation	ISO FLOW
Electrical design	DOC WIN 2.1 I-PROJECT 3.0 SINERGY INTEGRA EXTEEM
Electric motor design	DRIVE SIZE
Lighting system design	CALCULUX DLUX 32 ZEUS PLUS
Cables calculation and MTO/BOQ	JDC 3.0 PICO BTICINO TSYSTEM 5.0

ENGINEERING SOFTWARES

Procurement

Material requisition status	MRS TAB
Bid tabulation	BT TAB
Expediting report status	EXP TAB
Shipping management	SHP TAB
Piping material procurement	PUMA 5
Purchase order status	POS TAB
Inspection report status	IR TAB

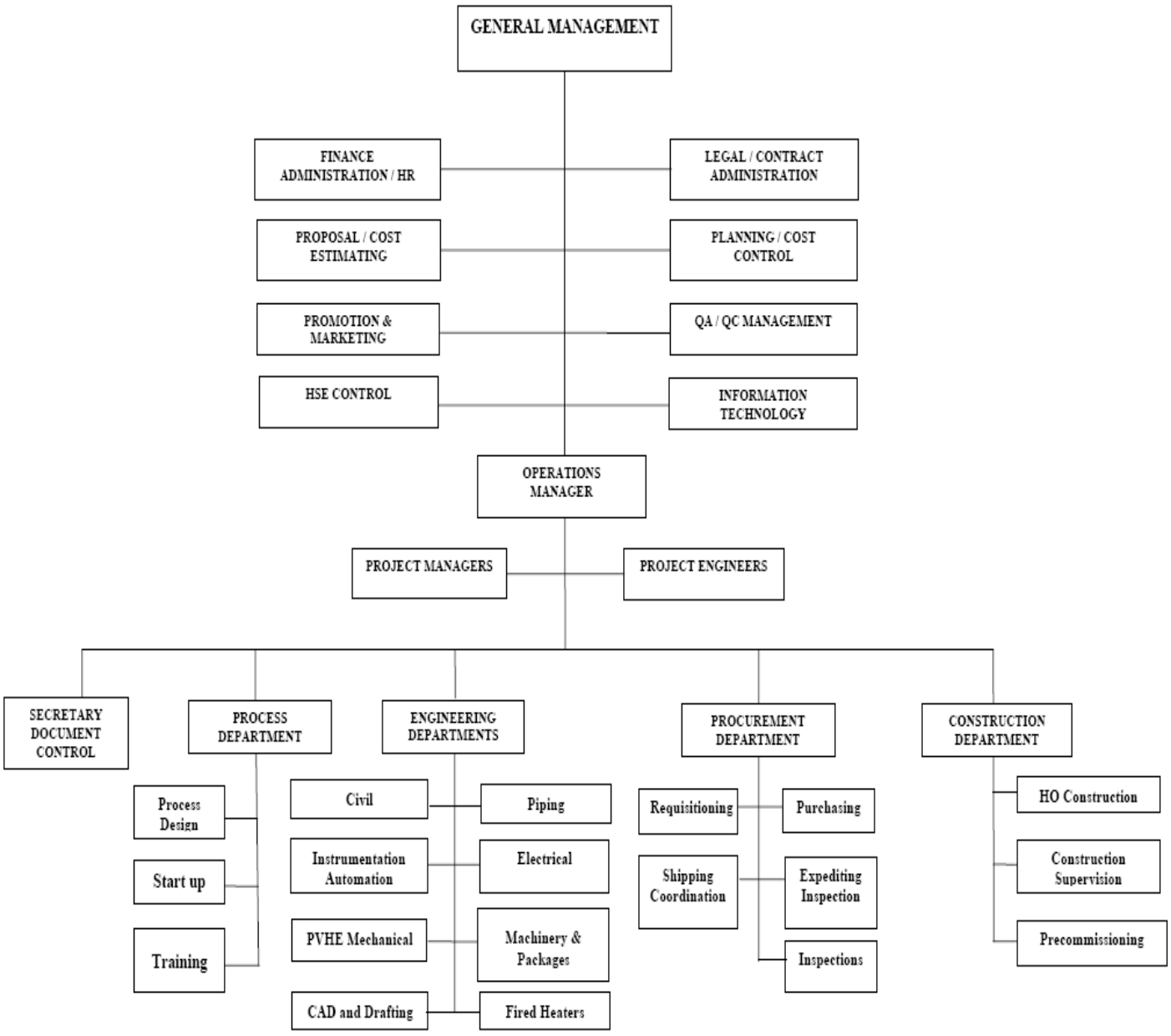
Project management

Project Planning Schedule	PRIMAVERA Rel 3 MS PROJECT 2010
Construction Scheduling	PRIMAVERA Rel 3 MS PROJECT 2010
Physical progress calculation	MS TAB
Document management system	EFH 1.0
Material management system	MMS 1.0

Office automation

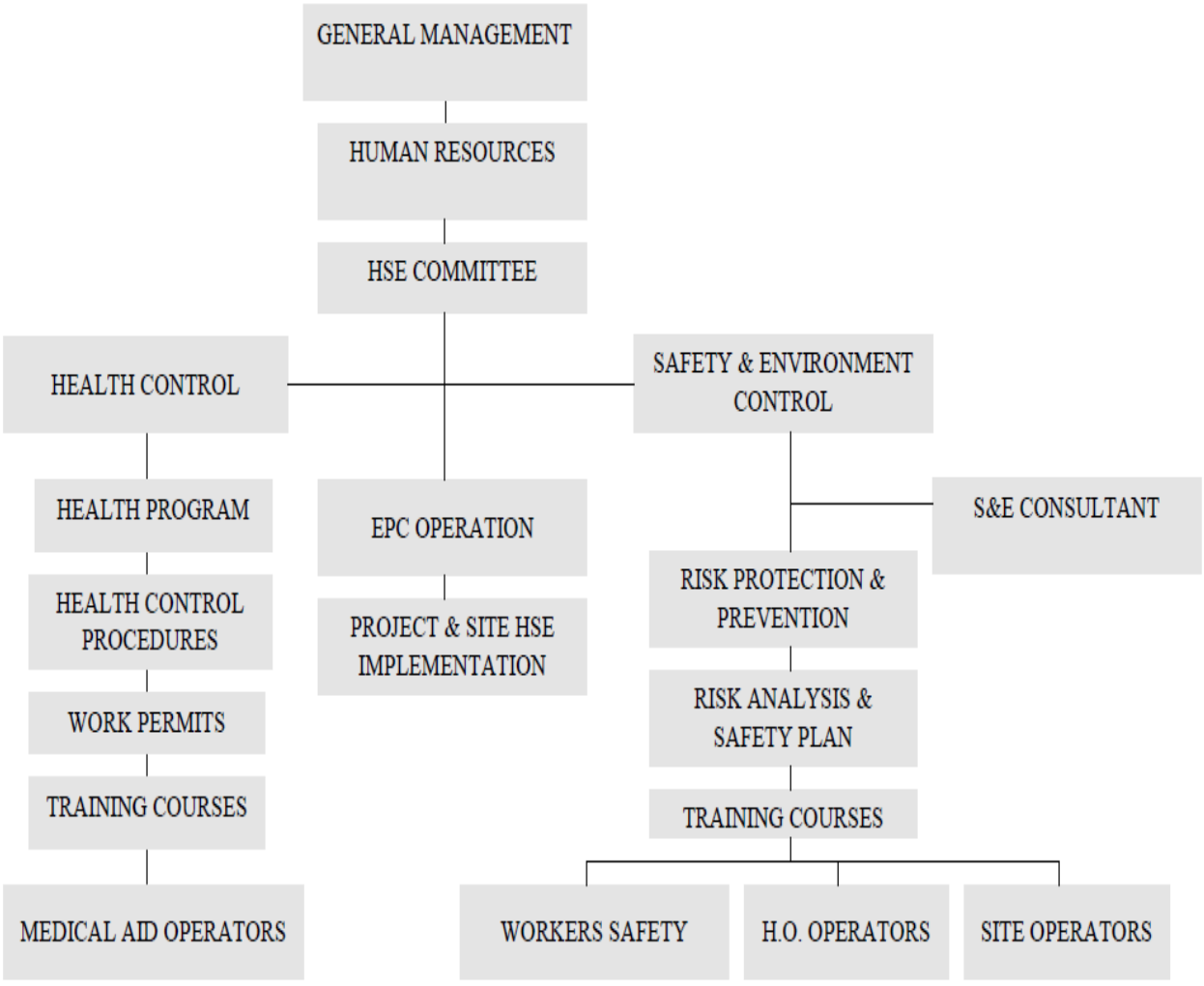
Office 2010

COMPANY ORGANIZATION



QA/QC ORGANIZATION CHART

HSE ORGANIZATION CHART



BUREAU VERITAS
Certification

S.T.P. STUDI TECNOLOGIE PROGETTI SPA

Head Office and Operative Site:
Piazzale Ezio Tarantelli, 97 – 00144 ROMA (RM) - 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

ISO 9001:2008

Scope of certification

General Contractor for engineering, procurement and construction for the implementation of industrial plants in the sector of oil & gas, petrolchemical, energy and industrial plants in general.

EA Sector(s): **34, 18**
Certification cycle start date: **28 May 2014**
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on**: 30 May 2017**

Original certification date: **01 June 2011**

Certificate No. IT239546 Version N, 1 Revision date: **28 May 2014**

Patrizia Caporaletti- Quality Technical Committee

Certification body address:
Bureau Veritas Italia spa, Via Miramare, 15, 20126 Milano, Italia

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please refer to the website www.bureauveritas.it

SGQ	N° 009A	PRS	N° 076C
SGA	N° 008D	SGE	N° 009M
PRD	N° 009B	EMAS	N° 004P
SCR	N° 008F	GHG	N° 008O
FSMS	N° 003I	ISP	N° 006E

Membro degli Accordi di Mutuo Riconoscimento EA e IAF
Signatory of EA and IAF mutual Recognition Agreements

MAJOR CUSTOMERS

MAJOR CUSTOMERS

S.T.P. is qualified registered Contractor at following major Customers

TOTAL
FINA
elf
Bristol-Myers Squibb
Q8
api
TAMOIL
eni
RM Raffineria di Milazzo S.C.p.A.
POLIMERI EUROPA
KNPC
VEOLIA
silub
M.R.C
IRAQ وزارة النفط العراقية
NARGAN Engineers & Constructors
SNAM RETE GAS

MAJOR CUSTOMERS

Other major Customers:

Johnson & Johnson

LUKOIL

TÜRKMENGAZ

CHEMI

Enel

ECO HUILE

NOTULUB

ENGELHARD

CAFFARO

EGPC

sonatrach

ISAB

KLOC

GRUPO LWART

TRL

N.I.O.C

RA.M.OIL S.p.A.
RAFFINERIA MERIDIONALE OLI LUBRIFICANTI

ROLOIL

STIR

TÜRKMENGAZ

OIL REFINING

Selected references

NATIONAL REFINERY LIMITED
Karachi, Pakistan

- Project : Refinery Upgradation Project
- Contract : FEED and ITB documents
- Year: On going - Completion 2013

MIDLAND REFINERIES COMPANY
Daura Refinery, Baghdad - Iraq

- Project : 40 m^3/h In line Lube Oil Blending
- Contract : EPC
- Year: On going - Completion 2013

MINISTRY OF OIL – MIDLAND REFINERIES CO.
Daura Refinery, Baghdad - Iraq

- Project : 13,000 BPSD Light Naphtha Splitter
- Contract : EPC
- Year: On going - Completion 2013

MINISTRY OF OIL – MIDLAND REFINERIES CO.
Daura Refinery, Baghdad - Iraq

- Project : 10,000 BPSD PENEX DIH Isomerization
- Contract : EPC
- Year: On going - Completion 2013

HARDT GROUP GMBH
Benghazi, Libya

- Project : 60,000 BPSD Refinery
- Contract : Bankable Feasibility Study
- Year: Completed 2013

NATIONAL REFINERY LIMITED
Karachi, Pakistan

- Project : 53,000 BPSD CDU & VDU Revamping
- Contract : FEED
- Year: Completed 2012

CALS REFINERIES LTD
Haldia, West Bengal India

- Project : 200,000 BPSD Refinery
- Contract : Bankable Feasibility Study
- Year: Completed 2011

SONATRACH NAFTEC
Arzew and Skikda Refineries - Algeria

- Project : VDU and Asphalt Blowing Revamping
  5,100 BPSD at Arzew Refinery
  5,600 BPSD at Skikda Refinery
- Contract : FEED
- Year: Completed 2010

ENI Refining & Marketing S.p.A.
Sannazzaro Refinery, Italy

- Project : 280,000 Ton/y FCC CLO Fractionation
- Contract : FEED
- Year: Completed 2006

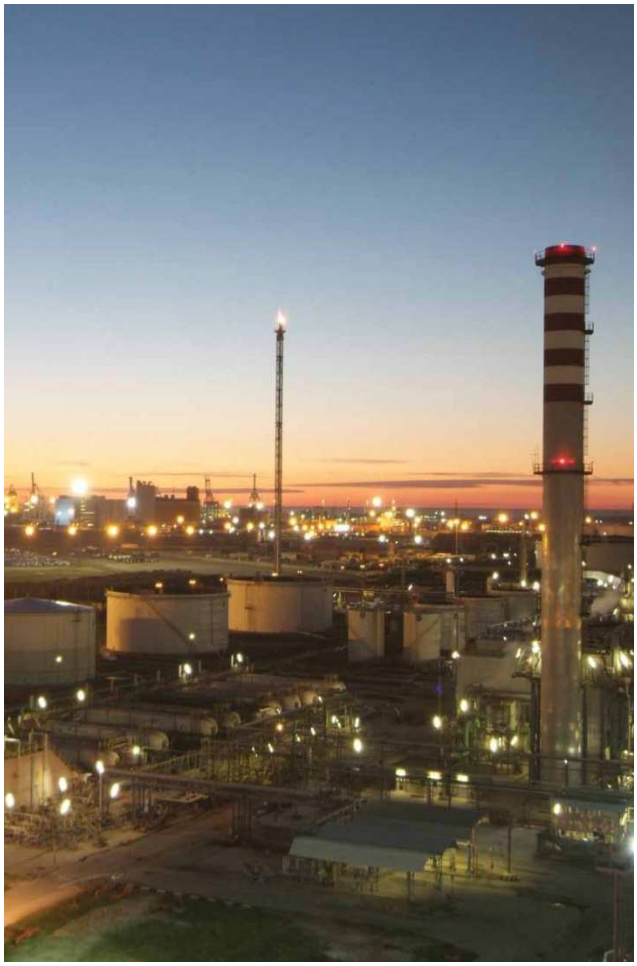
RAM - ENI – Q8
Milazzo Refinery, Italy

- Project : 17,000 m^3 Jet Fuel Storage Revamping
- Contract : EPC
- Year: Completed 2005

RAM - ENI – Q8
Milazzo Refinery, Italy

- Project : 1,200 m^3/h Mogas Blending
- Contract : FEED
- Year: Completed 2004

ENI Refining & Marketing
Livorno, Italy



- Project : 110,000 BPSD CDU Revamping
  45,000 BPSD VDU Revamping
- Contract : FEED
- Year: Completed 2004

ENI Refining & Marketing
Taranto, Italy

- Project : 1,100,000 Ton/y Gasoline Splitter & Deisopentanizer
- Contract: FEED
- Year: Completed 2003

ENI Refining & Marketing
Sannazzaro, Italy

- Project : 40,000 Ton/y Gasoline Rerun Unit
- Contract : FEED
- Year: Completed 2003

SOMO – MIDLAND REFINERIES CO.
Daura Refinery, Baghdad - Iraq

- Project : Crude Heaters and Boilers Revamping
- Contract : FEED
- Year: Completed 2000

TECHNIP/MOTOR OIL HELLAS
Corinth, Greece

- Project : 35,000 BPSD FCC Unit
- Contract : Detailed Engineering
- Year: Completed 2000

ALEXANDRIA PETROLEUM CO.
Alexandria, Egypt

- Project : 50,000 BPSD CDU N. 3 & N. 4 Revamping
- Contract : FEED
- Year: Completed 1999

STIR
Biserta, Tunisia

- Project : 40,000 BPSD Crude Heater Revamping
- Contract : FEED
- Year: Completed 1999

ALEXANDRIA PETROLEUM CO.
Alexandria, Egypt

- Project : 200,000 Ton/y Soft Wax Recovery
- Contract : EPCM
- Year: Completed 1998

REDOIL
Nola, Italy

- Project : 40,000 Ton/y Lube Oil Blending
- Contract : EPC
- Year: Completed 1997

TOTAL FINA ELF
Rome Refinery, Italy

- Project : 100,000 Ton/y Benzene Hydrogenation (UOP)
- Contract : EPCM
- Year: Completed 1995

GAS PROCESSING

Selected References

SNAM RETE GAS S.p.A.
Messina, Italy

- Project : Gas compression station
  4 x 25 MW Upgraded turbo compressors
  2 x 30 MW turbo compressors
- PMC Chief Engineering Services, Safety organization, Site Management Services
- Year: On going - Completion 2014

SNAM RETE GAS S.p.A.
Messina, Italy

- Project : Gas compression station
  4 x 25 MW Upgraded turbo compressors
  2 x 30 MW turbo compressors
- PMC Chief Engineering Services, Safety organization, Site Management Services
- Year: On going - Completion 2014

SNAM RETE GAS S.p.A.
Sabbioncello, Italy

- Project : Gas underground storage and compression station 2 x 10 MW turbo compressors
- Engineering Supervision and Site Management Services
- Year: On going - Completion 2013

SNAM RETE GAS S.p.A.
North of Italy

- Project : Upgrading and relocation of 4“ to 36“ gas pipelines, 25 Km length, pressure up to 75 bar.
  Pig and launching/receiving stations

- Design check and Site management including safety organization

- Year: On going - Completion 2014

ENI GAS Exploration & Production
Candela Gas Field, Italy

- Project : 600,000 Nm^3/d Gas Treatment
- Contract : EPCM
- Year: Completed 2006

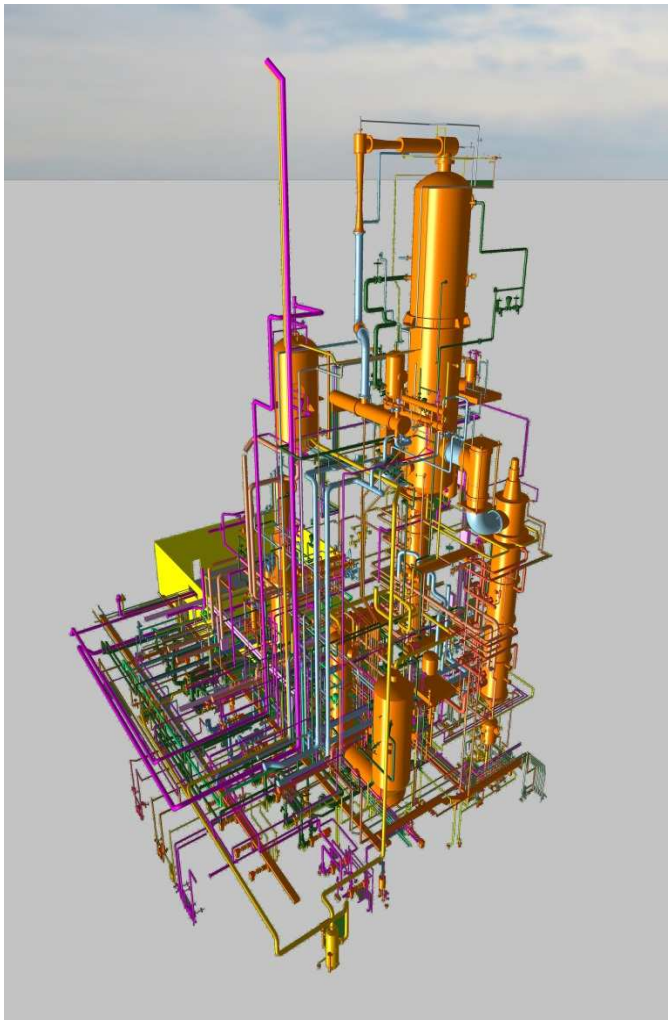
TURKMENGAS
Gazaciak, Turkmenistan

- Project : 3.0 M Nm^3/d Natural Gas Processing
- Contract : EPC
- Year: Completed 1994

USED LUBE OIL RE-REFINING

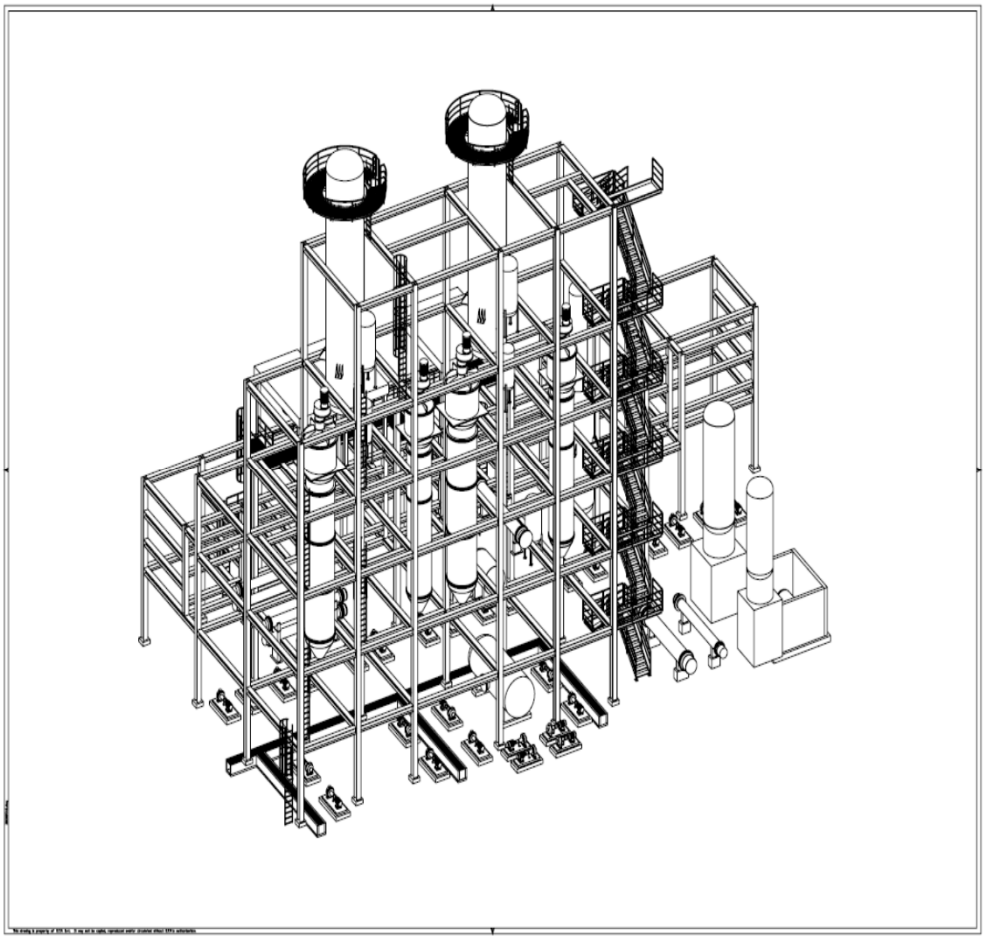
Selected References

KLOC KSCC
Ahmadi Kuwait



- Project : 33,000 T/y Used Lube Oil Rerefining
- Contract : FEED
- Year: On going - Completion 2014

ECOIL ITALIA
Ferrandina, Italy



- Project : 65,000 T/y Used Lube Oil Rerefining
- Contract : EPC
- Year: On going - Completion 2014

VEOLIA ES CANADA
St. Hyacinthe, Quebec

- Project : 60,000 T/y Used Lube Oil to VGO
- Contract : EPCM
- Year: Completed 2013

TOTAL – VEOLIA – OSILUB
Gonfreville l'Orcher, France

- Project : 120,000 T/y Used Lube Oil to VGO
- Contract : EPC
- Year: Completed 2012

SIRAL S.p.A.
Nola, Italy

- Project : 30,000 T/y Used Lube Oil Re-refining
- Contract : EPC
- Year: Completed 2007

KLOC
Ahmadi, Kuwait

- Project : 27,000 Ton/y Used Lube Oil Re-refining
- Contract : EPC
- Year: Completed 2000

SOTULUB
Biserta, Tunisia

- Project : 20,000 Ton/y Used Lube Oil Re-refining
- Contract : EPC
- Year: Completed 1999

GROUPO LWART
Lencois Paulista - Brazil

- Project : Used Lube Oil Re-refining Plant
- Contract : FEED
- Year: Completed 1998

RAMOIL
Naples, Italy

- Project : 30,000 Ton/y Lube Oil Fractionation
- Contract : EPC
- Year: Completed 1995

SOTULUB
Bizerte, Tunisie

- Project : 16,000 Ton/y Used Lube Oil Re-refining
- Contract : EPC
- Year: Completed 1989

EKVE/LPC
Aspropyrgos, Greece

- Project : 25,000 Ton/y Used Lube Oil Re-refining
- Contract : EPC
- Year: Completed 1985

PETROCHEMICALS & CHEMICALS

Selected References

KOPC – NARGAN
Sanandaj, Iran

- Project : Ethylene Recovery Unit
- Contract : EP
- Year: On going - Completion 2014

BOSICOR CHEMICALS PAKISTAN Ltd.
KRC Naples Refinery, Italy

- Project : Aromatics Plant Relocation
- Contract : EPC
- Year: Completed 2008

BRISTOL-MYERS SQUIBB
Swords, Ireland

- Project : Irbesartan Pharmaceutical Plant
- Contract : EPCM
- Year: Completed 1998

ICC CAFFARO
Colleferro, Italy

- Project : Fenilglicine Expansion
- Contract : EPCM
- Year: Completed 1997

BRISTOL-MYERS SQUIBB
Sermoneta, Italy

- Project : Solvent Recovery Unit
- Contract : EPCM
- Year: Completed 1996

BRISTOL-MYERS SQUIBB
Sermoneta, Italy

- Project : 10 m3/hr Sour Water Stripper
- Contract : EPCM
- Year: Completed 1995

CONTACT US

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