









SIMECO, established in 1984, has gradually grown up into a leading medium size Engineering and Contracting Company.

In 1988 SIMECO:

- acquired the Technical Departments of an external Company;
- renewed Company's Management;
- reorganized Company's structure and strategy;
- invested in personnel training and information technologies

SIMECO now offers:

- Competitive Services for Feasibility Studies, Basic & Front-End Design, Detail Engineering, Procurement and Site Services in the Oil & Gas Sector including On-shore and Off-shore upstream facilities, Refineries, Pipelines, Petrochemicals, Fertilizer & Chemical Plants, Power Plants including Renewable Energies, Utilities Generation Units and Offsite Facilities.
- Contracting for the execution of projects on turn key lump sum basis. In order to tender for turn-key EPC project up to 50 Million Euro, the bidding alternative is either to participate as Main Contractor with nominated Sub-contractors or in Joint Venture with selected Construction Companies.

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33	80	400 000
YEARS OF EXPERIENCE	CLIENTS	HOURS

Field of Activity









SIMECO's experience covers Gas Oil Separation Plants, Degassing Stations, Natural Gas Processing (Dehydration Packages, Acid Gas Removal), LPG treating. SIMECO has carried out the detail design of several fertilizer plants, mostly based on proprietary Urea technology licensed by Saipem/ Snamprogetti.

SIMECO has developed a significant experience in the detail design of polymer plants, e.g. Polyethylene (LDPE, HDPE), bioplastics. SIMECO activities in the midstream sector cover pipeline and storage facilities. The design services carried out by SIMECO with the support of the affiliate Streamline Engineering S.r.l. span all the expertise from pipeline flow assurance up to site services. SIMECO activities in the refining sector span from feasibility studies to detail design of:

- Process Units (based on openart or licensed technologies)
- Utilities Units
- Power Generation Plants
- Plants
- Waste Water Treatment
- Tank Farms & Loading Bays
- Electrical Substations
- Control Rooms







Field of Activity | Continued



During the recent years SIMECO has developed several projects dealing with power plants and use of renewable energies.

Experience in renewable energies cover biomass, waste to energy and solar power.

SIMECO's experience covers Gas Oil Separation Plants, Natural Gas Processing (Dehydration Packages, Acid Gas Removal), Hydrogen Production, Chlorine Production, LPG treating. SIMECO has carried out several offshore projects providing Clients with both the platform's structural design and the topside processing and auxiliary facilities.

SIMECO has been recently involved in the design of marine terminals including berth moorings, jetties/ piers as well selection and installation of loading arms. SIMECO engineering capabilities cover from feasibility study to detail design of control systems and control rooms.

Typical design activities are: control room layout, technical room layout, functional specification of DCS, implementation and detailed specification of DCS, functional specification of ESD/ PLC, implementation and detailed specification of ESD/PLC, functional specification of SIS, implementation and detailed specification of SIS, control narrative, AND-OR Logic diagram, cause-effect matrix, control system's database and loop diagram/wiring.

Capabilities



SIMECO has capabilities, experience, organization and highly experienced professional staff required to provide the following Services:

- · Feasibility Studies and Economical Evaluations;
- Project Management Consulting;
- Basic Engineering;
- Front-End Engineering;
- Project Planning & Cost Estimating ;
- Risk Analysis and HSE Reports;
- · Detail Engineering;
- Procurement Activities;
- Expediting and Inspections;
- Construction Management & Supervision;
- Plant Start-up Assistance and Operations.

SIMECO features:

- Excellent technical skills;
- More than 30 years experience in project execution;
- Single point responsibility from conceptual design to project completion;
- 1800 m2 office including 100 m2 available for Client's representatives;
- Sound financial credentials with the Italian Banking Organization.



Project Management

Project Management Activities consisting of:

- Contractual documents re-examination & endorsement
- Project Planning
- Project Team Building
- Project Control
- Multidisciplinary reviews of project documents
- Project Change Management
- · Handing over & Client acceptance

For Multidiscipline Engineering Projects a fully dedicated Task Force is appointed. A Nominated Project Manager, reporting to the Operation Director, coordinates the activities.

For the Monodiscipline Projects, the management activity is usually demanded to the Technical Manager of the concerned discipline.

Process and Technology

SIMECO's Process and Technology Department design capacity is more than 50,000 manhours per year, in the following areas:

- Upstream
- Refining
- Petrochemicals
- Chemicals
- Pipelines and Flow Assurance
- Utilities Systems
- Power Plants

Engineering Department

Most of the engineers within the technical department have been involved in projects, from screening and conceptual studies to detailed design and assistance to yard and they form a strong scientific core within the company.

Engineering Department consists of:

- Piping (TUB)
- Instrumentaion & Automation (SMI)
- Electrical (ELE)
- Mechanical (MEC)
- Civil & Structures (CIV)

Tools



- HYSYS / PROMAX (Process simulators)
- AspenOne Engineering Desk Top (Process simulators) including HYSYS / Crude / Amines / Dynamics / Upstream dynamics / Petroleum Refining / Flare system analyzer / Energy analyzer / Aspen Cost Estimator
- AFT Arrow / Fathom / Impulse (Steady state & dynamic simulation of pipeline networks)
- LEDA FLOW / Flow Assurance, Dynamic Multiphase Flow
- HTRI / MT-EXCH / VESS / COMP 6258 / LAYOUT (Design of heat exchangers, air coolers, pressure vessels, compressors)
- AVEVA PDMS (3D plant design)

- Intergraph PDS (3D plant design) with FRAMEWORK (3D design of steel structures) and ELECTRICAL RACEWAY (3D design of cable raceway)
- ESAPro (3D plant design)
- ETAP / NEPLAN / AMPERE / CYME (Integrated design optimization and simulation of electrical systems)
- PRYSMIAN JDC (Electrical cable sizing)
- DIALUX (Lighting calculations)
- ZEUS (Lightning protection system design)
- SUN SIM (Photovoltaic plants sizing)
- TEKLA (3D design of steel works &
- reinforced concrete)

- CAESAR II (Stress analysis)
- INSTRUCALC (PSV & control valves sizing)
- SMART PLANT INSTRUMENTATION
 (Instrumentation data manager)
- FOUNDATION 3D/MAT 3D (Design of concrete foundations)
- SAP 2000 (Design of steel structures)
- MS Project (Project Planning)
- Primavera P6 (Project planning)

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AVEVA
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The potential of SIMECO lies in its highly qualified, multidisciplinary teams of engineers and technicians, with a permanent staff of about 90 employees and a total staff of about 180 people.



History \ Market



Certificates

SIMECO Quality Management System

SIMECO Quality Management System is certified by D.N.V. (Det Norske Veritas) for conformity to the Requirements of ISO 9001:2008 for multidisciplinary basic and detailed design of chemical, petrochemical, refinery, power generation and of gas and oil pipelines, equipment and material Procurement.

Mana	GEN	BNV 2
	ICATE	SYSTEM
SIMECO S. P.A		
UNI NA ING MARI JAN		
	(ROAD SHARE)	



Occupational H&S Management System

SIMECO Occupational Health and Safety Management System is certified by D.N.V. (Det Norske Veritas) for conformity to the Requirements of BS OHSAS 18001:2007 for multidisciplinary design, site survey and construction supervision activities, procurement of equipment and materials, construction and installation of Oil & Gas

Credit Passport Assesment

Credit Passport[®] assessment indicates a company's ability to conduct business without defaulting. It is derived from a combination of factors, both historical and forward looking.

The behavioural model is Default Metrics by Credit Data Research, the financial model is RiskCalc by Moody's Analytics.

A Credit Passport of "A+" means the company has a High Credit Quality.



ACHILLES FPAL Certificate

SIMECO is now fully registered as a supplier on the Achilles First Point Assessment Database for suppliers to the Oil & Gas Industry





www.simecomilano.it | simeco@simecomilano.it

Main Clients

ABB
AMEC FW (Wood plc)
BAPCO (The Bahrain Petroleum Co.)
RIO-ON
BONATTI
CASALE S.A.
DESMET BALLESTRA
ENI
ENIPROGETTI (former TECNOMARE)
TECHNIPFMC
MUL Group
IPLOM
LUKOIL
PKN ORLEN

www.simecomilano.it | simeco@simecomilano.it

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SEC | Group - Company Brochure v4.00

Long-Term Agreements

In force with Primary companies:



SAIPEM

Process Design, Multidiscipline Engineering Services, Flow Assurance & Process Design for Subsea Systems.



RAFFINERIA DI MILAZZO Project Management Services, Process Engineering Services.



ENI Process Design Services for Downstream.



CASALE S.A. Multidiscipline Engineering Services including Process Design.



ENIPOWER Process Design Services



power



ENIPROGETTI Multidiscipline Engineering Services, Process Engineering Services.





VERSALIS Process Engineering Services.





RAFFINERIA DI GELA Process Engineering Services.



Maire

MAIRE - TECNIMONT Multidiscipline Engineering Services.



SARLUX Multidiscipline Engineering Services.



MATRICA Process Engineering Services for Bioplastics Plant.

Affiliated Companies



SIMECO.Systems d.o.o.

Gradacacka 29B, 71000, Sarajevo, Bosnia and Herzegovina Tel: +387 33 942 144 | Fax: +387 33 942 148 Web: simecosystems.com E-mail: contact@simecosystems.com

Company specialized in Consulting, Engineering and Procurement in field Oil, Gas and Power Industry for Packaged Units and plants.



STREAMLINE Engineering S.r.l.

Via Alessandro Milesi, 5/7 - 20133 Milan, Italy Tel: +39 02534773 Web: www.stream-line.it E-mail: info@stream-line.it

A Company for Oil, Gas Pipeline services and Design.



PnT Process & Technology S.r.l. Via Romilli, 22 - 20139 Milan, Italy Tel: +39 02 55231267 | Fax: +39 0256818998 E-mail: info@pandt.it

A Company specialized in Process Design for Petrochemical & Chemical Plants with offices located in SIMECO's headquarter.



CO.IMP S.r.l. Via Romilli, 22 - 20139 Milan, Italy Tel: +39 0255187474 E-mail: coimp.engineering@coimpsrl.it

A Company of Consulting and Design for the Petrochemical, Chemical, Pharmaceutical industries with operational offices located in SIMECO's headquarter.



SIMECO (Bahrain Office)

GCC Regional Office Office Suite 32, Petrodar Tower Seef District Kingdom of Bahrain

□ Simeco Offices





Energy Integration between MHC and TAME plants

Project scope is the reduction of LP steam consumption by recovering the enthalphy content of the Light Gasoil stream from the Mild Hydrocracking Unit (MHC) to preheat the etherified gasoline stream entering the Main Fractionator of TAME (Gasoline Etherification) plant.

The main revamping activities consisted in the installation of new pumps and heat exchangers.

A challenging task was the installation of the heat exchangers on a new structure over a service road, in a congested area of the Refinery.

lient:	SARLUX
/ear:	2014-2017
Contract type :	LS of Engineering Services
MHS:	25,000
ocation:	Sarroch Refinery, Italy
50W:	Basic Design, FEED, Detail Engineering Design, Document for Permitting, Procurement Services, Field Engineering & Construction Supervision Services



Revamping of Kerosene Desulphurization Unit

Project scope was a major revamping of the existing Kerosene Hydrodesulphurization Unit (HDS-1) to expand the capacity from 2,400 to 4,000 t/d. Improvement of product quality to target specification Pro Clear and Bright and maximum S content of 10 ppm were foreseen as well. New feed pumps, stripper, kero dryer and heat exchangers have been installed. The start-up of the revamped unit and the achievement of target performance was exceptionally smooth and fast.

Client:	RAM
Year:	2014-2016
Contract type :	EPC LSTK
Value:	15M€
Location:	Milazzo Refinery, Italy
SOW:	Process Design, Detail Engineering Design, HazOp and Risk Analysis, Permitting Applications, Pick Based Inspection

Applications, Risk Based Inspection, Procurement Services and Supply of Equipment & Bulk Materials, Construction Works and Commissioning & Start-up Assistance for the New Unit.



New Naphtha Hydrotreating Unit

The scope of the Basic Design Package is a new naphtha hydrotreating unit named HDT-3. HDT-3 will produce 450,000 tons per year of hydrotreated Naphtha containing less than 0.5 ppmw of sulphur and 24,000 tons per year of olefin saturated LPG with target specification Pro-Isomerization.

HDT-3 will include a refurbished hydrotreating reactor, new pumps, heat exchangers in the preheating trains, fired heater, three-phase separators, stripper, distillation tower, LPG and off-gas amine treating packages, recycle/make-up gas compressor package and control systems.

Client:	RAM
Year:	2014-2015
Contract type :	Reimbursable
EMHS:	3,000
Location:	Milazzo Refinery, Italy
SOM:	Feasibility Study, Process Design, Basic Engineering Design, HazOp.



British Columbia Greenfield Refinery

Pacific Future Energy Co. (Canada) is committed to build and operate the world's greenest refinery on British Columbia's north coast. PFEC believes it's in Canada's national strategic interest to gain access to international markets for Alberta's oil, especially the fast growing Asian market. The company believes it should not be done at the sacrifice of BC's coast or broader environment and must be done in full partnership with First Nations.

The \$10 Billion refinery will be built in modules (each phase having a process capacity of 200,000 BPSD).

The refinery will be powered by a combination of natural gas and renewable sources which will reducerefineryemissions by40%. Additional investment in carbon- capture technology has the potential to reduce emissions by another 52%.

To reach the goal of zero emissions, the remaining energy used to power the facility will come from biogas.

Client:	Pacific Future Energy Co.
Year:	2014
Location:	British Columbia (Canada)
Contract type :	Lump-Sum
SOW:	Prefeasibility Study



Vacuum Column & Filtration System for FCC Slurry Oil

Project scope is the installation of a new Vacuum Column & Automatic Filtration System on the Slurry Oil stream produced by the existing FCC Plant of the Refinery.

The purpose of the new Unit is 1) to recover additional LVGO for the Hydrocracking, 2) to increase Slurry Oil flash point and 3) to remove the catalyst fines in order to feed the stream to the existing Gasification Plant or to recycle to the FCC riser .

Client:	Eni R&M Division
Year:	2011-2013
EMHS:	50,000
Location:	Sannazzaro de' Burgondi Refinery, Italy
Contract:	EPC LSTK
Value:	14 M€
SOW:	Process Design, Detail Engineering Design, HazOp and Risk

Design, HazOp and Risk Analysis, Permitting Application, Procurement Services and Supply of Equipment & Bulk Materials, Construction Works and Commissioning & Start-up Assistance for the New Unit.





Waste Water Treatment System for Water Re-use

Project scope is the installation of a new Waste Water Treatment Package to process 740 m3/h of water discharged from the existing Refinery Water Treatment System, to obtain permeated desalted water (conductibility < 100 μS/cm, hardness < 5 mg/l as CaCO3).

The purpose of the new Unit is to recycle water previously discharged to the environment in order to feed the existing demineralized water production system for the new requirements of the Process Plants .

The New System includes:

- Coagulation and Flocculation Unit, for suspended solid removal;
- Ultra-filtration Pretreatment Unit, for colloid removal;
- RO Treatment Unit, for dissolved salt removal;
- Storage tanks.

Client:	Eni R&M Division
Year:	2011-2012
EMHS:	18,000
Location:	Sannazzaro de' Burgondi Refinery, Italy
Contract:	LS of Engineering & Site Services
SOW:	Process Design, Detail Engineering Design, HazOp and Risk Analysis, Permitting Applications, Vendors follow-up, Managemen

Services and Assistance at Site.



Carbon Dioxide Removal Unit

Project scope is the implementation of the Detail Design, the Equipment & Bulk Material Procurement and the Home Office Project Management Services for the 10,000 Nm3/h Carbon Dioxide Removal Unit at an iron ore reduction plant.

The Unit, based on the Giammarco-Vetrocoke hot carbonate process technology, is extensively modularized in order to facilitate the construction activities utilizing local labour.

Client:	Danieli Far East
Year:	2011-2012
EMHS:	50,000
Location:	Far East
Contract:	LS for Engineering, Procurement & Management Services .
SOW:	Detail Engineering Design, HazOp Study, Procurement Services of Equipment & Bulk Materials Home Office Management Services



🗆 Fauzia, Elettra & Benedetta Platforms

The project was carried out providing our Client with the EPC Tender Documents for n.3 new gas platforms located offshore Adriatic Sea and the relevant ±15% Cost Estimation.

SIMECO developed the multidiscipline Front End Engineering Design according to the following main specifications:

FAUZIA PLATFORM: 12" export sealine; n° 2 wellheads double completion; 3-legs jacket

ELETTRA PLATFORM: 8" export sealine; n° 1 wellhead double completion; 3-legs jacket

BENEDETTA PLATFORM: 8" export sealine; n° 1 wellhead single completion; monopode

lient:	Eni E&P Division
'ear:	2010-2011
MHS:	50,000
ocation:	Adriatic Sea Offshore
ontract:	LS for Engineering Services
50W:	Multidiscipline Front End Engineering Design for EPC Tender with ±15% Cost Estimation



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Electrical Traced Transfer Line for Liquid Sulfur

Project scope is the installation of the new 4" x 1 km Liquid Sulfur transfer line from the Sulfur storage tanks to the Unit producing solid chips.

The unflanged trasfer line is electrically heated by a skin effect tracing system capable to remelt the sulfur in case of in line solidification.

Client:	Eni R&M Div.
/ear:	2010
MHS:	18,000
ocation:	Taranto Refinery, italy
Contract:	EPC LSTK
/alue:	1.1 M€
50W:	Design, Procurement Services and Material Supply, Construction Works, Commissioning & Start-up



Combined Heat & Power Plant Revamping

Project scope was the multidiscpline Front End Engineering Design for the revamping of Enipower Combined Heat & Power Plant located in Bolgiano, San Donato Milanese, Italy.

The revamping consists in dismantling the existing power generation units and their replacement with a new gas turbine (aeroderivative type), installation of n.2 endothermic engines with waste heat boilers for power generation and production of hot water, n.3 auxiliary boilers, n.10 buffer tanks for hot water distribution to the existing district heating network, new pumping station, new electrical room, new technical room.

SIMECO SOW included ±15% cost estimate and preparation of the EPC Tender Documents for the following work package: gas turbine, endothermic motors, Balance of Plant (BOP).

Client:	Enipower
Year:	2010
EMHS:	18,000
Location:	San Donato Milanese, italy
Contract:	LS for Engineering Services
SOM:	Multidiscipline Front End Engineering Design for EPC Tender with ±15% Cost Estimate



OLT Livorno FSRU

The world's first offshore Floating Storage and Regassification Unit (FSRU) is constructed by converting LNG Carrier Golar Frost. The FSRU is permanently moored offshore Livorno, Italy, about 12 miles from the coast in a water depth of about 120 meters and connected to shore through a gas export pipeline.

Storage capacity of 137,000 cubic meters in four spheres, production capacity of 3.75 billion standard cubic meters per annum (bscmpa).

Client (Main Contractor):	SAIPEM
Final Client:	OLT Offshore LNG Toscana S.p.a
Year:	2008-2010
EMHS:	25,000
Location:	Livorno, Italy
Contract:	Reimbursable for Engineering & Site Services
SOW:	Instrumentation and Automation Detailed Engineering, Vendor Follow-Up, FAT (ESD and DCS) and Site Services





Zubair Degassing Station (DGS)

Project scope was the development of the Front End Engineering Design for a new Oil Degassing Station (DGS) and rehabilitation of an existing one at Zubair field, Iraq.

The Zubair field - being developed by Eni with Occidental Oil Co., Korean Gas and Missan Oil Company - with an estimated production capacity of 1,200,000 BOPD is one of the few super giant oil field presently discovered worldwide.

Zubair is a "brown field" project involving the realization of new plants as well as the revamping of existing unit.

Client:	Saipem
FInal Client	Eni E&P Division
Year:	2010-2011
EMHS:	50,000
Location:	Zubair, Iraq
Contract:	LS for Engineering Services
SOW:	Multidiscipline Front End Engineering Design for EPC Tender



EST Project - Sannazzaro Plant

EST (Eni Slurry Technology) is a new deep hydrocracking technology developed by Eni for the valorization of heavy and extra heavy oils, tar sands and refinery residues.

Sannazzaro Plant, with a capacity of 23,000 BPSD, will be the first industrial application of the EST technology, which has been extensively tested in a Commercial Demonstration Unit in Italy.

SIMECO SOW deals with the multidiscipline detail engineering with 3D Modeling of the following process units, utilities and off-sites:

- Hydro-treating;
- Amine Regeneration Unit;
- Cooling Water Unit;
- Flare & Blow Down;
- Steam System;
- De-mineralized Water and Condensate Recovery;
- Fuel Gas;
- Instrument Air;
- Fire Fighting System;
- Interconnecting;
- General EP Distribution;
- Electrical Substation;
- Switchyard

EST plant features n.2 x 2,000 t hydro-cracking reactors made of CrMoV + SS 347 Weld Overlay, supplied by GE-Nuovo Pignone, the largest ever built.

SIMECO has been in charge for the Technical Bid Evaluation and the followup of the hydro-cracking reactors, hydro-treating reactors (400 t) and large HP Gas/Liquid Separators (300 t) made of CrMoV (supplied by ATB).

Client:	SAIPEM
Year:	2009-2012
EMHS:	220,000
Location:	Sannazzaro de' Burgondi, Italy
Contract:	Reimbursable with ceiling.
SOW:	Multidiscipline Detail Engineering, 3D Model, TBE of reactors and HP vessels.

Project carried out in IN.PRO (Civil & Steel Structure Design) and CO.IMP JV with: (Piping Design).



C4 Dryers Package (Butylenic Stream)

The new C4 Dryer Package is designed to remove impurities (water, acetone, acetonytrile) from a C4 Olefinic Stream feeding the existing Isomerization Unit . The purification is obtained throughout adsorbents continuously regenerated. The regeneration unit includes a hydrogenation reactor to remove any olefins from the adsorbent regeneration stream.

The Unit is entirely installed on a steel structure "straddling" an existing pipe-way in a very congested area of the Refinery.

Final Client:	Eni-Spa
Year:	2008-2009
EMHS:	25,000
Location:	Sannazzaro de' Burgondi, Italy
Contract:	Reimbursable for Engineering Services
SOW:	Development of Licensor's Process Design, Detail Engineering Design,HazOp and Risk Analysis,

Engineering Design,HazOp and Risk Analysis, Permitting Applications, Procurement Services and Supply of Equipment & Bulk Materials, Construction Works, Commissioning, Start-up & Test Run of the New Unit.



□ GOSP at Burun Oil Field (TURKMENISTAN)

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The GOSP at Burun Oil Field had some trouble operations, i.e.: sand carry over, clogging of filters by paraffines contained in the crude oil and HSE issues.

SOW was to carry out, on a very tight schedule, a review of the existing BDP developed by the previous Owner of the Oil Field in order to solve the operating problems.

Each document of the BDP was reviewed: several inconsistencies were identified and for each document a Comment Sheet was produced.

Eventually, recommendations have been provided to Company regarding the possibility to use the BDP as a basis for an EPC bid to de-bottleneck the Plant.

lient:	Saipem Energy Services
inal Client:	Eni E&P Division2008-2009
'ear:	2009
MHS:	1,600
contract:	LS of Engineering Services
60W:	Review of Basic Design Package.



□ TAS (WWT) Covering System

The New Unit recovers and condenses the vapors produced at existing jetty on oil tankers during loading operations and vapors produced in the API Separator basins.

A fixed roofing system, pressurized with nitrogen, is provided on the API Separator basins to recover and neutralize hazardous vapors.

The New Cryogenic Condensation Unit was designed to reduce emissions of VOC (Volatile Organic Compounds) to the atmosphere, in compliance with the most recent EC Rules.

Client:	Polimeri Europa
Year:	2006-2007
Location:	Sarroch, Italy
Contract:	LSTK EPC
Value:	6 M€
SOW:	Process & Detail

Process & Detail Engineering Design, HazOp and Risk Analysis, Permitting Applications, Procurement Services and Supply of Equipment & Bulk Materials, Construction Works, Commissioning, Start up &Test Run of the New Unit.



Underground Gas Storage

Bordolano is a depleted gas field, 50 km from Milan, owned by STOGIT (Stoccaggi Gas Italia – SNAM Rete Gas).

STOGIT intend to convert the existing reservoir into an Underground Gas Storage. The Plant consists of a temporary gas compression and Injection Station, called Early Injection Station, withdrawing natural gas from the national pipeline network owned by Snam Rete Gas. Natural Gas is collected and delivered to the reservoir though 2 new pipelines. The Early Injection Station shall be dismantled once completed the injection phase of the cushion gas in the reservoirs.

lient:	Bonatti (Main Contractor)
inal Client:	Eni E&P Division2008-2009
/ear:	2008-2009
MHS:	15,000
ocation:	Bordolano, Italy
Contract:	LS of Engineering Services
50W:	Basic Design, Detailed Engineering of the Early Injection Station, Certifications according to PED and ATEX, Bid Technical Evaluation.



QAFCO V Project - Ammonia Plant

PROCESS UNITS: N. 2 complete Ammonia Plants (Licensor Haldor Topsoe A/S - design capacity 2 x 2,200 t/d) based on Steam Reforming of Natural Gas consisting of the following process systems: Natural gas desulphurization; Process Air Compression; Steam Reforming of Natural Gas and Waste Heat Recovery; HT & LT Shift Converters; CO2 removal by MDEA; Methanation; Syngas Compression; Ammonia Synthesis Loop; Ammonia Refrigeration; Purge Gas Scrubbing & Hydrogen Recovery; Process Condensate Stripper; Deaerator & BFW pumps.

INFRASTRUCTURES AND SITE FACILITIES

- Urea Storage Capacity 160,000 t
- Urea Product Handling System Capacity 195 t/h
- 132 kV Substation,
- Cogeneration Plant,
- Sea-water Multi-cell Cooling Unit,
- Electro-chlorination Unit & Chemical Dosing System,
- Closed Cooling Water System,
- Potable Water System,
- Desalination Plant by TC/MED,
- Utility and Fire Fighting Water Systems,
- Waste Water Treatment Plant.

lient:	Saipem
inal Client:	EQatar Fertiliser co.
/ear:	2008-2009
MHS:	170,000
ocation:	Messaied, Qatar
Contract:	LS of Engineering Services
50W:	Multidiscipline Detailed Engineering, 3D Model, TBE for Instrumentation, Analyzers and Electrical Materials.

Project carried out in IN.PRO (civil design)-CO.IMP (piping design). JV with:



Trans Anatolian Pipeline TAP

The Project includes the following facilities:

• A new unloading terminal located east of Samsun, on the Black Sea;

• A new tank farm located east of Samsun, on the Black Sea, featuring 12 floating roof storage tanks (total net capacity of 1,500,000 cu.m), comprehensive of all relevant facilities and a new dedicated power plant;

• A 48 inch diameter, about 550 km long carbon steel pipeline ;

• One head pump station (PS1) located at the unloading terminal on the Black Sea and three additional pump stations (PS2, PS3, PS4) located along the route of the TAP pipeline

• A new tank farm located at Ceyhan, featuring 12 floating roof storage tanks (total net capacity of 1,800,000 cu.m) , comprehensive of all relevant facilities;

• A new jetty marine loading terminal, on the Mediterranean Sea, located in front of the new Ceyhan tank farm.

Client:	Snamprogetti
Year:	2006-2007
EMHS:	90,000
Contract:	LS of Engineering Services
SOW:	Phase 1 : Conceptual Selection of the crude oil transportation system. Multidiscipline Engineering Services to develop selected final system configuration and Preliminary Cost Estimate;
The second seco	Phase 2 : Front End Engineering Design of the TAP Project : Detail Engineering Design of all Facilities (with the exception of Samsun Marine Terminal), Material Requisitions of Long Delivery Items, ITT for EPC Bids, Material Take Off for the Overall Project and Final Cost Estimate (+/- 15%).
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Bocamina II - Power Plant

Bocamina II is a new 370 MWe Coal fired Power Plant owned by Endesa located in Puerto Coronel, 30 Km SE of Concepcion, CHILE.

The Plant features a SES Boiler and a GE D5 Steam Turbine model D5.

SIMECO and JV partners SOW covered Basic Engineering and Detailed Mechanical Design for Piping Engineering, including 3D modeling, of the following systems:

- Steam Generation;
- Auxiliary Steam System;
- Machinery Cooling Water (production and distribution);
- De-mineralized Water (production, storage and distribution);
- Instrument Air (production, storage and distribution);
- Fire Fighting Water (production, storage and distribution);
- Waste Water (storage, treatment and disposal);
- Condensate Recovery;
- Vacuum Condenser;
- Boiler Feed Water;
- Fuel Oil;
- Sampling;
- Chemical Injection.

Client:	Maire Engineering (Main Contractor)
Year:	2007
EMHS:	70,000
Contract:	LS of Engineering Services
Location:	Puerto Coronel, CHILE.
SOW	Basic Engineering, Process+Piping and Detailed Engineering Design Piping discipline) including 3D Model.
Project executed by:	POLIMTECH (JV between SIMECO, CS Impianti and Valcom).



ENVEN 1.3 Project -Ammonia / Urea Plant

PROCESS UNITS

1 complete Ammonia Plant (Licensor Haldor Topsoe A/S; 2184 MTPD) based on Steam Reforming of Natural Gas consisting of the following process systems:

Natural gas desulphurization; Process Air Compression; Steam Reforming of Natural Gas and Waste Heat Recovery; HT & LT Shift Converters; CO2 removal by MDEA; Methanation; Syngas Compression; Ammonia Synthesis Loop; Ammonia Refrigeration; Purge Gas Scrubbing & Hydrogen Recovery; Process Condensate Stripper; Deaerator & BFW pumps.

Urea Plant (Licensor Snamprogetti; 3835 MTPD) Process units have been connected to existing

Facilities as: Instrument Air, Plant Air, Steam Generation, Power Generation, Raw Water, Potable Water, Natural Gas Treatment

NEW UTILITIES SYSTEMS

Cooling Water Package, Process and Steam / Condensate Recovery & Polishing, BFW Raw Water Prefiltration, Steam Distribution / Power Distribution, Chemical Dosing and Unloading, Flares.

Client:	Snamprogetti
Year:	2007-2008
EMHS:	90,000
Contract:	LS of Engineering Services
Location:	Daharki, PAKISTAN
SOW:	Multidiscipline Detailed Engineering, 3D Model, TBE of Ammonia Reciprocating Compressors & Pumps, Centrifugal Pumps.
Project executed by:	IN.PRO (Civil Design) and CO.IMP (Piping Design).

POLIMTECH (JV between SIMECO, CS Impianti and Valcom).



LLDPE/ HDPE Plant - NKNK Russia

NKNK is a Polyethylene Plant based on the Spherilene Process Technology from Basell Italia. The plant annual capacity is 230,000 MTPY of polyethylene in pallets, HDPE, MDPE and LLDPR type.

The units concerned by the performance of the engineering activities were:

- Polymerization Area;
- Extrusion Area;
- Alkyl Area;
- Homogenization;
- Bagging, Palletizing and Warehouse;
- Interconnecting & Pipe Racks;
- Effluent Basin;
- Purification;
- Propane Storage;
- Control Room and Substation;
- Valve House;
- Flare Area;
- Underground.

Client (Main Contractor):	Tecnimont
/ear:	2006-2007
MHS:	127,000
ocation:	Nizhnekhamsk – RUSSIA
Contract:	Reimbursable for Engineering Services
50W:	Multidiscipline Detailed Engineering Design Project executed by POLIMTECH (JV among SIMECO. CS Impianti and Valcom).



Water Injection Plant & Power Generation

The Water Injection Plant (275,000 BWPD) consisted of:

- Water Supply System, including Oil / Water separation by induced gas flotation, Filtration and Chemicals Injection Systems;
- Injection Water System, consisting of: Buffer Tank, Injection Water Booster Pumps, Injection Water Pumps;
- Gathering System, consisting of n. 5 Trunk-lines up to 24" x 38 km.

The Power Generation Systems (50 MWe) consisting of:

- n. 3+1 Heavy Duty Gas Turbines GE FR5-1 fed with Crude Oil (chemically treated for V inhibition) or Natural Gas;
- New dedicated Control Room;
- New dedicated Electrical Sub-Stations.

Client (Main Contractor):	ENI Oil Co. Ltd, Libyan Branch
Year:	2005-2006
EMHS:	25,000
Location:	Elephant Field – LIBYA
Contract:	LS of Engineering & Services in Libya
SOW:	Feasibility Study, FEED, Cost Estimate +/- 15 %, ITT Documentation for EPC. POLIMTECH (JV between SIMECO, CS Impianti and Valcom).



Marine Loading Arms Revamping

The Project consisted of two Phases:

During Phase 1, 4 x 16" existing Crude Oil Loading Arms at Pier 2/Mooring 5 were dismantled and replaced with 3 x 16" Loading Arms.

During Phase 2, same operation as per Phase 1 were carried out on Pier 2 / Mooring 6.

- FMC were in charge for the supply of the Loading Arms;
- SIMECO provided Engineering Services, Procurement of piping materials and Supervision during Construction, Commissioning and Start-up;
- IFA carried out the Construction.

Client (Main Contractor):	RAM (Raffineria di Milazzo)
Year:	2005-2008
Location:	Milazzo, Italy
Contract:	LSTK EPC
Value:	
- Phase 1:	2.7 M€
- Phase 2:	2.9 M€
Project carried out in JV with:	FMC Technologies (Loading Arms Supplier) and IFA (Construction).



□ ISOCRACKER Plant

Sannazzaro ISOCRACKER Plant is a 25,000 BPSD Hydro-cracking Plant based on Chevron Texaco technology.

Scope of the Engineering Services executed by SIMECO and Partners included the Main Process Units along with the following Auxiliary Units:

- Sour Water Stripper Unit;
- Amine Regeneration Unit;
- Interconnecting, Off-sites & Cooling Water Unit

Client (Main Contractor):	Saipem
Year:	2005
EMHS:	140,000
Location:	Sannazzaro de' Burgondi, Italy
Contract:	LS of Engineering & Site Services
SOW:	Multidiscipline Detail Engineering, 3D Model, TBE.
Project carried out in JV with:	IN.PRO (Civil &Steel Structure Design) CO.IMP (Piping Design).



FCC GASOLINE HDS Unit

Sannazzaro FCC Gasoline Hydrodesulphurization Plant 20,000 BPSD is based on CDHYDRO catalytic distillation technology by CDTECH. Auxiliary Units were also included in the SOW.

lient:	Snamprogetti Sud (Main Contractor)
′ear:	2003-2004
MHS:	70,000
ocation:	Sannazzaro de' Burgondi, Italy
Contract:	LS of Engineering & Site Services
50W:	Multidiscipline Detail Engineering, 3D Model

Project carried out in IN.PRO (Civil Design) -CO.IMP (Piping Design). JV with:



Topping 2 Revamping Project

Topping 2 was originally designed to process 715 t/h of Arabian Light Crude Oil.

A major de-bottlenecking to process up to 770 t/h of Djeno Melange Crude Oil was required.Revamping consisted of:

- Addition of a new Pre-flash Column upstream of the existing Topping Column along with relevant Heaters and Pumps;
- Design of new steel structures.

Complete review/ check of the existing Utilities and Off-sites systems, i.e. BD, Utilities, Closed Drain.

Client:	Snamprogetti Sud (Main Contractor)
Year:	2003
EMHS:	20,000
Location:	Sannazzaro de' Burgondi, Italy
Contract:	LS of Engineering & Site Services
SOW:	Basic Design Review, Detailed Engineering, TBE Supply of Heat Exchangers and Piping Materials Site Supervision Services.



Genoa De-Bottlenecking Project

Underground interconnecting to upgrade and rationalize the 100 years old oil products offloading marine terminal in Genoa. "Trench-less" and "microtunnel" technologies have been deployed due to the very congested and geologically critical involved areas.

4 x 30" & 2 x 12" pipelines in 2.6 m x 650 m microtunnel between Genoa Marine Oil Terminal and Praoil Petroleum Products Depot & Pumping Booster Station.

Client:	PRAOIL Oleodotti Italiani
Year:	2003-2004
EMHS:	60,000
SOW:	Feasibility Study, Hydraulic Studies, Engineering Design (Basic+ Detail), Procurement Services including TBE and Material Supply Technical Follow-up.



Spent Lube Oil Re-refining Plant and Offsites Revamping

- VISCOLUBE is the European leader in re-refining spent lube oils, with over 60,000 MTPY of reclaimed oils.
- The New Hydro-finishing Unit is based on a technology licensed by Axens (France).
- The Plantincludes a Hydrogen Generation Unit designed by CALORIC Anlagenbau (Germany).
- CALORIC is a firm specialized in gas generation plant package supply, i.e.: sin-gas, carbon monoxide, hydrogen.

Client:	VISCOLUBE
Year:	2001-2003
EMHS:	50,000
Location:	Lodi, Italy
Contract:	LS for Engineering & Site Services
SOW:	Feasibility study, Basic Design of Utilities & Off-sites, FEED of Hydro-finishing Unit (BD by IFP/ Axens), Detail Engineering, Procurement and Site Supervision Services.





Client	Project / Location & Services
SARLUX	Feasibility Study for Replacement of Air-Preheaters at Power Generation Plant (CTE), Sarroch Refinery, Italy
SARLUX	Basic Design for Upgrading of Mercaptan Removal from Fuel Gas at Visbreaking Plant, Sarroch Refinery, Italy
ISAB LUKOIL	Basic Design Package for Revamping of the existing Water Treatment Plant (TAS), Priolo Refinery, Italy
SARLUX	Basic engineering, cost estimate and scheduling for replacement of MV and LV switchgears and VSD fan motors (560 kW) in electrical substations, North Plants, Sarroch Refinery, Italy
SARLUX	Detail Design of power grid modifications to supply 17.1 MW to the FCC blower, Sarroch Refinery, Italy
SARLUX	Detail Design for the self-supplying of South Plants (380 kV & 150 kV), Sarroch Refinery, Italy
SARLUX	Detail Design for the new H2S Removal Tower, CCR Plant, Sarroch Refinery, Italy
SARLUX	Detail Design for replacement of reforming reactors and heaters manifolds, CCR Plant, Sarroch Refinery, Italy
SARLUX	Process Study for Debottlenecking of Cooling Water Network, South Plants, Sarroch Refinery, Italy
RAM	FEED for Fuel Oil Destruction (FODS) Project Site Preparation Works (Tanks dismantling, Flare relocation, New Electrical Substation,), Milazzo Refinery, Italy
ENIPROGETTI	Process Study for debottlenecking of Acid Gas Removal Unit, Sulphur Recovery Unit and Tail Gas Treatment, Zohr Project, Egypt
CASALE	Multidisciplinary Engineering Services (Electrical, Machinery, Piping) for Metafrax Project (Ammonia/Urea/Melamine Complex), Russia

Client	Project / Location & Services
RAM	Project Management Consultancy Services for Fuel Oil Destruction (FODS) Project at Milazzo Refinery, Italy
SARLUX	Detail Design for energy integration between Mild Hydrocracking Unit (MHC) and Gasoline Etherification Unit (TAME), Sarroch Refinery, Italy
SARLUX	Detail Design for new 150 kV electrical substation, North Plants, Sarroch Refinery, Italy
BIO-ON	Feasibility Study for 1,500 MTPY Polyhydroxyalkanoates (PHA) bio-plastic production plant from glycerol feedstock, Italy
AMEC Foster Wheeler	Electrical engineering for replacement of electrical equipment inside electrical substations (power: 34 MVA) damaged by a fire at Versalis plant, Ragusa, Italy
RAM	Feasibility Study and Basic Design for relocation of existing Flare, Milazzo Refinery, Italy
SARLUX	Basic Design and FEED for new H2S Removal Tower, CCR Plant, Sarroch Refinery, Italy
TECNOMARE/ENI	FEED for Karachaganak Sour Gas Liquids Treatment Project, Kazakhstan
TECNIMONT	Detail Design for HDPE Plant, RAPID Project, Malaysia
SARLUX	Basic Design for upgrading and revamping of existing Blow-Down and Flare system, Sarroch Refinery, Italy
SARLUX	Basic Design and Services for upgrading of H2S Removal System (Amine System), Sarroch Refinery, Italy
SARLUX	Detail Design for replacement of loading arms at North Plants Marine Terminal, Sarroch Refinery, Italy

CLIENT	Project / Location & Services
ABB	Multidisciplinary Detail Design for Nawara Gas Treatment Plant, Tunisia
ABB	FEED for revamping of production satellites at Hassi Messaoud Field, Algeria
SAIPEM/ENI	Detail Piping/Instrumentation Engineering for Onshore Early Production Facilities, Zohr Project, Egypt
Siirtec Nigi	Detail Design for the new Gas Treatment Unit, Zhaikmunai Plant, Kazakhstan
RAM	Basic Design Package for a new 10,000 BPSD Naphtha Hydrotreating Unit (HDT-3) at Milazzo Refinery, Italy
SARAS	Detail Design for revamping of Propylene Recovery, Separation and Storage at North and South Plants at Sarroch Refinery, Italy
TECNOMARE	Electrical FEED for Nenè Field Development Project (PP1, AEP, Riser, WHP3 Platforms), Congo
SARLUX	Detail Design for replacement of electrical protection switchboards 150/33/6 kV, Sarroch Refinery, Italy
SARLUX	Detail Design for replacement of FCC Blower driver from steam turbine to electrical motor, Sarroch Refinery, Italy
SARLUX	Basic Design Package for upgrading of firefighting system at North Plants jetty, Sarroch Refinery, Italy
IRIS/Consorzio Industriale Sassari	Feasibility Study for LNG Storage at Porto Torres, Italy

Client	Project / Location & Services
RaM	EPC LSTK contract for Revamping of Kerosene Desulphurization Unit (HDS-1), Milazzo Rafinery (Italy)
PACIFIC FUTURE ENERGY Co.	Pre-feasibility Study for Greenfield Refinery, British Columbia (Canada)
United Petrochem	Pre-feasibility Study for a new Condensate Desulpurization Plant, Sohar (Oman)
SARAS	Feasibility Study for new scrubber for FCC flue gas desulphurization, Sarroch Refinery (Italy)
SARAS	Basic Design for thermal integration between Mild Hydrocracking (MHC) and new Sea Water Desalter (DAM), Sarroch Refinery (Italy)
VERSALIS	Owner's Engineering Services during construction of ETBE/Butene-1 plant at Ravenna Petrochemical Complex (Italy)
RaM	Basic design for new Gasoline HDT 3 Hydrotreating Unit, Milazzo Refinery (Italy)
IES	Feasibility Study for revamping the railroad offloading facilities , Mantova Refinery (Italy)
Eni R&M Div.	Basic and Detailed engineering design for revamping of Furfural Plant to TDAE production, Livorno Refinery (Italy)

Client	Project / Location & Services
SARAS	Detail design of the new oxygen line (6" x 600 m) for Oxygen Enrichment System, FCC Plant, Sarroch Refinery, Italy
Eni R&M Div.	Front End Engineering and Design for revamping of the logistics assets, Venice Refinery, Italy
Eni R&M Div.	Process Study for debottlenecking of the Cooling Water Network at Sannazzaro and Taranto Refineries, Italy
VERSALIS	Owner's Engineering Services during the FEED of elastomer plants (s-SBR, e-SBR, EPDM, SBS), RAPID Project, Malaysia
SAIPEM	FEED design activities for Ammonia Plant, Spiritwood Project, North Dakota, USA
SAIPEM	Instrumentation and automation design activities for drilling and production clusters EPC2, EPC3, EPC4, Kashagan, Caspian Sea, Kazakhstan
E.ON	Owner's Engineering Services for relocation of Solar Taurus 70 Gas Turbine, Mira/Adria, Italy
SARAS	FEED for energy integration between Mild Hydrocracking (MHC) and Gasoline Etherification Unit (TAME), Sarroch Refinery, Italy
SARAS	Basic and Front End Engineering Design for debottlenecking of Topping RT2 Unit, Sarroch Refinery, Italy
RaM	Front End Engineering Design for the revamping of the kerosene HDS1 unit at Milazzo Refinery (Italy).
SARAS	Basic design and process studies for the improvement of the energy efficiency on various process and auxiliary units at Sarroch Refinery (Italy).
URS	Front End Engineering Design for the new Waste Water Treatment Plant at Adriatic LNG Regassification Terminal (Italy).
ENI R&M Div.	Front End Engineering Design for the revamping of the Waste Water Treatment Plant at Livorno Refinery (Italy).
ENI R&M Div.	Front End Engineering Design for the new Treated Deasphalted Aromatic Extract (TDAE) Plant at Livorno Refinery (Italy).
Raffineria di Gela	Basic Design and Detailed Engineering Design for the installation of new Ultra Low NOx burners on fired heaters of Gela Refinery (Italy).
SAIPEM	Detailed Engineering Design for Dangote Ammonia/Urea Complex (Nigeria).
VERSALIS	Basic Design of the new Flare Gas Recovery Unit at Sarroch Petrochemical Complex (Italy).

Client	Project / Location & Services
ENI R&M Div.	Front End Engineering Design and Detailed Design of the New Hydrogen Production Unit based on Eni's proprietary SCT-CPO technology at Sannazzaro de' Burgondi Refinery (Italy). In progress.
ENI R&M Div.	Feasibility Study for the new Treated Deasphalted Aromatic Extract (TDAE) Plant at Livorno Refinery (Italy).
ENI R&M Div.	Technical Assessment of the existing tank farm for storage of raw vegetable oils and biodiesel and Front End Engineering Design of the relevant revamping, Green Refinery Project, Venice (Italy).
VERSALIS	Process Study of the Blow Down systems after the installation of new process units at Sarroch Petrochemical Complex (Italy).
VERSALIS	Basic Design for a new Commercial Demonstration Plant for production of Tackifying Resins (Italy).
SAIPEM	Front End Engineering Design activities for North West Red Water LC Finer Residues Conversion Unit (Canada).

Client	Project / Location & Services
ENI R&M Div.	Lump Sum Turn Key Contract for the Vacuum Column and Filtration System of FCC Clarified Oil at Sannazzaro de' Burgundi Refinery (Italy).
ENI R&M Div.	Basic & Front End Engineering Design for a proprietary Special Chemical Production Unit at Robassomero Plant (Italy).
ENI R&M Div.	Detailed Engineering and Procurement Services for the new Water Reuse Unit based on Ultra-filtration and Reverse Osmosis technologies at Sannazzaro de Burgundi Refinery (Italy).
DANIELI Far East	Detail Engineering, Procurement & Home Office Management Services for the new 10,000 Nm3/h Carbon Dioxide Removal Unit (Far East).
ENIPOWER	Basic Design and Cost Estimate for the installation of a new Steam Boiler (160 MWt) at Ravenna Power Station (Italy)
POLIMERI EUROPA	Basic Design and Cost Estimate for the installation of n.2 new HP Steam Boilers (2 x 150 t/h) at Porto Marghera Petrochemical Complex (Italy).

Client	Project / Location & Services
ENI E&P Div.	Front End Engineering Design (FEED) relevant to Fauzia, Elettra and Benedetta Platforms, including revamping of the automation & telecom systems of the transit platforms, Adriatic Sea (Italy)
ТМРС	Feasibility Study, Basic Design and Risk Analysis for Methanol Storage and Injection Unit - at the Terminal in Cap Bon (Tunisia) -for inhibition of hydrate formation in the Trans Mediterranean Pipelines.
URS Italia	Feasibility Studies and Basic Design for Wobbe Index correction systems at the Adriatic LNG Terminal (Italy) - Final Client: Adriatic LNG
TAMOIL	Detail Design of Chloride Removal Unit upstream the Catalytic Reforming Unit (CCR) at Cremona Refinery (Italy).
ENI R&M Div.	1 Km x 4" electrically traced Liquid Sulphur Transfer Line and associated Unit Revamping at Taranto Refinery (Italy) - EPC Contract.

Client	Project / Location & Services
ENIPOWER	Front End Engineering Design and Cost Estimate for the Revamping of the Combined Heat & Power Plant , S. Donato M.se (Italy).
BONATTI	Multidiscipline Engineering Design for the New Utility Water Systems at NC-115 GOSP "A", GOSP "B" & CCX Industrial Area and NC-186 GOSP "A" – Final Client: Akakus Oil (Libya)
ENIPOWER	Front End Engineering Design of n.2 Photovoltaic Plants: Taranto (1 MWe) and Ferrandina (4 MWe) (Italy)
SAIPEM	Multidiscipline Engineering Design for EST (Eni Slurry Technology) Plant at Sannazzaro Refinery (Italy) - Final Client: Eni R&M Div.
SIRAM S.p.A.	Conceptual Design & Budget Estimate for nr. 2 Biomass fired (wood chips) Power Plants (14 MW and 10 MW).
SAIPEM ENERGY SERVICES	Review of the Basic Engineering Design Package for Burun Oil Field (Turkmenistan). Final Client: ENI E&P Div

Reference List 2008

Client	Project / Location & Services
SNAMPROGETTI	Multidiscipline Engineering Design for Ammonia & Urea Plants; QAFCO 5 Project - Qatar. Final Client: Qatar Fertilizers Co.
TECNIMONT	Basic Design for the Biomass (wood chips) fired Power Plant at Olevano Lomellina (Italy) – Project carried out in partnership with CS Impianti srl & Valcom srl
ENI OIL CO. LTD	Risk Analysis/Assessment Study for the out of service of Gas Sweetening Unit at DP4 Platform Bouri Field – Libya
BONATTI S.p.A	Detailed Engineering Design for the Water Injection System Up-grading at NC-115 El Sharara GOSP "B" . Final Client: Akakus Oil (Libya)
ENI R&M Div.	C4 Butylenic Stream Dryer Package for Sannazzaro de' Burgondi Refinery (Italy). Engineering Design, Equipment & Bulk Material Supply and Installation, Commissioning & Start-up - Lump-sum Turn-key Job

Client	Project / Location & Services
RaM – Raffineria di Milazzo	Pier 2 / Mooring 06 bis: Marine Loading Arms revamping and replacement on – Milazzo (Italy) – Lump Sum Turn-key Job in partnership with I.F.A. srl and FMC Technologies
SAIPEM ENERGY INT.	Process Engineering Design for revamping and modifications of Kitina Platform Top Side Facilities - Congo - Final Client: ENI E&P Div.
CO.ME.CF s.r.l.	Detail Engineering for 12 t Power Boilers substitution with 3.5 MW Power Boilers/ Solar Centauro 55 Turbogas at Robassomero Plant (Italy). Final Client: ENI R&M Div.
POLIMERI EUROPA	T.A.S. (WWT) Covering System and Cryogenic Condensation Unit System for Sarroch Plant (Italy). Engineering Design, Equipment & Bulk Material Supply, Construction, Commissioning & Start-up - Lump Sum Turn-key Job
SNAMPROGETTI	Multidiscipline Detailed Engineering Services for Ammonia & Urea Units; ENGRO Project – Pakistan - Activities performed in partnership with CO.Imp.s.r.l. & IN.PRO s.r.l. Final Client: Engro Chemicals Co.
TECNIMONT	Basic Engineering and Detailed Mechanical Design for BOCAMINA II 370 MWe Coal Fired Power Plant - Puerto Coronel (Chile) Activity in partnership with CS Impianti srl and Valcom srl - Final Client: ENDESA

Client	Project / Location & Services
SNAMPROGETTI	Multidiscipline Detailed Engineering for Taranto Plus Refinery Expansion Project (Topping/Vacuum; LPG Treatment Package; Auxiliary; Interconnecting, Gasoil HDS). Final Client: ENI R&M Div.
ENI R&M Div.	Process Study for the Sour Water Stripper of Livorno Refinery (Italy). Activities performed in partnership with TECNO srl
ENI R&M Div.	Feasibility Study for the existing Power Boiler Generators substitution. Robassomero Power Generation Plant (Italy)
ENI E&P Div.	Tender Documents preparation for the Turbo-generator duplication for the NAOC Electrical Power Plant - Okpai (Nigeria)
SNAMPROGETTI	Machinery Engineering and Packages technical follow-up for the Isocracker Plant and Associated Units - Sannazzaro de' Burgondi Refinery (Italy) – Final Client: ENI R&M Div.
TECNIMONT	Multidiscipline Detailed Engineering Design for the NKNK LLDPE / HDPE Project - Nizhnekamsk (Russia) - (in partnership with CS Impianti srl and Valcom srl)
SAIPEM ENERGY INT.	Process Engineering Design and Fire-fighting Study for the LITCHENDJLI and BANGA platforms (Congo). Final Client: ENI E&P Div.
SAIPEM ENERGY INT	Process Engineering Services for Kalamakas Project at the Caspian Sea. Final Client: ENI E&P Div.
ENI R&M Div.	Front End Engineering Design of a New GPL Desulphurization Unit at Venezia Refinery (Italy)
NORAHAN SANAYE	Endorsement of the Basic Engineering Design & Detailed Engineering Design for Utilities & Offsites of Ilam Petrochemical Complex – Iran
SNAMPROGETTI	Basic Engineering Design for the initial definition and development of the FEED for: Samsun Marine Terminal (Black Sea); NPS 48"Ceyhan Marine Terminal & NPS 48" Oil Pipeline Samsun – Ceyhan Trans Anatolian Pipeline (Turkey). Phases I&II Final Client: ENI E&P. Div.

Client	Project / Location & Services
RaM - Raffineria di Milazzo	Pier 2 – N. 4x16" marine loading arms dismantling and replaced with N. 3x16" loading arms – Milazzo (Italy) - Turn key job performed in partnership with IFA srl & FMC Technologies
Engineering & Management Services	FEED for the Commercial Demonstration Plant for H2S Absorption at Karachaganak (Kazhakstan); Final Client: ENI E&P Div.
TECNOMARE	Fire-fighting Study for the LITCHENDJLI and BANGA Platform (Congo). Final Client: ENI E&P Div.
RaM - Raffineria di Milazzo	Feasibility Study & Basic Design for the Vapour Recovery Unit at Pier 2 – Milazzo (Italy)
SAIPEM ENERGY INTERNATIONAL	Process Engineering Activities for AWA / Paloukou Platform – (Congo). Final Client: ENI E&P. Div.
ENI Oil Co. Ltd	Feasibility Study Design and preparation of Tender Documents for EPC for the Water Injection System & Power Generation System at Elephant Field (Libya)
SNAMPROGETTI	Instrumentation Engineering activities for the following projects: Samir Up-grade Project - Mohammedia (Morocco). CCR Platformer & LRSN Isomerization Plant – Yanbu (Saudi Arabia) Ras Laffan LPG – Phase 2 FEED – Ras Laffan (Qatar) NGL – Ruwais (UAE)
SNAMPROGETTI	Multidiscipline Detail Engineering for the Isocracker Plant and Auxiliary Units – Sannazzaro Refinery (Italy) -Activities carried out in partnership with Co.Imp s.r.l. & IN.PRO s.r.l. Final Client: ENI R&M Div.
ENI E&P Div.	New 18" Gas Pipeline Kwale / Okpai (Nigeria) for NAOC. Tender Documents preparation for EPC contract
ENI E&P Div.	Multidiscipline Engineering activities to enter into production wells ${\tt 13\&19}$ at Pisticci Oil Field (Italy)
STOGIT	Multidiscipline Engineering activities for the Gas Compression Centers at Cortemaggiore, Settala, Cinisello Balsamo, Ripalta, Sergnano, Minerbio (Italy)

Reference List 2004

Client	Project / Location & Services
ENI E&P Div.	Tender Documents for supply and installation of a 3MW Turbogenerator for the NAOC Electrical Power Plant - Okpai (Nigeria)
Raffineria di Gela	Supply and installation of the instrumentation system for the Water Treatment Plant – Gela Refinery (Italy) - Turn-key Lump Sum Contract
FMC Energy System	Basic Design for the LPG Railway Loading Station in Noyabrsk (Russia)
ENI R&M Div.	Basic Design Study for Energy Saving on Topping 1 and Vacuum Plant, Sannazzaro de' Burgondi Refinery (Italy)
ENI E&P Div.	18" Oil Pipeline Tebidaba – Brass for NAOC (Nigeria). Tender Documents preparation for EPC Contract
ENI S.p.A. Exploration & Production Div.	24" Gas Pipeline Ogbainbiri – Ob/Ob (NAOC Nigeria). Follow-up and check of the technical documents issued for construction by the EPC Contractor (DAEWOO - Chorea)
ITALPROGETTI	Study for the Panigaglia LNG Terminal pier modifications to allow the mooring of ships with 65.000 / 70.000 ton DGW. Final Client: SNAM

CLIENT	Project / Location & Services
SNAMPROGETTI SUD	Detailed Engineering Design for the FCC Gasoline HDS Plant at Sannazzaro de' Burgondi Refinery (Italy) - Final Client: ENI R&M Div.
ENI R&M Div.	Feasibility Study and Cost Estimate for N. 8 ENI petroleum products terminal in Italy
ENI R&M Div.	Feasibility Study and Cost Estimate for the new marine terminal in Gaeta, Italy.
ENI R&M Div.	Basic Engineering Design for the ENI marine petroleum products terminal in Vibo Valentia – Italy
PRAOIL	Design study for the Gran San Bernardo service gallery relocation – Italy
PRAOIL	Detailed Engineering design for the "Genua Debottlenecking Project" – Italy
GENUA PORT AUTHORITY	Rationalization study for the petroleum products dispatch at Genua Harbour – Italy
ALSTOM POWER Boilers	Electro-instrumental Engineering and 3D Modelling for the OKPAI Power Plant - Nigeria

Reference List 2002

Client	Project / Location & Services
Agip Petroli	Basic Engineering and Cost Estimate for WAX Vacuum Plant revamping Project at Livorno Refinery (Italy)
SNAMPROGETTI	Detail Engineering for the Third Methanol Plant in Bandar Imam (Iran)
Agip Oil Co.Ltd	Feasibility study for Regeneration Gas Compressor installation – NGL Recovery Plant (Libya)
SNAMPROGETTI SUD	EPC contract for Topping 2 (Unit 10) Revamping at Sannazzaro de' Burgondi Refinery (Italy) - Final Client: Agip Petroli

□ Reference List 2001-2000

Client	Project / Location & Services
PRAOIL	Rationalization design study for the Agip and Iplom products distribution in Genua (Italy)
VISCOLUBE	New Lube Oil Re-refining (hydro-finishing) Plant and Off-sites revamping at Pieve Fissiraga Refinery (Italy) Feasibility Study, FEED, Detail Engineering, Cost Estimate, Procurement, Test and Expediting of the Materials
SIRTE OIL COMPANY	Gas Lift Project including Gas Lift Compression, Methanol & Chemical Inhibitor Injection Skids, Trunk Lines and Flowlines - Raguba –Libya (JV with Bonatti)
ENELPOWER	Multidiscipline Engineering Design for Combined Heat & Power Plant, Castleford (UK) – Final Client: HICKSON & WELCH Ltd