

ONSHORE OIL AND GAS TRANSPORTATION SYSTEMS



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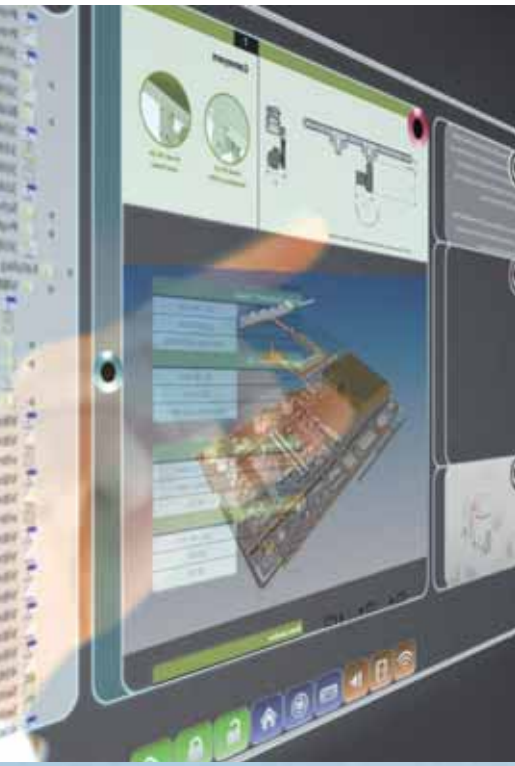
SAIPEM TODAY

SAIPEM TODAY IS A WORLD LEADER IN THE GLOBAL SUPPLY OF ENGINEERING, PROCUREMENT, PROJECT MANAGEMENT, CONSTRUCTION AND DRILLING SERVICES WITH DISTINCTIVE CAPABILITIES IN THE DESIGN AND EXECUTION OF LARGE-SCALE OFFSHORE AND ONSHORE PROJECTS.

Saipem has a strong bias towards oil and gas frontiers, namely activities in harsh and remote areas, in deep waters as well as in extremely cold and hot environments, applying significant technological competences in many diverse fields such as gas monetization and heavy oil exploitation.

Saipem is organized in two Business Units: Engineering & Construction and Drilling.





SAIPEM ENGINEERING & CONSTRUCTION

FOLLOWING AN AGGRESSIVE GROWTH STRATEGY, WHICH INCLUDED IN THE LAST DECADE THE ACQUISITION OF MANY CONSTRUCTION, TECHNOLOGY AND ENGINEERING COMPANIES, MOST PROMINENTLY OF SNAMPROGETTI, BOUYGUES OFFSHORE, SOFRESID AND MOSS MARITIME, SAIPEM HAS BECOME ONE OF THE WORLD LARGEST AND MOST COMPLETE ENGINEERING AND CONSTRUCTION COMPANIES IN THE GLOBAL OIL AND GAS MARKETS, ONSHORE AND OFFSHORE.



Ever since its initial steps in the fifties as the construction division of Snam, the pipeline company of the Eni Group in Italy, Saipem has pursued a systematic growth strategy, based on the development of internal assets, expertise and skilled resources, as well as on the acquisition of other players with their own asset bases, such as Micoperi in late eighties, and many others.

In the last decade, Saipem has continued its growth by acquiring Bouygues Offshore and Sofresid in France, Moss Maritime in Norway, IDPE in India and Snamprogetti in Italy, and by carrying out a multibillion investment program into the expansion of its offshore construction and drilling fleets. Since the year 2000, Saipem's market capitalization has grown more than sixfold and its revenues tenfold. (*)

The organizational integration of this considerable asset base, namely the network of engineering centres, fabrication and support yards in several continents as well as the offshore construction fleet, has been completed gradually over the years - most recently with the creation of a unified Business Unit Engineering & Construction, an entity with over 30,000 employees (excluding corporate and BU Drilling staff) from over 100 nationalities, with over 60 permanent establishments

and numerous project execution centres around the globe, and with yearly revenues exceeding 10 billion €/y; all held together by outstanding project management skills.

Through the involvement of our global EP(I)C hubs in Milan, Rome and Fano (Italy), Paris (France) and Chennai (India), which operate in connection with a growing number of medium size and smaller regional engineering and project execution centres employing altogether over 7,000 engineers, Saipem balances high project execution quality with a competitive cost and - most importantly - with a major emphasis on local know-how and content.

This well-integrated multicentre approach provides a consistent design and robust execution philosophy on all our projects worldwide. Top priority is provided throughout to all HSE and Quality aspects.

Saipem therefore offers a complete range of project definition and execution services, offshore and onshore, particularly for the complex "mega-projects" required by the market today: from feasibility and conceptual studies to complex integrated solutions combining design, engineering, procurement, field construction, fabrication and offshore

installation; also revamps, upgradings, maintenance, decommissionings, reclamations and decontaminations.

Saipem today operates in virtually every world market, often in remote locations with harsh environmental conditions and challenging logistics, leveraging on its proven experience across the most significant product lines in the oil and gas production onshore, offshore, in deepwater; gas and oil transportation via offshore and onshore pipeline systems; midstream, refining, chemicals, power generation from fossil as well as from renewable sources; environmental industries, maritime works and infrastructure.

This new series, therefore, outlines Saipem's integrated references in engineering and construction markets offshore and onshore, according to individual business and technology lines.

(*) Until Dec. 31, 2010

ONSHORE OIL AND GAS TRANSPORTATION SYSTEMS (OTS)

WITH THE ACQUISITION OF SNAMPROGETTI AND BOUYGUES OFFSHORE, SAIPEM HAS CONSOLIDATED ITS PREEMINENT POSITION AS A WORLD LEADER IN THE DESIGN AND CONSTRUCTION OF ONSHORE OIL AND GAS TRANSPORTATION SYSTEMS.

Both Snamprogetti and Saipem draw their roots more than fifty years ago from the design and laying of complex oil and gas transportation systems. Born at the time as divisions of Snam S.p.A. (today Snam Rete Gas S.p.A.), following their rapid growth also outside of Snam's mission, they were shortly thereafter spun off in order to become major independent players. The oil and gas transportation systems business, however, remained one of their core activities and one of the foundations of their subsequent expansion.

In oil and gas pipelines both companies had full EPC capabilities, although to a different degree:

Saipem's primary focus was on construction and related technologies (such as welding, etc.), whereas Snamprogetti's was on engineering and procurement services. For years, therefore, Saipem and Snamprogetti combined forces on the largest world oil and gas transportation systems, under a variety of EPC contractual forms, mostly with Saipem as the leader.

In addition, the acquisition in 2002 by Saipem of Bouygues Offshore s.a., who at that time also owned the engineering subsidiary Sofresid, had brought to the new Group numerous active engineering resources, specialized know-how, local presence

in certain key markets, extensive references as well as some ongoing flagship projects in new markets.

Today, following the full integration of these constituent companies, Saipem is one of the leading full-service engineering and construction general contractors, world-wide, in pipeline systems as well as in many other oil and gas market segments. Saipem can develop advanced design solutions and build complex integrated oil and gas transportation systems, based on advanced technologies, in the harshest and most remote environments.





To date, Saipem has designed over 60,000 km and laid almost 100,000 km of land pipeline systems, utilizing its own equipment and assets, in almost every corner of the world:

- ▾ The Italian oil and primarily gas transportation and distribution network (see separate story) - in itself almost 40,000 km of pipelines.
- ▾ The gas supply system into Italy - trunklines to bring in gas from Algeria, Libya, Russia and the North Sea.
- ▾ Major oil, gas, water and chemicals pipelines in every possible physical environment: deserts, frost lands, swamps, prairies, virgin forests as well as densely inhabited areas.

▾ A world-wide track record, from Far Eastern Russia and Australia all the way to Latin America, with numerous completed projects in Asia, Europe, Middle East and Africa.

This has been made possible in particular by Saipem's emphasis on developing permanent local establishments in most markets.

▾ Complex integrated oil and gas transportation systems, which include not only pipelines but also the full design and construction of compression and pumping stations, including receiving terminals and upstream facilities for treatment and reinjection.

▾ Multibillion mega-projects often executed on an EPC/LSTK contractual basis: among many

examples, the Sakhalin II Onshore Pipeline System.

▾ Major pipeline rehabilitation and upgrading undertakings, including de-commissioning and re-commissioning.



Over the years, Saipem has been at the forefront of technology development and utilization of the most modern design, diagnostic and construction tools; for example:

- ▾ Applications of the continuously evolving high strength steels: e.g. X45 in the earlier decades, then X60, now in some applications X80, demo units on X100.
- ▾ The development of proprietary tools and methodologies, such as welding machines, monitoring systems, topographic techniques, etc.
- ▾ The development - on behalf of Eni - of TAP, an advanced Gas Transportation technology for high throughput pipelines at high pressures, based on the application of X100 high strength steel. A commercial application of this concept, extensively tested in a three years long program at the demonstration plant in Sardinia, has the potential of further reducing large volume gas transportation costs over very long distances. Therefore, ever more remote gas reserves can be brought closer to world markets.





OTS CENTRE OF EXCELLENCE IN FANO, ITALY

EVER SINCE ITS FOUNDATION IN NOVEMBER 1970, THE ENGINEERING CENTRE IN FANO, ON THE ADRIATIC COAST OF ITALY, HAS BEEN THE FOCAL POINT OF SNAMPROGETTI'S DESIGN AND CONSTRUCTION ACTIVITIES IN ONSHORE TRANSPORTATION SYSTEMS (PUMP STATIONS, COMPRESSION STATIONS, CROSS-COUNTRY PIPELINES, ETC.), AS WELL AS - MORE RECENTLY - IN OTHER FIELD UPSTREAM PROJECTS.

Over these decades, the Fano centre has thus performed numerous projects on EPC or EPCS basis, as well as many other engineering-only contracts, for a broad array of international Clients. Many projects were also executed in partnership with Saipem, mostly to supply engineering and procurement services.

Following the more recent integration of Snamprogetti into Saipem, most of the oil and gas transportation system capabilities of Saipem were concentrated in Fano, in order to create a global centre of excellence, specialized in all aspects of onshore oil and gas transportation systems design and execution: engineering, procurement, construction, project management, R&D. In addition, the Fano centre continues to be active in several broader aspects of the upstream world, beyond pipelines and

associated systems.

Today, several multibillion upstream and generally pipeline-based integrated projects, worth billions of Euros, are being designed and executed under the leadership of the Fano centre.

This centre continuously operates in alignment with other Saipem engineering centres with pipeline and upstream capabilities, such as Milan, Italy and Paris, France, as well as with many regional centres, in order to design and build large oil and gas transportation and upstream systems jointly.

The Fano centre also provides the technical support and the technological guidance to Saipem's regional offices, in their efforts to design and execute smaller projects autonomously.





To date, the Fano centre has designed and put in operation an impressive record of onshore pipelines systems:

- ▾ Over 52,000 km of gas pipelines.
- ▾ 86 compression stations, for a total capacity exceeding 3,000 MW.
- ▾ Over 22,000 km of oil and product pipelines.
- ▾ 40 oil pumping stations, for a total capacity exceeding 2,100 MW.
- ▾ Over 1,400 km of water pipelines.
- ▾ 11 water pumping stations, for a total capacity of about 130 MW.

This track record comes in addition to the integrated upstream projects, such as the ones illustrated in the flagship sections of this brochure, and those presented in the parallel Upstream brochure.

The Fano centre's total personnel exceeds 1,100 employees, at the time

of writing, of which almost 900 (including over 500 graduate engineers) focus entirely or mostly on onshore activities and on administration.

To accommodate the growth, in 2008 the Fano centre has expanded its facilities by adding a new office

building. Today, therefore, the centre can house easily its permanent staff as well as dedicated project task forces, which often include Clients' representatives, Owner's engineers and occasionally subcontractors.

OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Mexico	Transportadora de Gas Natural de Norte-Noroeste (TGNN)	Natural Gas Transportation Pipeline Project
Iraq	Exxonmobil (Fluor as PMC)	West Qurna Phase 1 - ISBL Water Injection Pumps
Iraq	Exxonmobil (Fluor as PMC)	West Qurna Phase 1 - OSBL Water Pipeline and Injection Systems
Venezuela	Petrojunin (ENI Venezuela - PDVSA)	Import and Export Pipelines Associated to the Phase of Early Production 2012 Petrojunin

NATURAL GAS TRANSPORTATION PIPELINE PROJECT – MEXICO

This 556 km, 30" gas pipeline, with two compression stations to be installed along the route to connect El Encino, located in the Chihuahua State, to Topolobampo, in the Sinaloa State on the western coast of Mexico.

The pipeline will have a capacity of 670 million cubic feet of natural gas per day.

Saipem's scope of work encompasses the Engineering, Procurement and Construction on a LSTK basis.

LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
556	30"	EPC	Under Exec.
		EPC	Under Exec.
14 + 10 + 1	28" - 20" - 24"	EPC	Under Exec.
2 x 35	8" - 12"	EPC	Under Exec.



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Australia	Gladstone LNG Operations Pty Ltd	Gladstone LNG Pipeline Project
Abu Dhabi	Abu Dhabi National Oil Company (ADNOC)	Shah Gas Development Program Package 5 Shah Product Pipeline
Kuwait	Al Khurayef Company	GC 16
Kuwait	Kuwait Oil Company	BS-171 New Booster Station
Kuwait	Kuwait Oil Company	Installation of Compressors at GC 7, GC 8 and GC 21

GLADSTONE LNG PIPELINE PROJECT - AUSTRALIA

This 420 km 42" gas transmission pipeline, including mainline valves and associated facilities, will connect the gas fields in the Bowen and Surat Basins, in the area between Roma and Emerald, Queensland, to the Gladstone State Development Area (GSDA) on the Coral Sea shore, near the city of Gladstone, Queensland, where a LNG liquefaction and export facility will be built.

The pipeline will be entirely buried and a number of mitigation measures will be implemented during pipeline construction to minimize the environmental impact to sensitive areas, including weed control, rehabilitation and biodiversity offsetting.

Saipem's new Brisbane Project office will be responsible for the management of the whole project, including the training programs for local employees.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
420	42"	EPC	Under Exec.
120 + 130	16" - 36"	EPC	Under Exec.
		ES	Under Exec.
73 + 96	4" - 36"	EPC	Under Exec.
		EPC	Under Exec.



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Algeria	Sonatrach	GK3 - Gazoduct - Lot 3 Gas Pipeline Ain Djasser El Kala/Skikda
Algeria	Sonatrach/First Calgary Petroleum	MLE - Gas Gathering Treatment and Transport System at Menzel Ledjmet East
Kuwait	Kuwait Oil Company	New Booster Station BS-160 and Pipeline at South East Kuwait

MLE - GAS GATHERING TREATMENT AND TRANSPORT SYSTEM AT MENZEL LEDJMET EAST - ALGERIA

Major multibillion integrated oil and gas production, processing and transportation system in the desert area 300 km South-East of Hassi Messaoud. The grass roots project to be built on a fast-track schedule.



THE GAS GATHERING TREATMENT AND TRANSPORT SYSTEM AT MENZEL LEDJMET EAST IS TO PRODUCE:

Gas	350 MMSCFD
LPG	16,200 BPD
Condensate	10,800 BPD
Oil	19,500 BPD

PIPELINE SYSTEM FROM GASSI TOUIL TO MENZEL:

30"	Gas	130 km
12"	LPG	130 km
14"	Condensate	130 km
10"	Oil	109 km

LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
355	48"	EPC	Under Exec.
499	10" - 30"	EPCC	Under Exec.
	3" - 42"	EPC	Under Exec.



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Austria	OMV A.G.	TAG Expansion 04
Nigeria	Total E&P for Elf Petroleum Nigeria	OML - 58 Facilities Upgrades
Turkey	TAPCO	Trans Anatolian Pipeline Project
Italy	Galsi	Algeria - Sardinia, Italy (Sardinian section)
Algeria	Sonatrach	LZ2 LPG Hassi R'Mel-Arzew Pipeline

LZ2 LPG HASSI R'MEL-ARZEW PIPELINE - ALGERIA

This 24 inch, 495 km pipeline, connecting the oil field located in Hassi R'Mel to the export area in Arzew on the Mediterranean Algerian coast, will be the longest LPG pipeline in the world. It will go across varied terrains, such as rocky deserts, mountains, cultivated lands and populated areas.

Saipem's scope of work encompasses the Engineering, Procurement and Construction on a LSTK basis.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
		EPS	2012
170	4" - 12"	ES	2012
550	42" - 48"	ES	2011
287	32" - 48"	ES	2011
495	24"	EPC	2010



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Algeria	Sonatrach	UTBS Project Crude Oil Treatment in South Hassi Messaoud
Nigeria	Shell Petroleum Development Company (SPDC)	Gbaran Ubie IOGP Pipelines, Flowlines and Intersites Cables

GBARAN UBIE IOGP PIPELINES, FLOWLINES AND INTERSITES CABLES - NIGERIA

Engineering, Procurement and Construction of a 310 km pipelines/flowlines system connecting the 6 main oil and gas fields to the Central Processing Facilities Terminal located on the left bank of the Nun River.

The construction methods and trenching activities were heavily influenced by local requirements: particular methodologies for swamps/marshes, tropical vegetation and river crossings.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
130	8" - 24"	EPCC	2010
310	4" - 20"	EPC	2010



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Russia	Sakhalin Energy Investment Co. (SEIC)	Sakhalin II Onshore Oil and Gas Pipelines
Italy	Exxon	North Adriatic LNG Project
Nigeria	Shell Petroleum Development Company (SPDC)	Nembe Creek - Cawthorne Channel Trunkline Replacement (NCTL)

SAKHALIN II ONSHORE OIL AND GAS PIPELINES - RUSSIA

The oil and gas twin onshore pipeline system in the harsh subarctic environment of Sakhalin Island in the Russian Far East is a major component of one of the world's biggest integrated oil and gas projects. The pipeline connects the Piltun-Astkhskoye and Lunskeye field's landfalls in the NE of Sakhalin Island to the LNG Plant & Oil Export Terminal in the South.

The design, carried out at Saipem's high value engineering centres in Italy, France and Russia, as well as the construction activities conducted in a very remote area, required overcoming significant challenges: construction under extreme climatic conditions with temperatures often below 45°C and permafrost several meters deep, across varied terrains; mountains with steep slopes; swamps; ponds; crossing more than 1,000 lakes and rivers; seismic zones; forests and unexploded ordnance.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
2 x (171 + 614)	20" - 48"	EPC	2009
	30"	ES	2009
46	30"	C	2008



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Australia	Dampier-Bunbury Natural Gas Pipeline Western Australia	Dampier-Bunbury Natural Gas Pipeline - Expansion Project Looping
Saudi Arabia	Saudi Aramco	Ghawar Seawater Pipelines Expansion
Saudi Arabia	Saudi Aramco	Ourayyah to Khurais Seawater Supply Pipelines
Kazakhstan	Agip KCO	Kashagan Pipeline
Saudi Arabia	Saudi Aramco	EWG-1 Pipeline Conversion to Dale Gas
Saudi Arabia	Aramco Overseas Co. B.V./Saudi Aramco	Ourayyah Seawater Treatment Plant (QSTP) Facilities
Saudi Arabia	Saline Water Conversion Corp. (SWCC)	Shoaiba Water Transmission System "Phase 2"
Italy	Edison	Cavarzere-Minerbio Gas Pipeline Project

DAMPIER-BUNBURY NATURAL GAS PIPELINE EXPANSION PROJECT LOOPING - AUSTRALIA

This 571 km, 10 loops pipeline is one of the pivotal components of Western Australia's energy infrastructure: it provides gas for approximately 30% of the state's electricity needs.

Built in a world record time in nine months only under a LSTK contract, at a rate of 6.5 km a day, the gas pipeline runs from North to South across Western Australia.

Its route takes it across a diversity of terrains: semi-arid plains, mountains, rocks, 26 rivers, fields, deserts, rich fauna, swamps, intensely cultivated farmlands and urban peripheries, as well as environmental protected aboriginal sites. This project follows others built by Saipem in Western Australia in earlier years; namely the GGD Goldfields Gas Pipeline Project and the Dampier-Perth Natural Gas Pipeline Project.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
571	26"	EPC	2008
209	20" - 60"	EPC	2008
223	56" - 60"	EPC	2008
47 + 94	18" - 28"	C	2008
		EC	2008
		CLSTK	2008
160		EPC	2008
84	36"	ES	2008



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Tunisia	Scogat-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline (Tunisian Section); Expansion of Feriana, Sbikha and Cap Bon
Austria	OMV A.G.	Trans Austria Gasleitung Loop 2
Italy	Praoil	Taranto Plus Sistema Logistico Sud
Oman	Oman Refinery Co. L.L.C	Crude Oil Pipeline from Mina Al Fahal to Sohar
Saudi Arabia	Aramco Overseas Co. B.V./Saudi Aramco	BI-8274 Ain Dar & Shedgum Seawater Conversion Project
Qatar	Qatar Petroleum (QP)	Dukhan Field Gas Lift Project
Nigeria	Nigerian Agip Oil Company (NAOC)	GTS 4 Gas Pipeline

GTS 4 GAS PIPELINE - NIGERIA

The route for this gas pipeline, running from Rumuji to the Bonny Natural Gas Liquefaction plant, is located 70% in a swampy environment and it is covered by dense tropical vegetation. It also includes the crossing of the 6.2 km wide Bonny river. The construction was executed under challenging geotechnical and environmental requirements, arising from the peculiar characteristics of the area: topography, geology, soil types, swamp areas, tropical vegetation and river crossings. A particular additional challenge was to secure unstable excavations, made in very permeable sands subject to seepage pressures. Developed dedicated laying barge for swampy environments.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
		EPC	2008
374	40" - 48"	ES	2007
300	12"	ES	2007
266	24"	EPC	2006
		EPC	2006
		EPC	2006
82	36"	EPCI	2006



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Saudi Arabia	Saudi Aramco	East-West to Rabigh - Crude Oil Pipeline
France	Total	La Mede Rp-Lavera Pipelines - from Provence Refinery to Lavera Industrial Sites
Saudi Arabia	Saudi Aramco	Khuff Gas - Maintenance of Gathering and Flowlines
Kuwait	Kuwait Oil Company	New BS-131 Installation and Interconnecting Lines with Gathering Centres and BS-130
Qatar	Qatar Petroleum (QP)	NGL - 4 Natural Gas Liquids Complex - Products Pipeline
Germany	Trans Europa Naturgas Pipeline (TENP)	Holland-Italy NG Pipeline (German Section) - Expansion Schwarzach, Mittelbrunn and Stolberg Compression Stations
Algeria	BHP Billiton/Sonatrach/Agip	Rod Idp Offsites Gathering and Reinjection Pipelines - Flowlines and Trunklines
Kuwait	Kuwait Oil Company	Lift Gas Distribution System at Sabriyah and Raudhatain Fields "Phase 1"
Kuwait	Kuwait Oil Company	Water Transfer System & Minagish Water Injection Plant - 2 Water Pipelines
Switzerland	Transitgas A.G.	Holland-Italy NG Pipeline (Swiss Section) Extension of Ruswil Compression Station "Phase 2"
Switzerland	Transitgas A.G.	Expansion of the Transitgas Transmission System
Iran	Hyundai Engineering & Construction Co.	South Pars Gas Field "Phases 4&5" - Products Pipeline
Libya	Greenstream B.V.	Libya Gas Transmission System (Mellitah Compression Station)



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
146	36"	C	2005
		EP	2005
		C	2005
		EPC	2005
100	14"	EPC	2005
		ES	2005
330	6" - 16"	EPC	2004
180	3" - 30"	EPC	2004
100 + 80	8" - 20"	EPC	2004
		ES	2004
53 + 130	36" - 48"	ES	2004
70	56"	ES	2004
		ES	2004



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Algeria	OOC Oil Operating Company	ROD (Rhourde Ouled Djemma) Integrated Development: Onshore Facilities
Nigeria	Shell Petroleum Development Company (SPDC)	Cawthorne Channel Gas Gathering Pipelines
Kazakhstan	Karachaganak Petroleum, Operating B.V.	Karachaganak Infield and Export Pipelines

KARACHAGANAK INFIELD AND EXPORT PIPELINES - KAZAKHSTAN

This 635 km 24" oil export pipeline from Karachaganak Processing Complex in North Western Kazakhstan to Bolshoi Chagan and to Atyrau on the Caspian Sea was executed under challenging logistics in a very remote and climatically inhospitable environment: extreme conditions, due to snow and frozen terrains, as well as frequent crossings of mountains, lakes and rivers. The EPC project package included a gas re-injection unit together with a gathering and re-injection pipeline network, a gas processing and oil condensate stabilization plant, a fuel gas sweetening plant and all associated pumping stations and metering facilities.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
300		PC	2004
74	4" - 24"	EPC	2003
635	24"	PC	2003



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Algeria	Sonatrach	Mesdar Terminal Extension Hassi Messaoud
Saudi Arabia	Saudi Aramco	AY-1 Oil to Gas Pipeline Conversion
Ireland	Bord Gais Eireann	Gas Pipeline to the West (Section 3)
Spain	Medgaz - F.A.	Gas Pipeline from Algeria to Europe
Oman	Oman Gas Company	Fahud - Sohar Gas Pipeline - (Api 5IX - 70)
Oman	Petroleum Development Oman	Central Oman Expansion "Phase 1"
Nigeria	Nigerian Agip Oil Company (NAOC)	N.NLG Oil & Gas Pipeline "Phase 3" Supply Project

AY-1 OIL TO GAS PIPELINE CONVERSION - SAUDI ARABIA

An interesting example of an oil pipeline conversion from Arabian Light Crude Oil flow to Gas Pipeline service.

The revamp of the 975 km, 48" pipeline included batching facilities and decruding cleaning; mechanical modifications; testing and commissioning, from Yanbu to pumping station 3.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
	26"	EPC	2003
975	48"	C	2003
100	30"	C	2003
80 + 900 + 550	48" - 52"	ES	2003
360	12" - 32"	EPC	2002
70	4" - 32"	EPC	2002
39 + 39 + 48 + 63	10" - 24"	ES	2001



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Abu Dhabi	Abu Dhabi National Oil Company (ADNOC)	Asab Gas Development Oil Pipeline
Abu Dhabi	Abu Dhabi Company for Onshore Oil Operations (ADCO)	Bu Hasa Upgrade & Production Facilities
Thailand	Petroleum Authority of Thailand (P.T.T.)	Gasline System from Ratchaburi to Wang Noi
Saudi Arabia	Saudi Aramco	Hawiyah Gas Development Pipeline
Abu Dhabi	Abu Dhabi Company for Onshore Oil Operations (ADCO)	OGD "Phase 2" - Gas Gathering System and Trunklines
China	Cnooc China Ltd.	Dong Fang 1-1 Gas Field Development
Kazakhstan	Karachaganak Operating Group	Karachaganak Field Development Project - Initial Development Phase
Kuwait	Kuwait Oil Company	Central Seawater Injection Plant, North of Kuwait

HAWIYAH GAS DEVELOPMENT PIPELINE - SAUDI ARABIA

An example of many pipelines built in the Kingdom of Saudi Arabia, in Kuwait, in the U.A.E. and in Oman.

A significant factor was field operation in one of the harshest climates in the world. The environment was prevailing desert, but it also consisted of moving sands, rocky flats, mud areas, oases, swamps and hills. Often steep mountains had to be crossed too. A trenching machine was utilized for the first time on this project.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
190	18"	EPC	2001
		ES	2001
153	30"	EPC	2001
583	24" - 56"	EPC	2001
130 + 95	8" - 16"	EPC	2001
		ES	2001
180	24"	ES	2001
		EPC	2001



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Iran	Agip Iran B.V.	South Pars Gas Field "Phases 4&5" - Products Pipeline
Russia	Rao Gazprom	Export Gas Transmission System Revamping and Gas Industry Development
Russia	CPC Caspian Pipeline Consortium	CPC Caspian Pipeline
Nigeria	Nigeria LNG Ltd.	LNG - Bonny Island Liquefaction Trains - Gas Pipeline
Nigeria	SPDC	AG Gathering Pipelines System for Obigbo Node
Nigeria	N.N.P.C.	Gas Supply System to BET, OMPADEC, PHRC
Saudi Arabia	Saudi Aramco	UBTG-3 Uthmaniyah Gas Plant - Gas Pipeline
Nigeria	Shell Petroleum Development Company (SPDC)	Odidi Associated Gas Gathering (AGG)

CPC CASPIAN PIPELINE - RUSSIA

Construction of 745 km (40" and 42") of new pipeline linking the Tengiz Field in Kazakhstan to the new export terminal at Novorossiysk on the Black Sea coast, and the rehabilitation of 290 km of an existing pipeline in Russian territory.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
71	56"	ES	2001
350	56"	EP	2000
745	40" - 42"	EPIC	2000
203	20" - 36"	EPC	2000
53	8" - 16"	EPC	2000
		EPC	2000
152 + 5 + 52	40" - 56"	EPC	2000
		EPCI	2000



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Oman	Saipem S.p.A. for Petroleum Development	LNG Upstream Gas Supply Pipeline
Malaysia	Petronas Gas Berhad	Grass Roots Peninsular Gas Utilisation Gpp 5&6 - Products Pipeline
Nigeria	Bonny Project Management Co. Ltd. (TSKJ)	Nigeria LNG Prj. Gas Transmission System Pipelines for the Transport of Gas and Water (Api 5LX - 60)
Saudi Arabia	Saudi Aramco	Dammam-Riyadh Multiproduct Pipeline System (Api 5LX - 60)
Tunisia	Scogat-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline (Tunisian Section); Expansion of Feriana and Cap Bon Compression Stations
France	Elf France	Donges-Bassens Pipeline Preliminary Study
Switzerland	Transitgas A.G.	Holland-Italy NG Pipeline (Swiss Section) - Ruswil Compression Station Expansion
Italy	Agip S.p.A.	Insulated Oil Pipeline Monte Alpi (Potenza) Oil Centre - Taranto Refinery
Abu Dhabi	Abu Dhabi Company for Onshore Oil Operations (ADCO)	Sahil Field Development Project "Phase 1"
Saudi Arabia	Aramco Overseas Co. B.V./Saudi Aramco	Riyadh Products Supply System
China	China National Machinery Import & Export Corp. for North-West Petroleum Pipeline Constr. Headquarters	Joint Design of Korla-Shanshan Crude Oil Transportation Pipeline
Abu Dhabi	Abu Dhabi Government - Water Electricity	Taweelah Water Transmission Scheme "Phase B" - Pumping Stations and Reception Complex
Oman	Saipem S.p.A. for Petroleum Development Oman	LNG Upstream Gas Supply Pipeline from Saih Rawl to Sur
Italy	Cassa per il Mezzogiorno	Ofanto Drinkable Water Pipeline System "Phases 2&3"



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
355	48"	EP	2000
115	2" - 48"	EPC	2000
200	20" - 36"	C	1999
398	20"	EPC	1999
		ES	1998
		E	1998
		ES	1998
137	20"	ES	1998
105	6" - 16"	EPC	1998
395 + 64	8" - 20"	EPC	1998
491	26"	ES	1998
		EPC	1998
355	48"	EP	1998
	80" - 100"	EPC	1998



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Austria	OMV A.G.	Russia-Italy NG Pipeline (Austrian Section); (TAG) - Extension 2
Myanmar	Total Myanmar	Yadana Onshore Pipeline
Malaysia	Petronas Gas Berhad	PGUP III - Peninsular Gas Utilisation - Phase III - Sectors II&III (Api 5LX - 65)
Colombia	Oleoducto Central S.A.	Cusiana-Cupiagua Full Field Development-North Section Pipeline (Api 5LX - 70)
Germany	Mider	Leuna - Hardmannsdorf Pipeline
Indonesia	Total Indonesia	Tunu North Field Development - Swamps & Onshore Pipeline
Indonesia	Bakrie Harper Co.	Kertapati - Jambi Pipeline
Italy	Azienda Municipale del Gas di Palermo	Gas Distribution Network

CUSIANA-CUPIAGUA FULL FIELD DEVELOPMENT PROJECT - COLOMBIA

The construction of the 30" North section of the Cusiana-Cupiagua Oil Pipeline and of the Vasconia Covenas (Golfo de Morrosquillo) in a mountainous environment with dense tropical vegetation and many river crossings.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
		ES	1997
70	32"	FEED/ES	1997
266	36"	PC	1997
473	30"	CP	1997
110	16"	EPC	1997
70 + 45	8" - 24"	EPI	1997
300	10"	E	1997
		C	1997



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Nigeria	Oil Mineral Producing Areas Develop. Comm.	Phase I of Bonny Ring Road River State
Abu Dhabi	Abu Dhabi National Oil Company (ADNOC)	Bab-Maqta-Taweelah Gas Pipeline
Indonesia	Pertamina	Balikpapan-Samarinda Multiproduct Pipeline
Nigeria	Nigerian Gas Company	Gas Supply to Aluminium Smelting Plant
Australia	Goldfield Gas Transmission	Goldfield Gas Pipeline (Api 5LX - 70)
Saudi Arabia	Saudi Aramco	The Abqaiq Berri Gas Plant Gas Pipeline
Spain	Enagas	Pipeline Tarifa-Cordoba - "Phases 1&2" (Api 5LX - 70)
Nigeria	Nigerian National Petroleum Corp. (NNPC)	Gas Supply to Aluminium Smelting Co. (NIG)
Algeria	Nuovo Pignone for Sonatrach	Hassi R'Mel-Buried Gas Pipelines for New CTH1 Compression Station



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
		C	1997
170	36" - 42"	EPC	1997
150	12"	FEED	1997
107	14" - 24"	EPC	1996
1,380	14" - 16"	C	1996
		C	1996
	48"	C	1996
103	14" - 34"	EPC	1996
60	10" - 24"	ES	1996



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Malaysia	Petronas Gas Berhad	PGUG III - Peninsular Gas Utilisation - Phase III - Sector I (Api 5LX - 65)
Saudi Arabia	Saudi Aramco	Salt Water Disposal Pipelines at Ain Dar "Gosp - 2"
Saudi Arabia	Saudi Aramco	Replace Seawater Transfer Line from "Uwss" to "Uwip - 3"
Saudi Arabia	Saudi Aramco	Uthmaniyah Water Supply Station
Saudi Arabia	Saudi Aramco	Shedgum Water Injection Line
Algeria	Sonatrach	Hamra Grass Roots Natural Gas Process Complex - Products Pipeline
Argentina	YPF S.A.	Mega Front-End Design of NGL Recovery Complex & Transport Products Pipeline
Pakistan	P.A.R.C.O.	Parco Pipeline Project
Pakistan	P.A.R.C.O.	Parco Pipeline Extension

PGUG III - PENINSULAR GAS UTILISATION - PHASE III SECTOR I - MALAYSIA

An example of several pipeline projects designed and built in South East Asia. This one was the latest stage of the P.G.U. Project which provides natural gas from fields located off the East coast of the Malaysian Peninsula to customers in Malaysia and in Singapore.

Construction of the main 184 km, 36" gas line on a LSTK basis, across swamps as well as rain forests, several rivers, oil palm plantations and paddy fields.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
184	24" - 36"	PC	1995
		C	1995
		C	1995
		C	1995
275	6" - 24"	C	1995
		EP	1995
600	14"	ES	1995
860	16"	E	1994
360	16"	E	1994



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
France	S.P.M.R.	La Mede-Puget (Pmp) Pipeline
Indonesia	TBT/Pertamina	Balongan/Jakarta Pipeline
Saudi Arabia	Saudi Aramco	Maintain Potential Flowlines - Southern Area
Tunisia	SCOGAT	Transmed Pipeline - Tunisian Section (Api 5LX - 70)
Thailand	Petroleum Authority of Thailand (P.T.T.)	Multiproduct Pipeline System
Abu Dhabi	Abu Dhabi Company for Onshore Oil Operations (ADCO)	North East Abu Dhabi Early Production Scheme
Saudi Arabia	Saudi Aramco	Haradh Gathering Lines
Morocco	UTE/INITEC/TECNICAS REUNIDAS for Europe Maghreb Pipeline Ltd.	Maghreb-Europe Gas Pipeline - Compression and Metering Stations
Spain	Repsol Petroleo S.A.	Puertollano-Cartagena Oil Pipeline
Tunisia	Scogat-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline Expansion (Tunisian Section)
Nigeria	N.N.P.C.	Pipelines & Depots Project Phase II Detail Engineering
France	S.P.M.R.	Puget/Nice Pipeline Feasibility Study
Nigeria	NAOC	Gathering Lines for Ebocha Oil Centre
Oman	Petroleum Development Oman	Pipeline Construction Project - Phase 1
Yemen	Yemen Exploration & Production	ALIF, Al Kamil & Al Raja Facilities
Italy	Enichem S.p.A.	North-Adriatic Handling System Production Pipelines
Saudi Arabia	Saudi European Petrochemical Co. "Ibn Zahr"	MTBE 2 Al - Jubail Products Pipeline
Saudi Arabia	Saudi Arabian Oil Co. (Saudi Aramco)	Increase Yanbu Crude Export Capacity Oil Pipeline
Indonesia	Lurgi/Pertamina	Java Pipeline Network
Saudi Arabia	Saudi Aramco	Seawater Injection System at Hawiyah
Kuwait	Kuwait Oil Company	Flowlines and Trunklines Revamping
Kuwait	KOC/BECHTEL	Firefighting System and Restoration Facilities
Algeria	AGIP S.p.A.	Oil Pipeline Bir-Rebaa Oil Centre to Mesdar Gathering Centre
Tunisia	SCOGAT-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline (Tunisian Section) - Expansion of Cap Bon Compression Station

LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
153	12"	EPC	1994
210	16"	FEED/PMC	1994
		C	1994
370	48"	C	1994
125 + 18	10" - 24"	C	1994
		C	1994
		C	1994
550	48"	ES	1994
700	10" - 22"	ES	1994
368	48"	EPC	1994
486	12"	E	1993
153	12"	E	1993
		C	1993
		C	1993
		C	1993
225	8" - 10"	EPC	1993
58	3" - 8"	LES	1993
4	56"	EPC	1993
600		E	1992
		C	1992
	6" - 24"	C	1992
		C	1992
240	20"	ES	1992
		ES	1992

OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Egypt	Agip S.p.A.	El Qar'a Integrated NGL Plant - Products Pipeline
Algeria	Sonatrach	Rhourde Chouff & Rhourde Hamra Gas Field Develop. Gas Pipeline
Iran	Saipem S.p.A. for National Iranian Oil Co.	Moharram Project - Gurreh-Taheri Oil Pipeline
Bangladesh	122/124 Motijheel Comm. B.O.M.G.C. Area Dhaka - 1000	Pipeline - 8 No. Scraper Stations & 17 No. Twin Valve Stations
Nigeria	Nigerian National Petroleum Corp. (NNPC)	Oil Pipeline
Oman	Petroleum Development Oman	Oil and Gas Pipelines - North/South Oman
Nigeria	Nigerian National Petroleum Corp. (NNPC)	Escravos-Lagos Gas Pipeline Extension "Phase 1"
Qatar	Saipem S.p.A. for Qatar General Petroleum Corp. (OGPC)	Qatar North Field Development - Gas Pipeline
Qatar	Qatar General Petroleum Corporation (QGPC)	Gas Pipelines with Final Offshore Tie-Ins with Submarine Pipelines
Tanzania	Tazama Pipeline Ltd.	Rehabilitation of Existing Tanzania-Zambia Oil Pipeline
Oman	Petroleum Development Oman	Oil Pipeline from Yibal to Fahud/Oil Pipeline from Yibal to Al Huwaisid
Switzerland	Transitgas A.G.	Holland-Italy NG Pipeline - Ruswil Compression Station Expansion
Australia	State of Queensland	Queensland State Gas Pipeline
Morocco	Cherifienne des Petroles	Tangier Pipelines from Harbour to Storage
Austria	OMV A.G.	Trans Austria NG Pipeline - Expansion of Baumgarten Compression Station, Upgrading of Ruden and Grafendorf Stations



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
245	6" - 22"	ES	1992
145	8" - 14"	EP	1992
100	42"	ES	1991
409	19"	C	1991
78	19"	C	1991
178	14"	C	1991
77	14" - 24"	EPC	1991
553	6" - 32"	ES	1990
130 + 130 + 90 + 27	6" - 34"	EPC	1990
50	8" - 12"	C	1990
60 + 24	18" - 20"	C	1990
		ES	1989
526	12"	C	1989
		E	1989
		ES	1989



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Saudi Arabia	State Organization for Oil Projects (SCOP)	IPSA II Phase 2 - Crude Oil Pipeline from Khurais Pumping Station to Yanbu
Iran	National Iranian Oil Company (NIOC)	Oil Pipeline from Gurreh to Taheri, 1 st Package
Oman	Petroleum Development Oman	Sour Service Gas Pipeline from Nahada to Yibal to Izky
Italy	Dipartimento per il Coordinamento della Protezione Civile	Alta Irpinia Water Pipeline Project for Earthquaked Industrial Areas
Russia	V/O Techmashimport	High Concentration Coal Slurry Pipeline Transportation System - Reocarb
Saudi Arabia	Saipem/C.A.T./Tekfen for SWCC Minister of Agriculture and Water	Assir Water Transmission System
Nigeria	Nigerian National Petroleum Corp. (NNPC)	Escravos-Lagos Gas Pipeline

IPSA II PHASE 2 - CRUDE OIL PIPELINE FROM KHURAIS PUMPING STATION TO YANBU - SAUDI ARABIA

Construction of 2 crude oil pipelines (975 km at 56" and 630 km at 48") and the erection of six pumping stations (75 km each) in a desert area, which at the time had no road infrastructure.

This was a very significant project for its fast track completion time: 24 months from contract award to start of commercial operations.



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
975	56"	C	1989
100	42"	C	1989
189	36" - 42"	C	1989
144	10" - 40"	EPC	1989
262	20"	EP	1989
214		ES	1989
377	24" - 36"	EPC	1989



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Abu Dhabi	Abu Dhabi Company for Onshore Oil Operations (ADCO)	Bu Hasa Oilfield - Gas Injection Pilot Plant into the Oil Reservoir
Tanzania	Tazama Pipeline Ltd.	Tazama Crude Oil Pipeline Rehabilitation Project "Phase 1"
Saudi Arabia	SCECO	Oil & Gas Pipelines in Qurrayah Area
Tanzania	Tazama Pipeline Ltd.	Rehabilitation of the Existing Tanzania-Zambia Oil Pipeline
Austria	OMV A.G.	Trans Austria Pipeline Southern Section of Natural Gas Pipeline from Goggitsch to Arnoldstein (Api 5LX - 70)
Italy	Enichem/Anic S.p.A.	Cagliari Industrial Area - Fluids and Products Pipelines Handling System
Austria	OMV A.G.	Trans Austria Gas Pipeline - Second Main Line
Algeria	Sonatrach	Transmed Second Natural Gas Pipeline - Algerian Section - Hassi R'Mel-Oued es Safsaf (Api 5LX - 70)
Saudi Arabia	Saudi Aramco	East/West Crude Oil Pipelines from Yanbu Terminal to Kp 607 Ps3 (Api 5LX - 65)
Turkey	BOTAS	Turkish Section of the 2 Iraq/Turkey Crude Oil Pipelines with Marine Terminal (Api 5LX - 60)
Oman	Petroleum Development Oman	Oil and Gas Pipelines
Iraq	State Organization for Oil Projects (SCOP)	Iraqi Section of the Second Iraq/Turkey Crude Oil Pipeline (Api 5LX - 70)
Yemen	Yemen Exploration and Production Co. (YEPCO)	Oil Pipeline System from Marib to Salif (Api 5LX - 65)
Italy	Ministero per il Coordinamento Protezione Civile	Caltanissetta Emergency Water Pipeline
Italy	Saipem S.p.A.	Sinni Water Supply Pipeline
Libya	Ras Lanuf Oil and Gas Processing Co.	Ras Lanuf Harbour Liquid Loading System
Iraq	State Organization for Oil Projects (SCOP)	East Baghdad Grass Roots Oil Field Pilot Project - Oil & Gas Pipeline
Italy	ANIC S.p.A.	ICAM Propylene Pipeline Priolo-Ragusa to Gela
Yemen	Yominco	Products Pipeline Network - Yemen
Australia	NT Gas Co.	Section II of Amadeus Basin - Darwin Gas Pipeline from Helling to Buchannan Highway; Plus Spur Line Merenee to Alice Springs
Oman	Petroleum Development Oman	Gas and Oil Pipelines In Sayyala Area
Germany	Trans Europa Naturgas Pipeline (TENP)	Holland-Italy NG Pipeline (German Section) - Expansion of Hugelheim and Mittelbrunn Compression Stations
Italy	Oleodotti Nord Est S.p.A. (ONE)	Fuel Oil Integrated Transportation System Ravenna to Porto Tolle

LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
		ES	1989
74	12"	EPC	1988
83	24" - 30"	C	1988
13 + 62	8" - 12"	C	1988
126	42"	C	1988
135	8"	ES	1988
378	42"	ES	1988
550	48"	C	1987
615 + 120	42" - 56"	C	1987
200	46"	C	1987
132	6" - 36"	C	1987
313	28" - 46"	C	1987
435	24" - 26"	C	1987
2,750		EPC	1987
132		ES	1987
		ES	1987
80 + 14	16"	EP	1987
115	6"	ES	1986
		E	1986
326 + 116	10" - 14"	C	1986
275	6" - 28"	C	1986
		ES	1986
9 + 85	18" - 22"	ES	1986

OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Turkey	Boru Hatlari Ile Petrol Tasima A.S. (BOTAS)	Hamitabat Natural Gas Pipeline System
Italy	ANIC S.p.A.	Porto Torres Slurry Industrial Pilot Plant from Petroleum Coke
Sudan	Chevron Oil of Sudan	Unity and Heglig Oil Fileds Production Facilities - Oil & Products Pipeline
Libya	Agip (Name) Ltd.	Bu Attifel Storage Capacity Enlargement - N. 2 Storage Tanks
Saudi Arabia	Saudi Aramco	Gas Pipeline from Tanajib to Berri (Api 5LX - 60)
Iran	National Iranian Gas Company	Sections I & II of Igat 2 Natural Gas Pipeline from Khangan to Esfahan (Api 5LX - 65)
Algeria	Sonatrach	Crude Oil Pipeline from In Amenas to Haoud El Hamra; Repair Existing Oil Pipeline from Ohanet to Haoud El Hamra (Api 5LX - 60)
Egypt	Petroleum Pipeline Co. for Egyptian Petroleum Co.	Gas Pipelines and Parallel Multiproducts Lines from Suez to Port Said
Oman	Petroleum Development Oman	Main Line Replacement Phase II and Qarn Alam to Nahada Crude Oil Line Looping Phase I
Iraq & Saudi Arabia	State Organization for Oil Projects (SCOP)	IPSA I Crude Oil Pipeline from Zubair (Iraq) to Khurais Pump Station
Egypt	Petroleum Pipeline Company (PPC)	Suez-Abu Sultan-Port Said Pipelines
Tunisia	Scogat-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline Expansion (Tunisian Section)
Iraq	State Organization for Oil Projects (SCOP) Boru Hatlari Ile Petrol Tasima A.S. (BOTAS)	Iraq-Turkey Crude Oil Pipeline System - 2 Expansion
Sudan	G.P.C.	Port Sudan-Khartoum Pipeline



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
708	12" - 36"	ES	1986
		LBTA	1986
1,483 + 1,413	8" - 24"	EC	1985
		EPC	1985
150	30"	C	1985
632	56"	C	1985
630	30"	C	1985
107	10" - 16"	C	1985
212	28" - 42"	C	1985
630	48"	C	1985
107	10" - 12"	EP	1985
368	48"	EP	1985
867	46"	ES	1985
		EP	1984



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Tunisia	SOTRAPIL	Bizerte-La Goulette Pipeline
Tunisia	Scogat-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline (Tunisian Section) - Sbikha Compression Station
Saudi Arabia	SWCC	Concrete Water Main Installation Parallel Cables for Automatic Control System
Saudi Arabia	Saudi Aramco	Gas Pipeline from Abqaiq to Juaymah
Australia	State Energy Commission of West Australia	Gas Pipeline from Dampier to Perth (Api 5LX - 65)
Italy	Cassa per il Mezzogiorno	Ofanto Drinkable Water Pipeline System "Phase 1"
Iraq	State Organization for Oil Projects (SCOP) Boru Hatlari Ile Petrol Tasima A.S.	Iraq-Turkey LPG Pipeline System
Saudi Arabia	Saipem S.p.A. for Saline Water Conversion Corp. (SWCC)	Riyadh Water Transmission System
Saudi Arabia	Saudi Aramco	Gas Pipeline from Safaniyah to Khursaniyah (Api 5LX - 60)
Tunisia	Scogat-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline (Tunisian Section) - Feriana Compression Station
Saudi Arabia	Snamprogetti Saudi Arabia Ltd. for Petromin	Domestic Refinery - Yanbu Interconnecting Pipelines - "Phase 2"
Algeria	Sonatrach	Skikda Grass Roots Refinery - Products Pipeline
Saudi Arabia	Snamprogetti Saudi Arabia Ltd. for Petromin	Domestic Refinery - Yanbu Interconnecting Pipelines - Crude Oil Pipeline Management
Sudan	G.P.C.	Port Sudan-Khartoum Pipeline
Italy	Cassa per il Mezzogiorno	Seawater Pipeline Emergency - Caposele-Padula By-Pass Water Transmission System
Brazil	Petroleo Brasileiro S.A. (Petrobras)/Yacimientos Petroliferos Fiscales Bolivianos (YPFB)	S. Cruz de la Sierra (Bolivia) - S. Paulo (Brazil) Gas Pipeline
Saudi Arabia	Snamprogetti Saudi Arabia Ltd. for Petromin	Domestic Refinery - Yanbu Interconnecting Pipelines "Phase 1"
Iraq	State Organization for Oil Projects (SCOP)	Domestic Refinery - Yanbu Interconnecting Pipelines "Phase 1"
Brazil	Petroleo Brasileiro S.A. (Petrobras)	Arancauria-Paranagua Product Pipeline
Saudi Arabia	Gulf Interstate Engineering for Arabian American Oil Co. (Aramco)	NGL Yanbu Natural Gas Pipeline
Tunisia	Scogat-Société pour la Construction du Gazoduc Transtunisien	Algeria-Italy Transmediterranean NG Pipeline (Tunisian Section) Cap Bon Compression Station
Iraq	State Organization for Oil Projects (SCOP)	Baiji North Grass Roots Refinery and Lubricants Production Complex Products Pipeline

LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
		EP	1984
		E	1984
101		EPC	1984
82	30"	C	1984
1,500	20" - 26"	C	1984
63	80"	EPC	1984
905	18"	ES	1984
		EP	1983
175	20" - 40"	C	1983
		EP	1983
	6" - 24"	ES	1983
226	3" - 28"	EPC	1983
	30"	ES	1983
		E	1982
		EPC	1982
1,880	28" - 30"	ES	1982
250	6" - 26"	ES	1982
		ES	1982
92	12"	ES	1981
1,170	26" - 30"	ES	1981
		ES	1981
168 + 166 + 170	12" - 26"	ES	1982

OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Algeria	Sonatrach	Mesdar-Haoud El Hamra-Skikda Crude Oil and Condensate Pipeline
Algeria	Sonatrach	Algeria-Italy Transmediterranean NG Pipeline (Algerian Section) Hassi R'Mel to Oued es Safsaf (Go1)
Algeria	Sonatrach	Ohanet-Haoud El Hamra Crude Oil Pipeline Modernization & New In Amenas-Haoud El Hamra
Switzerland	Transitgas A.G.	Holland-Italy NG Pipeline (Swiss Section) - Ruswil Compression Station Expansion
Iran	National Iranian Gas Company	Second Iranian Gas Trunkline (IGAT 2)
Nigeria	Nigerian National Petroleum Corp. (NNPC)	Escravos-Warri Crude Oil Pipeline "Phase 1"
Algeria	Sonatrach	Hassi R'Mel-Arzew Condensates Pipeline
Algeria	Sonelgaz	Natural Gas Feeder Line to Annaba
Oman	Ministry of Petroleum - Oman	Yibal Grass Roots Natural Gas Pipeline
Egypt	The Arab Petroleum Pipelines Co. (SUMED)	Suez Gulf Mediterranean Crude Oil Pipeline System
Iran	National Iranian Oil Company (NIOC)	Marun-Esfahan Crude Oil Pipeline and Marun-Esfahan-Rey Pumping Station System
Iraq	Iraq National Oil Company (INOC)	Haditha-Rumaila Strategic Crude Oil and Gas Pipeline System
Switzerland	Transitgas A.G.	Holland-Italy NG Pipeline (Swiss Section)
Zambia	Tazama Pipeline Ltd.	Tazama Crude Oil Pipeline Expansion and Ndola Refinery Pipeline Connection
Italy	Cassa per il Mezzogiorno	Desalination Plant Feeding Gela Secondary Water Distribution Pipeline
Austria	Transaustria Gas Pipeline (TAG)	Russia-Italy NG Pipeline (Austrian Section) - TAG 1



LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
758	26" - 34"	ES	1980
550	48"	EC	1980
632	30"	EP	1980
		ES	1979
1,400	48" - 56"	ES	1978
60	24"	ES	1978
516	28"	ES	1978
100	28"	ES	1978
320	20"	EPC	1978
640	42"	EPC	1977
420	30" - 32"	EPC	1977
670	42"	EPC	1976
164	34" - 36"	ES	1974
725	12"	EPC	1974
		ES	1974
384	26" - 38"	ES	1974



OTS - ONSHORE TRANSPORTATION SYSTEMS PROJECT REFERENCES

PIPELINES LONGER THAN 50 KM

LOCATION	CLIENT	PROJECT
Algeria	Saipem S.p.A. for Sonatrach	Hassi R'Mel-Arzew Natural Gas Pipeline
Germany	Trans Europa Naturgas Pipeline (TENP)	Holland-Italy NG Pipeline (German Section) - Hugelheim, Mittelbrunn and Stolberg Compression Stations
Algeria	Sonatrach	West Algeria-Morocco Gas Pipeline
Iraq	Iraq National Oil Co. (INOC)/Turkish Petroleum Corp. (TPAO)	Iraq-Turkey Crude Oil Pipeline System
Algeria	Saipem S.p.A. for Sonatrach	Hassi R'Mel-Skikda Natural Gas Pipeline
Libya	Azzawiya Oil Refining Co. Inc. (ARC)	Tripoli-Azzawiya-Zanzur Oil Pipelines
Zambia	Tazama Pipeline Ltd.	Tazama Oil Products Pipeline
Germany	Sudpetrol A.G.	Central Europe Crude Oil Pipeline Expansion (German Section)
Syria	Ministry of Industry - General Petroleum Authority	Karatchok-Tartous Oil Pipeline
Spain	Empresa Nacional de Fertilizantes S.A. (ENFERSA)	Malaga-Puertollano Crude Oil Pipeline
Argentina	Snam S.p.A. for Gas del Estado	Santa Cruz-Gran Buenos Aires Natural Gas Pipeline
Argentina	Gas del Estado	Pico Truncado Grass Roots Gas Project - Gas Pipeline
Germany	Sudpetrol A.G.	Central Europe Crude Oil Pipeline
Iraq	Ministry of Industry & Minerals	Rumaila-Basrah Natural Gas Pipeline
India	Indian Refineries Ltd.	Baroda-Ahmedabad, Haldya-Barauni, Barauni-Kampur Oil Products Pipelines



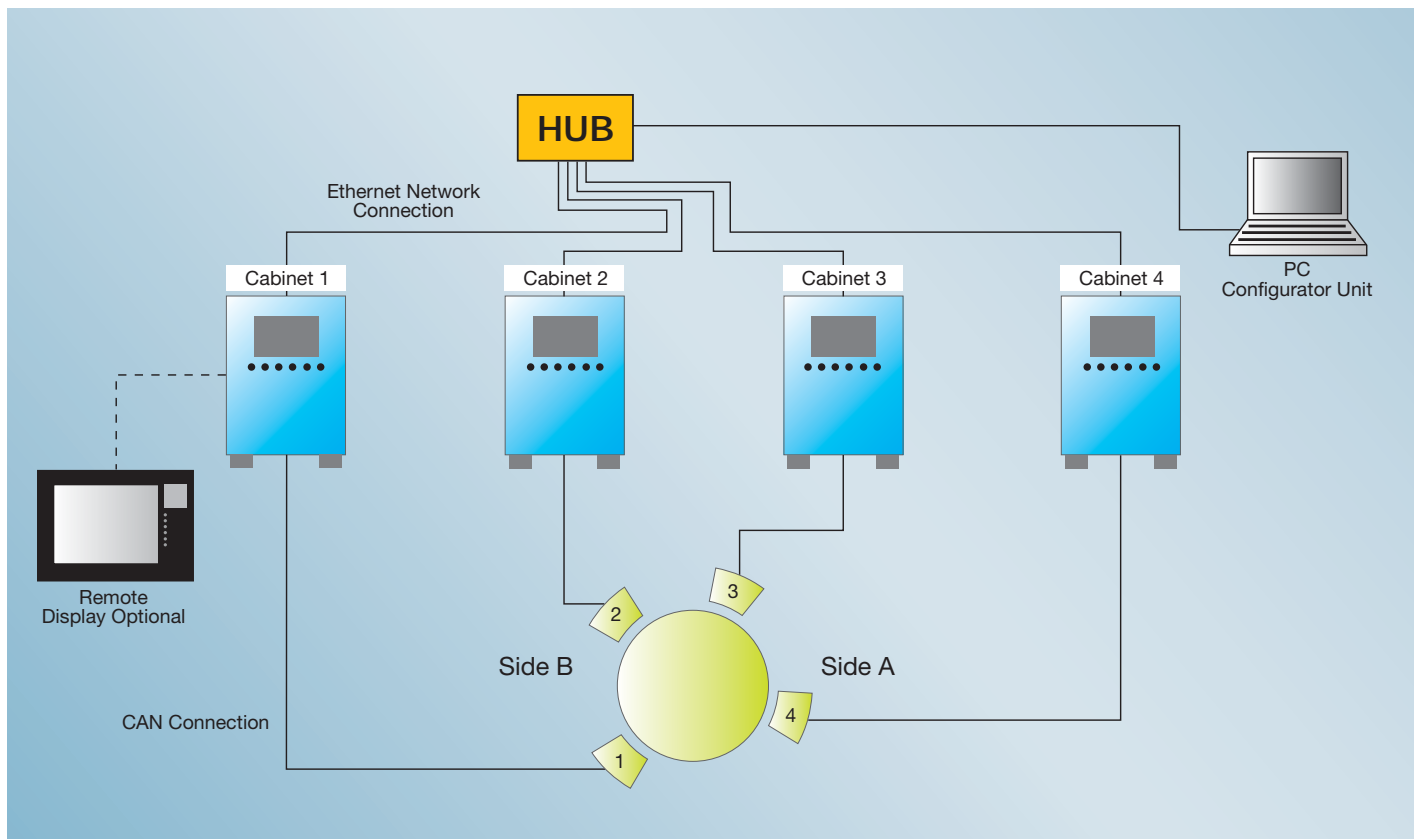
LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
507	40"	ES	1974
		ES	1973
263	20"	EPC	1973
1,005	32" - 40"	ES	1973
575	40"	ES	1972
89	8" - 10"	ES	1971
1,700	8"	EPC	1968
		ES	1967
650	18" - 22"	EP	1967
		EPC	1967
1,720	30"	EPC	1965
800	4" - 16"	ES	1965
574	18" - 26"	EPC	1963
90	10" - 18"	EPC	1962
520 + 85 + 670	8" - 12"	EPC	1962



SAIPEM A LEADER IN ADVANCED TECHNOLOGY DEVELOPMENT AND APPLICATIONS

FROM ITS EARLY DAYS, SAIPEM HAS BEEN AT THE FOREFRONT OF DEVELOPING NEW PROPRIETARY PIPELINE DESIGN AND APPLICATION TECHNIQUES.

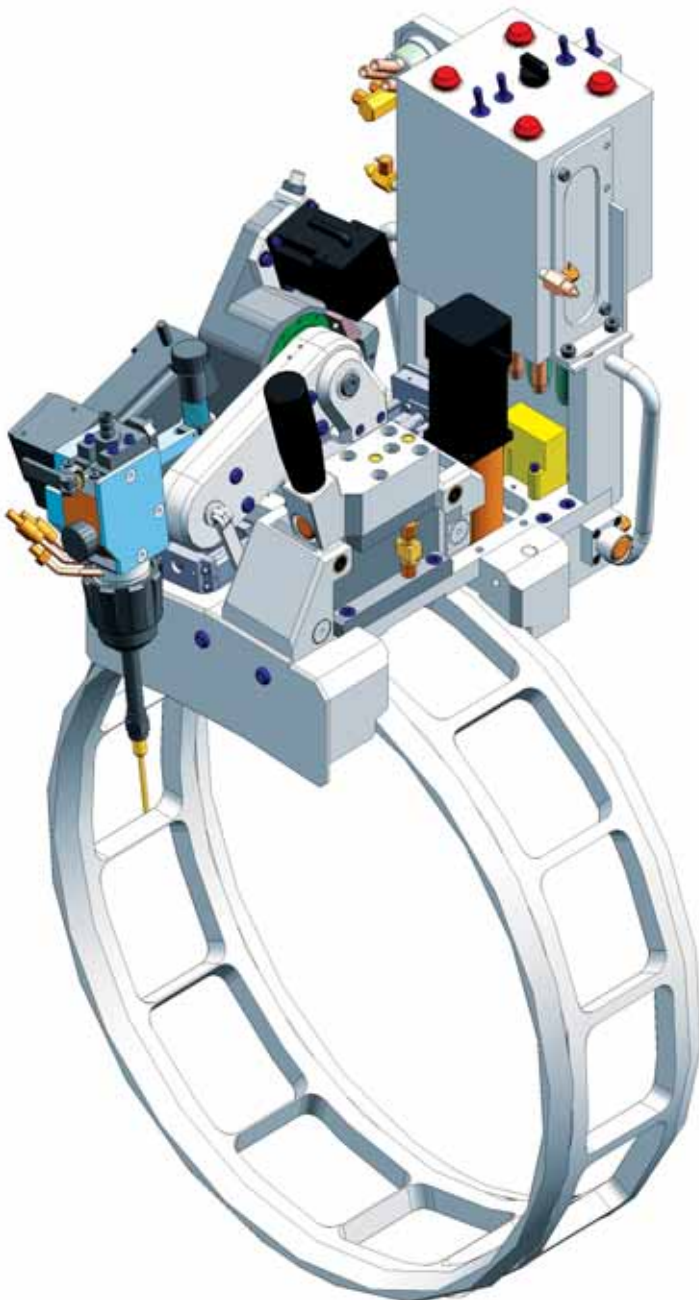
SWS - Robotized Welding System



WELDING SYSTEMS

OVER THE YEARS, SAIPEM HAS DEVELOPED, IMPROVED AND SUCCESSFULLY APPLIED SEVERAL PROPRIETARY WELDING SYSTEMS, SUCH AS "PASSO", "PRESTO" AND THE ROBOTIZED "SWS".

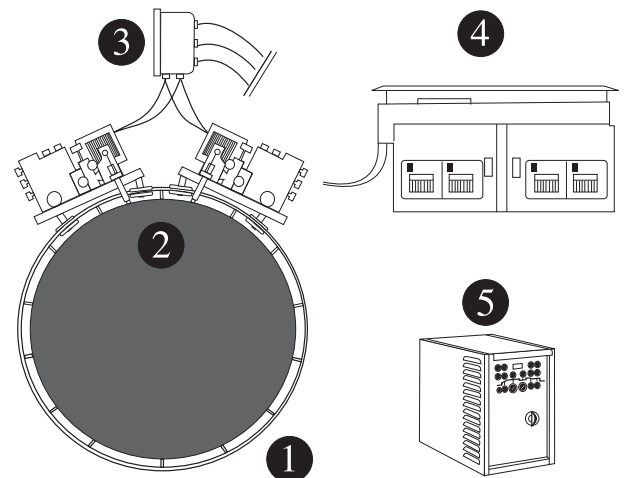
SWS - Robotized Welding System



Presto



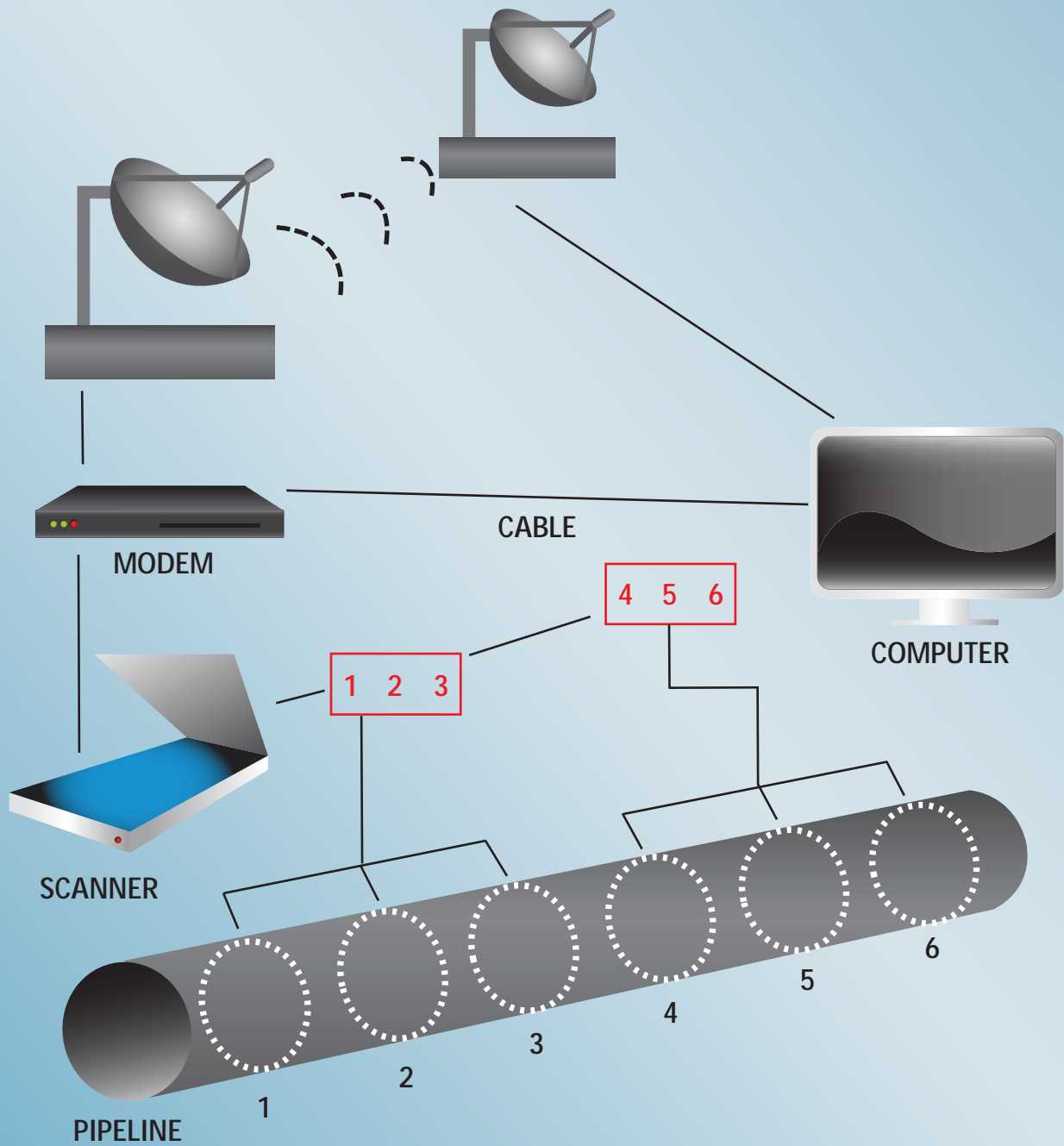
Passo



- ① Drive band
- ② Welding head
- ③ Junction box
- ④ Programmable unit
- ⑤ Power supply

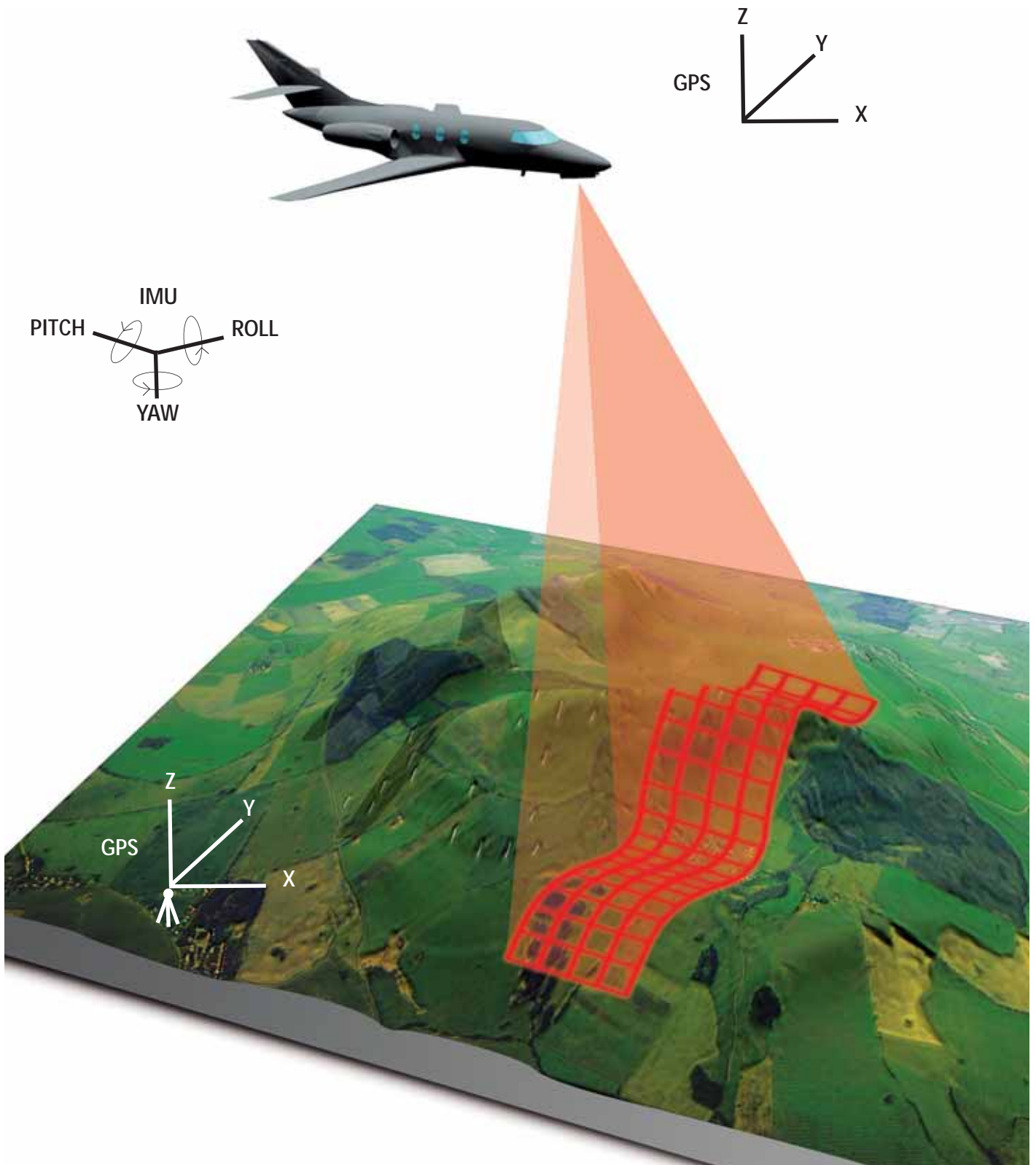
LANDSLIDE MONITORING SYSTEM

DEVELOPED IN-HOUSE, ALREADY IN USE BY SEVERAL CLIENTS,
TO ALLOW OPERATION IN UNSTABLE SOILS.



LIDAR: AIRBORNE TOPOGRAPHIC TECHNIQUE

BASED ON LASER TECHNOLOGY, TO QUICKLY OBTAIN PRECISE AND HIGH SCALE TOPOGRAPHIC INFORMATION OF LARGE AREAS.

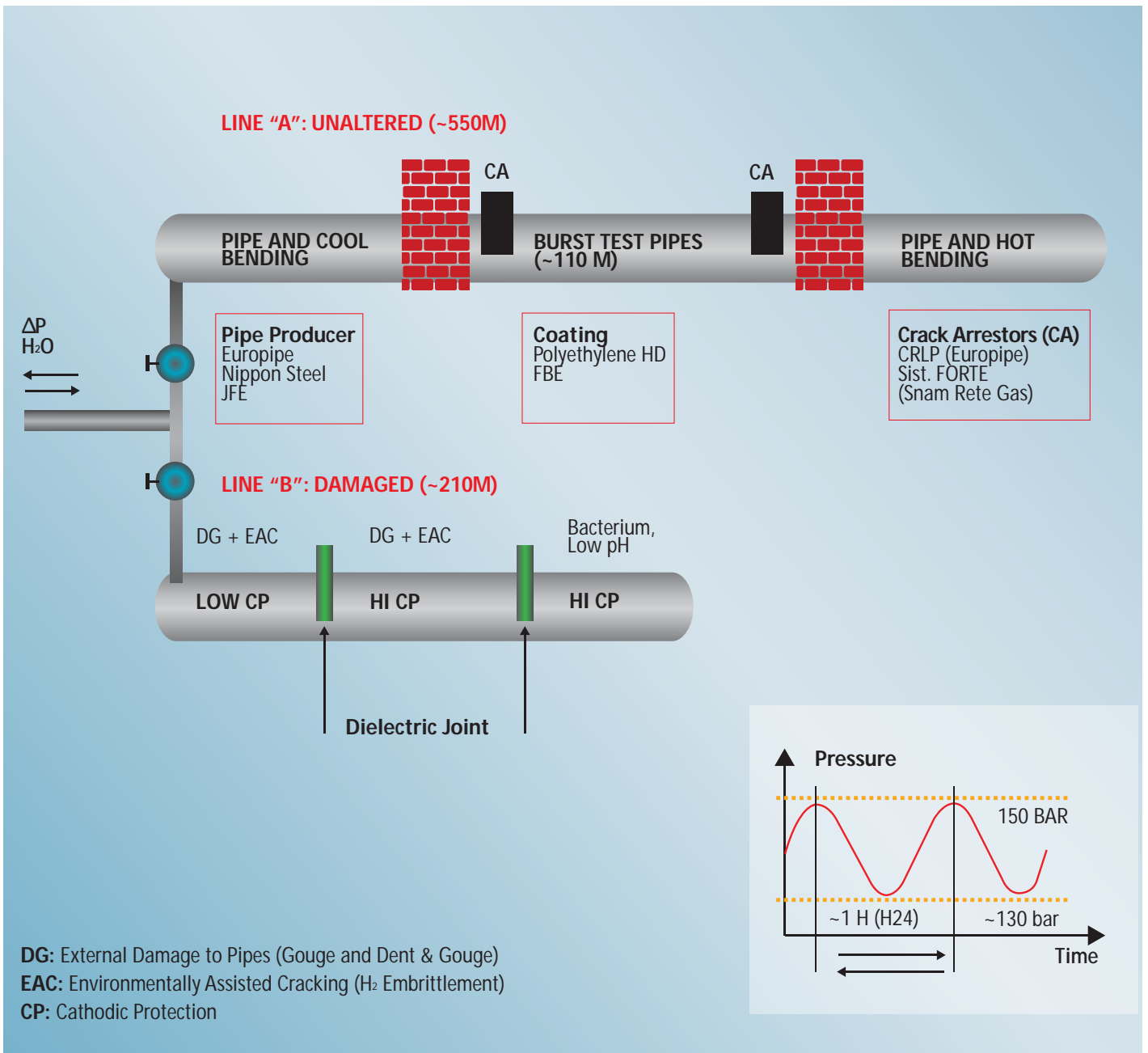


↙ HIGH PRESSURE, HIGH THROUGHPUT PIPELINES FOR LONG DISTANCE, HIGH CAPACITY GAS TRANSPORTATION SYSTEMS.

BASED ON THE APPLICATION OF HIGH GRADE STEELS (ABOVE X80, PRIMARILY X100). DEVELOPED BY SAIPEM FOR ENI.

SEMI-COMMERCIAL DEMONSTRATION PLANT IN SARDINIA, ITALY, WHERE A COMPLEX THREE YEARS LONG TESTING AND DEMONSTRATION PROGRAM WAS CARRIED OUT.





PIPELINE LAND REINSTATEMENTS

WITH HEIGHTENED ENVIRONMENTAL AWARENESS OVER THE LAST DECADES, IN ADDITION TO MAXIMIZING ENVIRONMENT PROTECTION DURING THE PIPELINE CONSTRUCTION, LAND REINSTATEMENTS BACK TO THE ORIGINAL LANDSCAPE CONDITIONS AND APPEARANCE ARE BECOMING MORE AND MORE AN ESSENTIAL COMPONENT OF A PIPELINE PROJECT.



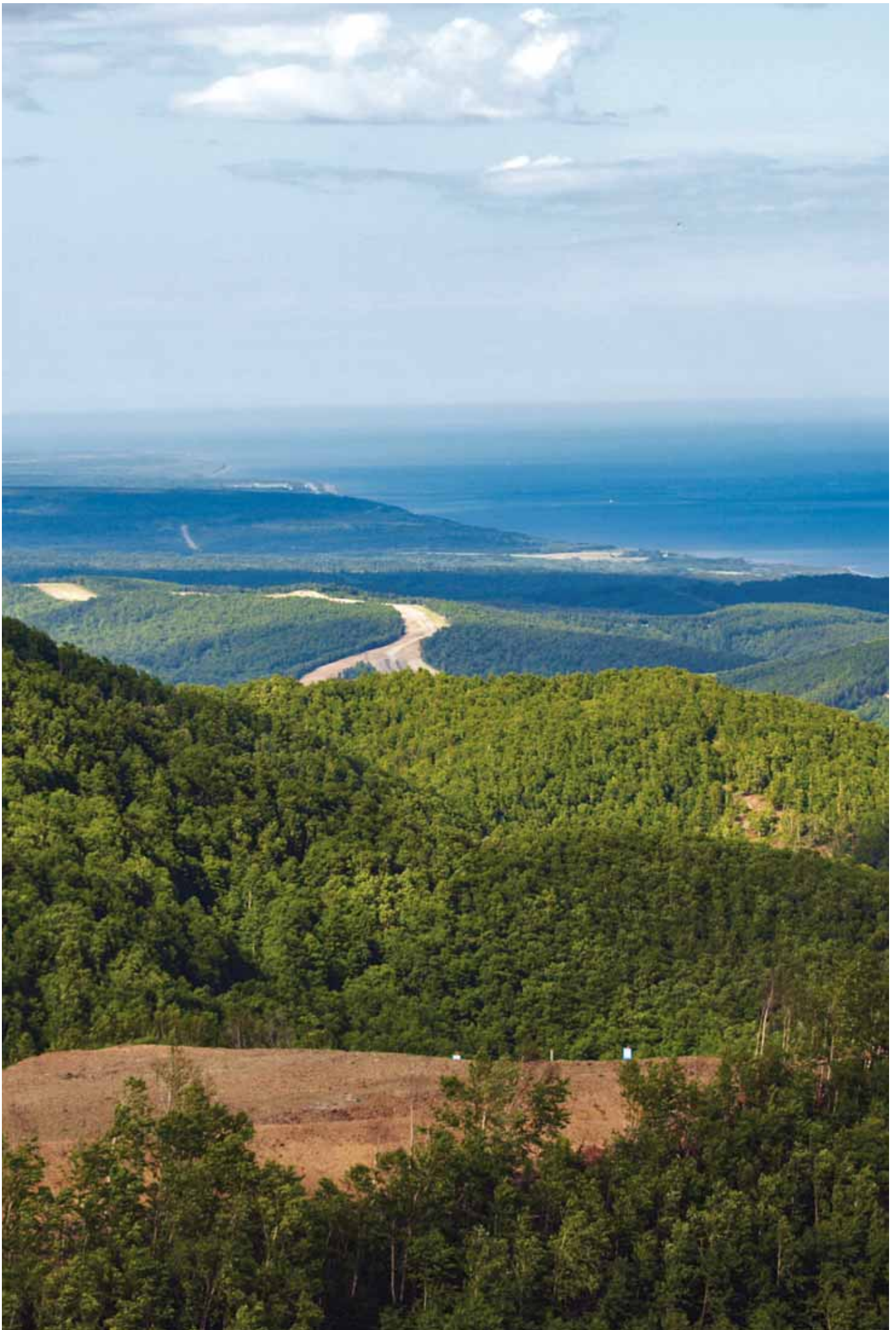
Several techniques are normally used to back fill the excavated trenches. In some cases, in the presence of likely seismic fault locations, a special proprietary design and construction methodology are implemented to safeguard the pipeline integrity in the event of an earthquake.

The reinstatement process is typically a series of steps: initially, the restoration of drainage patterns and

landscape profiling, followed by erosion control measures and structures, including slope breakers; finally, a biological reinstatement, involving the seeding of the right of way, to promote a rapid return of vegetative cover, via sowing of seeds by manual crews or mechanical spreaders mounted on tractors; on a larger scale, by hydro-seeding and aerial seeding from a helicopter.



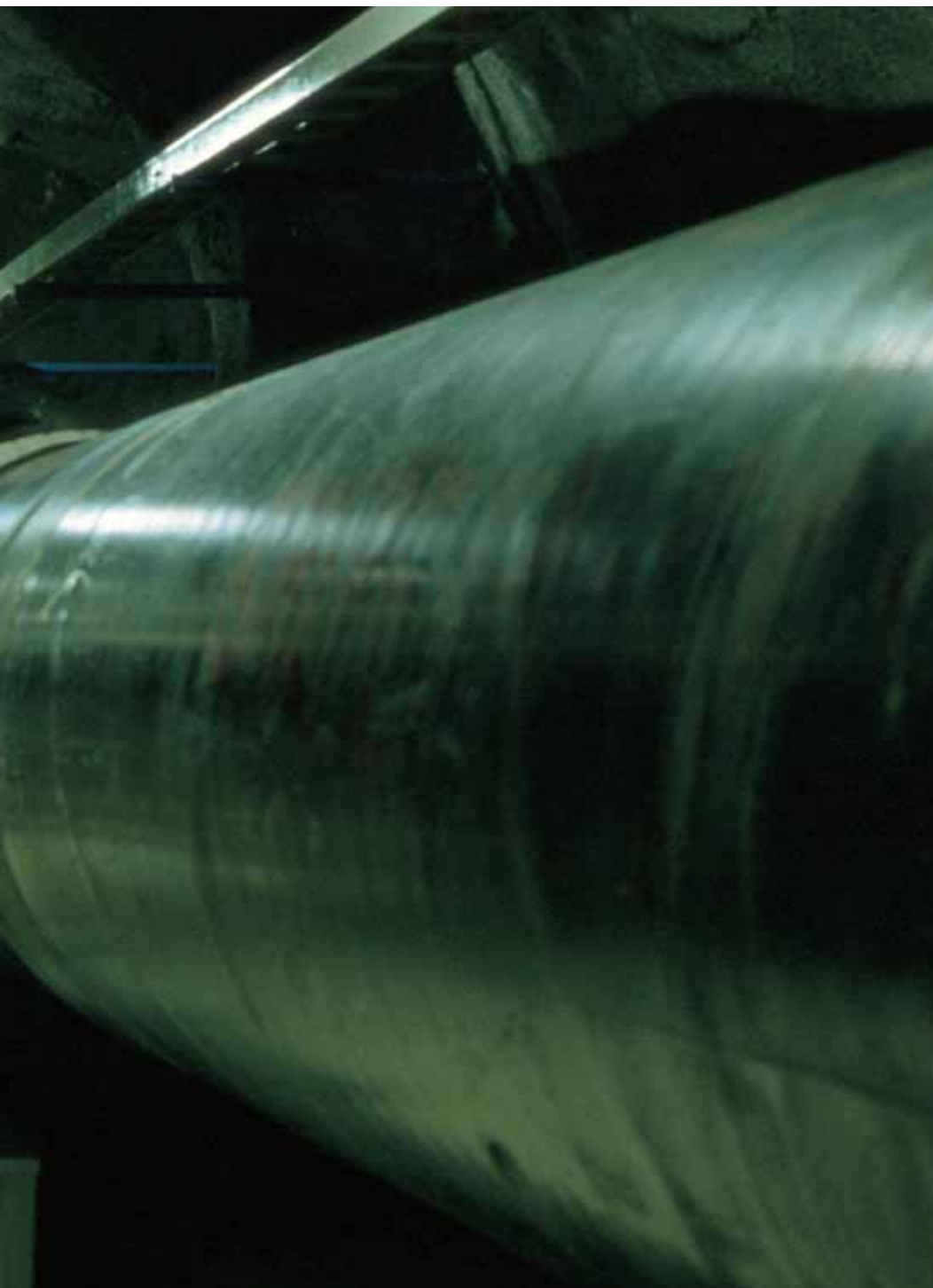
The examples shown here illustrate the successful reinstatement procedures at the Sakhalin II Onshore Pipeline Project in far-eastern Russia. For this one and for other analogous efforts on the same project, the Russian Federal Minister of Natural Resources has given to Saipem the " Best Environmental Project of the Year" award in 2008.



DEVELOPING THE ITALIAN GAS SUPPLY AND DISTRIBUTION NETWORK

SAIPEM'S HISTORY IS INEXTRICABLY INTERTWINED WITH THE DEVELOPMENT OF THE GAS DISTRIBUTION SYSTEM IN ITALY, WHICH STARTED ALMOST SEVENTY YEARS AGO, AS WELL AS WITH THE SUBSEQUENT DESIGN AND CONSTRUCTION OF LARGE PIPELINE SYSTEMS TO IMPORT NATURAL GAS INTO ITALY FROM NORTH AFRICA, RUSSIA AND NORTHERN EUROPE.





Snam (Società Nazionale Metanodotti) was founded in 1941 to exploit industrially the newly discovered gas fields in Northern Italy: a wartime pipeline to bring gas to Milan (13 km " Milan ring") was the first such industrial achievement. After the war followed a rapidly growing network: 257 km in 1948, over 700 km in 1950, gradually forming a capillary system reaching almost 40,000 km in 2009. Today this is owned by Snam Rete Gas S.p.A., the largest pipeline operator in Italy and one of the largest ones in the world, a company formed in the current shape in 2000.

In order to more effectively manage this complex job of planning, designing and building large-scale pipelines, from the very beginning Snam set up two new companies which, over the years, would forge strong independent identities, and later achieve a significant international standing:

↳ Snam Montaggi in 1955 - renamed Saipem in 1957;

↳ Snam Progetti in 1956 - later renamed Snamprogetti and incorporated into Saipem in 2006.

Over all these years, in highly complementary ways, through numerous large and challenging projects, Saipem and Snamprogetti have cooperated in designing and building major offshore and onshore trunkline systems to bring growing gas supplies into Italy:

↳ From Russia, Norway and the Netherlands, since the 1970s, including long pipeline stretches through Austria, Germany and Switzerland;

↳ From Algeria, from 1980s.

↳ From Libya, starting in early 2000s.

The creation of this complex domestic network and international supply system required overcoming numerous technical challenges. For the onshore pipelines, in particular, this meant crossing rivers and steep mountain slopes, inserting pipelines into existing tunnels, developing new designs to protect from geohazards and landslides as well as restoration systems for the protection of the environment, etc.

Often, these pipeline projects were also integrated into more complex gas transportation systems, which included compression stations, upstream and downstream processing plants, etc.





Saipem

THE GAS DISTRIBUTION SYSTEM IN ITALY

1950



YEAR	NETWORK LENGTH	GAS DELIVERED
1950	700 km	500 million cubic metres
1960	4,600 km	6,400 million cubic metres
1965	5,500 km	7,700 million cubic metres
1970	9,000 km	12,800 million cubic metres
1975	13,000 km	22,000 million cubic metres
1980	15,000 km	27,500 million cubic metres
1990	23,110 km	47,240 million cubic metres
1997	28,100 km	53,016 million cubic metres
2003	30,500 km	82,900 million cubic metres
2009	40,000 km	85,000 million cubic metres

2009



DEVELOPMENT OF THE ITALIAN GAS SUPPLY SYSTEM PROJECT REFERENCES

ALL FOR SNAM RETE GAS S.P.A. AND ITS PREDECESSORS

PROJECT	LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
Enna Gas Compression Station			ES	Under Exec.
Bordolano Gas Storage Station			ES	Under Exec.
Gas Compression Stations and Node of Poggio Renatico and Minerbio			ES	Under Exec.
New Natural Gas Backbone Pipeline for Taranto	80	various	ES	Under Exec.
NG Pipeline Collesalveti-Piombino	82	48"	ES	Under Exec.
NG Pipeline All. Terminal GNL Porto Empedocle	15	36"	ES	Under Exec.
NG Pipeline Pontremoli-Cortemaggiore	100	36"	ES	Under Exec.
Minerbio Node			ES	Under Exec.
Palaia-Collesalveti Pipeline	30	48"	C	Under Exec.
Recanati-Foligno Pipeline	100	42"	ES	Under Exec.
River Treste-Cortemaggiore-Minerbio Basic Engineering			ES	Under Exec.
NG Pipeline Zimella-Cervignano	170	56"	ES	2011
NG Pipeline Poggio Renatico-Cremona	150	48"	ES	2009
NG Pipeline Bacini Calabri	120	various	ES	2008
NG Pipeline Cremona-Sergnano	50	48"	ES	2008
Transmed Development Compression Stations and/or Upgrading			EP	2007
Algeria-Italy GA.ME C Transmediterranean NG Pipeline Expansion - Enna to Gallese	643.8	48"	ES	2006
NG Pipeline Bordano-Flaibano	32	56"	ES	2006
NG Pipeline Villesse-Gorizia-Gonars	18	42"	ES	2006
NG Pipeline Cherasco-Cuneo	50	20"	ES	2006
NG Pipeline Abbadia Lariana	20	10"	ES	2005
NG Pipeline Massafra-Biccari	193.4	48"	ES	2005
Russia-Italy NG Pipeline Futher Expansion Italian Section (Tarvisio-Poggio Renatico)	332	48"	ES	2005
NG Pipeline Giarratana-Solarino	38	24"	ES	2004

PROJECT	LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
NG Pipeline Sulmona-Minerbio	420.3	48"	ES	2004
Expansion of North Europa NG System - Italian Section (Passo Gries-Mortara)	175	48"	ES	2003
Holland-Italy NG Pipeline - New Masera Compression Station			ES	2003
Sergnano Gas Compression Station Expansion			ES	2001
Secondary National Natural Gas Transport and Distribution System	33,914		ES	1985-1999
Algeria-Italy GA.ME B Transmediterranean NG Pipeline Expansion - Mazara del Vallo (Trapani) to Minerbio (Bologna)	1,488	48"	ES	1999
Ripalta Gas Compression Station Expansion			ES	1998
Cinisello Balsamo Natural Gas Storage System New Compression Station			ES	1998
Russia-Italy NG Pipeline (Italian Section) Expansion of Istrana Compression Stations			ES	1998
Russia-Italy NG Pipeline (Italian Section) Expansion of Malborghetto Compression Stations			ES	1997
Construction of Transmed Pipeline Montalbano Torrente Mela (Api 5LX-65)	36	48"	C	1997
Construction of Transmed Pipeline - Terranova Bracciolini Marradi (Api 5LX-65)	56	48"	C	1997
Construction NG Pipeline Serravalle Pistoiese Borgo a Mozzano (Api 5LX-65)	50	16"	C	1996
Minerbio Compression Station Expansion			ES	1996
Construction Pipeline Ripalta-Cerviniano (Api 5LX-65)	21.5	48"	C	1995
Construction Pipeline Piazza Armerina-Enna (Api 5LX-65)			C	1995
Cortemaggiore Gas Injection Station			ES	1995
Construction Pipeline Ponti-Cosseria (Api 5LX-65)	35	30"	C	1994
Construction Onshore Flowlines & Transferlines Construction of Transmed Pipeline - Italian Section Various Sections	200	48"	C	1994
Construction Pipeline to Passirano (Api 5LX-65)	222	20" - 24"	C	1994
Cupello Gas Compression Station Expansion			ES	1994

DEVELOPMENT OF THE ITALIAN GAS SUPPLY SYSTEM PROJECT REFERENCES

ALL FOR SNAM RETE GAS S.P.A. AND ITS PREDECESSORS

PROJECT	LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
Development of Models for the Pipeline Structural Damage			ES	1994
Assessment for Consequence Evaluation "Phase 1"			ES	1994
Cortemaggiore Gas Compression Station Expansion			ES	1993
S. Donato District Heating Project - S. Francesco & Business Quarters New Waterteheating Network	12		ES	1993
Interconnecting System from Vastogirardi (Isernia) to S. Salvo (Chieti)	58		ES	1992
Transmed Pipeline South Italy Section	140	48"	C	1992
Various Gaslines	200	24" - 48"	C	1991
Russia-Italy NG Pipeline Expansion (Italian Section)	271	36" - 42"	ES	1991
Russia-Italy NG Pipeline (Italian Section) Malborghetto and Istrana Compression Stations Upgrading			ES	1990
Messina Compression Station Expansion - Combined Cycle Installation for Energy Saving			ES	1990
Interconnecting System from Vastogirardi (Isernia) to Pacentro Ciciliano (L'Aquila)	107		ES	1990
Interconnecting System from Recco-Genova Staglieno and Genova Quinto NG Pipeline	46	26"	ES	1990
Interconnecting System from Alessandria to Genova and Recco	8	26"	ES	1990
Holland-Italy NG Pipeline - Masera Compression Station Modernization			ES	1990
Cortemaggiore New Gas Compression Station			ES	1990
Construction of Various Gas Pipelines North Italy	164 + 2.1	10" - 20"	C	1990
Bussolengo Compression Station			ES	1989
Construction of Gas Pipeline North Italy	70	30"	C	1989
Construction of Oil Pipeline from Camisano to Zimella	43	42"	C	1988
Construction Natural Gas Pipeline (Urss-Italy) from Maiano to Camisano. Material (Api 5LX-65)	102	42"	C	1988
National Oil Pipeline System	57		ES	1987
Construction Natural Gas Pipeline from Podenzano to Alessandria. Material (Api 5LX-65)	99	36"	C	1986

PROJECT	LENGTH KM	Ø INCHES	SCOPE OF WORK	ON STREAM
Cassano Jonio Compression Station			ES	1985
Algeria-Italy GA.ME Transmediterranean NG Pipeline Mazara Del Vallo (Trapani) to Minerbio (Bologna)	1,393	42" - 48"	ES	1985
Settala Compression Station (21,000 Kw)			ES	1985
Tresigallo Gas Injection Station (21,310 Kw)			ES	1984
Construction Algeria-Italy GA.ME Reggio Calabria to Minerbio Section	690 + 292	42" - 48"	C	1984
Ripalta Gas Injection Station Revamping			ES	1984
Cupello Gas Injection Station			ES	1984
Biccari Compression Station			ES	1981
Minerbio Gas Injection Station			ES	1981
Ripalta Cremasca Gas Injection Station for Underground Storage			ES	1981
Rimini Compression Station			ES	1981
URSS-Italy NG Pipeline (Italian Section)	390	34" - 36"	ES	1977
Sergnano Gas Injection and Distribution Station			ES	1975
Recanati Compression Station			ES	1975
Importation of NG from North Europe Holland-Italy NG Pipeline (Italian Section)	165	34"	ES	1974
Ferrandina Compression Station			ES	1973
Central Europe Crude Oil Pipeline (Italian Section)	83	26" - 30"	ES	1973
Brugherio Gas Injection Station			ES	1964

