

# COMPANY PROFILE

**Soil Services'** position in the industry of Special Subterranean and Deep Foundations is based on the successful combination of skills, knowledge and experience of its employees and partners.

Emerging as a result of the union of the experience of **SCS** ([www.scstn.it](http://www.scstn.it)) and **Ferretti International** ([www.ferretti-group.com](http://www.ferretti-group.com)), **Soil Services** provides services throughout Europe, Africa and the Middle East.

**Soil Services'** regional presence in the above mentioned markets, its knowledge of the local regulations and environment make Customers trust on the reliability and performance of Soil Services.

The variety of services offered ranges from **Industrial Construction, Infrastructures** and **Real Estate** and gives **Soil Services** the opportunity to make use of the benefits of the large consolidated groups and a variety of professional skills it co-operates with.

Over decades in all sectors of foundation engineering and work, **Soil Services** offers a guarantee for the high quality that is essential nowadays in order to carry out demanding and complex tasks quickly and flawlessly.





# BUSINESS AREAS

**Soil Services**, thanks to the expertise and experience of the staff and the most modern techniques at its disposal, can offer a wide range of solutions and all complex technologies that are necessary for projects in:

- 1. Soil Investigation**
- 2. Geo-technical and Foundation Design**
- 3. Deep Foundation Works**
- 4. Test and Laboratory**

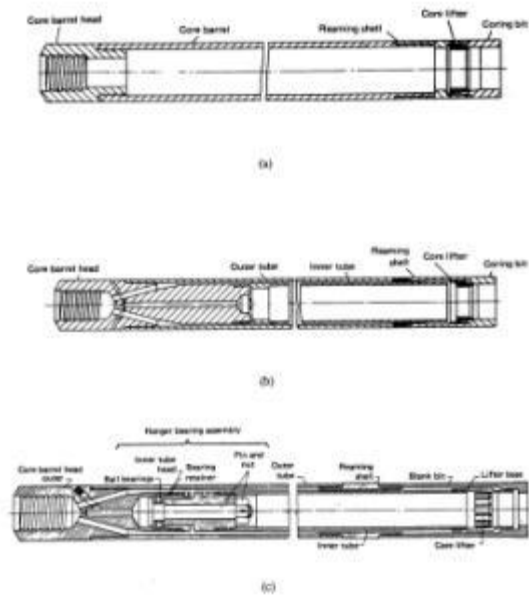
# SOIL INVESTIGATION

The geotechnical Soil Investigation, carried out with collections of samples in continuous coring, represents the best system to extrapolate the physical and mechanical characteristics of underground strata crossed during the drilling.

**Soil Services** is equipped with a proper drilling rig, water pump and mud pump, various size of vidiam and diamond bits, single and double core barrel, casing and ancillaries, so to obtain any type of soil investigation with the best results.

**Soil Services** provides a range of services related to geotechnical investigations, including:

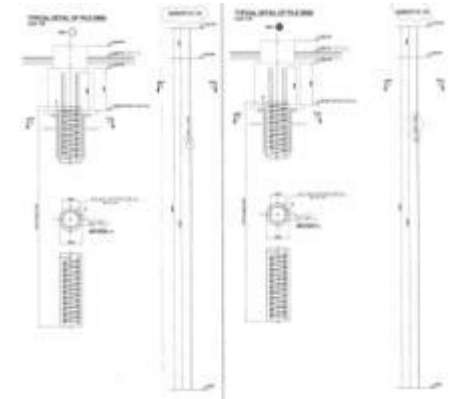
- Investigation planning
- Geotechnical boreholes
- In situ testing
- Laboratory testing
- Data interpretation and reporting



# GEOTECHNICAL AND FOUNDATION DESIGN

**Soil Services'** experience includes design of foundations tunnels, roads and railroads foundation base, earthworks, foundations for bridges/viaducts, caissons as well as civil and industrial facilities, earth retaining structures, slope stability/landslide remediation, soil improvement and landfill design.

All project designs are executed according to the European Construction Standard.



# DEEP FOUNDATION WORKS

Every project within the Deep Foundation sector is carried out using innovative and individual solutions at the very highest level in order to achieve optimal customer's benefits.

In Deep Foundation Works, **Soil Services** has the flexibility and the capacity to provide Customers with the guarantee for a fast and high-quality execution.

For what concerns Marine Works, **Soil Services** performs Bored and Driven Piles in water for port benches, bridges and “viaducts” foundations. Dam foundation consolidation and deep curtain works are also included within the Company's activities.



# DEEP FOUNDATION WORKS

## SERVICES PROVIDED:

- Bored Piles → we use 3 methods:
  - dry method
  - cased method
  - slurry method
- Continuous Flight Augered Piles (CFA)
- Cased Augered Piles (CAP)
- Cast in Situ Driven Piles
- Vibro-compaction
- Driving of Pre-cast Piles
- Soil Mixing Piling
- Full Displacement Piles (FDP)
- Diaphragm Walls
- Hydromill
- Plastic Cut of Walls
- Sheet Piling
- Cutting and Mixing Head (CSM)
- Compaction Grouting
- Heavy Tamping
- Jet Grouting
- Micropiles
- Tie Rods and Anchors
- Anchorages



# DEEP FOUNDATION WORKS

## SERVICES PROVIDED:

### GROUTING

We use different systems:

- Open hole grouting on multiple stage ascending or descending method
- Tube Manchetts (TAM) System able to inject the grout at appropriate level depth
- Grouting Intensity Number (GIN) system able to inject the required volume of grout mix according the soil characteristic

### DEWATERING & WELLPOINT SYSTEM

We can provide all type of dewatering system:

- sump pumping
- dewatering with drainage trenches
- dewatering with shallow wells
- vertical WellPoint dewatering
- dewatering with deep wells
- horizontal WellPoint dewatering





# DEEP FOUNDATION WORKS

## Services provided for Marine Works & Dams:

- Bored Piles with barge
- Driven Piles in water
- Hydromills
- Excavation and small dredging works
- Shore Protection
- Diaphragm Wall for port benches
- Hammered Pile
- Foundation Blanket Treatment
- Deep Curtain
- Instrumentation (Piezometer-Inclinometer-Load Cell etc.)



# TEST AND LABORATORY

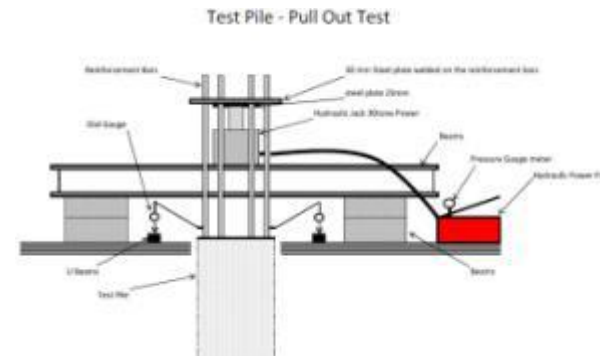
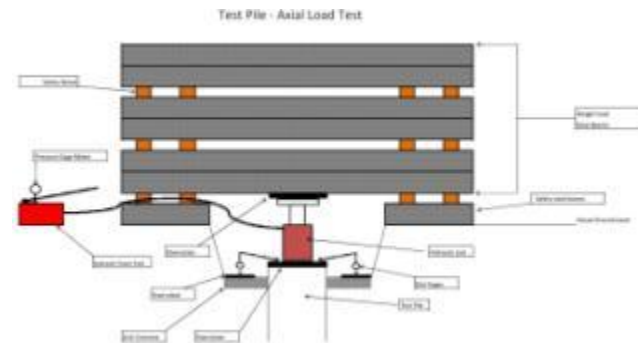
**Soil Services** tests its own works with new generation apparatus and experienced Engineers.

**Soil Services'** Engineers are high-qualified and equipped for all tests necessary to identify the quality of foundation and can also offer consulting to supervise all type of works on site.

All the data performed during the tests are presented in a digital format and graphic calculations to satisfy all Client's requests.

## Tests provided:

- Axial Load Test
- Pull Out Load Test
- Lateral Load Test
- Pile Integrity Test (PIT)
- Anchor Test
- Sonic Test
- Compaction Test
- Cube Test
- Bentonite Test
- Lab Analysis



# MAIN PROJECTS: LIBYA

## CUSTOMER:

LISCO - Libyan Iron & Steel Company

## LOCATION:

Misurata, Libya

<b>PROJECT</b>	250 TPD AIR SEPARATION PLANT
<b>ENGINEERING COMPANY</b>	CATIC (China)
<b>CIVIL ENGINEERING</b>	DASTUR (India)
<b>SPECIAL FOUNDATION: PILING ACTIVITY</b>	n. 300
<b>CIVIL WORKS: REINFORCED CONCRETE</b>	m <sup>3</sup> 4.000
<b>PILING SCHEDULE</b>	2 MONTHS
<b>YEAR</b>	2008-2009



## CUSTOMER:

LISCO - Libyan Iron & Steel Company

## LOCATION:

Misurata, Libya

<b>PROJECT</b>	REVAMPING DSRWM
<b>ENGINEERING COMPANY</b>	SIDERIMPES SRL
<b>CIVIL ENGINEERING</b>	FERRETTI INTERNATIONAL
<b>SPECIAL FOUNDATION: MICRO PILE ACTIVITY</b>	n. 100
<b>CIVIL WORKS: REINFORCED CONCRETE</b>	m <sup>3</sup> 5.000
<b>PILING SCHEDULE</b>	1 MONTHS
<b>YEAR</b>	2009



# MAIN PROJECTS: LIBYA

## CUSTOMER:

LISCO - Libyan Iron & Steel  
Company

## LOCATION:

Misurata, Libya

## PROJECT

0.8 MTPY BAR ROLLING MILL

## ENGINEERING COMPANY

DANIELI & C. OFFICINE MECCANICHE SPA

## CIVIL ENGINEERING

FERRETTI INTERNATIONAL

## SPECIAL FOUNDATION: PILING ACTIVITY

n. 2.500

## CIVIL WORKS: REINFORCED CONCRETE

m<sup>3</sup> 35.000

## PILING SCHEDULE

8 MONTHS

## YEAR

2008-2009



## CUSTOMER:

LISCO - Libyan Iron & Steel  
Company

## LOCATION:

Misurata, Libya

## PROJECT

6-HIGH COLD REVERSING MILL

## ENGINEERING COMPANY

KEY TECHNOLOGY/TENOVA (TECHINT)

## CIVIL ENGINEERING

FERRETTI INTERNATIONAL

## SPECIAL FOUNDATION: PILING ACTIVITY

n. 150 + n. 260 SECANT PILES

## CIVIL WORKS: REINFORCED CONCRETE

m<sup>3</sup> 6.000

## PILING SCHEDULE

1 MONTHS

## YEAR

2009

