



# ENGINEERING SERVICE

**ABEL's** core business is designing and building industrial plants. Its sectors of greatest expertise are:

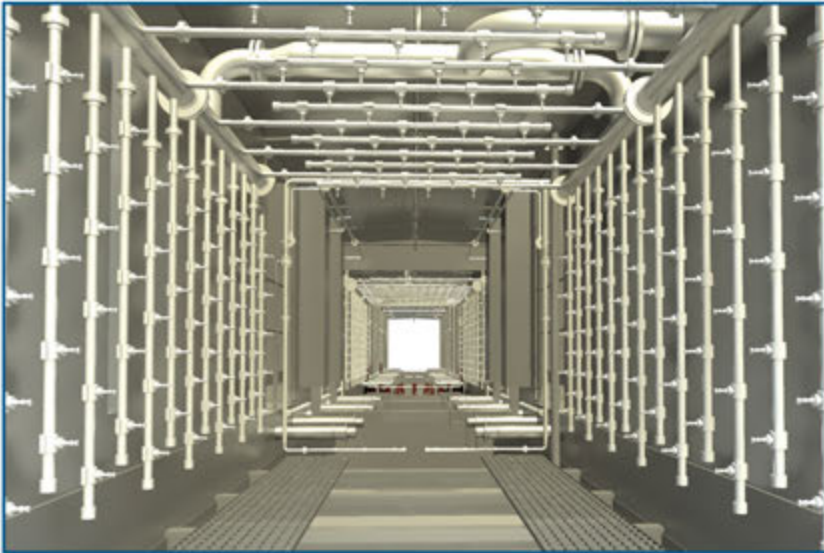
- Chemical
- Pharmaceutical
- Oil & Gas
- Energy
- Industrial painting
- Machine tools
- Paper mills
- Water treatment

The engineering department chiefly focuses on developing each phase involved in industrial plants, such as piping, structural steelwork, electro-structural parts and mechanical engineering. The detailed engineering is developed ensuring the proper execution and construction of the project, starting from the basic engineering, to define the layout and the main features of the project. Our experience allows us to alternate "green field" solutions with work to revamp existing plants.

*The engineering department handles an annual workload of:*

**70,000**  
internal hours

**30,000**  
hours for associated tasks



### COMPLETE CAR CHASSIS PRE-TREATMENT AND PAINTING PLANT

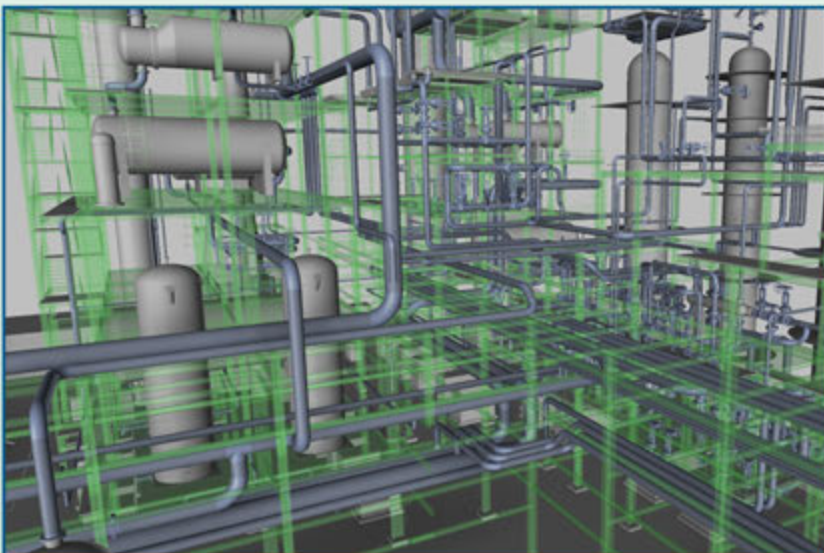
PDMS piping, supports  
and equipment modelling.  
Providing detailed piping engineering,  
isometric drawings, piping layout  
and lists of materials.

Client: **Falcare** | Workload: **3,500**

### COMPLETE CAR CHASSIS PRE-TREATMENT AND PAINTING PLANT

3D piping routing, support and equipment  
modelling using PDMS. Piping detailed  
engineering, isometric drawings,  
piping layouts, material lists.  
Engineering and studies for ovens,  
including internal and external  
ducts with supports.  
Engineering and calculation reports,  
assemblies and construction nodes,  
TEKLA modelling of all structures.

Client: **Geico** | Workload: **10,000**

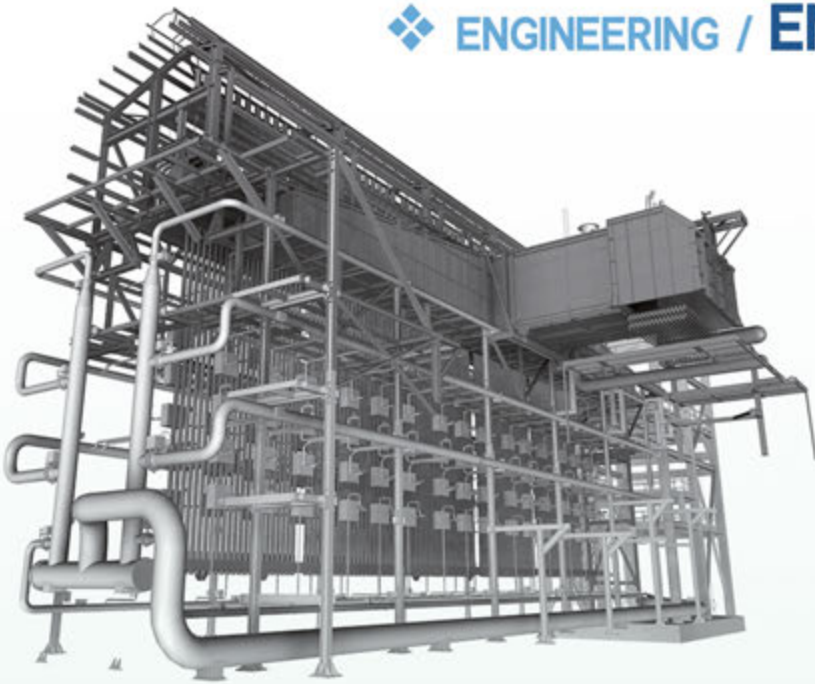


### PRODUCTION PLANT

Engineering service (feed)  
for a complete plant with Smart Plant.

Client: **Eni Progetti** | Year: **2019** | Workload: **4,000**

## ❖ ENGINEERING / ENERGY ❖



### STEAM REFORMER PLANT

3D modelling of steam reformer plant for burner piping lines.

Client: **ITT** | Year: **2019** | Workload: **1,000**

### GEOHERMAL ELECTRICITY PRODUCTION PLANT

Detailed engineering of piping construction and stress analysis of 80% of the lines.

Client: **Turboden** | Year: **2018** | Workload: **6,000**

### BOILER

Design of a combined cycle boiler.  
Detailed engineering of structures and piping using 3D model.

Client: **Macchi** | Year: **2015** | Workload: **3,500**

### BIOGAS PLANT

Design of 14 biogas production plants harnessing an anaerobic digestion process which uses materials from an agro-industrial complex.  
Detailed Engineering for structures and piping.

Client: **Sebigas** | Workload: **6,000**



## ❖ ENGINEERING / PAPER MILL ❖



### WATER TREATMENT PLANT FOR A PAPER MILL

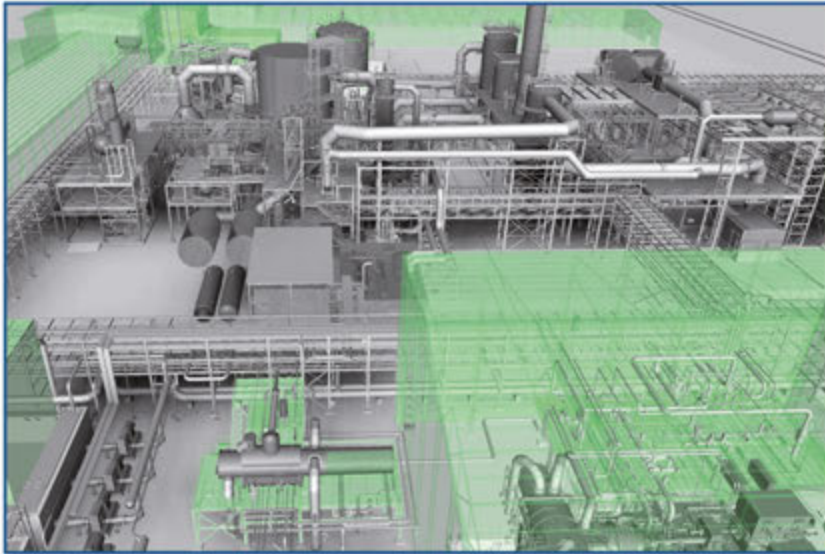
Complete supply of "lamella clean" sedimentation system.

Client: **Cartiera Ciacci**  
Year: **2019** | Workload: **1,000**

### PAPER MILL REVAMPING

Detailed engineering of the cogeneration plant conversion.

Client: **SM SMUTH - Loc. Porcari (LU)**  
Year: **2016** | Workload: **2,000**



**SULPHURIC ACID PLANT  
1500 TONNES/YEAR**

Multidisciplinary detailed engineering.

Client: **Desmet Ballestra**

Year: **2019** | Workload: **18,000**

**SULPHURIC ACID PRODUCTION PLANT**

3D modelling of both piping and structures. Production of detailed documentation for the construction, including carpentry, isometric piping, piping layouts, supports, elaboration in detail for jacketed lines.

Client: **Desmet Ballestra**

Year: **2010** | Workload: **10,000**

**CHLORALKALI PRODUCTION PLANT**

Ingegneria polidisciplinare di dettaglio.

Client: **Thyssenkrupp**

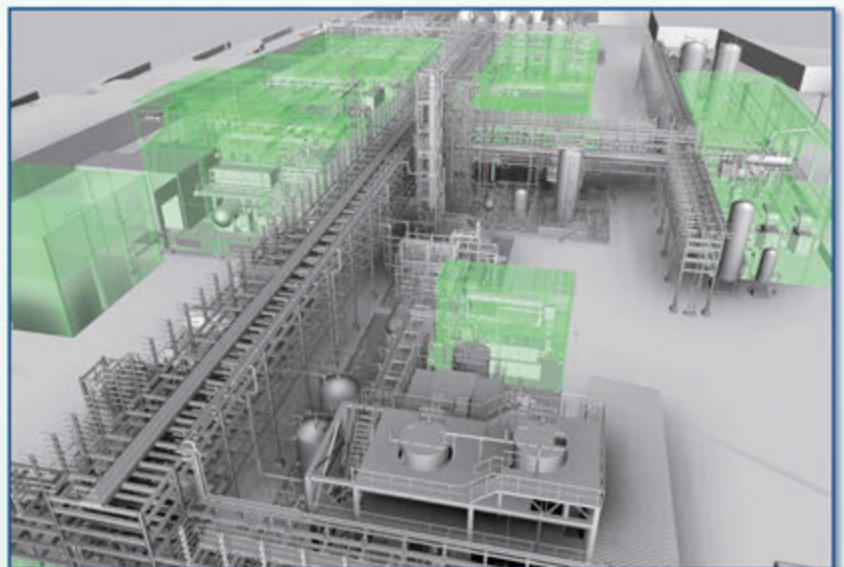
Year: **2019** | Workload: **10,000**

**REVAMPING OF AN EXISTING  
PHARMACEUTICAL PLANT**

Inspection on site, demolition and reconstruction of floors and stairwells, renovation of mezzanine levels, new pipe rack and "as built" drawings. Calculations and designs complete with all structures and civil works. Detailed 2D engineering for the piping.

Client: **Amec Foster Wheeler**

Year: **2014** | Workload: **6,000**

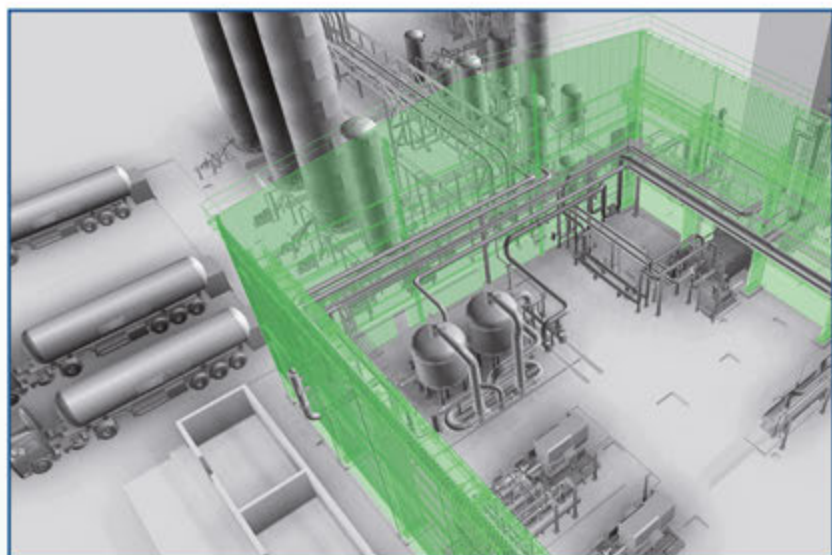


**ABEL** uses all the main planning and design software

 PDMS	 E3D	 ESA PRO 3D	 TEKLA STRUCTURES	 MIDAS GEN 2013
 IDEA STATICA	 E-PLAN	 SIEMENS NX	 SOLID WORKS	 INVENTOR
 AUTOCAD	 MICROSTATION	 BRICSCAD	 ESAPRO P&ID P&ID & INSTRUMENTATION	

**ABEL** has the necessary technical competences for using **SMART 3D - SMART P&ID - CESAR**

## ❖ ENGINEERING / CRYOGENIC GAS ❖



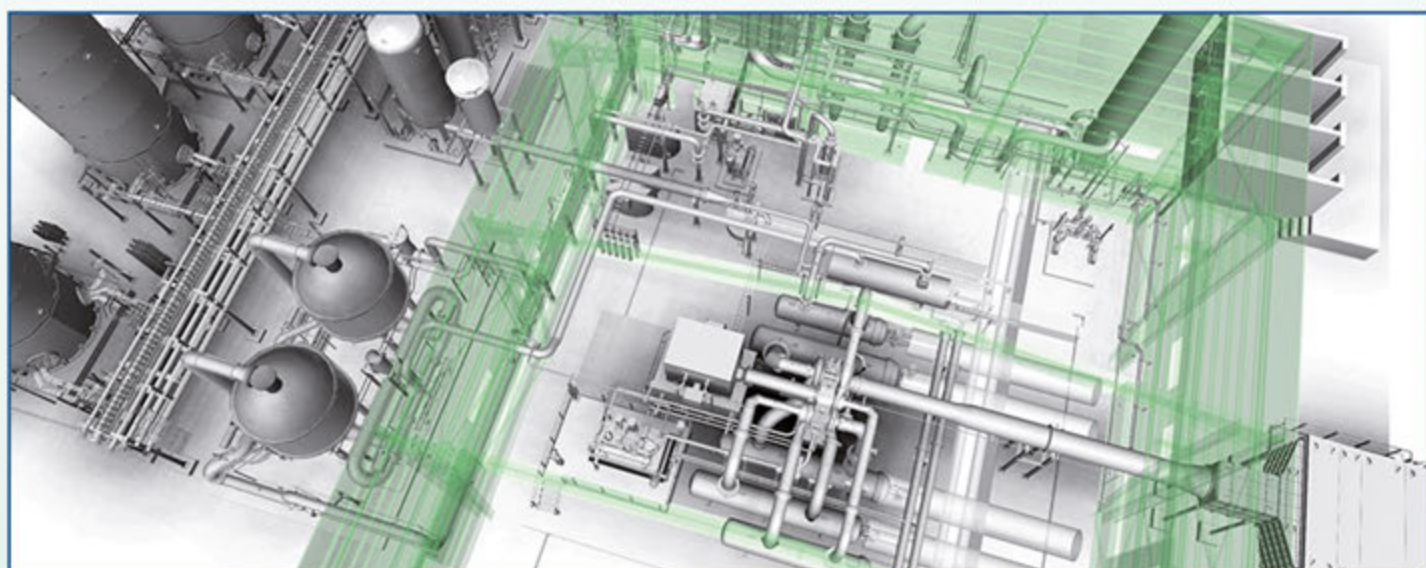
### PRODUCTION AND STORAGE PLANT FOR CRYOGENIC GAS: OXYGEN, NITROGEN AND ARGON

Production of detailed engineering for the construction of piping, structures and supports.

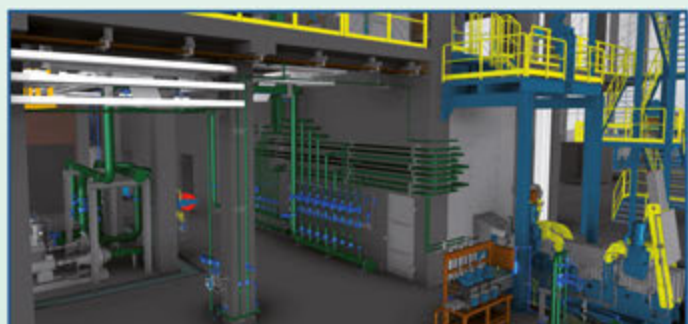
Client: **Siad**

Year: **2019** | Workload: **3,500**

Client: **Siad**  
Year: **2019**  
Workload: **4,000**



## ❖ ENGINEERING / METALLURGIC ❖



### CCM CASTING PLANT

Modelling of piping for detailed engineering, supports, hook-up and piping layout.

Client: **Danieli**

Year: **2019** | Workload: **1,500**



### ALUMINUM COIL EXTERIOR TREATMENT PLANT

3D modelling of piping, structures, supports, civil works, equipment and air duct drawings.

Client: **Tenova**

Year: **2019** | Workload: **3,500**

## SERVICE



### Engineering

The engineering department chiefly focuses on developing each phase involved in industrial plants, such as piping, structural steelwork, electro-structural parts and mechanical engineering.



### Construction

The Construction Department designs industrial plants according to technical specifications defined by the client and developed by the engineering department.



### O&M

ABEL avails of a management and control department that oversees the quality of the projects and their maintenance. Its aim is to ensure optimal efficiency of the plants it designs and installs.

## PLANTS



### Water treatment

Water used for technological and/or industrial purposes must undergo special treatments to achieve the necessary results. Modern industrial production lines require process water with precise characteristics that remain constant through time, in the same way that water used in food production needs to respect strict health and hygiene regulations.



### Renewable energy

ABEL develops renewable energy solutions, particularly designing and building plants to produce biogas from agricultural biomass and waste-to-energy optimization plants.



[www.abelgroup.eu](http://www.abelgroup.eu)

### **Varedo premises**

Via Celotti, 8 - 20814 Varedo (MB)

Tel. 02 45077213

### **Verbania premises**

Via Montorfano, 3 - 28924 Verbania

Tel. 0323 675150

### **Headquarters**

Piazza Napoli, 19 - 20146 Milano | Italy

ADMINISTRATION | [info@abel96.com](mailto:info@abel96.com)

COMMERCIAL OFFICE | [bdeveloper@abel96.com](mailto:bdeveloper@abel96.com)

TECHNICAL OFFICE | [tecnico@abel96.com](mailto:tecnico@abel96.com)