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We are among the world’s top three manufacturers of plants and machines for the metals industry. The Group’s companies use their own technologies to manufacture and install competitive machines and plants all over the world, supplying both single units and turnkey plants.

Our current range of products includes machines, plants and processes for all the production cycles of steel and non-ferrous metals, from ore and scrap processing to finished long and flat products.

We are constantly striving to achieve even higher levels of quality and standards in every aspect of our work from planning, designing and manufacturing to erection and commissioning and service. We don’t shop around. We operate globally with local standards and well-recognized trademarks, with product lines that cover the entire metal industry cycle. We create effective solutions that improve resource- and energy-efficiency and apply Industry 4.0. technologies within the processes.

The company’s motto: Innov-Action to be a step ahead in CapEx and OpEx inspire us to always put innovation into action to achieve even higher levels of quality and standards in every aspect of our work, from planning, designing and manufacturing to erection, commissioning and service.

Motivated by passion for innovation, driven by our core values and mission we set the course for continuous improvement and success. Our history and heritage helped to establish the reputation of our brand, the name of which can be found now in almost every plant in the world. We were the pioneers and today, together with our customers, we are shaping the way of the metal business development.

**Vision**

Passionate and inspired people building a stronger sustainable future.

**Values**

1. Customer orientation
2. Passion
3. Team spirit
4. People
5. Clarity and reliability
6. Excellence
7. Sustainability

**Mission**

> Danieli is a full-cycle provider from raw materials to finished products in the metals industry.

> We are a multicultural, dynamic team with deep knowledge of our business.

> Our professional life is dedicated to understanding and satisfying the customer’s needs through our experience, continuous collaboration and flexibility.

> We turn ideas into end-to-end solutions of technological excellence, to create added value for our customers and stakeholders.

> We empower people, our main asset, with courage and creativity.

Knowledge and tools are the keys to the success of our projects and the strength of the company is directly proportional to the strength of our Engineering Team.
Danieli's origins date to 1914 when Mario and Timo Danieli founded the Angelini Steelworks in Brescia, Italy, one of the first companies to use the electric arc furnace for steel making. In 1929 part of the steelworks was transferred to Buttrio to manufacture tools for forging plants and auxiliary machines for rolling mills. In 1955, led by Luigi Danieli, the company started designing and manufacturing equipment for the steel industry. His idea was to manufacture more competitive equipment, simplify layouts and maximize the use of automation. One of the concepts developed, the “EAF/ Conticaster-Rolling mill” production route, has characterized and contributed to the successful development of the minimill process, which is widely adopted today. In 1982 the company was listed on the Milan Stock Exchange, and in 1984 Mrs. Cecilia Danieli (who had managed the financial and administrative departments of the Group since 1977) - who was appointed Chairman - and Mr. Gianpietro Benedetti (who had been Technological, Commercial and Project execution Director since 1977) - who was appointed C.E.O. - were entrusted with the management of the company. The planned expansion of the company was based on two guidelines: — increase the number of products offered through the purchase of companies considered to be international benchmarks; — internationalization of the company with the construction of plants and engineering offices in areas forecast for strong growth. Since then, through the acquisition of German
(Josef Fröhling), Swedish (Morgårds hammar), British (Davy Distington), French (Rotelec), American (Wean Industries, United Engineering), and Dutch (Corus Technical Services) companies, leaders in their specific fields of activity, and the continuous development of the acquired process technologies and equipment, Danieli has become a global player in plant making over the full range of products, from ore, scrap and treating; to flat, long, tubular, forged and extruded products processing; and fume, water and slag treating. At the end of the 1990s the internationalization process was completed with the construction of fully owned and directly managed design and production centers in China, Thailand, Vietnam and India, followed by Russia, Turkey, and Brazil, all of which were added to the European plants already existing in Italy, Sweden, and Germany, guaranteeing the same excellent quality equipment and service produced at Danieli Headquarters. Beginning in 1969, through Danieli Automation, the company has developed its own automation systems, including instrumentation and power control technologies. Danieli Automation has grown considerably in the past 20 years. In particular, in 2015 they began investing in Industry 4.0 development and purchased a company specialized in the use of robots. In 1995 Danieli acquired a steelmaking company - ABS - which today is among the European leaders in engineering steels production. In addition to being a profitable business in itself, it is also used as a laboratory for metallurgy, equipment/processes, and their related automation.
Danieli Team’s mission is to serve customers with competitive plants and process technology/automation to produce quality with the lowest depreciation and production cash costs, and to offer friendly after-sale service involving highly qualified, specialized engineers.
The Danieli Team is a multinational collection of companies that have helped shape the history -not to mention the progress- of metals production.

The technology spectrum -from ore to finished product- and relevant process know-how provided by our product lines, the well-known tendency towards innovation and high reliability are the best guarantees in reaching this target.
Danieli
Plantmaking
Industrial Culture
The Danieli Team is made up of more than 25 divisions active with specific technical capabilities, and a dozen of these bring long and notable legacies from their own countries, including Wean United (USA, established in 1901), Morgårdshammar (Sweden, 1856), Davy Distington (UK, 1951), Fröling (Germany, 1947), Rotelec (France), Kohler (USA), and more.

In addition to the acquired technical know-how, we benefit from our multicultural and multi-language team which helps us to establish the best relationships with our customers around the world.

Danieli Group Finance
Economic and technological results over the last decade have constantly improved despite the fluctuating nature of the plant engineering market. Danieli, aware of its good results, has pursued the strengthening of its international leadership through the acquisition of companies whose activities are synergistic with Danieli’s main activities and also have a sound technological reputation.

Now, Danieli possesses the most complete range of technology and know-how belonging to one single supplier/provider, and coming from the world’s best steel industry traditions: USA, Germany, Sweden, France, The Netherlands.
Danieli Plant Engineering Since 1964 Italy Turnkey Plants and Systems Engineering
Danieli Fata EPC Since 1965 Italy, USA, India, China, UAE Turnkey Plant Engineering, Procurement, Construction
Danieli Automation Since 1969 Italy, USA Process Control Systems
Danieli Centro Metallurgics Since 1987 Italy Ore Processing and Direct Reduction Plants
Danieli Corus Ijmuiden Since 1977 The Netherlands Integrated Steelmaking Plants
Danieli Linz Since 2011 Austria Oxygen Converter Steelmaking Plants
Danieli Centro Recycling Since 1998 Italy, UK, France, Germany Scrap Processing Plants
Danieli Centro Met Since 1914 Italy, Austria Electric Steelmaking and Long Product Casters
Danieli Davy Distington Since 1951 UK, Italy Thick and Thin Slab Casters
Danieli Wean United Since 1901 Italy, USA, Germany Flat Product Rolling Mills and Strip Processing Lines
Danieli Kohler Since 1959 USA, Italy Air Wiping Equipment for Zinc Coating
Danieli Fröhling Since 1947 Germany Specialty Mills and Strip Finishing Lines
Danieli Fata Hunter Since 1936 Italy, USA Aluminium Casting, Rolling, and Coil Coating Lines
Danieli Morgårdshammar Since 1856 Italy, Sweden Long Product Rolling Mills
Danieli Centro Tube Since 2004 Italy Seamless Pipe Plants
Danieli W+K Since 1968 Germany, Italy Longitudinal and Spiral Welded Pipe Plants
Danieli Centro Maskin Since 1953 Italy, Sweden Conditioning, Drawing, and Finishing Plants
Danieli Rotelec Since 1977 France, Italy EMS and Induction Heating Systems
Danieli Hydraulics Since 2008 Italy, Thailand Industrial Hydraulic and Lubrication Equipment
Danieli Breda Since 1950 Italy Extrusion and Forging Plants
Danieli Centro Combustion Since 1981 Italy Heating Systems
Danieli Olivotto Ferrè Since 1927 Italy Heat Treatment Furnaces
Danieli Centro Cranes Since 1958 Italy Heavy-duty Cranes
Danieli Environment and Systems Since 1973 Italy Green Technology and Systems
Danieli Construction Since 2003 Italy, Thailand Turnkey Construction, Erection, and Systems Engineering
Danieli Service Since 1962 Italy, Austria, China, India, Russia, USA, Brazil, Thailand Technical Service and Original Spare Parts

9,000 People Worldwide

Design, manufacturing and service centers
More than 25 divisions, each one staffed by individuals with specific technical capabilities, and bringing long and notable legacies from their own countries form a multicultural, multilingual team that helps us to establish the best relationships with our customers around the world.

**DANIELI AUTOMATION**
Process Control Systems  
/ Since 1969

With more than 40 years of experience focused on metals production worldwide, Danieli Automation is your technological partner for production management, process and equipment control, advanced instrumentation, and state-of-the-art electrical solutions.

**DANIELI PLANT ENGINEERING**
Turnkey Plants and Systems Engineering  
/ Since 1964

We supply integrated plants for the metal industry, including technologies, auxiliary plants, construction, and after-commissioning assistance.

We provide customers with single-point responsibility, ensuring project delivery-time assurance and total investment cost certainty.

**DANIELI CENTRO METALLICS**
Ore Processing and Direct Reduction Plants  
/ Since 1987

With more than 40 years of research and experience in design, construction, commissioning and operation of iron ore processing and direct reduction plants, we supply any type and size of DRI-based minimills.

**DANIELI FATA EPC**
Turnkey Plant Engineering, Procurement, Construction  
/ Since 1965

Danieli Fata EPC operates in the field of plant engineering, procurement and construction, providing customized, state-of-the-art technology and environmentally consistent solutions for primary aluminium smelters, downstream aluminium projects, and oil & gas and power generation plants.

**DANIELI CORUS IJMUIDEN**
Integrated Steelmaking Plants  
/ Since 1977

Danieli Corus has firm roots in Ijmuiden, where steel production started in 1924 and quickly developed towards world benchmark results for blast furnace ironmaking and BOF steelmaking.
DANIELI LINZ
Oxygen Converter Steelmaking Plants
/ Since 2011

Danieli Linz Technology is a steelmaking center of competence, where proven oxygen converter specialists interact with experts on sublance systems, process models, and technological packages, as well as with the pioneering Danieli researchers.

DANIELI CENTRO RECYCLING
Scrap Processing Plants
/ Since 1998

Danieli Centro Recycling is the innovative team to meet new challenges in the design and construction of advanced recycling plant technology, giving added value to scrap, and focusing on the needs and requirements of aiming for zero environmental impact.

DANIELI CENTRO MET
Electric Steelmaking and Long Product Casters
/ Since 1914

The constant evolution of technical and process know-how through significant investments in R&D as well as synergies and cooperation with our customers have made Danieli Centro Met a worldwide leading supplier of electric steelmaking plants.

DANIELI DAVY DISTINGTON
Thick and Thin Slab Casters
/ Since 1951

Danieli Davy Distington pioneered continuous casting technology and, through continuous innovation, now is the world’s leader in the design and manufacture of advanced continuous slab casters.

DANIELI WEAN UNITED
Flat Products Rolling Mills and Strip Processing Lines
/ Since 1901

Over the course of its long history Danieli Wean United has developed a thorough knowledge together with a well-earned experience in the downstream processing of the hot/cold-rolled steel and strip-processing lines.

DANIELI KOHLER
Air Wiping Equipment for Zinc Coating
/ Since 1959

Danieli Kohler is the world leader in the supply of high-technology equipment, with more than 150 installations in molten metal coating lines of all types.
DANIELI

We believe in what we build day-by-day and we are what we produce. This has been written in our DNA since 1856. From large to smaller, from heaviest to longer, from smaller to faster, simply indisputable features in the metals industry.

DANIELI MORGÅRDSHAMMAR
Long Product Rolling Mills / Since 1856

We believe in what we build day-by-day and we are what we produce. This has been written in our DNA since 1856. From large to smaller, from heaviest to longer, from smaller to faster, simply indisputable features in the metals industry.

DANIELI CENTRO MASKIN
Conditioning, Drawing and Finishing Plants / Since 1953

Danieli Centro Maskin is a reliable and innovative partner for challenging new goals in the design and construction of advanced grinding, drawing, peeling and cold-finishing lines for SBQ bars.

DANIELI FRÖHLING
Specialty Mills and Strip Finishing Lines / Since 1947

Danieli Fröhling is well known all over the world as a manufacturer of machines of the highest quality for rolling and processing of non-ferrous metals, not simply satisfying its demanding customers but rather inspiring them by continuously extending technical limits.

DANIELI CENTRO TUBE
Seamless Pipe Plants / Since 2004

Through a highly qualified and long-standing experienced engineering team, Danieli Centro Tube designs, manufactures and supplies technologically-advanced complete plants and equipment for the hot-rolling and cold-finishing of high-quality seamless pipes.

DANIELI W+K
Longitudinal and Spiral Welded Pipe Plants / Since 1968

Danieli W+K is a strong, reliable and competent partner for the pipe and tube industry. It develops customer-oriented individual solutions not only with upcoming modernization projects and the delivery of individual plant components but also with the installation of a complete turnkey pipe plant.

DANIELI FATA HUNTER
Aluminium Casting, Rolling, and Coil Coating Lines / Since 1936

Danieli Fata Hunter is one of the world leaders in implementing individual equipment as well as complete turnkey plants for the aluminium flat rolled product industries, and for steel and stainless steel processing industries, with a comprehensive ability and know-how for all production ranges.

DANIELI ITALIA
DANIELI CENTRO TUBE
Seamless Pipe Plants / Since 2004

Through a highly qualified and long-standing experienced engineering team, Danieli Centro Tube designs, manufactures and supplies technologically-advanced complete plants and equipment for the hot-rolling and cold-finishing of high-quality seamless pipes.

DANIELI ITALIA
DANIELI CENTRO TUBE
Seamless Pipe Plants / Since 2004

Through a highly qualified and long-standing experienced engineering team, Danieli Centro Tube designs, manufactures and supplies technologically-advanced complete plants and equipment for the hot-rolling and cold-finishing of high-quality seamless pipes.
Daniele Rotelec is a leading company in the manufacture of electromagnetic stirrers for conticasters and induction bar-edge heaters for hot strip mills, offering a unique combination of metallurgical process know-how, and expertise in designing/manufacturing of equipment.

Thanks to the expertise and know-how gained in the steel industry, Danieli Hydraulics can provide any stage of engineering, production and commissioning process also for other markets, such as oil & gas, mining, paper industry, cement industry, hydro-power, tools machine, marine, etc.

For well over 50 years Danieli Breda has been recognized as one of the world’s front-runners in the design, manufacture and supply of machines and integrated plants for processing ferrous and non-ferrous materials in the field of extrusion and forging technology.

Design and supply of cranes and lifting systems for heavy industry and logistics, with dedicated solutions for lifting and handling of materials and equipment in the most severe conditions. Our products are designed to operate where reliability, safety, and cost-effective solutions are a must.

Equipment is bespoke to suit the needs of each client and includes cutting-edge technologies that concentrate on environmentally friendly solutions. A well-established network of after-sales services guarantees equipment supplied, regardless of different feedstocks; billets, blooms, beam blanks, slabs or pipes, etc.

With over 800 references, Danieli Olivotto Ferrè is able to supply a wide range of economical and sustainable heating solutions and modern heat-treating furnaces covering a whole range of applications and services for the metals industry.
DANIELI ENVIRONMENT AND SYSTEMS
Green Technology and Systems
/ Since 1973
A division that specializes in environmental protection, offering a full range of proprietary technologies for air-pollution control, water treatment, energy savings, energy recovery, solid-waste recovery, and noise reduction.

DANIELI CONSTRUCTION
Turnkey construction, erection and systems engineering
/ Since 2003
Danieli Construction International operates worldwide with its own handling and transportation equipment and through specialized and trained people covering a full range of services related to civil and MEIP (Mechanical, Electrical, Instrumentation, Piping) installations for industrial plants.

DANIELI SERVICE
Technical Service and Original Spare Parts
/ Since 1962
Always close to our partners. Counting on Danieli Service support means becoming more than just a customer: it means becoming a partner in the strategic challenges requested by market developments, so as to be always a step ahead in CapEx and OpEx.
Backed by investments in research and development averaging 140 M Euro/year, our process and design engineers, located at the new Danieli research center and at specific product lines, continually strive for technological innovation. Spurred by metal producers’ requests for improved product quality, plant efficiency, operators’ safety and environmental impact, Danieli has innovated iron-ore reduction, melting, casting, rolling and finishing processes, including registering hundreds of international patents.

Danieli Research Center is located near the headquarters in Buttrio, Italy. Highly skilled employees follow all new products from the genesis of the idea to the engineering. The scientific team is devoted to the analysis of chemical, metallurgical and electro-magnetic processes, in collaboration with the most specialized universities around the world. Instrumented physical models, of size comparable with the industrial-scale equipment, are used to optimize the design of the process. Experimental evidence is thus interpreted by numerical modeling, including thermo-fluidodynamic, electro-magnetic and non-linear FEM simulations. In addition, the activities of 3D design and virtual mock-up are structured in conceptual, basic and detail engineering. Design work is also accompanied by sizing through static, fatigue and dynamic modeling and by kinetodynamic and rotodynamic analyses. The construction of physical models and prototypes is followed in by an experienced staff, used to improve further the accessibility and operation of the machineries.

Danieli Research Center also serves the needs of product lines in overcoming any situations that can arise from new products, new installations or a change in operation (like increasing the productivity). Qualified engineers follow the tasks directly on site, face to face and side by side with product line engineers and the client himself, to team up and intervene in customizing the process in order to adapt it to any specific requirement. Modeling activities also are aimed at accumulating a software library for off-line or on-line simulations that eventually can be embedded in the control systems, to assist operators or even for Model Predictive Control systems. Indeed, improving the technological content of the equipment can sometimes consist of a software update that optimizes performance and adapts to the variability of the process.
The strength of a company is directly proportional to the strength of its engineering team. This sentence explains how Danieli approaches the Engineering Design Process. The global Engineering Team of Danieli counts more than 1,600 engineers and technicians that cover all the disciplines from civil engineering to automation, passing through mechatronic, hydraulics, and electrical systems engineering. For the design, Danieli uses the latest generation of 3D CAD programs, able to interface with any kind of CAD available on the customer side. Modelling tools for Multibody and Multiphysics simulations to properly read the physical phenomena are commonly used during the development of the project. Finite Element Modelling, to forecast the plastic deformation as well as torque and load during hot and cold rolling, which is fundamental in the design of the rolling mills for sections, heavy beams and rails, is regularly used to support the Design Team. Most of the basic design is realized at the headquarters in Buttrio, where more than half of the technicians are located. A well-proven team effort will ensure the perfect integration of the various disciplines. Perfect integration of tools and human knowledge is fundamental to the success of the project. Multidisciplinary review meetings are regularly planned to follow up the activities from the timing and technical points of view. During these assessments, procurement and production teams are involved to cover and anticipate any potential issue.

The Danieli Design Team has experience and strong competencies in all the processes relevant to the fields of metal transformation.
Danieli Automation and Process Control Systems
from process know-how to automated production

Danieli Automation is the company within the Danieli Group responsible for the transfer of technological know-how from other Danieli technological divisions to end users, supplying the interface between plant process and operator. Its mission is to provide process automation and control systems for the metals industry, covering the wide spectrum of Danieli technologies, ranging from iron ore to long and flat products. Software algorithm models, computerized quality and production control systems are developed in house and are the means to transfer Danieli process know-how to final users, thanks to the synergistic relationship with Danieli and the technological background shared with the parent company. This co-operation with the mechanical designers has led to optimized and standardized solutions, resulting in best performances and quicker plant start-ups.

Digi&Met is the cross-functional business unit Danieli has created to develop and implement new plant design concepts, based on digital innovation, and also new business models based on servitization and outcome economy principles, to ensure consistency in quality, plant utilization, OpEx and faster deliveries.

1,000+ People dedicated to developing the future
Seven Danieli Production Centers worldwide to ensure the same quality everywhere

At Danieli we are aware that know-how is not only the technological process and design expertise but it is also the manufacturing capability that we have developed and consolidated over time with the aim of offering our customers cutting-edge equipment and prompt service. We can boast advanced manufacturing plants in all the most important steel markets: China, India, Thailand, Russia, and, obviously, state-of-the-art technology in Europe.

The plants cover an indoor area of 500,000 sqm and employ 2,500 highly skilled technicians who provide five millions of productive hours per year and work in a safe and eco-friendly environment. In particular, we are able to:

- Weld thicknesses up to 1,000 mm on products weighing up to 500 tons.
- Carry out boring, milling, turning, and grinding operations on 250 machine tools equipped with the latest generation numerical controls and special tools able to work on eight axes simultaneously.
- Produce high-precision gears and perform all types of heat treatment by checking the chemical and physical properties of the products before and after treatment.
- Assemble and complete final tests that ensure performance and reliability over time with teams that also are in close connection with commissioning.

Thanks to all this and also to advanced planning tools, real-time traceability systems, 3D measuring machines, and metallurgical labs, we have overall control of our projects from in-house design and manufacturing to on-site startup and commissioning. Therefore, we produce internally the most strategic and complex machines that incorporate the company’s know-how at top-quality standards. Keeping overall control of projects from in-house design and manufacturing to on-site construction activities, startup and commissioning, creates a virtuous circle that guarantees on-time and quality deliveries.

In fact, Danieli doesn’t want to compromise the quality and reliability levels of the equipment supplied. That’s why the workshops abroad are completely owned and managed by Danieli, and can be seen as a whole workshop, where culture, and high standards of quality and reliability guarantee the same excellent results we have at the headquarters workshops in Italy, and allow us to claim “Danieli workshops: same quality worldwide.”

All plants guarantee the same quality as the headquarters workshop in Italy, based on International Standards and tailor-made products and services in accordance with local regulations and standards, thus promoting customer-oriented Danieli Services.

Training of personnel on standards, norms and regulations, as well as continuous updating of Danieli standards to reflect any changes, are methodically used to guarantee the compliance of products. Qualified vendors of products and services are essential for the success of Danieli’s projects.
1 / Danieli Headquarters / Italy
Total surface: 320,000 m²;
Workshop area: 92,000 m²;
Technical and administrative offices: 28,000 m²;
Employment: 1,800 engineers.
Start of operations: 1962.

2 / Danieli Volga / Russia
Total surface: 250,000 m²;
Workshop area: 10,000 m²;
Technical and administrative offices: 1,800 m²;
Employment: 90 engineers.

3 / Danieli Austria
Total surface: 40,000 m²;
Workshop area: 6,000 m²;
Technical and administrative offices: 1,400 m²;
Employment: 40 engineers.

4 / Danieli / Germany
Total surface: 4,200 m²;
Workshop area: 2,800 m²;
Technical and administrative offices: 1,400 m²;
Employment: 140 engineers.
5 / Danieli India
Total surface: 320,000 m²;
Workshop area: 41,000 m²;
Technical and administrative offices: 2,500 m²;
Employment: 500 engineers.
Start of operations: 2013.

6 / Danieli China
Total surface: 200,000 m²;
Workshop area: 90,000 m²;
Technical and administrative offices: 12,000 m²;
Employment: 950 engineers.

7 / Danieli Thailand
Total surface: 525,000 m²;
Workshop area: 90,000 m²;
Technical and administrative offices: 13,000 m²;
Employment: 900 engineers.
Danieli Turnkey and Product-in-hand projects
Global expertise for EPC management and production

200 People providing engineering services and technologically advanced plant solutions

3,000 People providing skilled and fast-track construction and erection services

1,200 People providing expert advisory services for plant commissioning and assisting the customer in managing process and production organization

Danieli Plant Engineering together with the construction and advisory service arms of Danieli (i.e.: Danieli Construction International and Danieli Commissioning and Ramp-up Services) represents today the ideal EPC Partner for the metals industry owners worldwide, since the Danieli TK Team acts either as a multi-referenced main contractor or as a reliable and knowledgeable business provider, capable of developing products and services with value-added solutions. Thanks to its extensive, in-house knowledge of plant processes, equipment and operations, and its ability to act in partnership with the customers from the beginning of the project and through to production stabilization, the Danieli TK Team properly and satisfactorily addresses all project requirements to avoid risks, to minimize CapEx and OpEx and to maximize ROI. To reach the above targets, Danieli TK Team grants to the customer a “TK Service” characterized and driven by the following main fundamental guidelines:

— joint assessment of the market requirements and finding of the “value pools” where the production of a new plant could be located most strategically;
— definition of a tailor-made winning solution of the plant, fit-to-purpose with state-of-the-art, own engineered and manufactured equipment, granting economic, social, and environmental sustainability;
— execution of the TK Project as EPC main contractor with single-point responsibility via a trouble-free implementation on budget, schedule and performances, always bearing in mind, throughout the whole project life, to create value to our customers;
— assistance to our customers in managing the process and production organization through to achieving the production target fixed during the initial project feasibility phase.

In other words: a real step ahead in the TK Project Business approach and execution.
The aim of Danieli Service is to support our customers through the lifecycle of their plant and equipment, providing a wide range of services that range from spare parts and technological products through to technical assistance, revamps, refurbishment and reconditioning, training, and many other value-added solutions. Recent advancements have included the development of highly interactive advanced services, from traditional maintenance management and condition-monitoring systems to real-time support and diagnostics. Our world-class specialists and facilities are at your disposal to align these services to your needs, where and when required.

With continuous investment in our technology, people, and a critical focus on improving customer service, we achieved our highest sales revenues on record in the last financial year (2016/17) but are now adapting at a faster rate to meet the increasingly complex and challenging economic climate of the “New Normal.”

In recognition of the latter, the next phase of our evolution includes the development of a more synchronised approach and an expansion of our services to include total asset management. Together with our suppliers, our customers and their customers, our vision is to create a common platform to enable the sharing and optimization of resources and the creation of a new “business ecosystem” for our mutual benefit.
More and more restrictive limits on the use of natural resources, on the emissions, on the production of wastes, on noise impacts - both inside the plant working areas and in the surrounding environment - will be applied for the metals production sector. To respond to this new trend of environmental obligations, the industrial producers require reliable partners with knowledge, experience and commitment to ensure operational health, sustainability and competitiveness, without slowing the production of metals.

Water treatment and consumption decrease
Water is a valuable natural resource, and the market will require continuous improvement to reduce wastewater discharges and integration of cooling systems for different processes, with reduction of the total fresh water use. In the past 30 years, Danieli has supplied over 180 water treatment plants, gaining a deep experience in the use and management of water, with a philosophy dedicated to continuous R&D. Our technological packages for softening, demineralization, ultrafiltration and reverse osmosis (Zero Liquid Discharge) are proven solutions to address possible problems related to the future scarcity of water for industrial production and water pollutions.

Fume treatment and noise reduction
Danieli fume-cleaning technologies can cover all the technological needs thanks to the experience developed while supplying hundreds of plants worldwide. The major efforts done in recent years have been focused on both reducing the emissions to the external environment and on providing the operators with healthy working places. All the emissions points are sealed, and the dust produced is captured by dedicated suction hoods to generate the “Green Layout.” The most relevant pollutants controlled are: dust, dioxin, heavy metals, NOx, and other organic matter, and our future target is to achieve “zero emissions” to the external environment.

Energy saving through reduction of emissions
Energy savings and efficiency mean automation of start-stop functions based on the true operating requirements of the production plant. Important energy savings come as well from an effective way to recover the exhaust heat from the fume-treatment plant, accomplished by the Danieli Clean Heat Recovery plant (CHR™). On our website, visit the section on CHR™ to learn about the technical, environmental and economic benefits of converting thermal energy into electrical power.

Solid waste and recovery
The circular economy calls for the recovery and recycling of all the waste materials produced in a steel making plant, such as slag and dust. Danieli, through its patented Indutec™ process and Ecogravel™ plant, is able to eliminate the problem of hazardous wastes by turning them into an economic value as recycled material to be reused in the production cycle (such as pig iron and inert slag) or salable products in the market (such as conglomerate materials for civil construction products and for paving of the roads, or crude zinc oxide). At end of the production cycle, there is no waste discharged to the ecosystem.
Right page: the Rotoforgia. The follow up development of the Rotoforgia mill continues, with a focus on the most demanding applications (railway sector, bearing and wind power sector) and the optimization of the steel used in the tube production process.
Danieli
Steelmaking
**ABS production and sale of special steels**

Acciaierie Bertoli Safau, with its wide range of products (ingots, blooms, rolled bars, Rotoforged bars, forged bars and coils), in terms of both dimension and quality, solidified its international position as one of the most important players in the production of special steels. The continuous product and process innovation, together with its long tradition and experience, guarantee the quality and the value of ABS’ steel. ABS is able to satisfy every customers’ request, even those with the most stringent requirements and is a supplier for several demanding sectors, particularly: Automotive, Mechanical Engineering, Oil & Gas, Wind Energy, Railways and Yellow Goods.

ABS was created in 1988 by the merger of two legendary steel-making companies: Officine Bertoli and Acciaierie Safau. We have focused on innovation ever since. In a constantly evolving world, we have invested in skills, specialisation, technological innovation, digitalisation and sustainability.

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**Steelmaking Division Structure**

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS Acciaierie Bertoli Safau Spa</td>
<td>Steelmaking Plant (Udine, Italy)</td>
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<tr>
<td>ABS Sisak doo</td>
<td>Steelmaking Plant (Sisak, Croatia)</td>
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<tr>
<td>Qualisteel Srl</td>
<td>Cold Finished Bars Production Unit</td>
</tr>
<tr>
<td>ESW Röhrenwerke</td>
<td>Seamless Tubes Rolling Plant</td>
</tr>
<tr>
<td>ABS Centre Métallurgique Sarl</td>
<td>Research &amp; Development Centre</td>
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</table>
ABS’s range of engineering special steels is one of the widest in Europe, in terms of both quality and dimension.

The product mix includes ingots up to 130 t, as-cast round blooms up to 850 mm, rolled bars up to 500 mm, bar in coil up to 30 mm, forged bars up to 1,000 mm, and seamless tubes up to 244 mm.

The heat treatments capabilities include annealing (soft, spheroidizing), quenching and tempering, stress relieving, normalization, stabilization, and tempering.

Product’s surface finish span from as-cast/as-rolled to peeled-reeled and ground.

Quality for ABS is not simply a matter of products, of system or certification. Quality for ABS is an absolute concept that applies in each and every area in which the company operates.
Danieli Steelmaking
A sustainable industry for a sustainable world

ABS is deeply involved in every aspect of sustainability. The concrete projects and the considerable investments in Health, Safety, Environment and in the future of our territory represent the tangible demonstration of such commitment.

The concreteness, the determination, the tradition and innovation that we apply in our products and services, are the same that characterize the vision and actions of ABS in taking its social responsibility as a priority.

Safety is a culture
The steelmaking environment is by nature one of the most hostile and dangerous. Precisely for this reason, ABS decided to invest heavily in the safety of its employees. Through an ongoing project, in terms of staff training and corporate culture, combined with massive investments in the plants’ technology, ABS is committed to pursuing the goal of zero injuries.

Environment
ABS invested 48 M Euro for the preservation of the environment in the last ten years. Such investments are aimed at improving and preserving the air we breathe, reducing water consumption in the producing process, reusing slags with the Global Blue project, creating a 13-hectare green area surrounding our mill.

Energy efficiency
ABS is fully committed to achieving high energy performance. Since July 2015, ABS is among the first steel mills that have an Energy Management System certified according to UNI EN ISO50001 for the entire production process. In this perspective, the company annually invests significant resources aimed at optimizing the plants to ensure the rational use of energy. There are numerous projects to achieve greater efficiency involving all departments and to help reducing energy consumption.

Global Blue
Project Global Blue was launched at the end of 2007 with an investment of 15 M Euro, for the creation of 80,000-sqm area, specifically equipped for the production of Ecogravel®, a building material obtained through a further processing of steel slags.

In keeping with an international commitment to encourage the recycling, recovery and re-use of waste materials and with a constant environmental awareness, ABS produces Ecogravel®, used in bituminous conglomerates, concrete and concrete cglomerates. The product is EC marked according to recent regulations (DIR 89/106/CEE). The last development of our applications is Ecogravel® White, a superior product obtained from slag derived by ladle, used as replacement of lime in ground stabilization. Today Global Blue has a production capacity of 200,000 tpy of industrial aggregate with the highest quality standards, continuously improving the production process.

Corporate Welfare System
Through its 2014 Welfare System ABS promotes the organizational wellbeing, which is a necessary condition for the quality of life and the development of professional and personal potentialities. ABS aims at giving a constant and structural support to people’s needs in order to find new solutions and to define projects consistent with such expectations. To reach such purpose ABS established a benefit system for employees based on a concept of welfare accessible by everyone but at the same time responding to specific needs, linked to social roles employment characteristics and to individual and collective aspirations.
Headquarters and laboratories of the Danieli Academy in Buttrio. The Academy is a strategic corporate tool for the systemic and systematic development of the individual and organizational skills of human resources, and their effects on the business, leading to the creation of a positive brand identity.
**Danieli Academy**
**Empowering People**

**WHY empowering people:**
To elevate the level of the Company's Culture
To promote knowledge sharing
To build partnerships with universities, polytechnic institutes and research centers
To network with internal, external, Italian and worldwide resources
To recruit, attract and scout talent

The Academy is a strategic corporate tool for the systemic and systematic development of the individual and organizational skills of human resources, and their effects on the business, leading to the creation of a positive brand identity.

The pursuit of the Academy's Mission is backed by a Technical-Scientific Committee that points out macro-level actions that are needed, periodically identifying critical areas and opportunities; and by an Operational Unit that carries out the actions recommended by the Technical-Scientific Committee, and also through a network of experienced instructors from inside and outside the company that promote knowledge sharing, knowledge transfer, and skills acquisition.

Danieli has decided to implement this tool to help create a corporate strategy that will strengthen our organizational culture (common values and goals to improve our Corporate Identity) through Innovation, by forging structured partnerships with universities, polytechnic institutes and research centers.

The concept of innovation is focused on maintaining a Competitive Edge and on Placement. The former aims to heighten motivation while the latter is intended to attract and inspire loyalty among excellent resources.

The guidelines to apply this concept are:
— Use of excellent internal and external (if any) resources for the transfer of knowledge;
— A network of authoritative Italian and foreign universities to provide the necessary skill sets;
— Profiling of ad hoc professional résumés based on business needs;
— Selection and care of excellent candidates for staffing the Company in the future. The tool used at the Junior level is JPM-Job Progress Milestones, which by means of six-month plans with increasingly challenging and complex targets, allows newly hired prospects to effectively and demonstrably grow in their respective roles, and the results they achieve in their personal and professional careers then can be used to benefit the entire company.
Italian and foreign technical institutes and business schools of excellence for the development of corporate learning programs as part of the Danieli Academy project.

<table>
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<th>Italy</th>
<th>Europe</th>
<th>Russia</th>
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<tbody>
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<td>Politecnico di Milano</td>
<td>Montan University</td>
<td>Nosov Magnitogorsk State Technical University</td>
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<td>Politecnico di Torino</td>
<td>Imperial College</td>
<td>Bauman Moscow State Technical University</td>
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<td>Beograd University</td>
<td>Moscow Institute of Steel &amp; Alloys Tech.</td>
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<td>South Asia</td>
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<td>Wuhan University of Technology</td>
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University of Phayao King Mongkut's University of Technology North Bangkok

Narassuan University Technology Laemchabang College

King Mongkut’s University of Technology Thonburi

King Mongkut’s Institute of Technology Ladkrabang

Nottur Technical Training Foundation Government Tool Room & Training Centre / Government of Karnataka

Indian Institute of Technology

Loyola Institute of Business Administration
With the 2016/2017 school year, the officially recognised “Cecilia Danieli” primary school started, open to both the families of the employees and to the families of the local community.

The curriculum proposed by the school enriches the traditional school education with courses dedicated to the English language, linked to a workshop approach to new information technologies.
Danieli Education is a project that provides education for children, starting from a very young age through to their professional careers.

**Nursery**  
Where “doing” and “experimenting” play an essential role

The educational program of this nursery is designed for children from 0 to 3 years of age, and includes laboratories for experimentation where “doing” is the most important aspect.

**Pre-school**  
A school to discover the world

The educational activities are designed for children from 3 to 6 years of age, who “learn by playing”. There are various projects to facilitate the children’s first approach to reading, writing, English and a positive social life.

**Primary school**  
An officially recognized elementary school

The Italian tradition is combined with an innovative approach to English language teaching and with new technologies.

**High schools & universities**  
A fruitful partnership

The collaboration is between Danieli Academy and technical high schools, and Italian and foreign universities. The Talent Department also recruits, selects, manages and develops new graduates in the company.
On-line now: the New, Responsive Danieli Website

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DanieliGo

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DANIELI HEADQUARTERS
Via Nazionale, 41
33042 Buttrio (UD) Italy
Tel (39) 0432.1988111
info@danieli.com

www.danieli.com
info@danieli.com

DANIELI WORLDWIDE

AUSTRIA
Max Planck Strasse, 5
A - 9100 Völkermarkt
Tel. (43) 4232.51440.6101
info@austria.danieli.com

EGYPT
76 Al-moltaka Al-Arabi Dist 11799
Sheraton Zone, Helipolis, Cairo
Tel. (20) 2.22699491
info@egypt.danieli.com

GERMANY
Scherl 12
D-58540 Meinerzhagen
Tel. (49) 2354.70820
info@germany.danieli.com

INDIA
1, Hari Mohan Ghosh Road
Taratala 700 091 Kolkata
West Bengal
Tel. (91) 33.33013777
info@india.danieli.com

JAPAN
42F, Yokohama Landmark Tower
2-2-1, Minatomirai, Nishi-ku,
Yokohama-City
220-8142 Japan
Tel. (81) 45.651.7077
info@japan.danieli.com

BRAZIL
Rua George Rexroth, 609 Diadema
CEP 09951-270 Sao Paulo
Tel. (55) 11.39953150
info@danieli-brasil.com

Korea
# 602 6th Fl., Yeondang Bldg.,
439 Teheran-Ro, Gangnam-Gu,
06158 Seoul
Tel. (82) 2.5626622
info@danieli-rotelec.fr

MEXICO
Edificio Sierra Madre
Ave. Vasconcelos Oriente 310
Colonia del Valle
66250 Garza Garcia, N.L.
Tel. (52) 81.83781055
info@danieli.com

RUSSIA
Ataozovskoe shosse 48
Nizhny Novgorod Region
606000 Dzerzhinsk
Tel. (7) 8313.310310
info@russia.danieli.com

SPAIN
Poligono Sondikalde
Calle Portu Bide, 2
48150 Sondika - Vizcaya
Tel. (34) 94.4872800
info@danieli.com

SWEDEN
Box 994
SE-85125 Sundsvall
Tel. (46) 60.139400
info@sunbirsta.se

TAIWAN
26F-1, No. 31
Hai-Bian Road
Kaohsiung City, Taiwan 802
Tel. (886) 7.3358655
info@taiwan.danieli.com

THAILAND
Land Plot N. K11
The Eastern Seaboard Ind. Estate
Tambol Pluakdaeng, Amphur
Pluakdaeng, 21140 Rayong
Tel. (66) 38.929000
info@thailand.danieli.com

TURKEY
1, OSB Istiklal Mahallesli
1, Cadde No. 15
Beyköy - Duzce
Tel. (90) 3805531110
info@turkey.danieli.com

USA
600 Cranberry Woods Drive
Suite 200
Cranberry Township, PA 16066
Tel. (1) 724.7785400
info@danieli.com

UKRAINE
Glinky Street 2, Office 301
49000 Dnipropetrovsk
Tel. (38) 56.7904301
info@ukraine.danieli.com

VIETNAM
Lot A4b Industrial Park
Tan Thuan EPZ (E-Office Park)
Tan Thuan Dong Ward, District 7
Ho Chi Minh City
Tel. (84) 28.37929400
info@vietnam.danieli.com

CHINA
No. 19, Xing Gang Road, CEDZ
Changshu, Jiangsu 215513
Tel. (86) 512 52267000
infodcs@china.danieli.com

INDIA
1, Hari Mohan Ghosh Road
Taratala 700 091 Kolkata
West Bengal
Tel. (91) 33.33013777
info@india.danieli.com

KSA
Silver Tower 6th floor
P.O. Box 4867
Al-Khobar 31952
Tel. (966) 3.8993145
info@ksa.danieli.com

JAPAN
42F, Yokohama Landmark Tower
2-2-1, Minatomirai, Nishi-ku,
Yokohama-City
220-8142 Japan
Tel. (81) 45.651.7077
info@japan.danieli.com

RUSSIA
Leningradskiy Prospekt 31A
Building 1, 24th Floor
125284 Moscow
Tel. (7) 495.9819073
info@russia.danieli.com

SWEDEN
Box 994
SE-85125 Sundsvall
Tel. (46) 60.139400
info@sunbirsta.se

THE NETHERLANDS
Rooswijkweg 291, 1951
ME Velsen-Noord
Tel. (31) (0) 251.50.0050
info@danieli-corus.com

UNITED KINGDOM
4 Ignite, Magna Way
Rotherham S60 1FD
Tel. (44) 1709.724300
info@uk.danieli.com

KOREA
# 602 6th Fl., Yeondang Bldg.,
439 Teheran-Ro, Gangnam-Gu,
06158 Seoul
Tel. (82) 2.5626622
info@korea.danieli.com

THAILAND
Land Plot N. K11
The Eastern Seaboard Ind. Estate
Tambol Pluakdaeng, Amphur
Pluakdaeng, 21140 Rayong
Tel. (66) 38.929000
info@danieli-thailand.com

VIETNAM
Lot A4b Industrial Park
Tan Thuan EPZ (E-Office Park)
Tan Thuan Dong Ward, District 7
Ho Chi Minh City
Tel. (84) 28.37929400
info@vietnam.danieli.com
The Reliable Innovative Team
In the Metals Industry

The Company