

DANIELI
YEAR 2019





Danieli Year 2019

Results from
Innovation, Reliability
and Partnership

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Danieli & C. Officine Meccaniche S.p.A.
Headquarters in Buttrio (Udine) Italy
Share Capital: euro 81,304,566 fully-paid

The data in this publication
refers to the period
01.07.2018 / 30.06.2019

Letter to the Stakeholders

Results for the fiscal year 2018 / 2019:		
(millions of euro)	2018 / 19	2019 / 2020
	Group Results	Group Forecast
Revenue	3,064	2,900 / 3,000
EBITDA	239	230 / 240
Order book	3,099	3,100 / 3,300

The fiscal year 2018/19 ended according to forecast, with revenue and EBITDA improved compared to 2017/18, by 13% and 4%, respectively

The figures above reflect the results of the Company's profit and loss account, but not the prospects that will arise from the investments made in assets and above all in innovation and research, as well as in plant and process prototyping. The most significant investments mainly included:

Assets

For the plantmaking segment

No capital expenditure has concerned the plantmaking segment at the moment, since the learning curve period of the investments made in the past few years is not yet completed, in particular as regards the workshops and engineering facilities of Danieli India and Danieli Volga (Russia).

For fiscal year 2019/20, however, investments have been planned for the Service sector, not only with a workshop in the USA, but also with the upgrade of the Danieli workshops of Buttrio in Italy, aimed at improving competitiveness, while obviously maintaining and even enhancing the quality of our service which is very much appreciated by our most demanding customers who are focused on high-quality production. Investments in DIGI&MET 4.0 and in the Group's IT system are ongoing.

For the steelmaking segment

— A new, high-tech wirerod line, involving an investment of 190-200 M Euro, is under construction and its start-up is expected by the middle of 2020.

— Moreover, the new, digital electric furnace Danieli Digital Melter is under start-up at Sisak in Croatia; its success will set a revolutionary milestone in the field of electric steelmaking for productivity, energy savings and environmental impact (green steel).



among the priorities for the coming years and includes scrap recycling innovations. It is well known that producing steel from scrap makes it possible to reduce CO₂ emissions by three or four times if compared to the blast furnace process involving the use of coke. Considering that in industrialized countries steel consumption is expected to remain stable (+/- 10%), and scrap consumption along with it, it can be deduced that the utilisation of the EAF-based steelmaking process will be constantly increasing. This will require innovative scrap preparation methods which must be not only even more eco-friendly but also more advanced to produce quality steel grades. Therefore, our objective is to develop innovative projects for scrap recycling.

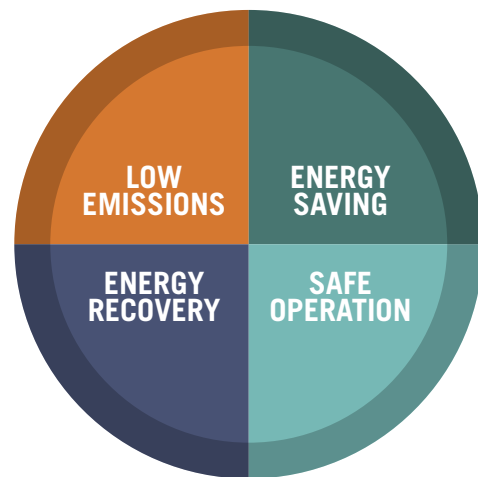
Innovation

During the last three years, more investments than ever were made in innovation, the results of which will be reaped in the next 2 or 3 years. These mainly include:

- The new generation high-productivity MI.DA. (Danieli patent) which, after its introduction in the market about 10 years ago, has become increasingly appreciated worldwide not only as a highly competitive regional mini/micro-mill concept, but also for its reduced environmental impact thanks to a drastic reduction in CO₂ emissions. We consider this to be a clear demonstration of “green steel” production.
- The QSP DUE project for quality strip production via Thin Slab Rolling. The first plant of this innovative concept is starting up now in China, with good prospects. Our objective is to become leaders in the market of Thin Slab Rolling plants for flat products. In addition, just like the MI.DA., the QSP also has a reduced environmental impact with low CO₂ emissions.
- A prototype minimill plant for aluminium flat products intended for the automotive sector and for special applications, based on the strip caster technology, is in start-up now.

CIRCULAR ECONOMY

Continuous investments have been made in closed-cycle systems for meltshops (e.g. Ecogravel, reduction in water and power consumption, low CO₂ emissions). The activity related to the “green steel” production process is



DIGI&MET

Finally, the DIGI&MET project is ongoing with the aim of achieving full automation and digitization of meltshop processes and logistics, not only to improve competitiveness and quality but also to reduce power and water consumption, as well as CO₂ emissions, and thereby pursue “continuous improvement” towards the “green steel” production. These are the most significant innovations which, together with dozens of other detailed ones, will enable us to maintain our competitiveness also in the coming years simply by honouring our motto: “Danieli, the Innovative and Reliable Partner to be competitive in CapEx and OpEx, to produce green metals”.



Customer Satisfaction

Among the most significant plants that were started up successfully during the year, to the customers' full satisfaction, we can mention:

- High-speed W.R.M. – Acciaierie di Verona, Ferriere Nord Group, Italy
- MI.DA. - CMC Group, USA
- Cold Roll Mill Complex – Yildiz, Turkey
- Processing Lines - Severstal, Russia
- AQS - Algeria
- Slab caster for high-quality steel - voestalpine Linz, Austria.

The objectives that we have set ourselves for the fiscal year 2019/20 include:

- Completion and/or progress of the innovative projects mentioned above.
- Fiscal year results with:
Revenue: 2,900-3,000 M Euro.
EBITDA: 230-240 M Euro.
Net cash: Euro 900-950 million
Order backlog: 3,100-3,300 M Euro.

These are the vision and objectives that we are going to pursue with resolution.

On the global political and economic scenario, however, USA, China, Russia and Europe, with their changing trading rules, may negatively influence the world steel consumption, and consequently adversely affect our forecast, which, as usual, is prudential. Yet, there is also the possibility of reasonable agreements between the parties with a positive impact on our outlook.

Regarding the management of the team, Danieli Academy is making a valid contribution in terms of professional updating and improvements.

The concept of continuing improvement is applied also to the Group's factory environment and to safety in the workplace. In addition to a training programme aimed at strengthening the team's soft skills, Danieli Academy also provides services to staff, including a nursery, preschool, primary school and now even a secondary school, in addition to a sports centre equipped with a summer campus in support of the employees' families and of youth education.

The promotion of cultural activities and the maintenance of high-value artistic heritage also are continuing. Before concluding, we wish to thank our shareholders who have allowed us to invest 85-90% of our profits back into the company. This is perceived as an expression of the shareholders' trust and esteem for the Danieli team, which we intend to honour to the best of our abilities. It is a trust which, in any case, has been repaid by the fact that the acquisition of Danieli shares has been confirmed to be a good, long-term investment.

On behalf of the Board of Directors and of the shareholders, special thanks go to the Danieli Group Team who, with passion and professionalism, are strongly committed to achieving the agreed objectives for our company's continuing improvement, and to honour the motto "Danieli, the reliable and innovative partner to be a step ahead in CapEx and OpEx", for the satisfaction of our business partners. And last, but not least, we express thanks for their efforts in bringing about the cultural change that today's technological and social trends call for, which is essential to maintaining market shares and competitiveness in a highly challenging global economy with constantly evolving quality requirements.

Gianpietro Benedetti

CHAIRMAN OF THE BOARD OF DIRECTORS

Vision and Strategy Danieli Group Executive Board

When talking about vision we do not refer just to the ability to see, but also to anticipate and to express understanding of complex issues and critical developments that are affecting our customers, cause to continuous and rapid market changes. Danieli Group Executive Board Members present their views and perspectives on the company and the market, and how they view the future.

— Giacomo Mareschi Danieli and Alessandro Trivillin Chief Executive Officers

Founded in 1914, since 1976 Danieli has been world leader in the design and supply of EAF-based minimills fed with scrap iron and/or DRI. The concept of modern automated minimills came about in the 1960s, in the steelmaking plants of Brescia; Danieli then exported the concept to Spain, France, the US, and then gradually throughout the world.

Now, after about 45 years, we still are the front-runners in minimill technology and we intend to remain there by investing heavily in innovation and customer service. In the last 30 years we also have become specialized in integrated steelmaking plants (blast furnaces, oxygen converters and plants for flat products), distinguishing ourselves by offering innovative technologies that focus on versatility and performance, making them readily accepted by our customers. But today, when planning a vision and strategy for the future, we have to take into account that the demands of markets and customers change rapidly. So, the Future is Today mindset is essential: quick decision-making and actions are musts in order to be competitive. This means having a forward-looking vision but

determination to act now. This is clearly one of the basic concepts that has to guide us in innovation. We work extensively on execution, to make sure we always begin with a detailed analysis, to be followed by careful planning, and then by what needs to be done on a daily basis. We have to further consolidate our operating mentality in terms of both effective planning, and then monitoring to anticipate and reduce unforeseen events. We all know that unexpected events lead to dissatisfied customers (time and quality) and a dissatisfied company (costs). And it is precisely to improve our ability to carry out both macro- and microplanning right from the initial sales stages that we are implementing specific training courses. To stay one step ahead, we are focusing on four guidelines:

1 / Sustainability in the long term: the beacon that guides us in making strategic decisions and in selecting investments and projects.

2 / Innovation: it is in our DNA, we interpret it with the spirit of anticipating market demands and customer needs.

3 / Added value: we always want to look at each idea and each project together with

its investment, according to a win-win rationale for our customers and for the company.

4 / Continuous improvement: we analyze, we act, we measure results and, consequently, we take responsibility.

These four points are developed by taking into consideration the medium- and long-term changes in context, and particularly the changes brought about by digital innovation and the well-known Industry 4.0.

Today, this approach is even more necessary to ensure that our customers are resilient to the volatility of metals markets and geopolitical dynamics, and that they are thus able to amortize economic trends to obtain a profit that, on average, is satisfactory.

These are the goals we are pursuing and that can be reached through team commitment, with a view to perfecting methods and operating mentality that guarantee customer satisfaction in terms of punctuality and quality, as well as innovative plants that are also competitive in the long term. By doing this, we can ensure progress and solidity for the company, and consequently dignity and realization for ourselves.



Michele Marinutti

Antonello Mordegia

Alessandro Trivillin

Gianpietro Benedetti

Giacomo Mareschi Danieli

Rolando Paolone

Nico Bleijendaal

Alessandro Brussi

— **Alessandro Brussi**
Chief Financial Officer

The goal for the company is always to ensure that its economic and financial situation is solid while delivering good results for shareholders. This has been the case since Danieli listed on the Milan Stock Exchange in 1984, and it continues still, allowing us to view our future objectives clearly.

Today, Danieli's social role has grown, with more and more interaction taking place with all the stakeholders. We reward our shareholders by giving them a return on their investment, but we also reward the customers who ask Danieli for innovative products, protection of the environment and a strong commitment

to build quality plants within the agreed timeframe. Also, we support our community and take care of our employees through training, safety standards, and a remuneration system based on fairness and meritocracy. Today, and increasingly so in the future, these goals will require greater commitment by the Danieli Group in terms of industrial strategies combined with adherence to sustainability issues, greater business diversification, and stable performance figures, to ensure continuity in the activities carried out by the company. We certainly are motivated and ready to keep our standing high, while promoting our commitment to Corporate Social Responsibility and taking concrete actions, leading to continuous improvement.

— **Rolando Paolone**
Chief Technology Officer

Sustainability is the key to opening markets and keeping the traditional ones opened. In any market in the world today there is a margin for improvement that will be achieved with a proper proposal that will lead to success and customer satisfaction. We have suitable answers to any request. The mission of the R&D and the Engineering team is to develop and design the most suitable solutions to meet the different customers' needs. This year we saw the consolidation of technologies launched in the last 5-10 years, for example the four-roll sizing block for the perfect round calibration in hot rolling; or the Danieli Universal

DANIELI
TURNKEY
PLANTS
SUPPLIED
WORLDWIDE

Thorough planning, complete systems integration and construction with our own heavy lifting equipment, provide our teams with full operational flexibility. Danieli Engineering and Danieli Construction International: your trusted partners with 37 years of experience in on-time project delivery and cost management.



DIRECT
REDUCTION
PLANTS



SCRAP SHEARS
AND
SHREDDERS



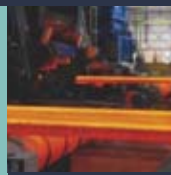
ELECTRIC
ARC FURNACES



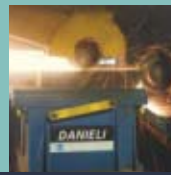
BLAST FURNACE
AND CONVERTER
PROJECTS



SECONDARY
METALLURGY
STATIONS



CASTING STRANDS
FOR SLABS,
BLOOMS,
AND BILLETS



SLAB, BLOOM,
AND BILLET
GRINDING
MACHINES

DANIELI
PROCESS
CONTROL
SYSTEMS

DANIELI
ENVIRONMENTAL
PLANTS

DANIELI
HANDLING
SYSTEMS
AND CRANES

Endless plant, a design able to produce great quality strip coils and at the same time to reduce transformation costs, avoiding the reheating of the cast slab. Ideas for the day after tomorrow are growing in our Research Center, taking advantage from the cooperation with the best universities worldwide. Thanks to these developments, the metal production plants are dramatically reducing emissions, obtaining cleaner steel and reducing transformation costs. Artificial Intelligence is becoming our best partner to support most of the innovation we are working to achieve. All the above, with the consolidation of the safety of our plants, are the priorities.

— **Antonello Mordeglia**
Chairman, Danieli Automation

The trend of the company, which began as long as 50 years ago, is marked by the development from system integrator into a worldwide industrial producer of extremely sophisticated control, measurement and power hardware. Through this development, Danieli Automation will continue to evolve far beyond the role of service provider, to become trendsetting source of the high technology demanded by today's challenging market. In line with the global trend towards

Industry 4.0, Artificial Intelligence and Automatic Vision, as well as robotics, Danieli Automation and DIGI&MET are continuously investing in the development and continuous research of innovative products and applications suited to our customers' needs.

In addition, today's market requirements are increasingly directing investments towards energy savings as well as energy storage and recovery systems, supporting the development of ever more efficient and technologically advanced digital products that also are unique in the world. Of course, the Industry 4.0 program also will support the "green steel" activity



HOT STRIP, PLATE AND COLD MILLS



HEAVY SECTION, RAIL, BAR AND WIREROD MILLS



SEAMLESS TUBE PLANTS



EXTRUSION AND FORGING PRESSES



ALUMINIUM HOT AND COLD MILLS



STRIP PROCESSING LINES



DRAWING AND PEELING MACHINES



DANIELI HEATING AND HEAT TREATMENT SYSTEMS

aimed at a progressive and constant reduction in the environmental impact of steelmaking.

— **Nico Bleijendaal**

Executive Vice President, Danieli Europe

The short-term outlook for our European customers is difficult with the current pressure on pricing, caused by reduced automotive sales and imports. We understand the drive for cost optimization and we work closely with our clients to find the most suitable solutions. Reduction in working capital through consignment stocks on spare parts, ensuring immediate availability, is one of the many examples whereby we help our clients through this period. We recognize that under these circumstances capital projects will be postponed and the focus is on overhauls and improvements in existing equipment. Our strategy to develop a comprehensive portfolio of technological packages with short pay back is much appreciated. In parallel we are gearing up for the future. The pressure for CO₂ reduction will only increase in the years to come, and may lead to cost increases through dedicated taxes and fines. We are working with our clients to ensure medium- and long-term solutions through alternative production routes within an integrated steel plant, such as partial replacement of the BF through EAF combined with DRI plants that are ready for the application of H₂ as a reducing agent, if and when this will be available. All this is in line with our mission: InnovAction to be a step ahead in CapEx and OpEx.

— **Michele Marinutti**

Chief Group Controller

We are working every day to make our group stronger, more dynamic, innovative, attractive and sustainable. Among the steps we have taken to accomplish this I consider first the effort to maintain a lean, flexible organization that is capable of dealing with the market's ups and downs, without compromising operation, quality or fulfillment of contractual commitments, and by optimizing the use of the company's resources

Next, we maintain our focus on the profitability of job orders, our business units and investments made, and by encouraging new ideas. We act quickly when faced with a performance that is not in line with our goals.

We ensure that our organization always values merit according to actual, measurable and shared results. We examine each expense to eliminate the superfluous, enhancing the quality and service of anything that is considered to have added value for our customers and the team.

Finally, we commit our company to being open to the new challenges of digital transformation, including RPA (Robotic Process Automation) to automate repetitive activities that have no added value, and machine learning to anticipate trends and risks.

The Danieli Group Executive Board and its members are prepared to pursue the vision that will ensure the company remains strong and innovative, attractive to customers and investors, and with sustainability for the challenges of future markets.

Schematic diagram of process optimization – for energy, water and emissions- typically applied to, and achievable with, a Danieil MI.DA. plant for long products. Technological packages also can be implemented separately, to comply with customer needs and opportunities

FTP Q-Drive Variable Frequency Drivers (VFD) on main fans: Electricity savings up to 12-15 kWh/t of liquid steel (l.s.)

Fume Energy recovery with Clean Heat Recovery (CHR) System: Electricity produced up to 10-15 kWh/t of l.s.

WTP Absorber system to convert thermal power into energy savings up to 4 kWh/t of l.s.

WTP area, Q-Drive Variable Frequency Drivers on pumps and cooling towers: Electricity savings up to 5 kWh/t of l.s.



FTP MAIN FANS DRIVE CONTROL



CLEAN HEAT RECOVERY (CHR)



WTP ABSORBER SYSTEM



PLANT WATER TREATMENT PLANT

Steelmaking EAF 2020 with ECS electricity savings: 20 kWh/t of l.s.

Reduction in electrode consumption up to 15% and in power on time of about 10%

Billet to billet rolling mill: savings in natural gas consumption up to 20-25 nm³/t of l.s.

Saving in natural gas consumption up to 30-32 nm³/t of l.s.



ECS ENDLESS SCRAP CHARGING SYSTEM



Q-ONE POWER CONVERTERS TO FEED THE ELECTRIC ARC FURNACE



HOT CHARGE AND FASTCAST TECHNOLOGY



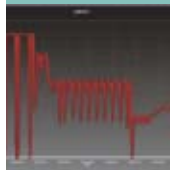
ENDLESS CASTING AND ROLLING PROCESS

18-20% of total energy can be saved (ref. case in wtp)

The pumps can work in a more efficient way, saving energy up to the 35%

"Flameless" burner design allow NOx reductions of up to 70% compared to conventional "flame mode" burners

Improved productivity and quality, reduced scale formation up to 1% and CO₂ up to 80%



Q3-DEMS PLANT AND UTILITIES ENERGY OPTIMIZATION



INTELLIGENT HYDRAULIC POWER UNITS



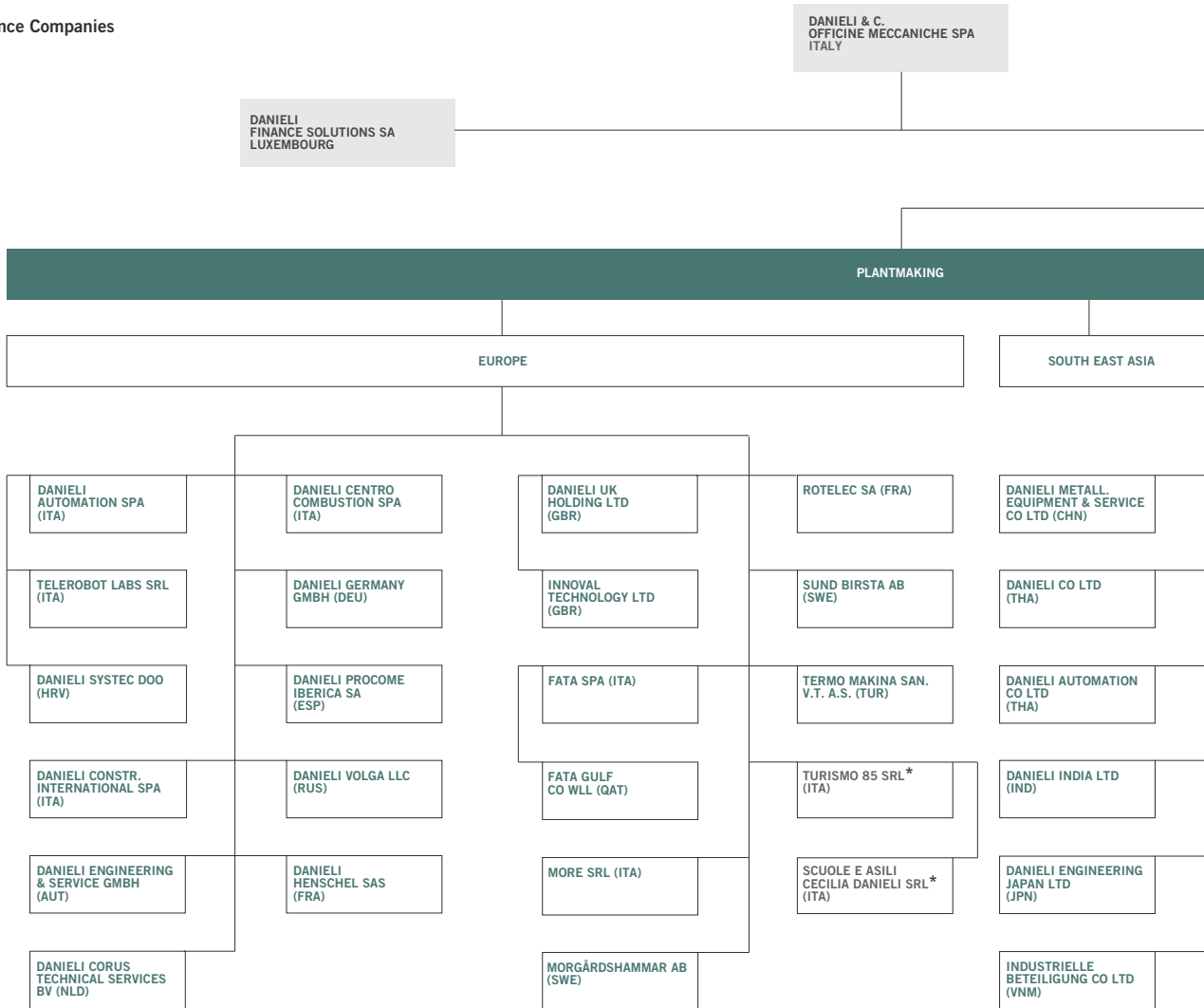
REHEATING AND HEAT-TREATING FURNACES



Q-HEAT

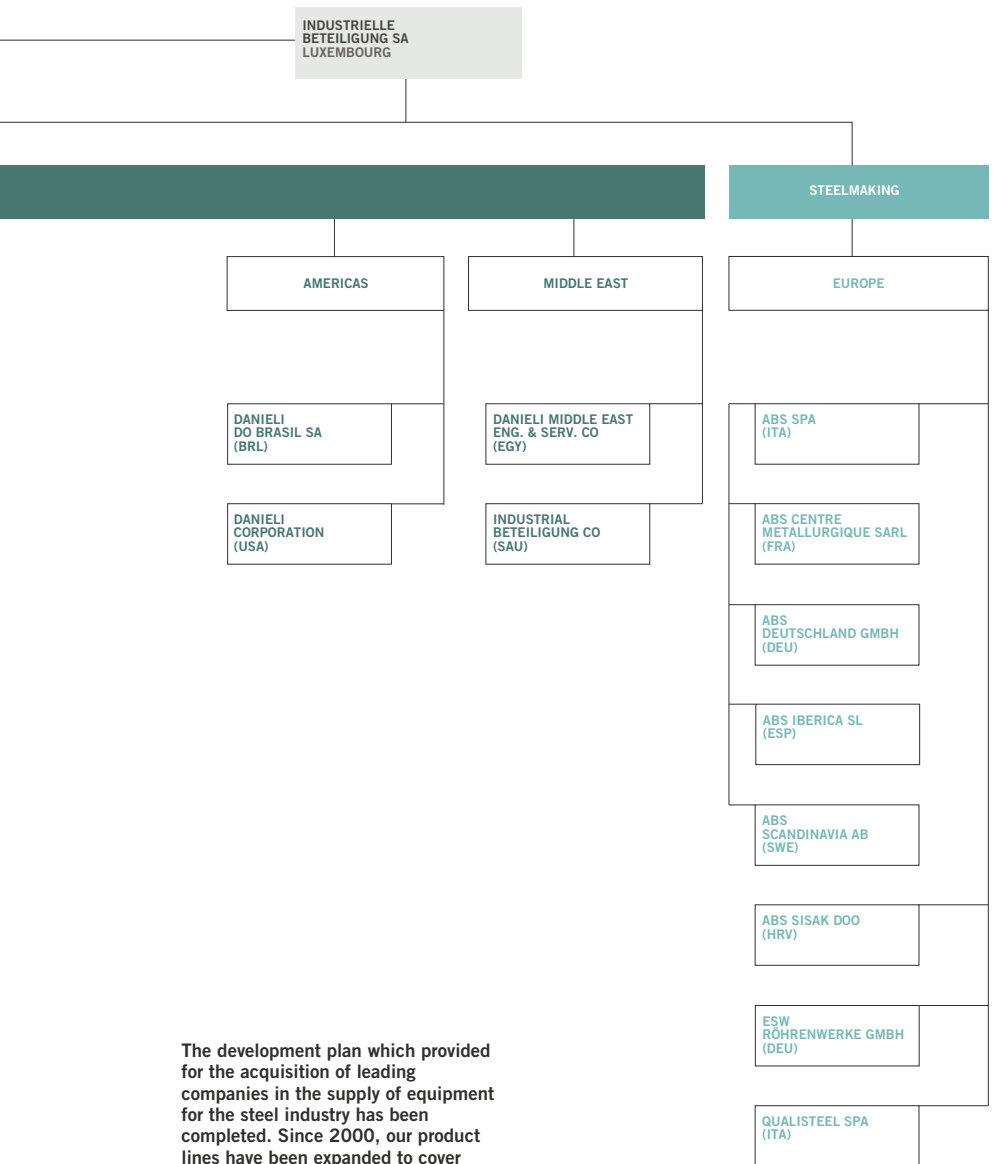
Danieli at a Glance Group Structure

Finance Companies



Plantmaking and Steelmaking Companies

*Services and other Activities



The development plan which provided for the acquisition of leading companies in the supply of equipment for the steel industry has been completed. Since 2000, our product lines have been expanded to cover blast furnaces, DR plants, seamless and welded pipe mills and now cover the whole spectrum of ironmaking and steelmaking plants, from iron ore to any steel finished products as well as those for non-ferrous metals.

Board of Directors

- GIANPIETRO BENEDETTI
Chairman
- CAMILLA BENEDETTI
Deputy Chairman
- GIACOMO MARESCHI DANIELI
CEO
- ALESSANDRO TRIVILLIN
CEO
- ALESSANDRO BRUSSI
CARLA DE COLLE
CHIARA MIO
GIULIO CAPOCACCIA
Directors

Board of Statutory Auditors

- DAVIDE BARBIERI
President
- GAETANO TERRIN
VINCENZA BELLETTINI
Auditors
- GIULIANO RAVASIO
MARINA BARBIERI
EMANUELA ROLLINO
Deputy Auditors

Group Executive Board

- GIANPIETRO BENEDETTI
Chairman
- GIACOMO MARESCHI DANIELI
ALESSANDRO TRIVILLIN
ALESSANDRO BRUSSI
ROLANDO PAOLONE
ANTONELLO MORDEGLIA
NICO BLEIJENDAAL
MICHELE MARINUTTI

Danieli Year 2018/19

(thousands of euro)	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Order backlog	3,387,000	3,225,000	3,206,000	3,079,000	3,155,000	2,814,000	2,532,000	2,954,000	3,099,000
Sales revenue	3,118,485	3,081,108	2,782,294	2,944,102	2,765,940	2,508,352	2,490,912	2,705,600	3,063,588
Net income	192,461	174,578	163,165	153,577	161,738	87,999	50,540	58,400	67,016
Total net worth	1,185,896	1,292,113	1,427,266	1,548,396	1,713,744	1,777,158	1,817,828	1,853,000	1,899,189
Research and development	139,000	146,000	140,000	150,000	200,000	185,000	175,000	185,000	200,000
Employees	9,392	10,037	10,944	11,424	10,954	9,419	8,959	9,358	9,521
Consolidated net income per share (euro)	2.50	2.51	2.20	2.06	2.17	1.19	0.68	0.78	0.90
No. of ordinary shares	40,879	40,879	40,879	40,879	40,879	40,879	40,879	40,879	40,879
No. of non-convertible saving shares	40,425	40,425	40,425	40,425	40,425	40,425	40,425	40,425	40,425
Dividends distribution	26,193	25,002	23,075	23,075	8,195	8,195	8,195	8,195	11,915
Dividend per ordinary share (euro)	0.33	0.33	0.30	0.30	0.10	0.10	0.10	0.10	0.15
Dividend per non-convertible saving share (euro)	0.3507	0.3507	0.3207	0.3207	0.1207	0.1207	0.1207	0.1207	0.1707

Thanks to prudent policies and the highly entrepreneurial spirit of our shareholders, which have always allowed us to allocate a large part of our profits to research and

development, Danieli has been able to achieve positive results even in periods of economic downturn.

(millions of euro)

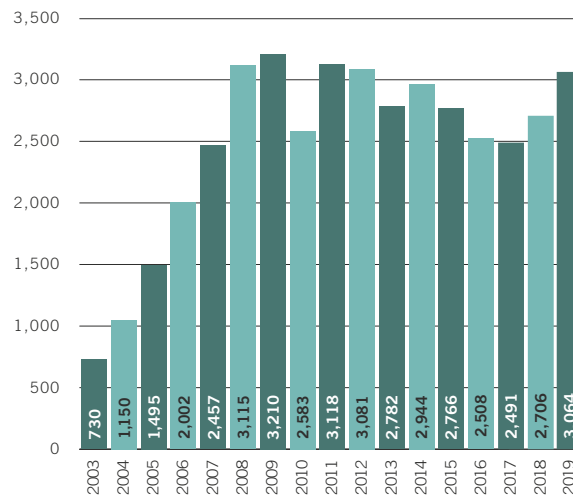
Danieli Group

The average year-on-year growth of the global economy for 2019 shows an increase of 3.2%, down from 3.6% in 2018, with a contribution of 4.1% from emerging countries and developing economies and a contribution of 1.9% from advanced and mature economies with a more limited but still stable growth. The worldwide growth outlook for 2020 confirms again a recovery with a world GDP up 3.5%, still driven by emerging and developing economies compared to a substantial stability of those with advanced economies. USA is growing well in 2019 with consumption supported by a protected and financially strong domestic market, albeit with an expected reduction in 2020, Japan is stable, while India and China always maintain high growth at 7.0% and 6.2%, respectively, well supported by public investment programmes developed by their governments.

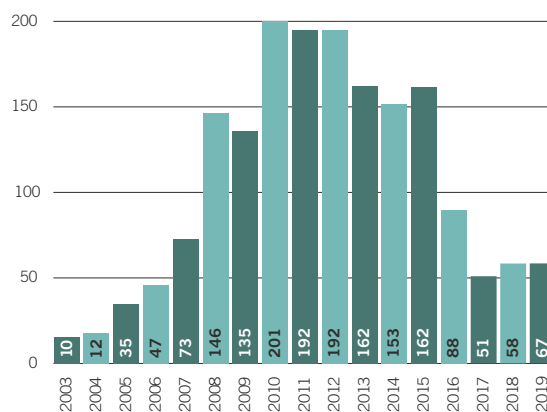
China, in addition to managing the gradual transition from a debt-based economy to a market economy, is suffering during the year from the negative effects of the escalation of customs tariffs towards the USA, which have a negative impact on foreign export demand but also on cross-trade with North America. In 2019, Europe recorded a further decrease in growth compared to 2018, affected by the Brexit and Trade War between the USA and China, but with the prospect of a 2020 that is once again improving, supported by the expansionary policies and the low cost of money promoted by the European Central Bank and by strong exports favoured by still low prices of energy factors.

Maintaining a balanced price for the main energy factors (oil, gas and coal) and the main raw materials relaunched the economy of the producer countries, while inflation control allowed the implementation of an accommodating monetary management by the main central banks with tax stimulus policies that favoured the consolidation of growth in countries with advanced economies, improving the quality and competitiveness of domestic production and reducing Chinese exports made less competitive by the adopted protectionist measures.

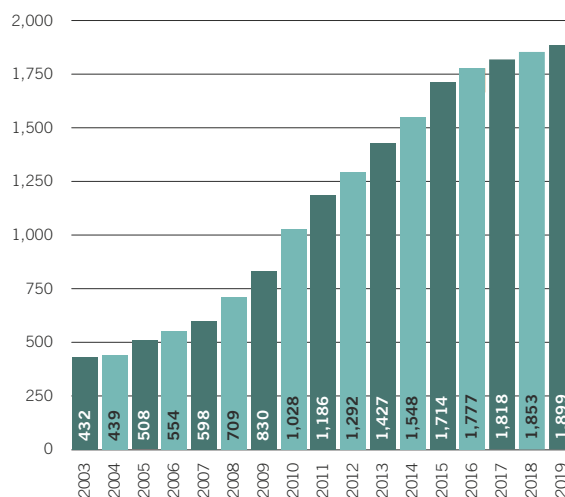
**Danieli Group:
Sales Revenue**



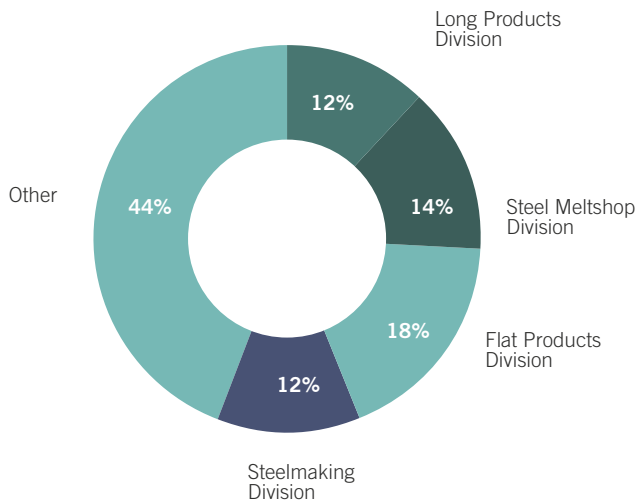
**Danieli Group:
Net Income**



**Danieli Group:
Net Worth**



(millions of euro)



**Danieli Group:
Order backlog
at June 30, 2019,
per product line.
The order backlog
amounts to
3,099 M Euro.**

The steel market

Worldwide steel production reached nearly 925 million tons in the first half of 2019, up by 4.9% compared to the same period of 2018, which reached approximately a total of 1,808 million tons over 12 months.

The forecasts for 2019 show an overall increase by nearly 3.5-4.0%, with Asia (driven by China and India) up by 6.5-7.0% and advanced countries, together with emerging ones, with a more limited increase of approximately 1.5-2.0%.

The plant utilisation average coefficient compared to the maximum theoretical level reached approximately 81% at the end of 2018, improving compared to 78.5% in June 2018.

The steel market will be stable or slightly declining in 2019/2020 due to ongoing negotiations on duties.

Steel producers confirmed increasingly their commitment to operate plants worldwide in a sustainable manner, reducing energy consumption per ton and using the new technologies available (Green Steel) to reduce GHG emissions and to make production towards the community and the environment socially sustainable.

In 2019, steel exports from China remained low both due to high level of prices (since it was necessary to produce in an economically sustainable way) and to the duties imposed by importing countries to avoid anti-dumping practices, whereas in the rest of the world, the application of protectionist policies supported the domestic market, where the availability of scrap at a still competitive cost made producers of electrical furnace competitive, also favoured by their inherent flexibility in production.

Production quality with a high-quality finish together with customer service remain the most important factors to obtain more remunerative prices from the market and greater continuity in the deliveries to serve customers who tend to reduce minimum stock volumes and require more and more "on time" deliveries.

A market consolidation is expected in the second half of 2019 and improvement in 2020, with the recovery of private investments and public infrastructure projects both in countries with emerging economies and in developed economies.

The market for steelmaking plants

The maintenance of a high level of steel consumption in the world and the interest in further developing production in some geographical areas with renewed development prospects and where it may be possible to produce more economically using the energy factors present in a more innovative and efficient manner, maintain our customers' keen interest in investing in new plants, in addition to technologically upgrading and developing those already existing to increase flexibility and quality by using available resources in a sustainable way.

Demand is maintaining appreciable growth in the BRIC and North African countries for integrated large plants whereas in the USA and EU for mid-sized flexible plants and modernisation of existing plants to enable higher quality production with high finishes used in mechanical engineering, car making and infrastructure.

Anti-dumping policies now implemented by all the main steel producing countries stimulated demand for new plants, supported by strong and stable domestic demand that will lead to further plant investments during 2020.

To maintain competitiveness in this "New Normal" market, Danieli invested in technologies that maintain first of all customer focus allowing it to:

- improve plant productivity and with its value added per capita;
- reduce GHG emissions per ton produced by applying technological solutions with low environmental impact;
- make operational the principles of revolution 4.0 in the steel industry by developing the DIGIMET project to ensure total control of the production variables both when devising and commissioning the plants;
- speed up production processes by reducing time and costs and optimising production efficiency by aggregating different processing phases with endless continuity solutions.

The research and technological development carried out by Danieli over the last ten years have led to an expansion in the range of products offered within the Metal sector (steel, aluminium and other metals), reducing significantly the cost required for the initial investment per individual project (CapEx) and even optimising operational expenditure (OpEx), by integrating multiple stages of processing in the production process, widening the target audience of potential investors in the sector thanks to increased economic feasibility of investments, both in countries with mature economies and in those still at the development phase.

Maintenance by the Group of a stable and substantial order book confirms the propensity of our customers to invest in new plants, thanks to the competitiveness and innovative solutions proposed by Danieli currently qualified and well-referenced across the entire metalmaking industry.

Danieli Group operations

The Danieli Group designs, builds and sells plants for the iron and steel industry, offering a complete range of machines from primary process management to the manufacture of finished goods (essentially from ore to finished product). It also produces and sells special steels for the long products market through its subsidiaries Acciaierie Bertoli Safau S.p.A., ABS Sisak d.o.o and ESW GmbH that use secondary metallurgy (electric arc furnaces) for the production of liquid steel.

Construction and sale of plants for the metals industry

Twelve design centres:

Danieli Centro Combustion SpA	Italy
Fata SpA	Italy
Danieli Germany GmbH	Germany
Danieli Corus BV	Netherlands
DWU Engineering Polska Zoo	Poland
Danieli UK Holding Ltd	United Kingdom
Innoval Technology Ltd	United Kingdom
Danieli Engineering Rom Srl	Romania
Danieli Procome Iberica SA	Spain
Danieli Heavy Machinery Engineering LLC	Ukraine
Danieli Engineering Japan Ltd	Japan
Industrielle Beteiligung Co Ltd	Vietnam

Sixteen production units and design centres:

Danieli & C SpA / Italy
Danieli Automation SpA / Italy
Danieli Special Cranes Srl / Italy
More SpA / Italy
Danieli Engineering & Services GmbH / Austria
Rotelec SA / France
Danieli Germany GmbH / Germany
Danieli Henschel SAS / France, Russia
Danieli Czech Engineering AS / Czech Republic
Danieli Volga LLC / Russia
Morgårdshammar AB / Sweden
Sund Birsta AB / Sweden, People's Republic of China
Termo Makina San vT AS / Turkey
Danieli India Ltd / India
Danieli Met. Equipment & Service (China) Co. Ltd. / People's Rep. of China
Danieli Co Ltd / Thailand

The product lines are as follows:

Danieli Plant Engineering / Italy
Turnkey Plants and Systems Engineering
Danieli Automation / Italy, USA
Process Control Systems
Danieli Telerobot, Italy
Advanced Robotics
Danieli Centro Metallics / Italy
Ore Processing and Direct Reduction Plants
Danieli Corus IJmuiden / The Netherlands
Integrated Steelmaking Plants
Danieli Linz / Austria
Oxygen Converter Steelmaking Plants
Danieli Centro Recycling / Italy, UK, France, Germany, USA
Scrap Processing Plants

Danieli Centro Met / Italy, Austria
Electric Steelmaking Plants and Long Product Casters

Danieli Davy Distington / UK, Italy
Thick and Thin Slab Casters

Danieli Wean United / Italy, USA, Germany
Flat Product Rolling Mills and Strip Processing Lines

Danieli Kohler / USA, Italy
Air Wiping Equipment for Zinc Coating

Danieli Fata Hunter / UK, USA, Germany, Italy
Casting, rolling and painting plants for aluminium strip

Danieli Fata EPC / Italy, USA, India, People's Republic of China, UAE
Construction of Turnkey Industrial Plants

Danieli Fröhling / Germany
Specialty Mills and Strip Finishing Lines

Danieli Morgårdshammar / Italy, Sweden
Long Product Rolling Mills

Danieli Centro Tube / Italy
Seamless Pipe Plants

Danieli Centro Maskin / Italy, Sweden
Conditioning, Drawing and Finishing Plants

Danieli Rotelec / France, Italy
Electromagnetic Stirrers and Induction Heating Systems

Danieli Breda / Italy
Extrusion and Forging Plants

Danieli Centro Combustion / Italy
Reheating Systems

Danieli Olivotto Ferrè / Italy
Heat Treatment Furnaces

Danieli Hydraulics / Italy, Thailand
Industrial Hydraulic and Lubrication Equipment

Danieli Centro Cranes / Italy
Heavy-Duty Cranes

Danieli Environment / Italy
Ecological and Recovery Systems

Danieli Construction / Italy, Thailand
Turnkey Construction, Erection and Systems Engineering

Danieli Service / Italy, Austria, People's Rep. of China, India, Russia, USA, Brazil, Thailand
Technical Service and Original Spare Parts

Production and sale of special steels

These operations are carried out by the subsidiaries Acciaierie Bertoli Safau S.p.A., ABS Sisak d.o.o. and ESW Röhrenwerke GmbH, which are in a position of leadership in Europe in the special structural steels sector, with production to order of high quality products for the most demanding applications in the form of ingots up to 160 tons, blooms, billets, forged and rolled products with a high level of verticalisation, with diameters from 15 to 800 mm, to which the seamless tubes for industrial use produced by ESW in Germany are added.

The structural steels family includes high carbon steels, case-hardened, hardened and tempered, and surface hardened steels verticalised in many types of product, which have applications in all engineering components. Their field of use is very extensive: motor vehicles and engines in general, tractors and earthmoving machines, machine tools, the railway industry and the energy and petrochemical industries.

Highlights of the consolidated income statement as at June 30, 2019

(*) The Gross Operating Margin (EBITDA) represents the operating profit as in the consolidated income statement, before depreciation, amortisation and write-downs of fixed asset and receivables. The Gross Operating Margin (EBITDA) is used by the issuer to monitor and evaluate the performance of the Danieli Group, although it is not defined as an accounting measurement within IFRS. Consequently, the criteria for determining this value may not be consistent with the one used by other entities, and therefore not be altogether comparable.

in millions of euro	June 30, 2019	June 30, 2018	Change
Revenues	3,063.6	2,705.6	13%
Gross operating margin (EBITDA) (*)	239.2	228.8	5%
% revenues	7.8	8.5	
Depreciation, amortization and write-downs			
of fixed assets	(137.7)	(124.9)	
Operating income	101.5	103.9	-2%
% revenues	3.3	3.8	
Net financial income/(charges)	3.6	(19.6)	
Companies measured at equity	0.5	0.6	
Profit before tax	105.5	84.9	24%
Income taxes	(38.8)	(26.9)	
Net profit for the period	66.8	58.0	15%
% revenues	2.2	2.1	
Profit (Loss) attributable to non-controlling interests	0.2	0.4	
Net profit attributable to the Group	67.0	58.4	15%
% revenues	2.2	2.2	

Danieli Group structure

Danieli & C. Officine Meccaniche S.p.A
(Parent Company)

The company's revenues amounted to 1,018.9 million euro (853.7 million euro in 2018) with EBITDA of 31.7 million euro (20.5 million euro in 2018).

In this period, the company developed a sizeable volume of turnover, while the operating income improved albeit still penalised by additional start-up costs on some job orders ended during the period. Research and development activities continued with the use of important corporate resources, above all to expand and complete the range of products offered, developing high-tech solutions and environmental management and energy recovery systems to be used mainly in cutting-edge facilities.

The company continued to implement its investment plan to improve the productivity and efficiency of the Buttrio plants by replacing operating machinery older than 15 years.

The financial management of the period shows a result in line with forecasts as regards the ordinary management of exchange rates and cash-flow related to job orders in progress, while it was penalised in the financial year by additional charges for discounting financial receivables for which a deferred collection is expected beyond 12 months.

Order acquisition for the year is in line with the budget and already assures good production planning for next year, with operating income expected to improve also for the 2019/2020 financial year.

The Parent Company Danieli & C. Officine Meccaniche S.p.A. directly owns the following companies:

- Industrielle Beteiligung SA, the holding company for the Group's manufacturing firms;
- Danieli Finance Solutions SA, which invests liquidity in the international financial markets.

Analysis of/commentary on the economic and financial position of the Danieli Group

As at June 30, 2019, the main economic and financial data were as follows:

- revenues: 3,063.6 million euro up by 13% compared to 2,705.6 million euro as at June 30, 2018;
- Group's net profit: 67.0 million euro, marking an increase of 15% compared to 58.4 million euro as at June 30, 2018;
- consolidated shareholders' equity: 1,899.2 million euro, up by 46.2 million euro compared to 1,853.0 million euro as at June 30, 2018;
- positive net financial position: 928.3 million euro, up by 91.6 million euro compared to 836.7 million euro as at June 30, 2018.

The Group order book is well-diversified by geographical area and by product type and as at June 30, 2019 amounted to approximately 3,099 million euro (of which 237 million euro in the special steel making segment) up by 5%, compared to 2,954 million euro as at June 30, 2018 (of which 393 million euro for special steels).

Some major contracts already signed with foreign customers are not included in the order book: they will be included only upon completion of the engineering or with the finalisation of the related loan procedures. The rationalisation process in the plantmaking sector continued more strongly with a special attention to competitiveness in terms of innovation, technology, quality, efficiency and customer service, with:

- research and development and production of innovative and noble products mainly in Europe;
- the design and production of plants with already consolidated technologies is carried out in the Asian factories, at a lower cost but with the same European quality, covering both the Western steelmaking market and the Asian one, which to date accounts for more than half of global steel production.

In the steelmaking segment, investments downstream of the new rolling mills were completed in ABS, Pozzuolo, in order to guarantee a high degree of finish throughout the entire range of sizes offered, with the aim of delivering a more value-added product and personalised service to our customers. The objective is always to raise the technological competitiveness of ABS by improving production quality and efficiency, reducing the cost of processing and increasing quality and customer service, rationalising and completing the product range to be able to export directly 50-60% of production. Restructuring work continued during the period at the German company ESW Röhrenwerke GmbH, which operates in the seamless tube production for industrial use. However, the company has not yet completed the planned restructuring of its plants, generating an operating loss of about 4.8 million euro for extraordinary costs of production, which can only be avoided once the new plants that allow integrated production have been started. The market for seamless tubes is still receptive thanks to the recovery of the energy sector in general, and for the 2019/2020 financial year, ESW is expected to be able to show better operating margins once the modernisation of the plants has been completed, removing the "bottlenecks" and improving the finish of the products. The ABS Sisak plant in Croatia has also undergone a long shutdown period to allow a radical modernisation of the furnace and casting machine feed systems and, thanks to the new investments underway, it will be able to reach a high utilisation coefficient already at the end of 2019, with a return to profit for the next financial year. In the plantmaking segment, investments will be approximately 10/15 million euro per year, in addition to those for research and innovation that are still borne, whereas in the steelmaking segment important investments of approximately 180 million euro have already been made for a new quality wire rod rolling mill, which will allow ABS to significantly increase its rolling capacity for high quality products by the end of 2020, in coordination and synergy with the ABS Sisak plants.

The level of revenues of the Group increased by 13% compared to the previous year with an increase in turnover both in the plantmaking segment and in that of the steelmaking segment, which also shows higher production volumes compared to 2017/2018 thanks to the contribution of ABS Sisak and despite the restructuring still in progress of the ESW pipe

manufacturer, which will be able to operate more efficiently in the next financial year.

Revenues for the plantmaking segment are consistent with the forecasts at the beginning of the year and derive from the compliance with the construction programmes contractually agreed with the customers, with an EBITDA of 121.5 million euro, improving in the 2018/2019 period and which may also improve further in the next financial year.

On the other hand, revenues for the steelmaking segment are higher than the budget at the beginning of the year and show a profitability of 117.7 million euro, a good result, although still penalised by a negative EBITDA of the ESW Röhrenwerke GmbH pipe manufacturer, which can only improve in the next financial year.

Therefore, the 2018/2019 financial year has an operating profitability (EBIT) in line with the previous year.

The production sold during the financial year by the steelmaking segment (ABS Group) reached approximately 1,320,000 tons (slightly up compared to the volumes of the corresponding period of the prior year), with the aim of keeping this level of growth in volumes also in the next financial year bringing the company ABS Sisak in Croatia to full production.

ABS S.p.A. provides high quality products and delivery times in line with the best global producers, and its objective is to be the leading operator in Italy in the special steel sector and among the top three in Europe. The performances of both the plantmaking (engineering and plant construction) and steelmaking segments (special steel production) and keeping the order book at good levels mean positive results are expected next year in line with the budget forecasts. In particular, in the steelmaking segment, a good 2019/2020 is expected, without one-off negative influences, with greater efficiency in production and with the full operation of ABS Sisak and a production with more profitable margins of the ESW pipe manufacturer in Germany.

The operating income of the plantmaking segment is expected to grow in 2019/2020, equally distributed throughout the main product lines (steelworks, long products and flat products), with essentially homogeneous profitability in all geographical areas affected by our projects, and an improved contribution to the Group's operating profitability from the Parent Company.

Thanks to investments made in both operating segments, the Danieli Group can offer its customers innovative and more environmentally-friendly products and an increasingly better service in terms of quality, price and delivery timeliness, operating with an organisation that aims to optimise company processes in order to reduce waste, striving for maximum customer satisfaction.

Liquidity management continued during the year in accordance with the usual low-risk and easy to realise investment principles, incurring no financial loss and with a satisfactory return both on investments in euro and on those denominated in foreign currencies (essentially in USD), with a positive effect on the income statement related to the alignment of the exchange rates to the exchange rates in force on June 30, 2019.

Group EBITDA as at June 30, 2019 was 239.2 million euro, an increase by approximately 5% on

Revenues by geographical area

in millions of euro	Year to June 30, 2019		Year to June 30, 2018		Change
		%		%	
Europe and Russia	1,658.4	54	1,411.3	52.0	17.5%
Middle East	447.9	15	481.8	18.0	-7.0%
The Americas	365.3	12	277.6	10.0	31.6%
Far East	592.0	19	534.9	20.0	10.7%
Total	3,063.6	100	2,705.6	100	13.2%

Key consolidated financial ratios

Profitability ratios	Description	June 30, 2019	June 30, 2018
ROE	<u>Group profit for the year</u> Group shareholders' equity	3.5%	3.1%
ROI	<u>Operating income</u> Net capital employed	9.9%	9.8%
	<u>GOM (EBITDA)</u> Shareholders' equity	12.6%	12.3%
	<u>GOM (EBITDA)</u> Financial charges (*)	10.74	12.19
GOM (EBITDA)	<u>GOM (EBITDA)</u> Revenues	7.8%	8.5%
	<u>Gross financial indebtedness (**)</u> GOM (EBITDA)	2.23	2.18
ROS	<u>Operating income</u> Revenues	3.3%	3.8%
Financial charges over revenues	<u>Financial charges</u> Revenues	0.8%	0.7%
Capital ratios	Description	June 30, 2019	June 30, 2018
Debt to equity ratio	<u>Gross financial indebtedness</u> Consolidated shareholders' equity	40.2%	29.7%
Financial independence	<u>Consolidated shareholders' equity</u> Total assets	37.5%	39.5
Primary structural margin	<u>Consolidated shareholders' equity</u> Non-current assets	180.7%	167.1%
Secondary structural margin	<u>Consolidated shareholders' equity + non-current liabilities</u> Non-current assets	216.8%	204.9%
Current ratio	<u>Current assets</u> Current liabilities	144.0%	148.2%
Quick ratio	<u>Current assets (- Inventories)</u> Current liabilities	103.6%	106.4
Profit indicators		June 30, 2019	June 30, 2018
Revenues per employee (thousands of euro)		321.8	289.1

(*) net of interests on discounting operations
(**) excluding advances on job orders not yet in production.

Note that the figures used to calculate the performance ratios shown above do not always constitute standard measurements in the context of the Group's accounting policies.

the previous year, and margins were still substantial enough, compared to the turnover for the period, to cover the very high research and development costs incurred in the period.

Net financial income came to a negative 8.4 million euro, (before exchange rate alignment) affected by additional discounting charges calculated on financial receivables with the expectation of a long deferred payment; on the other hand, exchange rate management was positive due to the weakening of the euro against the US dollar, which continued to further strengthen in the summer of 2019. Cash management was in any case handled prudently, maintaining a high solvency profile while closing the year with a satisfactory net cash position.

The Group's EBITDA at June 30, 2019 includes the cancellation of payables for business combinations of 13.4 million euro: the related write-down of intangible assets makes the effect on EBIT and net income insignificant (for further details see the notes to the consolidated financial statements of Business Combinations).

Total taxes for the period amounted to 38.8 million euro (26.9 million euro in the previous year), essentially deriving from the application of ordinary taxation to the results of consolidated companies without the significant impact of one-off items in addition to the review of deferred taxation related to the negative results of the ESW pipe manufacturer.

The net profit for the period came to 66.8 million euro, increasing by 15% compared with 58.0 million euro as at June 30, 2018.

Consolidated revenues by geographical area

With regard to the plantmaking segment, the geographical distribution of revenues for the period reflects the target area of sales related to shipments made, as well as progress with equipment construction operations both at our factories and in terms of on-site installation and start-up throughout the world.

On the other hand, the revenues of the steelmaking segment are concentrated in Italy and Europe and are included in the Europe and Russia area, where they account for 34% of the total value of this area as at June 30, 2019, and for 34% of the total value of this area as at June 30, 2018.

Net Invested Capital decreased compared to the previous year, with working capital increasing thanks to advances received from customers on new orders acquired during the period, while the financial management for the period ensured adequate financial coverage for investments made in both operating sectors.

This situation, with expectations of continuing positive economic and cash flows in the next few years, will allow the Group to quickly repay its debt to banks, which increased slightly during the period, mainly to support the new investments being developed in the steelmaking segment.

The net financial position is still strong and was calculated by including, within "Bank debts and other financial liabilities", customer advance payments on job orders not yet in production, amounting to 229.1 million euro as at June 30, 2019 (52.4 million euro as at June 30, 2018). These amounts are included in the consolidated balance sheet as payables for construction contracts and customer advance payments, together with residual payables for the purchase of equity investments of approximately 6.6 million euro (20.2 million euro as at June 30, 2018), included in other liabilities.

The remaining customer advances, net of advances paid to suppliers, amounting to 560.1 million euro as at June 30, 2019 and 564.1 million euro as at June 30, 2018, are included in working capital as they are used to finance job orders in progress. The related amounts are still included as payables for construction contracts and customer advance payments in the consolidated balance sheet.

The net positive financial position as at June 30, 2019 increased by 91.6 million euro compared to the previous year, reaching the amount of 928.3 million euro. This amount is still important, affected partly by advances collected on current contracts and partly by a careful financial management of production on job orders, enabling the Group to finance the important investments in research and development in the plantmaking segment as well as those required for the new plants of the steelmaking segment to diversify and increase production and strengthen the efficiency in operations.

By maintaining this level of cash, the Group can meet without financial stresses the new technological challenges of building plants with high innovative content, by independently covering all extraordinary expenses that may arise from technical difficulties during their start-up.

Statement of changes in net financial position

The statement of changes in net financial position confirms the Group's ability to generate significant positive cash flows from operations, which were only partially absorbed during the financial year to cover disbursements on investments made, and with a decrease in working capital by 19.3 million euro (compared to 173.0 million euro in the previous year). The net cash flow from operations amounted to 168.2 million euro (10.1 million in the previous period) and allowed the financial coverage of net operating investments, of 66.3 million euro (83.5 million euro as at June 30, 2018). Hence, a final cash increase, after financing operating investments, of 101.9 million euro (whereas it was negative by 73.4 million euro as at June 30, 2018).

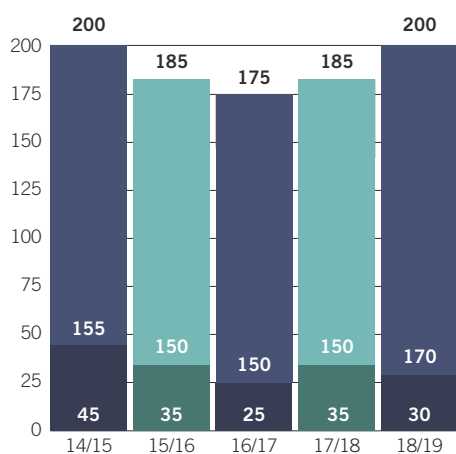
The total positive change in the net financial position, up by 91.6 million euro, also includes the outlay for the payment of dividends in November 2018, amounting to 8.2 million euro.

Investments and research activities

The main investments in tangible and intangible fixed assets in the period, totalling 83.4 million euro, were as follows:

- 62.8 million euro in the steelmaking segment, including progress on the new wire rod rolling mill (QWR), the modernisation at Sisak and new finishing plants completed in ABS to provide greater flexibility and efficiency in steel production, by expanding the range of products offered with improvements to their quality, together with a careful environmental management of all phases of production;
- 20.6 million euro in the plantmaking segment for new machine tools installed in Italy and in production facilities abroad, with the aim of improving efficiency and expanding the sales market for our plants, and in Italy to assure the replacement of operating machinery in use for more than fifteen years in the Parent Company's factories.

During the period, the Group moved ahead with research programmes initiated in previous years, with a view to providing customers with new-technology plants capable of superior quality output and lower investment (CAPEX) and production costs (OPEX). This process involved expenditure of approximately 30 million euro for direct and indirect research activities (almost entirely supported by the plantmaking segment for approximately 2% of the relevant turnover), with the management of a volume of innovative projects of approximately 170 million euro (approximately 10% of the turnover of the plantmaking segment).



Research (lower columns) and costs incurred for new products development.

Consolidated Non-Financial Statement

The Group's approach to Corporate Social Responsibility

The Chairman of the Board of Directors of the company and his Directors confirm the commitment of the Group to increasingly carry out its role of Corporate Responsibility towards the global community not only directly but also indirectly promoting the research and development of equipment and machines for producing steel with Green Steel and Sustainable Steel solutions, improving efficiency, safety and reducing waste and the impact of GreenHouse Gas emissions (GHG) to protect the environment.

Danieli has always considered as a priority the issue of protecting human health and the environment, accompanied by a commitment to research, innovation and social responsibility.

Today, it is necessary to operate in a complex global context, with the Group aimed at consolidating its reputation by carrying out business activities increasingly integrating industrial strategies with sustainability issues.

The increasingly challenging objectives in the metal industry to make conscious use of resources by reducing emissions, noise and waste production required, and still require, a great commitment from Danieli to develop new technological solutions that guarantee customers sustainable production and, at the same time, a competitive OPEX in plant management. Therefore, on the basis of what has been achieved so far and with a view to continuous improvement, the path taken by the Group in the field of sustainability is based on a continuous implementation of the values and operating practices in implementation of the principles of the Code of Ethics, which inspires the Group, and the main compliance models (primarily the Organisational Model pursuant to Italian Legislative Decree 231/01), as well as specific objectives that the Group sets itself for the short to medium term, including:

- The monitoring and assessment of specific non-financial risks, related to the Group's main sustainability issues, and their integration into the business risk management process,
- the strengthening of the Governance of Sustainability within the Group; for this purpose, ABS S.p.A. set up a Sustainability Committee to manage the projects that are undertaken and/or financed. This is an inter-functional committee that coordinates the various company figures on the issues and brings strategic control over them. During the reporting year, the Parent Company, with a view to continuous improvement, defined a more structured working group dedicated to the management of non-financial aspects,
- implement the new guidelines published on June 20, 2019 by the European Commission on integrating the disclosure of non-financial information with specific information on the control measures adopted in relation to climate change, as well as on the climate impacts of business activities and the impacts of climate change on business activities.

Within this path of sustainability, the communication of non-financial information thus represents a first step in the Group's commitment to work in line with the provisions of the Paris Climate Agreement and to achieve the 17 Sustainable Development Goals defined by the United Nations with Agenda 2030 for Sustainable Development, promoting all ESG issues as well.

The result of the company is not limited to management profits but should be understood considering also the capital strength, the international reputation, the propensity to innovation and protection of the personnel by promoting professional growth and safety in the workplace together with support to local communities in Italy and abroad and attention to culture and youth.

Therefore, Danieli's values for future generations represent an important legacy of skills, knowledge and processes for the creation of value that form a heritage to be preserved and further developed in a logic of long term and continuous improvement.

Given the above, Danieli defined the relevant material aspects to be reported in this Non-Financial Statement taking into account the reference context, the specific nature of the operating sector and the indications received from stakeholders.

The macro areas covered by this statement are:

- Governance and Compliance
- Human capital
- Research, development and product quality
- Commitment to the Environment
- Supply chain
- Community commitment

Stakeholder Engagement and materiality analysis

Danieli mapped the stakeholders present in the geographical contexts in which it operates, by identifying the most important ones on the basis of the interactions existing with the two main operating sectors of the Group.

The Group adopted flexible and diversified practices of dialogue and involvement in order to share present and future development strategies and objectives with the main stakeholders.

No critical issues and/or significant aspects emerging from stakeholder engagement activities carried out by Group companies are reported.

The Danieli Group operates in two substantially different industrial sectors:

— Steel production with Acciaierie Bertoli Safau S.p.A. (hereinafter also referred to as "ABS S.p.A.") and affiliates (steelmaking segment), which use secondary metallurgy (electric arc furnaces) for the production of liquid steel.

— Production of machines to produce steel with Danieli & C. Officine Meccaniche S.p.A. and affiliates (plantmaking segment), by offering a complete range of machines from primary process management to the manufacture of finished goods (essentially from ore to finished product).

The Group has always addressed in a more structured and careful way the management in the territory of issues related to the steel sector in consideration of the greater significance of the social and environmental impacts related to this specific activity. The process followed by the company was based on the preparation of questionnaires submitted to

The main stakeholders recognised by the Danieli Group are:

Environment	Trade associations	Local authorities
Customers	Collectivity and local communities	Employees
Suppliers and Business Partners	Future generations	Investors and financial analysts
Public bodies	Media and press organizations	Non-governmental organizations
Trade unions	Universities and Research Centres	

Material topics of the Danieli Group

Anti-Corruption	Business ethics and integrity	Governance and management of sustainability
Relations with stakeholders	Creation of economic value	Presence on the market and indirect economic impacts
Supplier social assessment (*)	Support to local communities (*)	Occupational health and safety
Training and Development	Protection of human rights	Diversity
Industrial relations	Company welfare	Innovation and R&D
Product quality and safety	Environmental impact of products	Management of energy consumption
Waste management and hazardous materials	Greenhouse Gas Production	Water resource management and quality of wastewater discharges
Biodiversity (*)	Conscious consumption of raw materials (*)	Environmental assessment of suppliers (*)

(*) topics below the established materiality threshold and therefore not related to a specific GRI Standard.

the main stakeholders to collect information in an independent manner and across the board. During the year, the Danieli Group updated the materiality analysis prepared during the previous year, integrating it with the assessments resulting from the extension of the stakeholder engagement.

For the plantmaking segment, the assessments of the top management and the main function managers were integrated with the assessments of the main suppliers and customers.

On the other hand, the steelmaking sector extended the internal and external stakeholder engagement previously carried out by involving senior employees (second, third and a few fourth levels), main customers and some partners in the assessments. The scores resulting from the engagement activities of each sector have been processed and integrated. Subsequently, in order to enhance the analysis carried out and identify the most strategic and priority aspects for the Group, a materiality threshold was inserted. The analysis with the results of the materiality and the identification of the material aspects was then approved by the Executive Committee of the company, which absorbed the main ones considering that the Board of Directors had previously absorbed as its own the 17 material aspects defined as Sustainable Development Goals (SDG) by the United Nations.

Governance and Compliance

The Corporate Governance structure adopted by Danieli is indicated in the 2018/2019 Report on Corporate Governance and Ownership Structure (approved by the Board of Directors on September 25, 2019) and envisages a Board of Directors, an Executive Committee, in addition to the Board of Statutory Auditors and the Supervisory Body.

The company adopts a corporate management model based on a system of principles and rules of behaviour (collected in a Code of Ethics and in the protocols developed pursuant to Italian Legislative Decree 231/2001) and by Risk Management and control tools for both financial and non-financial issues under the supervision of Internal Audit.

Danieli adopted and implemented a Code of Ethics (adopted by all the Companies of the Group with very small changes required by organisational characteristics of some subsidiaries) to identify and promote homogeneous behaviour standards for those who work with and for Danieli and complying with the principles of legality and transparency. In this context, special emphasis is placed on the rules aimed at prohibiting acts of corruption, private or otherwise, and the provisions on the prevention of conflicts of interest. During 2018, a general census of the active employees to whom the Code of Ethics was sent was conducted. A very large percentage of employees replied that they had examined and read it. For new employees, the Code of Ethics is available on the company portal and is being included in the "welcome kit" the new employees are provided with.

Over the year, Danieli developed and applied its own Organisation, Management and Control Model for the prevention of crimes pursuant to Italian legislative decree no. 231 of 2001, hereinafter also referred to as "Model 231" adopted today by the Parent Company, Danieli Automation S.p.A., Fata S.p.A. and ABS S.p.A., by progressively expanding it with new protocols to gradually cover all the sensitive operating areas of the company and changing its contents in accordance with legislative innovations and organisational changes in time.

The internal regulations aimed at preventing environmental crimes are particularly important in this area: although 35% of the Group's production sites with ISO 14001 certification cover over 90% of the volumes produced. In addition to the Parent Company (which covers both the operating unit and the head office and the headquarters of the Research Centre) also the most significant production sites: ABS S.p.A., ESW GmbH, Danieli Met. Equipment & Service (China) Co. Ltd., Danieli Automation Co.Ltd. and Danieli Co.Ltd, Danieli India Ltd. and note that another company in the Group is in the process of being certified.

Eleven companies obtained OHSAS 18001 certification and cover 74% of the Group's total workforce. The production sites equipped with the workers' health and safety management system certified by the above standard are the Parent Company, ABS S.p.A., Danieli Automation S.p.A., Qualisteel srl, Danieli Germany GmbH, Danieli Met. Equipment & Service Co. Danieli Co.Ltd, Danieli India Ltd. and the companies Danieli Corporation (a US company that follows the local market), Danieli Automation Co.Ltd. and the design centre Danieli Centro Combustion S.p.A.

The Supervisory Body oversees the updating and verification of compliance of the above-mentioned Model. This body has autonomous powers and consists of internal and external personnel with impartiality and specific skills. Moreover, in the area of environmental issues, the company ABS S.p.A. is a member of the ETS system (Emission Trading System) for the calculation and certification of direct greenhouse gas emissions.

Training programmes are planned and implemented on a regular basis aimed at disseminating a culture of corporate responsibility and business legality as outlined in the internal regulations, first of all the Code of Ethics.

The Parent Company asked its employees to confirm that they have read the Code of Ethics, which was sent to all in order to inform them of the zero tolerance position and the practices adopted by the company to prevent corruption, export control and the security of financial transactions.

Danieli established the Compliance Manager function, who in the performance of his/her functions also planned a series of courses for senior employees on Anti Bribery practices to mitigate the risk of corruption towards agents and suppliers.

This function developed two policies approved by the Parent Company's Board of Directors on 6 March 2019: the "Gift and Hospitality Policy" and the "Third Parties Compliance Management Policy". These documents were communicated to the top management of the Group companies and published on the company portal Danieli Synapse, to which reference is made in the following pages. Communication and training activities were carried out on these issues. With regard to the internal protocol "Gift and Hospitality Policy", during the year the Group Compliance Manager received a single report that did not reveal any anomalies after appropriate analyses and checks.

In each company of the Group, a whistle-blowing system is being implemented through dedicated channels and independent control authorities to report violations of the Code of Ethics or Model 231.

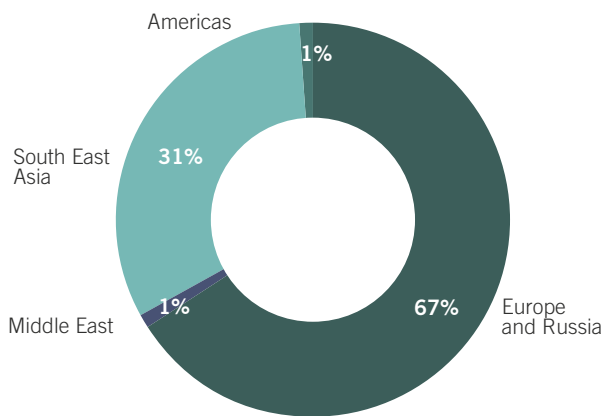
The Parent Company set up an internal control and risk management system consisting of a set of rules, procedures and organisational structures that allow the identification, measurement and management of the main business risks in order to protect the correct

Human Resources

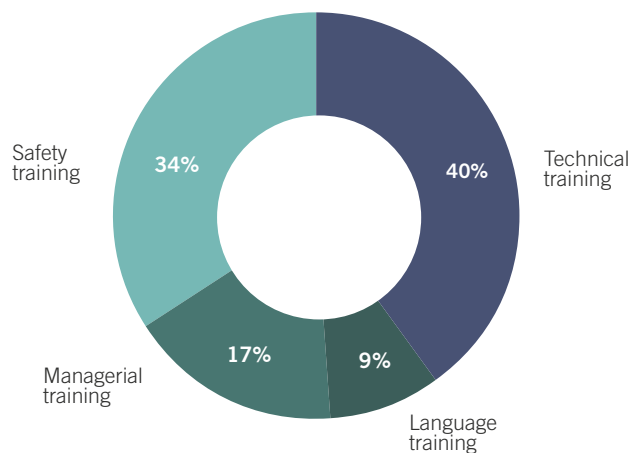
	June 30, 2019		June 30, 2018	
	Plantmaking	Steelmaking	Plantmaking	Steelmaking
Danieli & C SpA in Italy	2,432		2,233	
Italian affiliates	894	1,210	889	1,199
Foreign offices and affiliates	4,568	417	4,679	358
	7,894	1,627	7,801	1,557

Figure by category

	June 30, 2019	June 30, 2018
Apprentices	203	134
Blue collars	3,119	3,035
White collars and Middle managers	5,998	5,971
Managers	201	218
Total employees	9,521	9,358



Danieli Group:
Employees per geographical area. Female count for about 12%.



Danieli Group:
Training

management of the company's operating activities with:

- orderly management of powers and decision-making;
 - segmentation of activities separating operational and control activities;
 - traceability of the choices and decisions taken;
- the whole thing maintaining confidentiality and compliance with the regulations for the protection of privacy.

The Group's interfunctional privacy committee continued to implement the organisational privacy model. The activities were carried out in order to ensure compliance with the GDPR (EU Regulation 2016/679) for all Group companies in Europe.

The Parent Company has an Internal Audit function in charge of verifying - on a continuous basis and in relation to specific requirements and in accordance with international professional standards - that the internal control and risk management system is functioning and adequate, taking into account the development of business operations and the context of reference as well as existing best practices for:

- carrying out interventions aimed at checking that the rules and procedures of the control processes are observed and that all the subjects involved work in compliance with the set objectives;
- ensuring support to the other Control Bodies and with the players of the Internal Control and Risk Management System in order to ensure a sound, consistent and correct management of the company with the set goals.

Preliminary due diligence procedures were implemented and are regularly applied to the main contractual partners of the company, which envisage the use of software systems that allow to carry out analytical checks (as defined by the transparency principles issued by the World Bank) in order to preventively monitor the presence of any risk areas. The applicable CONSOB regulations were adopted and, in particular, the CONSOB regulation on related-party transactions is implemented, with the obligation of reporting by senior management of each company of the Group any commercial/financial transaction with related parties of significant value.

Danieli is committed to complying with the anti-corruption laws in force in all the countries in which it operates, adopting a "zero tolerance" approach to all forms of corruption and spreading a culture of compliance to its personnel so as to always operate with honesty and integrity in line with the relevant international best practices.

In the field of competitive practices, as formalised in the Code of Ethics, the company is inclined to ensure maximum competitiveness on the market and, therefore, its commercial policy is developed in full compliance with all applicable laws and regulations on competition.

The monitoring activity carried out by the Compliance Manager and by the Internal Audit pursues the objective of preventing and minimising the risk of active and passive corruption by carrying out a specific Risk Assessment process where necessary and providing for conservative penalties, termination of employment and actions for damages against employees and collaborators who have committed these serious contractual violations.

Moreover, Danieli adopted as its own the principles of transparency of the International's Business Principles for Countering Bribery and also takes part in a

Collective Action in the Metal Technologies segment under the coordination of the Basel Institute on Governance, aimed at maintaining a "fair competition" among the key competitors operating in the segment (SMS Group, Primetals and Tenova), through the adoption of similar internal rules for all participants, aimed at preventing corruption and other improper practices.

In the 2018/2019 tax year, the Group Compliance Officer received two reports of possible non-compliance with the provisions of the Code of Ethics. With reference to these reports, analyses and checks were carried out, the results of which were sent to the Management and did not require further action.

Human Capital

Human resources, prime origin and driving force behind all innovation, are in Danieli the central pivot of the organisation of the work that aims to ensure excellence and quality in customer service. Consistently with this concept, they are always the subject of constant attention: from enhancing the individual employees' potential and aptitudes, to promoting the professional development of teams and individuals, with instruments and initiatives to improve and enrich managerial skills, technical and specialist competencies, ethics and dedication to perform. With a structured simplification, the values with which it is desirable for the Danieli Team to identify itself were identified:

- customer-oriented approach
- passion
- team spirit
- respect for people
- consistency and reliability
- excellence
- sustainability.

These values are built every day with concrete actions and are transmitted by setting an example with transparency and trust.

Personnel management is developed in accordance with the principles included in the Code of Ethics and in compliance with the laws and regulations applicable in the countries in which the Danieli Group operates.

The approach of the company with regard to the personnel aimed at:

- attracting talented people through scouting activities and in particular graduates also with the collaboration of the best educational institutions;
- enhancing individual skills through development and training programmes by supporting an extensive and shared culture that also allows the consolidation and transfer of skills between employees;
- promoting a culture of safety at all levels of the organisation and always maintaining the highest level of health and safety protection for workers by using appropriate measures for the protection and prevention of occupational risks;
- motivating and retaining professional resources with an incentive and fair remuneration system based on meritocracy following market best practice.

Danieli operates on a Worldwide basis and the planning of human resource requirements (according to a standardised process for defining organic plans) is carried out centrally in coordination with the production units, while selection, recruitment and contracting are then managed independently by the individual Group companies, also taking into account

the different national legislations applicable on site. The recruitment process also uses a computer tool that allows an initial evaluation of soft and hard skills Danieli's remuneration policy follows:

- all practices and procedures necessary to comply with the provisions on minimum salary,
- a careful management of remuneration in order to obtain the loyalty of key figures, encouraging them to remain and stabilising collaboration in the medium to long term in the interests of the company and its stakeholders.

The Group adopts a remuneration policy with incentive systems: the remuneration of personnel holding positions of greater responsibility is subject to assessment based on shared objectives (Management by Objectives) every three years.

Therefore, the variable component of remuneration, which usually never exceeds 30% of salary, is related to the achievement of the set objectives (of the company as a whole and/or of individual product lines) compared to the budget values.

In the steelmaking segment, environmental objectives are assigned for some positions that result in the achievement of production efficiency while at the same time improving environmental impact.

The Group uses a management application called MET YOU to assess performance, the progressive development of skills and to have a complete view of the resources used by the Group ensuring transparency and traceability of what has been done. The objective is to fill all company positions with qualified profiles so as to always guarantee the continuity of operations, always taking into account the induction period necessary for the assimilation of company policies and procedures and the need for training for specific technical alignment.

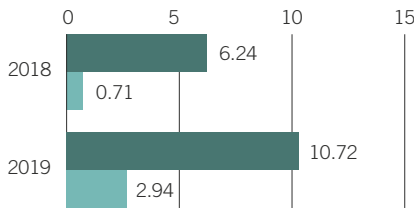
The Group points out that the workforce used in its factories and construction sites is highly specialised and that the risk of using child labour or the risk of forced labour is minimal.

For all employees, projects were started in the business and staff areas through the Hoshin method to disclose and measure the application of Danieli's values with continuity.

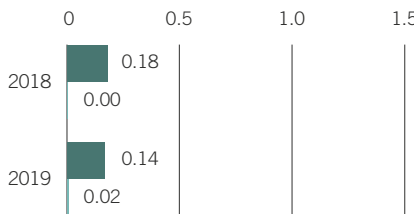
As explained in the Code of Ethics, Danieli also confirms its commitment to respect human rights, against discrimination in the workplace and child, irregular or forced labour by promoting equal opportunities (in terms of gender, origin, religion, age, political orientation, sexual orientation, disability), protection of diversity, freedom of association and the development of knowledge and professionalism of its own employees to better express their talents and the responsiveness to problem solving.

Danieli protects the integrity of its personnel by protecting workers from acts of physical, psychological or mobbing violence and by guaranteeing working conditions that respect the dignity of the person in compliance with the labour laws applicable in the countries in which it operates and with national collective agreements where present.

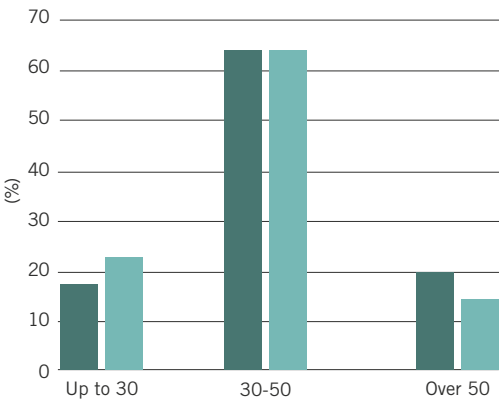
The company deals, where applicable, with organisations representing workers with an attitude that is always open and constructive where required. The working conditions, working hours and economic treatment of employment relationships are established on the basis of the national rules envisaged with the aim of ensuring compliance with the applicable legislation in each country ensuring full transparency of information on contractual terms and conditions of employment for candidates.



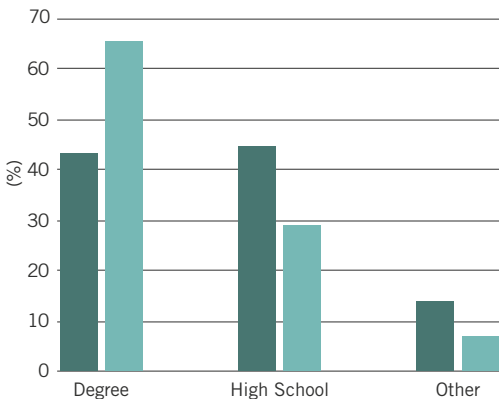
Danieli Group:
Injury frequency indicator



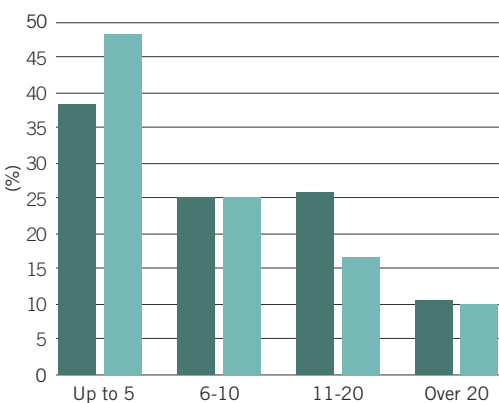
Danieli Group:
Injury severity indicator



Danieli Group:
Age of Employees



Danieli Group:
Educational level



Danieli Group:
Seniority of Service

■ Male
■ Female

Danieli never received any reports from employees and, during the year, no well-founded violations of working conditions were raised against the company, not even through national or foreign trade unions. There are no significant risks in terms of personnel management and in relation to the protection of diversity, duly referred to in the Company's Code of Ethics and in the Report on Corporate Governance and Ownership Structure regarding the composition of the board and the independent control bodies.

Danieli's position on human rights refers to the principles promoted by the United Nations (United Nations Guiding Principles on Business and Human Rights), fully in line with the Universal Declaration of Human Rights, with the commitment to require the entire chain of subcontractors used to be treated equally in their structures.

This continuous investment, together with the constant offer of career opportunities and prospects tied to merit, engenders a strong pride of place among our personnel, stimulating all of them to do their part in maintaining their companies' efficiency, effectiveness and competitiveness.

Welfare and health in the workplace

During the 2018/2019 tax year, the Italian companies fully implemented the provisions of the renewal of the CCNL (National Collective Labour Agreement) signed on 26/11/2016.

The subject matter of the renewal was both the salary - with the payment of the one-off bonus and the increases of the minimum amounts according to the pay-scale - and the forecast for supplementary health care.

Moreover, the development and expansion of the welfare platform dedicated to all Italian employees and other similar formulas for other employees abroad continued where required by current local regulations. Especially in ABS S.p.A. - steelmaking sector - specific welfare measures were implemented on personnel over 50 years of age in consideration of the type of work carried out.

The personnel are covered by an insurance programme against accidents, travel and reimbursement of medical expenses in case of business trips to mitigate the risks of these events. Moreover, both the Metasalute Fund for health care and a general coverage programme against accidents of the working personnel operate whereas the Danieli Foundation provides support to former employees in case of any situation of need.

Safety

Danieli defined a company management model identifying the roles, operational responsibilities and methods for carrying out the main production processes, paying the utmost attention to the health and safety of workers.

In particular, specific guidelines and company procedures were prepared for each operating unit and the activities carried out by them in order to:

- identify and assess any possible exposure to the hazard;
- identify potentially exposed persons;
- implement risk mitigation measures and control their application;

by training the personnel at the same time and raising their awareness through specific information and communication campaigns.

Employers and Safety Managers are responsible for the implementation of health prevention activities and the implementation of safety in the workplace using specialist personnel who devote particular attention to the training and education of personnel assigned to specific operational tasks.

Risk Assessment Documents are prepared and coordination meetings are held between third-party companies and site managers, verifying the health and safety issues of external workers.

The health of workers is guaranteed in the workplace also with the help of an internal Company Health Service present in all production units that carries out a health surveillance program with prevention and control procedures, information campaigns and periodic inspections.

As already mentioned, there are a number of non-employee workers who work on sites for which the Group implements the same procedures for monitoring the risks of employees and checks and controls the technical and professional requirements of the operating companies.

The Parent Company, ABS S.p.A., Danieli Automation S.p.A., Qualisteel srl, Danieli Germany GmbH, Danieli Met. Equipment & Service Co. Ltd., Danieli Co.Ltd, Danieli India Ltd. and the companies Danieli Corporation (a US company that follows the local market), Danieli Automation Co.Ltd. and the design centre Danieli Centro Combustion S.p.A. have an OHSAS 18001 certified management system. In particular, the subsidiary ABS S.p.A. received the certification in January 2013 and, in December 2018, the inspection was carried out during which non-compliance was not found.

The company approach for the prevention of accidents and injuries achieved positive results on average over the years: the severity index improved during the tax year.

On the other hand, during the year, there was an increase in small accidents related to the German steelmaking plant, which increased the injury frequency index.

On the other hand, ABS S.p.A. obtained a reduction in the INAIL Premium for interventions to improve prevention conditions and to protect health and safety in the workplace.

Finally, note that data relating to injuries recorded during the reporting year was shown with an improvement in the reporting system: unlike 2017/2018, they report all of them, thus also considering injury cases with days lost due to injury less than 3 days.

The injury indexes are calculated in accordance with the procedures established by UNI 7249: 2007 "Statistics on injuries at work", indicating the number of injuries that occurred per million hours worked.

The positive results, despite the slowdown in the last period, were achieved also thanks to the pursuit of the project entitled "Alcohol and the workplace", directed at contrasting alcohol abuse in the company, which is often a contributing cause in unacceptable accident situations both from the viewpoint of the frequency of events, and of their severity.

During the 2018/2019 tax year, training activities on safety were carried out totalling approximately 42.083 hours.

During the first months of the year, the activity related to the five-year compulsory retraining of the basic training for all workers began.

The personnel are covered by an insurance programme against injuries, travel and reimbursement of medical expenses in case of business trips to

mitigate the risks of these events.

If local needs require a special control unit, the company equips foreign sites with a Security structure with specialised personnel that:

- develops an action plan to protect the job order,
- operates in line with local regulations and standards,

in order to guarantee the continuity of operations, the integrity of personnel and that of the company assets used, operating in compliance with the company's Code of Ethics.

Training

The "Danieli Academy" is the kingpin and the organisational centre of the corporate training system and it pursues the dual objective of promoting and improving the growth and development of human resources and of fostering and consolidating corporate vision and values.

The "Danieli Academy" is a business school in the company to support both the process of change and the organisational development, as well as a place of learning where resources are enhanced through professional consolidation and team work with the support of Universities and of local High Schools. The Group is also determined to create new development opportunities, with particular reference to technology and employment, and it actively cooperates with major Universities and Education Institutions, sponsoring innovation projects and offering concrete suggestions to promote youth employment.

The refresher and training courses for employees (2.021 courses equal to about 124.199 hours) represent a company investment and are of different types with multiple goals:

- sharing the basic technical and technological knowledge that constitute the company's value and uniqueness today, and will increasingly do so in the future;
- development of specific technical – specialist knowledge and skills, including managerial ones, both general and running across the entire organisation, and tied to a specific role/function;
- consolidation of language skills;
- training workers on rules of behaviour and company procedures related to safety.

Collaboration with institutions for school and university education

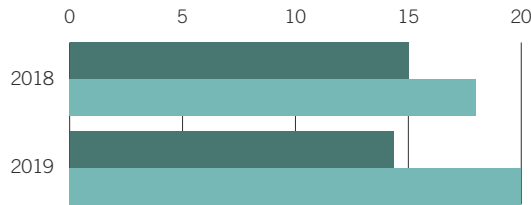
The Parent company constantly collaborates with High Schools and Italian and foreign Universities, organising and managing each year approximately 110 work-related learning projects and 40 curricular internships with related thesis.

Moreover, the company actively takes part in the study programmes of High Schools and Universities as follows:

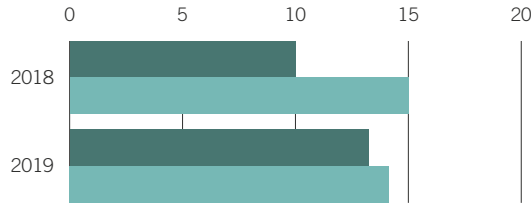
1. frontal lessons;
2. organising guided tours in the company;
3. taking part in vocational meetings aimed at student work placement;
4. taking part in career days.

The company is a founding member of the Fondazione ITS Malignani of Udine and sponsors each year the Mechatronic Course that has 2 classes totalling 50 students.

**Danieli Group.
Rate of new employee
hires (%)**



**Danieli Group.
Rate of employee
terminations (%)**



■ Male
■ Female

Each year, approximately 100 newly-qualified students and new graduates are hired by Danieli & C. Officine Meccaniche S.p.A. with a professionalising training contract.

This initiative focuses on young people to stimulate them in a training course that essentially gives them four perspective elements of development, which are of crucial importance today:

1. a highly specialised career, within a multinational context;
2. guarantee of recruitment at the end of the training and work placement course;
3. a remuneration aligned with that of the personnel of the same level from the beginning of the training course;
4. the possibility of taking a highly specialising training course thanks to the support of expert business tutors (training on the job) and to the participation in training courses (Danieli Academy).

The focus on young talents is also emphasised by the annual sponsoring of scholarships and graduation awards for worthy newly-qualified students and new graduates in technical and scientific branches.

Company portal

In addition to the company website, the Danieli Synapse company portal is also available for each employee, allowing immediate interaction with the company, guaranteeing up-to-date information on topics of specific interest, as well as services and assistance on safety and governance in the broadest sense. Each employee can customise the service that is continuously updated and guaranteed even on smartphones.

IT security

A special attention was paid to the company for business protection concerning Cyber Risks operating on several fronts:
— dedicated personnel training on a worldwide basis,

- also with dedicated interactive courses;
- cognitive analysis of system, network and user behaviour to reduce the time required for accident interception;
- BIA revision (Business/IT alignment), gap identification and application of corrections to machines and software;
- revising and publishing safety policies;
- accident management standardisation.

All the above-mentioned activities are covered by a dedicated budget, and the high standard of our systems (as Danieli is a world leader in the development of Hi Tech technologies) avoided today any opening of network thanks to existing firewalls.

Research, Development and Product Quality

Danieli concentrates its research and development activities exclusively in the technological areas falling within the Group's operating sector (metal production and production of machinery for the metal working industry), starting with the development of the primary process and ending with the finished product (in practice, from ore to finished product).

In summary, the following process areas are covered:

- reduction of iron ore;
- melting;
- casting;
- rolling;
- finishing;
- management of non-ferrous metals.

The ability to develop new technologies and technological packages in the sectors indicated above is for the Danieli Group a fundamental ability to maintain competitiveness in the steel and aluminium market.

The research process usually develops in an orderly manner:

- starting from the collection and analysis of data from existing plants;
- then developing studies on the physics, chemistry and mechanics of products validating the conclusions with mathematical models and laboratory tests;
- continuing with the 3D engineering of the plants (operating them also in a virtual manner);
- and completing with the implementation of prototypes and/or industrial equipment in the laboratory or at customers where to carry out tests of production and performance.

Research results in the form of ideas, concepts, technological approaches and operational capabilities represent an important intangible asset to ensure Danieli's technological leadership in the market. The protection of intellectual property plays a strategic role for the company that every year invests countless resources to develop new products and new technologies to be applied in industrial solutions offered to customers.

The maintenance of know-how and existing patents requires a constant updating activity that is also carried out with dedicated projects and with the involvement of the main local universities.

The total annual expenditure of about 200 million euro includes both prototype and direct research and related expenditure for innovative projects without

Energy - GRI 302-1	June 30, 2019	June 30, 2018
Energy consumption by type of fuel and process		
LPG by production process (GJ)	13,833	9,820
Methane gas by production process (GJ)	2,882,470	3,107,090
Diesel for non-production process (GJ)	20,419	33,763
Petrol and other fuels (GJ)		
For company cars (owned and rented) (GJ)	18,056	2.104
Electricity consumed (GJ) of which	3,888,804	3.816.476
Electricity purchased (GJ) of which	3,881,542	3.808.754
Electricity from renewable sources (GJ)	43,513	1.712.094
Electricity from non-renewable sources (GJ)	3,838,030	2.096.660
Internally produced and self-consumed electricity (GJ), of which	7,261	7.722
produced by photovoltaic plant (GJ)	4,363	2.502
produced by an ORC (Organic Rankine Cycle) plant (GJ)	2,898	5.220
Total energy consumption (GJ)	6,823,582	6.969.253

Notes: The conversion factors used are taken from the document "UK Government – GHG Conversion Factors for Company Reporting 2019". Some items that contribute to the determination of the Group's energy consumption were partly estimated, using criteria that can provide as accurate and exhaustive a representation as possible. Environmental data refers to the Danieli Group. As regards the Parent Company, in addition to its head office, the main Italian local units are also included.

For 2018/2019, the collection method was updated with a view to a continuous improvement in data presentation. Consequently, ABS S.p.A. was not included in the calculation of energy consumption from renewable sources. The portion of electricity purchased from renewable sources does not have Certificates of Guarantee of Origin. Therefore, the calculation of indirect CO₂ emissions according to the Scope 2 Market-based logic also takes this portion into account.

Total volume of water withdrawn with a breakdown by source

GRI 303-1	June 30, 2019	June 30, 2018
Surface water utilisation (m ³)	547,511	252,392
Groundwater utilisation (m ³)	1,157,072	1,519,684
Municipal water utilization (m ³)	345,230	281,702
Total water utilisation (m ³)	2,049,813	2,053,778

Greenhouse gas emissions into the atmosphere (t)	June 30, 2019	June 30, 2018
GRI 305-1		
Scope 1 CO ₂ direct emissions	291,508	277,723
GRI 305-2		
Location-based Scope 2 CO ₂ indirect emissions	391,629	435,366
Market-based Scope 2 CO ₂ indirect emissions	539,132	512,524

Other pollutant emissions into the atmosphere

GRI 305-7	June 30, 2019	June 30, 2018
NOx Nitrogen oxide (t)	809	701
SOx Sulphur oxide (t)	14	18
Dust (t)	73	79
CO (t)	1,129	1,595
Dioxins and furans (PCDD/F) (g)	0	1

Note: The data for other pollutant emissions into the atmosphere have been estimated on the basis of the measurements and analyses carried out at the emission points.

margins and the first industrial applications that require a strong commitment for the company in start-ups and performance tests.

In Italy, there is a Research Centre with about 150 employees with a new structure opened in 2017 to serve the machinery and plant sector and in France there is a Research Centre with about 25 employees to serve the steel sector to offer customers new alloys for industrial applications while Innoval Technology Ltd. operates in the UK with its own laboratories and offers innovative solutions to customers operating in the aluminium sector

Product quality

Meeting deadlines and quality of the products supplied in line with the obligations contracted towards the customer is the main objective of the company and of its employees to obtain customer satisfaction. To achieve these results, the Group adopted a Corporate Quality Policy based on company values and culture that defines construction methods, quality standards and performance indicators to be followed to prevent product non-conformities and provide quality goods and services contractually required.

Therefore, the Danieli quality system operates in compliance with the standards required by the certifications:

- ISO 9001:2015
- ISO 3834-2:2005
- EN 1090-1:2009 + A1:2011

ensuring that the products supplied are manufactured in accordance with the customer's expectations and in compliance with contractual, safety, statutory or regulatory obligations.

The standardised application of rules and processes across all Group units represents company know-how available to all employees to identify Best Practices to be followed in all Group factories, always guaranteeing the same level of quality and safety.

The production of machinery for the metal industry and the production of steel both require compliance with regulations, laws and requirements issued by national and international directives whose observance is required and regulated by the production specifications envisaged by the company and ABS S.p.A. that envisage the use of technical personnel trained and aware of the limits envisaged and imposed by applicable standards and regulations. Finally, the company's quality system envisages verification plans and controls to ensure compliance with the followed production standards.

To ensure the prevention and mitigation of health and safety risks to which customers are exposed, the Group obtained certifications attesting to compliance with the required standards on product quality (the company ABS S.p.A. obtained the ZF certificate), prepares accurate manuals for the use and maintenance of the plants, organises courses available to customers for the training of personnel who will work on the plants sold.

Moreover, note that ABS S.p.A. undertook to purchase raw materials from sources that certify an ethical and sustainable production chain.



DaNews: the quarterly magazine of Danieli Group provides readers with thorough information about the activities and the technology developments carried out by Danieli Product Lines.

Commitment to the Environment

For Danieli, environmental protection is not only a priority for the Group in relation to the production activities directly carried out in both the steelmaking and plantmaking sectors, but also an opportunity for the latter to be promoted to customers to enable them to comply with applicable legal requirements, and a conscious use of resources as part of a continuous improvement process in line with best practices.

The Group's environmental protection approach is aimed primarily at ensuring compliance with the legal requirements applicable to its own production activities by identifying, monitoring and mitigating all related environmental aspects:

- using appropriate safety procedures and efficient technical prevention systems;
- developing new technologies (also with HOSHIN projects) that allow a rational use of natural resources (raw materials, energy, water and waste management);
- achieving an increasingly effective mitigation of pollution, GHG emissions, waste, noise and any inconvenience to the local communities concerned;
- by raising personnel awareness through specific training and education.

The Danieli Group defined reference targets in order to maintain high environmental protection standards:

- promoting a culture of health and environmental protection in all workers and their families;
- designing plants with ever better performance from the viewpoint of the environment and workers' health and safety;
- constantly informing and training workers on general and specific risks, on rules of behaviour and company procedures;
- investments of economic, technical and human resources to achieve environmental protection goals for Danieli and for customers;
- promoting knowledge of environmental regulations and generating widespread awareness of their importance, by example and through systematic oversight of their compliance also along the supply chain used by the Group;
- improving waste management by providing specific labelled containers and dedicated areas bearing appropriate signs, and through more accurate separation of waste for disposal;
- improving hazardous materials management by identifying and labelling all containers, providing containment basins and suitable absorbing materials in case of spills, conducting practical emergency simulation exercises.

In the production of metals, the "green technologies" are those that allow to limit waste and emissions with lower consumption of raw materials in the production process, resulting not only in benefits for producers but also in reductions in the use of water and GHG emissions.

In new projects and in the modernisation of existing ones, the use of innovative design, logistics and plant layout using "Best Available Technologies" (BAT) make production more efficient and clean, above all by reducing energy consumption, which is one of the main sources of CO₂ emissions.

Products such as the Q-ONE that allows to digitally

power the electric furnaces preventing disturbances on the network will allow their better sizing at the service of the whole community reducing consumption, waste and Flicker disturbances.

The development of processes that continuously manage the casting and rolling phase (MI.DA and QSP-DUE) and the treatment of products at lower temperatures with induction heating systems (QHEAT) already allow us to obtain quality products with a substantial increase in efficiency compared to the past.

The lower use of natural gas with the use of controlled flame burners and the replacement of hydrogen in direct reduction plants will lead to steel production with a significant reduction in CO₂ emissions.

The future will be even better thanks to "green" research using predictive models and artificial intelligence, transferring the know-how developed through Danieli's research to the service of customer plants for highly efficient production and low waste.

During the launch of new projects (especially in the plantmaking segment), the company always carries out a risk assessment, which also identifies significant environmental issues related to the development of the job order at its customers' production sites, and identifies the measures needed to mitigate the impact on local communities, which in most projects are manageable and extremely limited.

The Parent Company (which covers both the operating unit as well as head office and the headquarters of the Research Centre), ABS S.p.A., ESW GmbH, Danieli Met. Equipment & Service (China) Co. Ltd., Danieli Automation Co.Ltd. and Danieli Co.Ltd, Danieli India Ltd developed an ISO 14001 certified Environmental Management System. The subsidiary ABS S.p.A., whose business activities are highly energy-intensive, also implemented an ISO 50001 certified energy management system in which an energy audit is carried out every 4 years.

Energy consumption, emissions and water withdrawals are the main indicators of the environmental impact of the Group's production processes. In particular, as part of energy efficiency initiatives, the Parent Company and Danieli Automation S.p.A. installed some photovoltaic systems covering the roofs of industrial buildings and the company ABS S.p.A. installed an ORC (Organic Rankine Cycle) system to produce energy using the heat from the fumes of electric furnaces used in the production of steel.

Reading the data, it can be seen that 93% of energy consumption, 84% of water utilisation and 97% of direct CO₂ - Scope 1 emissions are related to the Danieli Group's steelmaking segment, while the residual portion is related to the plantmaking segment, which has a much lower environmental impact than the steelmaking segment, which requires careful and continuous assessment of all the environmental parameters associated with production.

Due to the specific nature of its activities, the steelmaking sector uses a series of procedures to identify all the environmental aspects that may suffer a beneficial or negative impact as a result of interaction with the production activities of the plants:

- Under normal operating conditions
- In abnormal or extraordinary operating conditions
- In case of emergency,

and manage any substantial changes to the internal and external context of the factories, in particular with regard to the quality of environmental components and compliance requirements.

The identification of environmental aspects and the assessment of their significance is carried out by following a matrix assessment methodological approach, identifying both direct (compliance with laws/regulations and impacts on all parties involved) and indirect (regulatory, economic aspects based on the influence related to Danieli's activities) environmental aspects.

Procedures and assessments are periodically updated and every time interventions are made on the plants that modify their characteristics and performance.

Environmental sustainability

The steel industry accompanies the economic growth of the world community contributing to social welfare with an increasing respect for the environment following the guidelines defined by the United Nations (UN-SDGs) and in line with the commitments undertaken with the COP21 Paris Treaty. The World Steel Association identified eight main parameters to measure the sustainable performance of steel production divided into three families:

- A) environmental sustainability
 - reduction of Greenhouse Gas Emissions (GHG);
 - reduction of energy consumption;
 - efficiency in production;
 - environmental protection;
- B) social sustainability
 - safety in production;
 - development and training of human capital;
- C) economic sustainability
 - innovation in new technologies;
 - equitable distribution of value added.

The development of these indicators in the past 3 years shows a constant commitment in the protection of the environment and in social responsibility and an improvement in economic sustainability related to increased investments in new technologies with an increased value added distributed to the community.

Danieli became an integral part of these results by accompanying (with the equipment supplied) customers in the process of technological and productive improvement with innovative and sustainable solutions.

In the construction of plants, Danieli guarantees the principles described above also to customers by implementing technical solutions in line with the contractual obligations undertaken and with those envisaged by the various regulations in force, both in terms of energy performance and in terms of reduction in emissions, in order to minimise their environmental impact.

The Parent Company also took part in the Carbon Disclosure Survey, a programme aimed at monitoring the reduction of greenhouse gas emissions both for the public sector and for private companies in order to mitigate the risk of climate change. In 2018, it was in a good position in the rankings of Italian and European companies. This excellent goal was achieved thanks to our commitment to developing SustSteel (increasing efficiency in steel production) and Green Steel (minimising environmental impacts in steel production) solutions for the Group and our customers.

On June 4, 2019, Danieli obtained confirmation from SBTi (Science Based Targets Initiative) that its targets for reducing GHG emissions by 2030 fall within the "well-below 2°C trajectory" global decarbonisation target, i.e. in line with the level of decarbonisation required to keep the global temperature increase below 2 degrees with respect to pre-industrial temperatures. This certification was obtained on the company's 2030 targets for reducing emissions related to Scope 1 and Scope 2 by 36% compared to 2017 levels and by 62% per dollar value added compared to 2017 for indirect emissions related to Scope 3.

The use of the parameters prepared by Quantis Evaluator guaranteed a refining of data entered for the completion of the CDP questionnaire, above all in defining the information related to indirect emissions (Scope 3), by obtaining a better quality of data presented; moreover, by joining the Science Based Initiative, Danieli received further validation for long-term targets for Scope 1 and 2 emissions related to direct and/or directly manageable activities. The achievement of emission targets results in the objective of reducing greenhouse gas emissions to keep the global temperature increase below 2 degrees compared to pre-industrial temperatures. The definition and achievement of Science Based Targets allows, on the one hand, to make a contribution to the challenge against climate change and, on the other, to stimulate innovation and increase competitiveness.

Waste management is carried out in compliance with the regulations in force, following their methods of disposal and destination envisaged by the law classification for each specific category of waste. Disposal activities are carried out by certified external companies where permitted by the relevant regulations and with the use of the most up-to-date and efficient technological solutions on the market.

Over the years, the Danieli Group implemented a policy of reducing the consumption of raw materials that enabled it to optimise them. In particular, last year, heat treatment activities increased to improve product quality by using the plants efficiently with integrated and waste-free production cycles. In particular, the ABS S.p.A. company and the entire Steel-making sector are the Group's most impactful companies in terms of raw material consumption. The following table shows the materials used during the year by ABS S.p.A., in which non-recyclable materials include gases and refractory materials, whereas recyclable materials include scrap, metal machine parts and packaging.

Note 1: Hazardous and non-hazardous waste disposal operations listed under "Other" concern physical-chemical treatment (D9) or preliminary storage (D15) in authorised plants. Thanks to an improvement of the reporting system in the 2018/2019 reporting year, it was possible to collect data within the organization on the waste produced with more detail for its disposal items, improving the coverage of the indicator.

Waste (t)	June 30, 2019		June 30, 2018	
	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous
GRI 306-2				
Reuse	54			
Recycling	19,595	38,768	24,009	45,541
Landfill	652	99,805	13,118	110,960
Incineration	703	3		
Recovery	132	6,455		
On-site storage		14,633		
Other	16,266	5,079		
Tons of waste	37,400	164,743	37,127	156,501

(Note 1)

Note 2: For non-recyclable gas data, in accordance with GRI requirements, methane has not been considered.

Materials purchased by weight

GRI 301-1	June 30, 2019	June 30, 2018
Non-recyclable gases (m ³)	59,007,380	61,907,613
Purchased non-recyclable materials (t)	300,923	159,241
Purchased recyclable materials (t)	1,272,318	1,233,479

(Note 2)

Directly generated and distributed economic value

in millions of euro	June 30, 2019	June 30, 2018
A. Directly generated economic value	3,080.5	2,718.8
B. Distributed economic value	2,890.9	2,547.3
(A - B) Economic value retained	189.6	171.5

Analysis of the distributed economic value

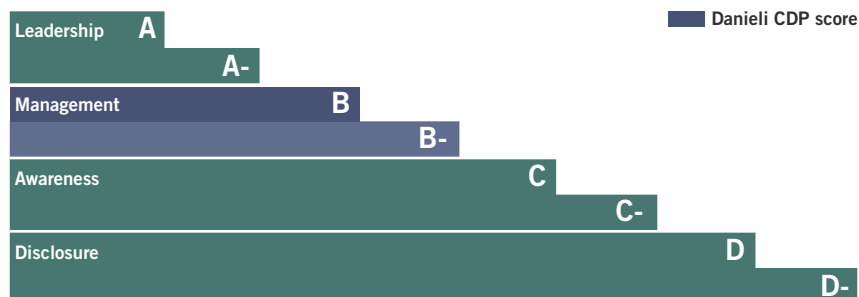
in millions of euro	June 30, 2019	%	June 30, 2018	%
Operating costs	2,344.3	81.1	2,027.6	79.6
Personnel remuneration	472.7	16.4	442.0	17.4
Public administration remuneration	44.5	1.5	35.1	1.4
Venture capital remuneration	8.2	0.3	8.2	0.3
Non controlling interest remuneration	(0.3)	0.0	(0.4)	0.0
Ancillary components	13.8	0.5	27.6	1.1
Lender remuneration	6.1	0.2	6.1	0.2
Donations and sponsorships	1.6	0.1	1.1	0.0
Total distributed economic value	2,890.9	100.0%	2,547.3	100.0%

Score Levels

Score summary statement.
Companies at Management level are taking further steps to effectively reduce emissions, indicating more advanced environmental stewardship.



Understanding Carbon Disclosure Project (CDP) score. The Group' Scoring Level (Disclosure, Awareness, Management, Leadership) demonstrates the company's level of environmental stewardship, and the actions and approaches in managing climate change. Danieli has received a score of B which is within the Management band. This is higher than the general average of B- and higher than the Europe regional average of B-. The band of Danieli is colored blue, in light blue the sector average.



Supply Chain

The quality of the supply is a key element for Danieli and the supplier is an important asset with which to build relationships based on principles of transparency, integrity and trust that can last in the long term.

In the Plant and Steel sectors, the Danieli Group uses a total of around 5,000 suppliers to service its activities and factories in the West and the East:

- in the steel sector, there are about 500 strategic suppliers for about 2,000 customers;
- in the machinery sector, there are about 4,500 strategic suppliers for about 500 customers.

The main suppliers are subject to technical and ethical pre-qualification according to the Code of Ethics, company anti-corruption directives and relations between individuals and the management of privacy. During the year, the Parent Company implemented a specific procedure to obtain acceptance of the Code of Ethics by active suppliers, achieving 100% coverage.

Danieli is investing in the supply chain to prevent procurement risks and to ensure their compliance with existing environmental and social issues.

The choice and management of suppliers follows a guideline that envisages:

- segregation of duties;
- the use of a Vendor list managed by a computer system;
- acceptance of general conditions of supply including security, environment and human rights issues;
- acceptance of the provisions of the Danieli Code of Ethics;
- getting through a Supplier Quality Development (SQD).

The Group manages its activities with suppliers with relations based on transparency, selecting them correctly and impartially based on quality/competitiveness checking of the offers and without taking advantage of any situations of weakness or dependence.

Danieli is increasingly using only qualified and certified suppliers to limit the occurrence of technical, qualitative, environmental and safety problems in its supplies, reducing commercial and reputational risks for the company.

The qualification process is managed by the Parent Company's Procurement Department and envisages:

- the completion of questionnaires to identify their company structure, governance and financial data, certifications, environment and safety and human rights;
- specific in-depth sessions with visits to the production units to assess the technical and operational capacities and quality procedures followed in general and specifically for the types of products and services of interest to the Danieli Group;
- scheduled Quality Audit and Verification Sessions at suppliers even without prior notice to the latter.

Specific contractual clauses are included in contracts with suppliers who undertake to comply with the Code of Ethics, in addition to the requirements of Model 231 and the requirements of quality, health and safety.

Supplier performance and compliance monitoring activities are carried out by Danieli personnel during the order Expediting sessions.

In the plantmaking segment, there is a high presence of high-tech knowledge-intensive suppliers that are part of a "make or buy" strategy with an impact on noble components and on solutions offered to customers.

In the steelmaking sector, suppliers are engaged in continuous deliveries and large handling volumes where the quality and punctuality of the service are crucial to ensure a rational and efficient production process.

Danieli took part in the "Corporate Social Responsibility" qualification procedure on the Ecovadis platform, obtaining a Silver rating with 63% of positive parameters; new targets were defined and will be brought to the attention of management to integrate the current profile and further improve the company's ranking.

Community Commitment

The Danieli Group believes in its social role within the complex systems in which it operates at a global level and contributes to the development of the areas in which it operates with projects in favour of the social communities present there (social initiatives, sponsorships and philanthropic donations) by following the guidelines and counterparty checks envisaged by the ISO 37001 standard and with budgets approved by company management.

Most of the actions carried out can be classified into 3 macro areas of intervention:

- social and charitable
- culture, art and education
- sports and entertainment

Danieli takes an active part in the development of positive relations with local communities, defining and managing initiatives in their favour (e.g., the initiatives to restore the historical and architectural heritage on buildings of public interest in the city of Udine, the Telethon marathon in Udine, work in support of local communities and medical research, contributions to local musical events, support to schools through contributions to expand classrooms/improve learning instruments, etc.).

During the period, Danieli continued its work to promote architectural restoration in the main sites of cultural and historical interest of Udine and also took part in tangible support actions in favour of the people damaged in summer 2016 by the earthquake in Central Italy.

The support guaranteed was of particular significance in terms of entity and destination with a donation to the municipality of Udine for the conservative restoration of the covering of the municipal Castle of Udine that will be implemented during 2019.

The Danieli Foundation assures health care for former employees and their families.

The Turismo 85 S.r.l. travel agency, company belonging to the Group, offers attractive prices to employees, proposing monthly tourist destinations at

discounted prices and day trips, promoting co-worker socialisation outside working hours.

In addition to direct sponsorship of Group companies with a number of local sports teams, the Danieli Sports Group was also set up in Italy. It operates as an association open to the community (with more than 2,000 members) founded to promote aggregation, physical fitness and Group spirit, while maintaining a healthy sense of sporting competition. The latter has also promoted a series of agreements with various commercial and service operators in the area to ensure favourable conditions for its members (employees and non-employees).

Many initiatives have been developed by Danieli for its employees:

- Concerts organised for employees and family members
- MetYou project for the management of Soft and Hard Skills of personnel
- "Pink" (gender) parking (at the Parent Company and in ABS S.p.A.)
- Family party and open factory in ABS S.p.A.
- Parent Company Christmas party and lottery
- Blood donation with mobile blood bank
- Support activities for personnel employed in operating units in Thailand, China and India.

During the year, the Parent Company, together with Confindustria Udine, supported the Sa.Pr.Emo - Salute Protagonisti Emozioni Project, an initiative consisting of various coordinated actions for the prevention of the distress and illegality of narcotic substances. The activity was aimed at high school students, teachers and more generally young citizens and families in the area.

In June 2019, the Parent Company invested in the redevelopment of the Locanda, the historic hotel near the headquarters of Buttrio. The project involves the refurbishment of the hotel structure, the renovation of existing sports fields and the construction of other facilities that will also be made available to the local community.

The company Telefriuli S.p.A. is part of the Danieli Group and working in the region for more than 20 years, with the intent to support the issuer in proposing to the community a local television and news report highly dedicated and rooted to the territory.

Danieli provides the children of its employees and of contractor workers with the support of the company nursery school, accommodating family needs through work schedule flexibility and opening days, and kindergartens, providing the possibility of caring for children from 3 to 6 years of age with the same flexibility of working hours and hospitality. The traditional training offer is supplemented by permanent English language labs, outdoor activities of contact with nature, the weekly proposal of psychomotor practice sessions according to the Aucouturier method, music sessions with a master and only for kindergarten children, an annual course that provides a day every other week to spend at a teaching farm in the area.

The officially recognised primary school "Cecilia Danieli" (now with a new accommodation facility), both for the families of the employees and for the families of the local community, where the Italian tradition blends with an innovative approach to the English language

and to new technologies was opened in September 2016. An innovative teaching path based on lectures with mother-tongue teachers and on the laboratory approach to science and new computer technologies. The English Plus course envisages 5 hours of weekly English Language from the first class and modules of Science, Geography, Art and Computing (3 to 5 hours a week) with mother-tongue teachers (CLIL - Content and Language Integrated Learning method).

In June 2019, the Primary School was certified as a "Cambridge Exam Preparation Centre". The recognition means that the prestigious English institution recognises the specialisation of the language preparation of the students thanks to the quality of the training offer and to the structured approach to the learning of the English language.

The Tech Plus course consists of specific programming and educational robotics (Scratch and Lego Wedo) enabling the approach of the child to "coding" and to technology through the construction of animated objects. It ensures a certification of skills released by Eipass Junior (European Informatics Pass). During the year, the Group invested in the project, still in its initial phase, to set up a dedicated structure for the Middle School, as a natural development of the educational process already created.

Participation in trade associations

The Italian companies of the Group are registered with Confindustria in their own local areas whereas Danieli is also registered with the World Steel Association with headquarters in Brussels, Belgium and with the European Engineering Industries Association with headquarters in Brussels, Belgium, while the subsidiary ABS S.p.A. is registered with the Italian association METALFER.

Directly generated and distributed economic value

Tables on page 33 show the distribution of economic value among stakeholders through the reclassification of the figures of the consolidated income statement. In particular, the determination of the generated value added shows the wealth created by the Group and its method for distributing it to the identified stakeholders.

Non-recurring ancillary components derive from net financial income and expenses (excluding the expenses relating to payables to banks), gains and losses from foreign currency transactions and income and expenses on equity investments.

Net global value added is divided among the following beneficiaries: personnel (direct remuneration consisting of wages, salaries, employee severance indemnity and indirect remuneration consisting of social security contributions); Public Administration (income taxes and other taxes and duties); venture capital (dividend distribution); third parties (non-controlling interests); company remuneration (reinvested earnings); remuneration to lenders (interest on loans) and donations and sponsorships (sponsorships, donations and other forms of contribution).

Treasury shares

As at June 30, 2019 the company held 2,961,213 ordinary shares and 3,945,363 savings shares with a par value of 1 euro each, for a total par value of 6,907 thousand euro (8.49% of the share capital). No ordinary or savings shares were purchased or sold during the year.

Events occurring after the end of the reporting period

In a world steel market which is still strong and increasing, company operations continued with no significant events occurring since June 30, 2019. Alignment of currency items to the exchange rate prevailing on September 25, 2019 would result in an increase of approximately 20.0 million euro in unrealised exchange differences for the year compared to the figure recorded considering the exchange rate as at June 30, 2019.

Except for what has already been discussed, no other events occurred after June 30, 2019 which could have had an impact on the economic, equity and financial position as shown in the balance sheet, the income statement and statement of comprehensive income at said date or required further adjustments or additional notes to the consolidated financial statements and to the separate financial statements.

Outlook

We believe that in 2020 the world economy will show a lower level of growth but still in line with that of 2019; in particular, stability can be expected in the USA and Asia but a slowdown in Europe, avoiding the activation of a global macro recession.

The solution of the BREXIT problem and of the Trade War between the USA and China, which in part limited world trade, could allow an acceleration in the process of economic growth, especially for the manufacturing and steel sectors, which remain the basis for the development of infrastructures and the metalworking industry.

In any case, steel consumption remains strong in 2019 and 2020 in absolute terms, growing significantly in ASIA and recovering in other countries.

The trend of the main players in the metals market to make targeted investments to improve production efficiency and product quality is confirmed, also by migrating production to countries where the general competitiveness package (including the presence of domestic demand, energy, ore and transport) can guarantee greater production cost-effectiveness, with good opportunities for new orders in the plant engineering sector to be added to the current order book.

Based on these premises, the Danieli Group will be able to register steady performance in the next financial year in the engineering and plantmaking sector, whilst in the steelmaking sector 2019/2020 is still expected to be good, substantially in line with the financial year just ended.

With these objectives in mind, the Danieli Group, in the plantmaking sector, will continue to consolidate its international structure and in the steelmaking

sector, important new investments will be made in Pozzuolo del Friuli and Sisak with the aim of widening the product range while also increasing production volumes, diversifying it towards more profitable ranges while maintaining competitiveness, quality and productivity.

The Group continues to pursue its efficiency objectives such as increased productivity, reduction in structural costs and innovation with the goal of improving competitiveness in the global market and ensuring an improved service especially to Southeast Asian customers where steel production is mostly concentrated.

There are no other significant unknown factors for the year ahead, barring unforeseeable events beyond our control.

Proposals by the Board of Directors to the annual general meeting

We express our appreciation and thanks to all those whose perseverance and professionalism contribute to maintaining our strong competitive position and high technological status in world markets. We rely on their enthusiasm, as well as on our own, as we seek to progress with the serenity, confidence and strength necessary to meet future challenges.

The financial statements of Danieli & C. Officine Meccaniche S.p.A. for the financial year ended June 30, 2019, which we submit for your approval, show a profit of 194,014 euro that we propose be allocated as follows:

Dividend payable from Nov. 20, 2019 (distribution date Nov. 18, 2019; registration date Nov. 19, 2019)		
to the 37,918,320 ⁽¹⁾		
ordinary shares		
euro 0.150 per share	euro	5,687,748
to the 36,479,670 ⁽²⁾		
savings shares		
euro 0.1707 per share	euro	6,227,080
Total dividends	euro	11,914,828
Distribution of extraordinary reserve	euro	-11,720,814
Total net profit for the year	euro	194,014

(1) net of 2,961,213 ordinary treasury shares held on September 25, 2019.

(2) net of 3,945,363 savings treasury shares held on September 25, 2019.

QSP[®]

THE MOST ADVANCED
CASTING-ROLLING
TECHNOLOGY
FOR QUALITY
STRIP PRODUCTION

DANIELI QSP EVOLUTION 25 YEARS OF CONTINUOUS PROVEN TECHNOLOGY ACHIEVEMENTS

QSP STRENGTHS

HIGH PRODUCTIVITY
PRODUCTIVITY OF
MORE THAN 4.0 MTPY

FUTURE FLEXIBILITY
FLEXIBLE PLANT CONCEPT
TO GROW WITH FUTURE
MARKET REQUIREMENTS

VALUE ADDED STEEL GRADES
PRODUCTION OF THICK
GAUGE API, ULTRA-THIN LC
& THIN HSLA AND AHSS GRADES

**LOWEST ENERGY
CONSUMPTION**
OPTIMIZED OPEX
AND ENERGY SAVINGS

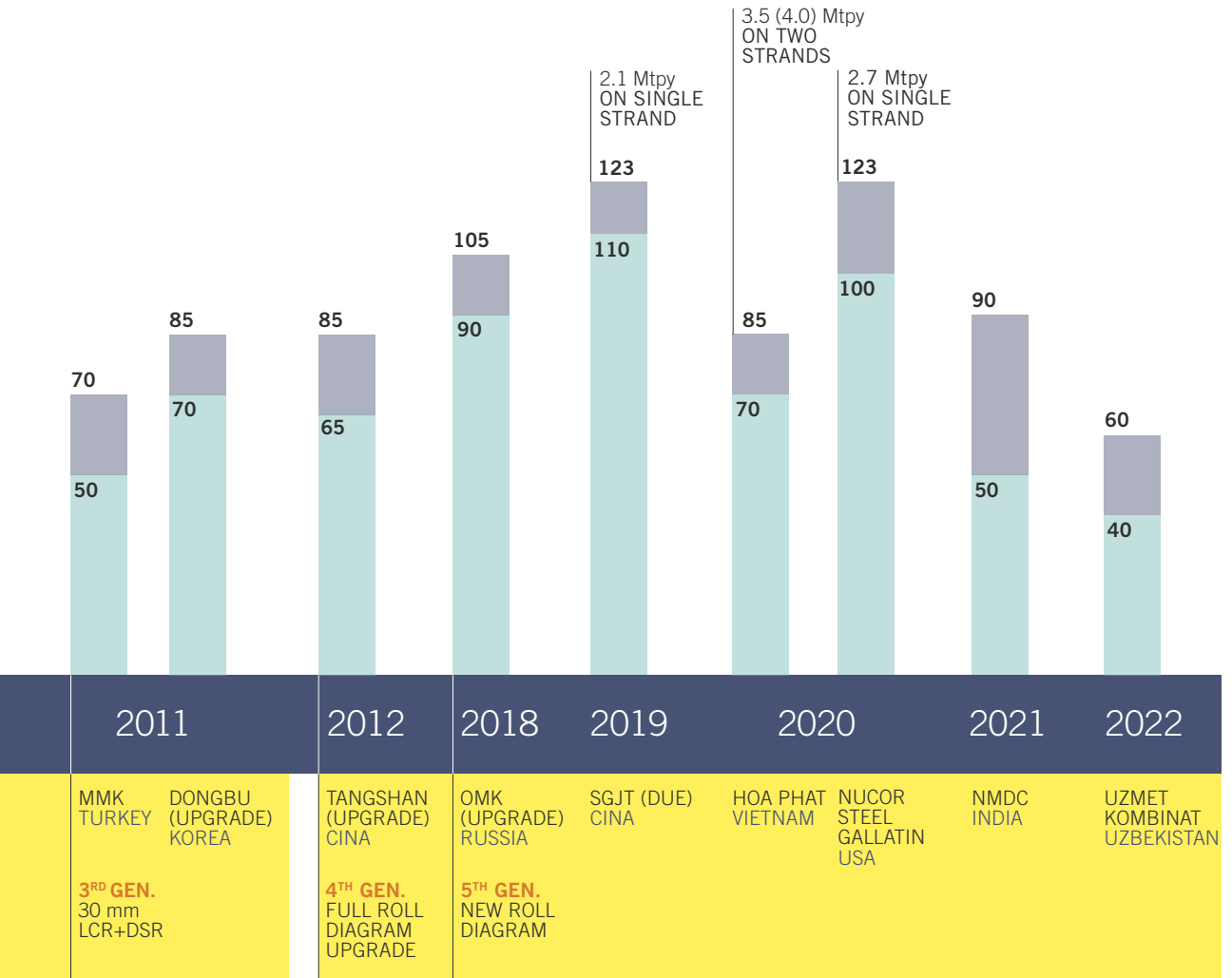


Casting speed
4.0 — 4.8 m/min

Casting speed
4.5 — 5.5 m/min

Danieli QSP is the first thin-slab casting rolling technology able to produce peritectic steel grades since 1997 at Algoma, Canada, and API X70 Arctic steels at OMK in Russia since 2008. Quality and productivity have distinguished QSP over the years. Tangshan in China was the world's first thin-slab caster to surpass the 1.5-Mtpy per strand threshold.

Continuous product development and increased casting speed and slab thickness have led to the highest product qualities and productivities available on the market. QSP DUE -Danieli Universal Endless - the 5th QSP generation - is the only plant in the world operating in coil-to-coil, semi-endless and endless modes in a single line. Nucor Steel Gallatin will produce 2.7 Mtpy on a single strand.



Casting speed
5.0 — 6.5 m/min

DANIELI QSP

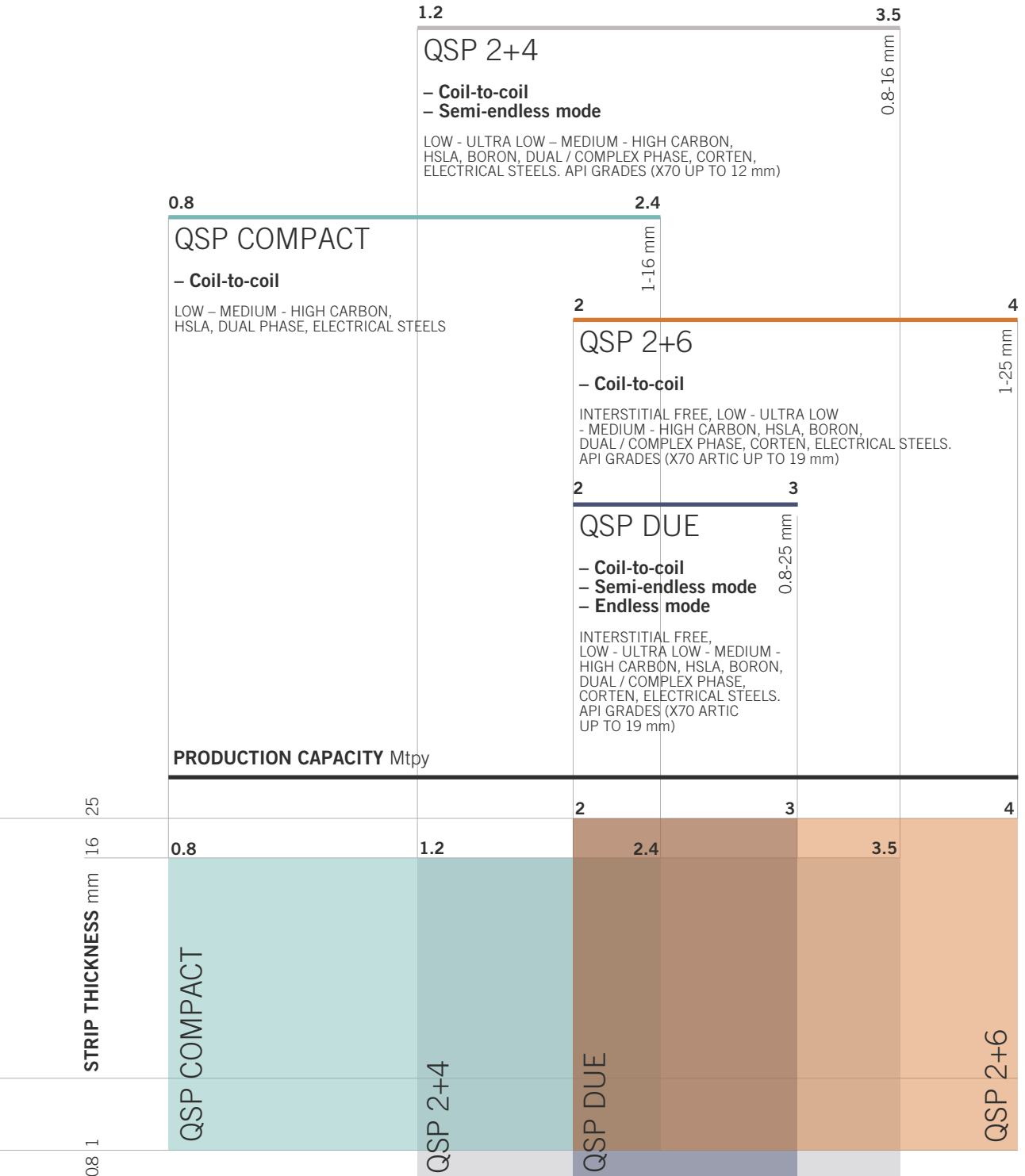
SAME TECHNOLOGY,
DIFFERENT LAYOUTS
FOR DIFFERENT
REQUIREMENTS,
LOOKING AHEAD

- > DUE / 3+5
- > 2+6
- > 2+4
- > COMPACT

The configuration diagram shows the ideal rolling mode for each strip thickness range. Depending on steel grade, strip thickness and volume of the specific products, they can also be obtained with different rolling modes. Meet the specialized Danieli Team to discuss your product requirements.

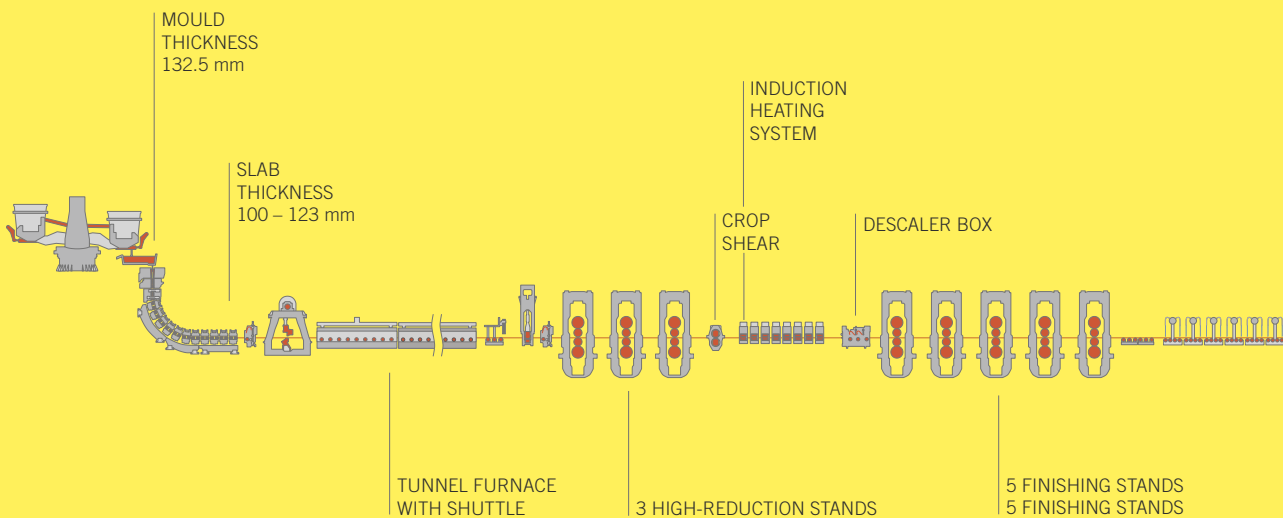
Danieli QSP answers for any product and production requirement with a flexible, winning concept available in different plant configurations to meet different customer requirements and market demands. The highest production flexibility through 3 rolling modes performed in one single line is achieved with the QSP DUE Danieli Universal Endless in operation at Shougang Jingtang, China. The Danieli QSP Compact configuration is designed for flexible plant expansion. Choose your hot-strip thicknesses, steel grades and production capacity from 1 to 4 Mtpy: QSP flexible layout solutions for coil-to-coil, semi-endless and endless for ultra-thin gauges, or all of them at once, will match your requests.

25	Coil-to-coil	
1.5		
1.5	Endless mode	Semi-Endless mode
0.8		



QSP-DUE® 3+5 AT SHOUGANG JINGTANG CHINA MAXIMUM PRODUCT-MIX FLEXIBILITY

IN INDUSTRIAL PRODUCTION SINCE OCTOBER 2019



The new DUE® plant commissioned at Shougang Jingtang in Hebei province, China, features an innovative layout (Danieli patented technology – US patent n. 8087449, January 3rd, 2012) developed in a continuous effort to improve existing processes and technologies, and to overcome their current limitations. Coil-to-coil and endless rolling of thermo-mechanical and multi-phase, ultra-thin and thick products are all possible in a single production line, to make high value-added niche products or mass-produced commodity-grade products. The layout and the optimized, effective combination of different energy sources make the DUE® a truly “green” plant, and significantly reduce OpEx compared to current benchmark thin-slab plants.



Productivity

2.1 Mtpy
on one casting strand

Rolling mode

Coil-to-coil,
semi-endless & endless

Plant length

290 m

Slab thickness

100 – 123 mm

Strip thickness

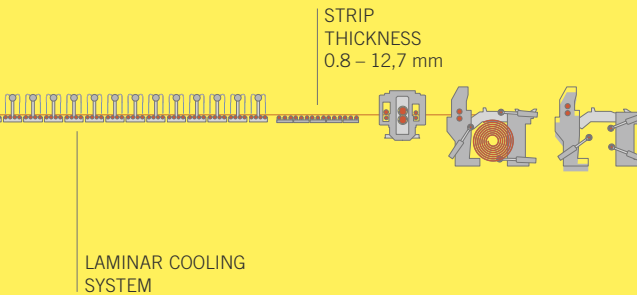
0.8 – 12.7 mm

Strip width

900 – 1,600 mm

Steel grades

Low- Ultra low- Medium-
High- Carbon, HSLA, Boron,
Dual / Complex phase,
Corten.



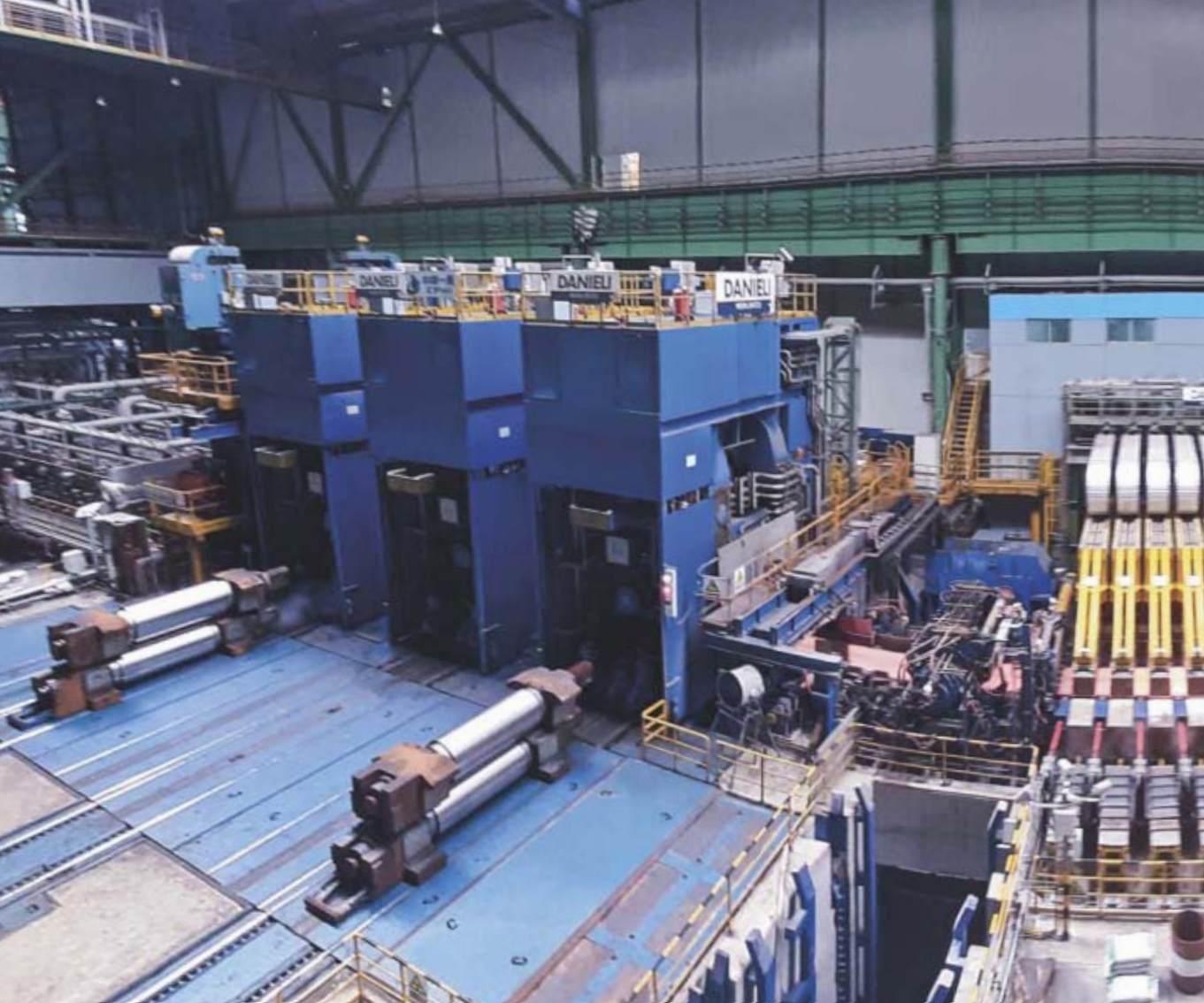
DUE / 3+5

The single-strand thin-slab caster is regularly producing 130-mm slabs (mould exit) reduced to 110 mm (TSC exit), using Danieli's well-proven Dynamic Soft Reduction technology.

Coil-to-coil rolling and semi-endless rolling already are consolidated production practices, the latter being the natural step to truly endless casting/rolling.

The DUE® at Shougang Jingtang has produced its first coil in full endless mode, with dimensions 3.00 mm x 1250 mm, MC grade, after rolling 45,000 t of HRC during hot tests, and producing 1.0 mm in stable endless rolling condition. The unique DUE® configuration is proving its outstanding flexibility performing different production modes.

QSP DUE is the all-purpose configuration in the QSP family. Flexible competitive production of ultra- thin and thick hot band to serve all markets, high-volume and niche products.



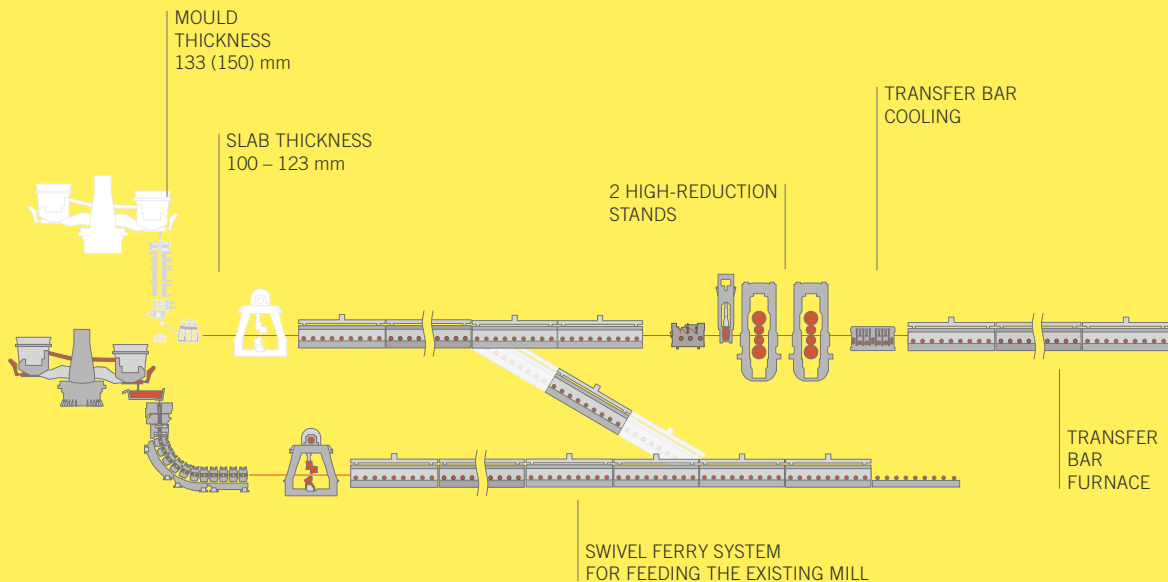
QSP-DUE® 3+5
AT SHOUGANG
JINGTANG CHINA /
MAXIMUM PRODUCT
MIX FLEXIBILITY



QSP DUE® -Danieli Universal Endless is the all-purpose configuration in the Danieli QSP family. With its three rolling modes available in one single line -coil to coil, semi-endless and endless- the QSP DUE® plant in operation at Shougang Jingtang is a major technology milestone in hot-strip production. Flexible competitive production of ultra- thin and thick hot band to serve all markets, high-volume and niche products, is performed thanks to QSP DUE®.

CONVERSION TO QSP AT NUCOR STEEL GALLATIN USA / HEAVY-GAUGE, THERMO-MECHANICAL ROLLED API LINE PIPE

CONTRACT SIGNING: NOVEMBER 2018
FIRST COIL: NOVEMBER 2020



Nucor Steel, a pioneer of the thin-slab casting and rolling (TSCR) technology, chose Danieli to upgrade its plant in Ghent, Kentucky, into one of the world's most modern steel plants, able to produce 3.0 million sht/y of premium grades like heavy-gauge, thermomechanical rolled API line pipe for Arctic applications and Advanced High Strength Steels (AHSS) for automotive markets.

Danieli's scope of supply will include a 188 sht DC EAF; twin-station LMF; new vertical-curved TSC; new tunnel furnace, with swivel (or "Z") configuration, and Danieli Centro Combustion Transfer Bar Furnace; adding two roughing stands and a new, compact transfer bar cooling; widening and



Productivity
2.7 MTPY
on one strand

Rolling mode
Coil-to-coil

Plant conversion
From CSP to QSP 2+6

Plant length
360 m

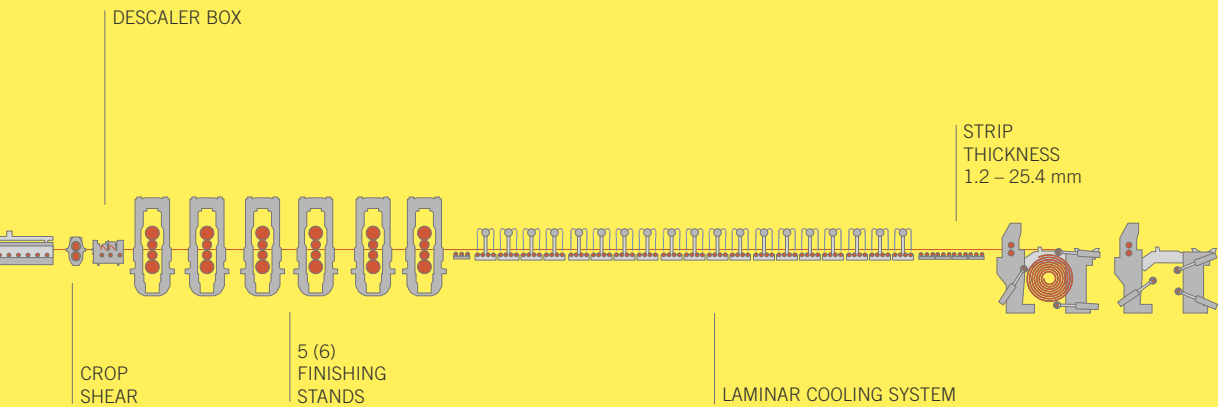
Slab thickness
100 – 123 mm

Strip thickness
1.2 – 25.4 mm

Strip width
900 – 1,870 mm

Steel grades
Low- Medium- High- Carbon,
HSLA, Boron, Dual / Complex
phase, API grades (X70 Artic
up to 19 mm)

2+6

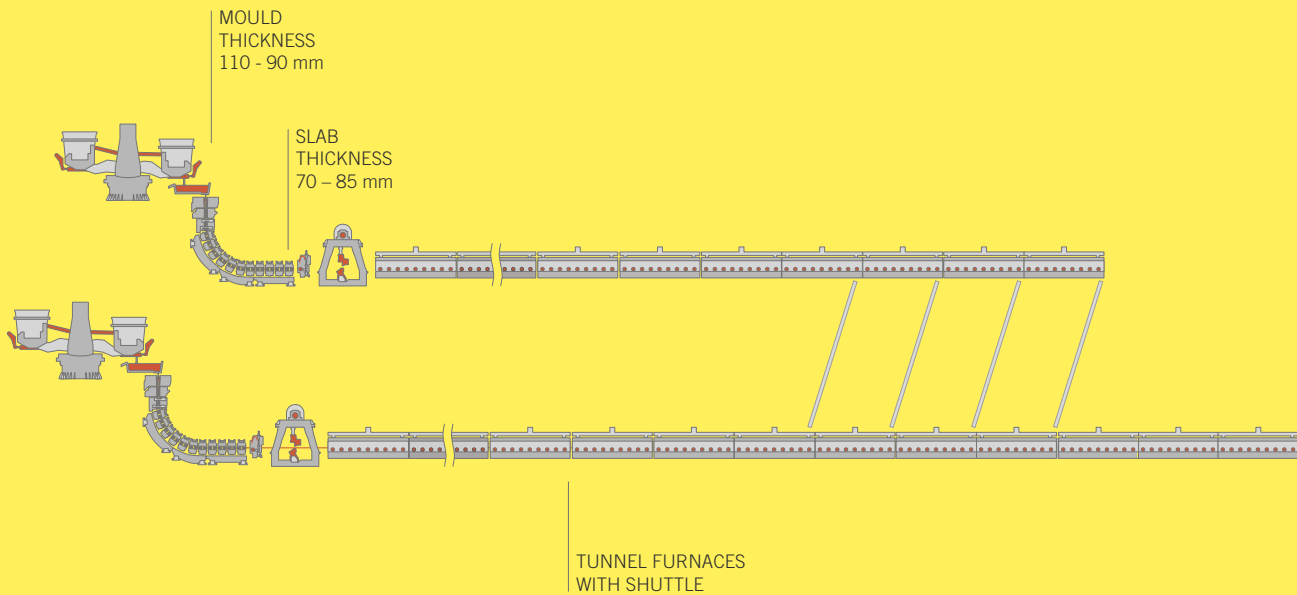


upgrading the existing finishing mill; integrating a high-pressure intensive cooling system on the run-out (ROT) for high-cooling rates; and complete new electrical and automation systems by Danieli Automation. The new mill layout will enable true thermomechanical processing by separating roughing and finishing rolling, along with tunnel and transfer bar furnaces. The advanced cooling system on the run-out table will offer the opportunity to develop premium steel grades. The challenges of this project will be mastered by a strong partnership between Nucor Steel and Danieli, setting a new benchmark for TSCR technology in terms of competitiveness and high-quality production.

Nucor Steel Gallatin QSP represents an innovative approach to convert CSP plants (vertical caster plus compact mill) to an ultra-modern and high-productive QSP plants, to produce high value-added steel grades.

HOA PHAT QSP COMPLEX IN VIETNAM ULTRA-HIGH HOT STRIP PRODUCTION CAPACITY

CONTRACT SIGNING: NOVEMBER 2017
FIRST COIL: APRIL 2020



Aiming to be a major Vietnamese steel producer, Hoa Phat investigated available processes and technological solutions to enter the challenging flat-products business.

The new QSP plant will be a cornerstone for HRC production in Vietnam, designed for an initial capacity of 3.5 Mtpy strip from 900 to 1,500 mm wide.

The proposed casters include Danieli's vertical curved design, taking full advantage of 25 years' operational experience to produce a wide product mix, including low-, medium- and high-carbon grades, high-strength low-alloyed, pipeline, API and more. The two Danieli Centro Combustion tunnel furnaces connect the casters and the mill and provide the fundamental



Productivity
3.5 Mtpy
on two casting strands

Rolling mode
Coil-to-coil

Plant length
390 m

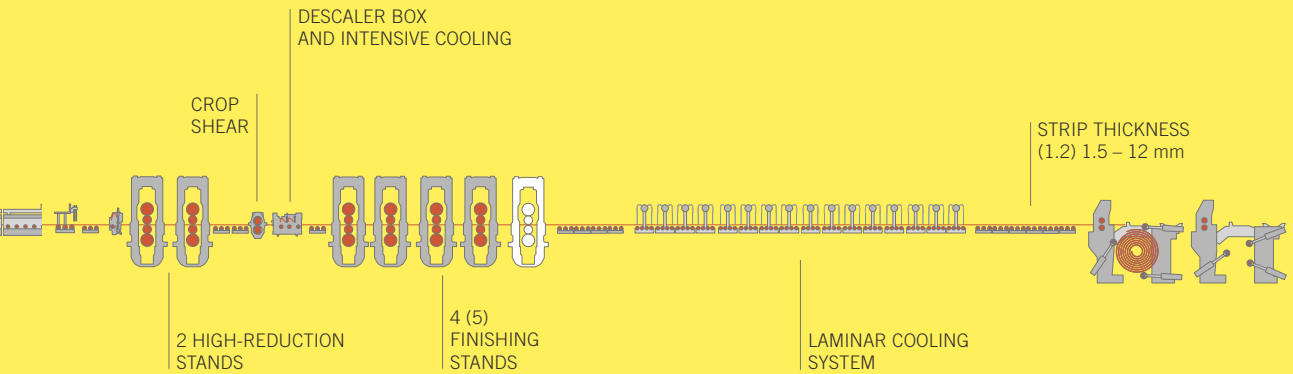
Slab thickness
70 – 85mm

Strip thickness
(1.2) 1.5 – 12.0 mm

Strip width
900 – 1,500 mm

Steel grades
Low- Medium-
High- Carbon, HSLA

2+4

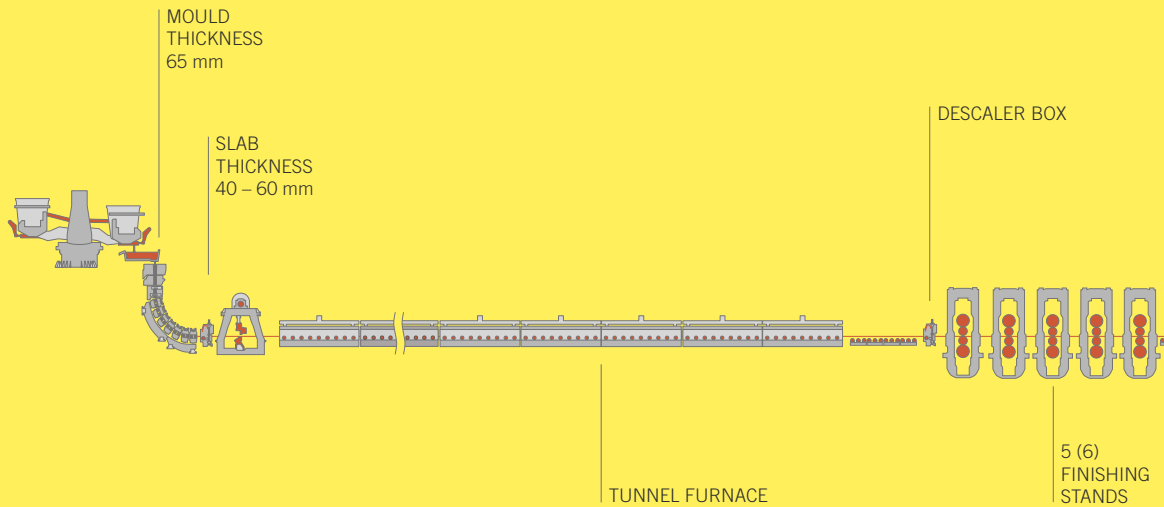


buffer that increases plant flexibility and provides the possibility of performing mill work-roll changes as a background task. The QSP mill features the well-known and successful “2+4” configuration, with separate mill stands for high-reduction units and finishing, in order to perform dual-step rolling. The mill stands guarantee superb geometrical and mechanical properties in the final products, and are equipped with state-of-the-art features for strip crown and profile control. The QSP configuration represents the most extensive application of Danieli’s concept of flexibility, even for new market entries seeking to exploit the challenging flat-products business.

With 4.0 Mtpy on two casting strands producing high-quality hot band at ultra-low conversion costs, Hoa Phat will be the thin slab casting-rolling production champion.

QSP® MINIMILL AT UZMETKOMBINAT UZBEKISTAN / MOST COMPACT PLANT LAYOUT

CONTRACT SIGNING: JULY 2018
FIRST COIL: FEBRUARY 2022



Uzmetkombinat Steel and Danieli are collaborating to build the first combined melting, thin-slab casting and hot-rolling complex for strip in the region at the Bekabad steel plant in Uzbekistan. The project represents a major expansion to the existing plant that will increase total capacity to 1.7 Mtpy, with over 1.0 Mtpy to be produced by the new plant supplied by Danieli.

The new installation will include one 120-t EAF, one twin LF, one twin tank-twin cover VD-OB with mechanical pump, and one single-strand QSP® compact thin-slab caster.



Productivity

1.0 Mtpy
on one casting strand

Rolling mode

Coil to coil

Plant length

245 m

Slab thickness

40 – 60 mm

Strip thickness

1.4 – 12.0 mm

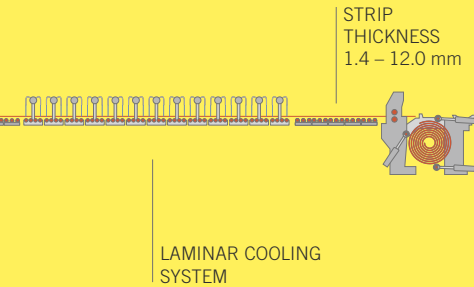
Strip width

800 – 1,300 mm

Steel grades

Low- Medium- High-
Carbon, HSLA

compact



The vertical curved casting machine will feed thin-cast slabs to a 120-m long tunnel furnace and five rolling mill stands, followed by one laminar cooling system and one downcoiler. All technological equipment will be supplied by Danieli and its specialized affiliates, Danieli Centro Combustion and Danieli Automation.

The project will allow Uzbekistan to become self-sufficient for hot-rolled coil production, and the majority of the HRC will be processed locally.

Uzmet confirms the validity of QSP compact layout as an economical and compact plant design for small production lots, dedicated to serve local markets, with low conversion costs.



DANIELI
THE TEAM



The Danieli education project started in 2009 with the inauguration of the “Cecilia Danieli” Nursery school, soon followed by the realization of the Pre-school, and, in 2016, by the Primary school, covering the whole educational path from 0 to 11 years. This year the project took the next course with the design of the new Middle school.

The main principle of the learning programs is the experimentation “by doing”, where children have the possibility to participate in science lab activities and be outdoors, alongside with a particular attention to innovative approach to the English language -which received Cambridge recognition- and to new information technologies.





A person is seen from behind, standing in a control room. They are looking at several computer monitors. The monitors display various types of data, including graphs, charts, and video feeds of industrial machinery. The room has a dark, industrial aesthetic with blue and grey tones. The ceiling is visible, showing a grid of lights. The overall scene suggests a high-tech manufacturing or industrial control environment.

Danieli

The Reliable
and Innovative Partner
in the Metals Industry

Plantmaking Division

Engineering and Plantmaking Leading Team

Group Executive Board

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Chairman

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Chief Executive Officer
— Procurement, manufacturing, logistics, governance of operations and quality, customer service, human capital management, academy, controlling, legal affair and internal audit.

GIACOMO MARESCHI DANIELI
Chief Executive Officer
— Group technical commercial sales, macroplanning, costing and tendering, danieli plant engineering, commissioning, danieli construction, general services.

ALESSANDRO BRUSSI
Chief Financial Officer
— Finance and administration.

NICO BELIJENDAAL
Vice President
— Danieli Germany, Danieli Corus.

ROLANDO PAOLONE
Group Technical Director
— Long products plants, group technical director, Danieli research center, process automation, products competitiveness.

ANTONELLO MORDEGLIA
EVP Danieli Automation
— Danieli Automation and Digi&Met 4.0.

MICHELE MARINUTTI
Chief Controller Officer
— Industrial Accounting, Information Technology.

Executive Managing Staff

Research Center
G. Marconi, C. Tomat

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Special Projects
D. Fabro, R. Pezzano

Costing and Tendering, Macroplanning
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Danieli Product Lines

Electric Steelmaking, Continuous Casting
R. Sellan, M. Knights

Danieli Centro Met (Italy)
— Electric meltshops / billet, bloom, beam blank casters / slab casters.
P. Burin, L. Testa, A. Sgrò, A. Trisciuzzi, P. Franco, P. Gasparini, H. Koblenzer, M. Massimo

More Srl (Italy)
— EAF Special technologies.
M. Iacuzzi

Danieli Procome Iberica SA (Spain)
— Charging systems for EAF, DRP and pelletizing plants.
G. Nigris, J. De Blas

Flat Products
G. Mareschi Danieli, M. Turchetto, L. Sandrin, F. Bortolussi, S. Lorenzini, I. Koshyk, L. Vignolo

Danieli Wean United
— Hot mills and quality strip production technology.
C. Bilgen, M. Bulfone, S. Berger, A. Pigani, M. Ferro, F. Stella, A. Recine, E. Bozzetto

— Cold rolling mills and stretchers, processing lines.
R. Holz, T. Settimo, M. Bianchini, M. Svetina
— Air wiping equipment.
M. Turchetto

Danieli Fata Hunter (Italy)
— Aluminium flat rolling products.
S. Dolzan, M. Mazza

Innoval Technology Ltd (UK)
— Process technology and advisor.
Services for aluminium flat product mills.
A. Betts, G. Mahon

Long Products
F. Mulinaris, L. Crespan

Danieli Morgårdshammar (Italy)
— Bar, Wire rod Mills, Heavy Bar / Section Mills.
I. Danielis, C. Fabbro, A. Rossit, M. Occhipinti, F. Rocchetti

Sund Birsta AB, Morgårdshammar AB (Sweden)
— Long product rolling mills for special steels, binding and handling systems for bars, wire rod, and hot / cold flat products.
P. Marstedt, O. Englund

Danieli Centro Maskin (Italy)
— Inspection and conditioning plants, cold finishing lines.
S. Orlando, N. Pascolo

Danieli Customer Service
E. Brusini, G. Carnelutti

Technical Service and Spare Parts
A. Vallan, G. De Lorenzo, M. Padovan, A. Zanon, A. Viviani, C. Garlant, M. Sorato, N. Tirel

Danieli Do Brasil Ltda (Brasil)
— Service, marketing, engineering, project management, site assistance.
L. Mottes, F. Turibio, M. Castenetto, W. Souza

Danieli Engineering and Services Austria GmbH (Austria)
— Service, marketing, engineering, site assistance.
S. Bergamasco, A. Deana, G. Ranc

Scrap Recycling

Danieli Centro Recycling (UK, Germany, France)
— Scrap recycling technologies.
G. Carnelutti, A. Betts, R. Calligaro

Danieli Plant Engineering
M. Pitton, S. Giacomelli

Project Directors, Technical Sales
S. Giacomelli, A. Perin

Danieli Engineering Products
S. Giacomelli, A. Di Giacomo

Danieli Centro Metallics
— Iron ore / pelletizing / DR plants.
A. Martinis, M. Zampa

Danieli Environment and Systems
— Ecological and recovery systems.
M.P. Cudicio, M. Flumignan

Danieli Centro Cranes
— Heavy-duty cranes / automated yards.
L. Argiolas, A. Vrech

Danieli Hydraulics
— Industrial hydraulic and lubrication equipment.
S. Giacomelli, N. Capuzzi

Danieli Construction International Spa
M. Pitton, F. Casarsa, A. Brussi, R. Poboni

MIDA® Minimill Danieli
A. De Luca, A. Tellatin

Forging, Extrusion and Pipes
M. Totis

Danieli Centro Tube (Italy)
— Seamless pipe mills and finishing.
C. Bartolini, S. Bettinelli, A. Bucci, G. Macedonio

Danieli Breda (Italy)
— Extrusion and forging presses.
C. Bartolini, A. Galli, G. Macedonio, G. Solaroli

Advisory Services for Plant Startup and Commissioning
I. Grgic, A. Todisco

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— *Governance of operations.*

G. Cruder, L. Marson

— *Worldwide manufacturing.*

M. Rinaldis

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G. D'Orlando, G. Furino,

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D. D'Odorico, V. Latorrata,

S. Singh, J. Ye

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R. Balestra

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— *Administration, controlling.*

M. Marinutti, A. Deana

— *Finance and contracting.*

A. Brussi, A. Mareschi Danieli,

R. Grosso, M. Ius

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S. Stafisso, C. Benedetti

Danieli Academy

— *Junior recruitment and development, kindergarden and primary school.*

P. Perabò

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M. Cappa, M. Marinutti

Legal Affairs

F. Londero

Internal Audit

V. D'Imperio

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A. Todisco, A. Brussi, S.

Stafisso,

M. Ometto, E. Plazzogna

Danieli Automation Spa

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A. Todisco, M. Ometto,

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A. Mestroni, G. Brunetti,

S. Martinis, F. Perotti,

G.B. Vallarino, R. Guido,

R. Poboni, S. Vasinis,

R. Molteni, A. Lugnan

Digi&Met 4.0

A. Mordeglia, M. Ometto,

A. Ardesi, C. Tassin

Danieli Automation Co Ltd (Thailand)

M. Oliviero

Danieli Systec Doo (Croatia)

S. Stafisso, A. Todisco,

R. Košmerl, H. Manestar

Danieli Taranis LLC (USA)

A. Nardone, W. Dow,

C.J. Feather

Elsid Cheda Ltd (Russia)

E. Cuzzot

Danieli Rotelec (France)

F. Guastini, P. Declerc

Danieli Telerobot Labs Srl (Italy)

D. Corsini, F. Becchi, G. Sini

Turnkey Plants**Fata EPC (Italy)**

A. Lombardi, S. Pagani

Ironmaking and Converter Steelmaking

N. Bleijendaal

Danieli Germany GmbH (Germany)

— *Flat products rolling / Froehling and metallurgical engineering for final applications.*

S. Berger, E. Weber, U Haag

Danieli Corus Technical Services BV (The Netherlands)

— *Blast furnace and oxygen steelmaking technologies.*

N. Bleijendaal,

T. Germershausen,

R. Jonkman, G. Apeldoorn,

F. Van Gool

Heating Systems and Heat Treatment Furnaces**Danieli Centro Combustion Spa**

Danieli Olivotto Ferrè (Italy)

Danieli Centro Combustion India

— *Heating systems and heat treatment furnaces.*

F. Pere, E. Mozzi, C.A.

Migliardi, A. Venanzini, S.

Street, F. De Santis, F. Arancio,

E. Puppo

Danieli Volga LLC (Russia)

— *Marketing, sales, engineering, project management, manufacturing, service.*

A. Colussi, G. Lovadina,

P. Deano, M. Rinaldis,

A. Polulyakh

Danieli Corporation (USA, Canada)

— *Marketing, sales, engineering, project management, site assistance, service.*

P. Losso, L. Rossetto, M.

Sattolo

F. Palagiano

Danieli Mexico (Mexico)

— *Marketing, sales, project management, service.*

A. Voltolina

Termo Makina San. V.T.A.S. (Turkey)

— *Marketing, sales, service.*

A. Brussi, T. Yilmaz

Danieli Asia

D. Ambrosino, D. D'Odorico,

F.D. Martino, A. Menocci,

B. Mockmongkonkul, G.

Panwar, G. Ximeris

Danieli Metallurgical Equipment & Services Co Ltd (China)

— *Marketing, sales, engineering, project management, manufacturing, site management, service.*

F.D. Martino, D. Ambrosino,

L. Coianiz, J. Guo, M. Meloni,

D. Pedrocchi, C. Zhang

Danieli Co Ltd

(Thailand and Vietnam)

— *Marketing, sales, engineering, project management, manufacturing, service.*

Hydraulics.

A. Menocci,

B. Mockmongkonkul,

D. Ambrosino,

G. Charoenvananatee,

D. D'Odorico, T. Nammisa,

N. Nakamura, N. Patrizi,

N. Sathitchoke

Danieli India Ltd (India)

— *Marketing, sales, engineering, project management, manufacturing, site management, service.*

G. Panwar, S. Singh

B. Ghosh, R. Hisaria,

A. Todisco, A. Pandey,

S. Jain, J. Paul, S. Banerjee,

P. Srinivas Rao, H. Mehdipour

Danieli Engineering Japan Ltd (Japan)

— *Engineering and service.*

A. Mordeglia, N. Nakamura

Sales and operating results

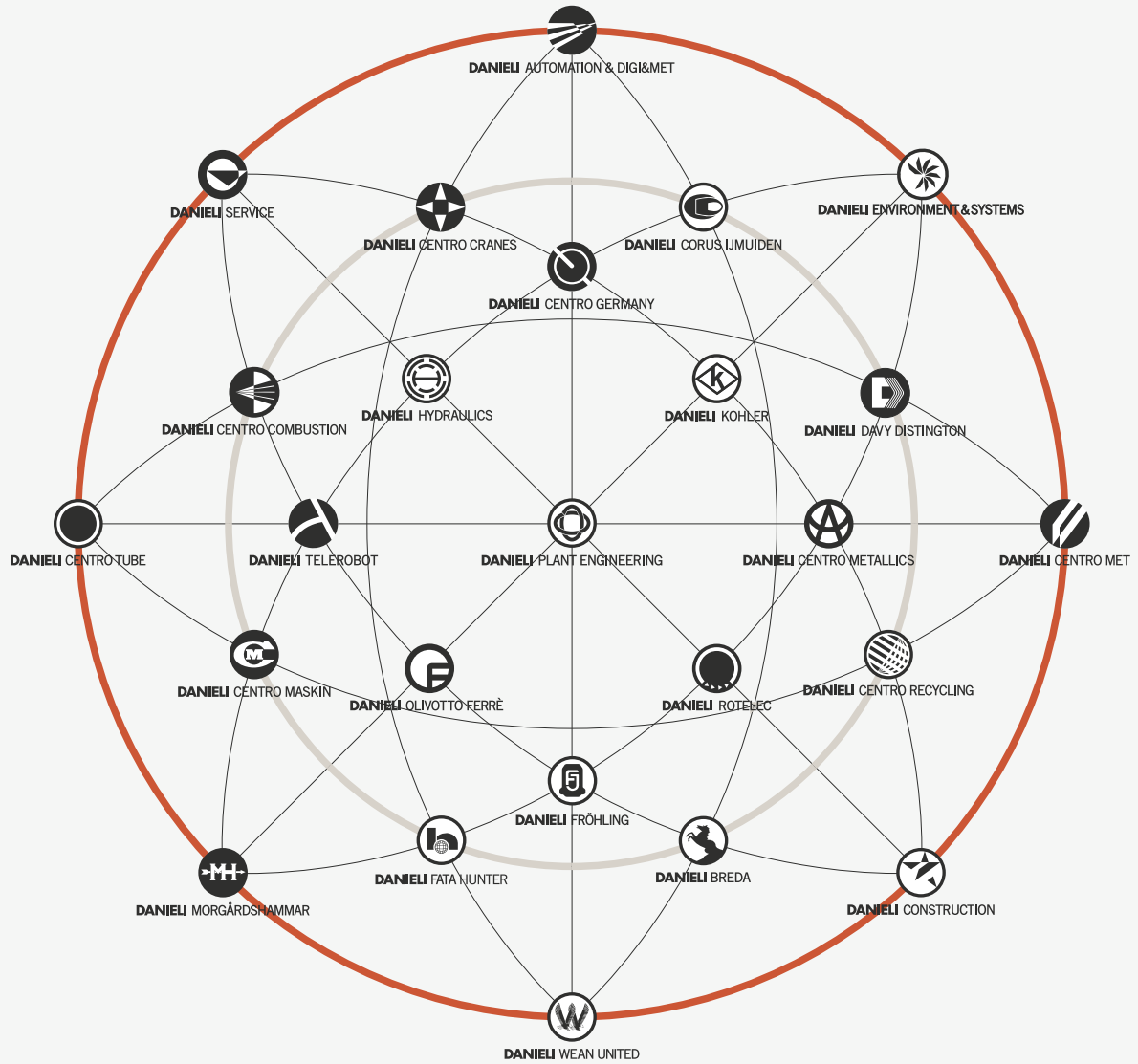
In thousands of euro	Plantmaking	
	June 30, 2019	June 30, 2018
Net revenues	2,026,849	1,726,778
Gross operating margin (EBITDA)	121,519	106,973
Depreciation, amort. and write-downs	(74,027)	(65,184)
Operating income	47,492	41,789
Net financial income/(charges)	4,945	(18,583)
Profit before tax	52,437	23,206
Income taxes	(14,580)	(9,652)
Net profit	37,857	13,554
Segment assets	4,055,508	3,586,252
(increases in investments in tangible and intangible fixed assets included)	20,724	31,199
Segment liabilities	2,850,832	2,394,200
Net financial position	1,002,758	951,772

The Danieli Group designs and builds plants for all process areas, such as:

- Mines;
- Pellet production plants;
- Blast furnaces;
- Direct reduction;
- Scrap shredders;
- Steelworks for production of liquid steel;
- Conticasters for blooms, billets; slabs; thin slabs;
- Rolling mills for long products;
- Rolling mills for seamless tubes;
- Hot and cold rolling mills for flat products (all ferrous and non-ferrous metals and stainless steel);
- Process lines for flat products;
- Complete plants for dimensional checking and for non-destructive quality control, and conditioning plants;
- Plants for secondary processing, such as

- peeling, straightening, 2-roll reeling and drawing machines;
- Forging presses and manipulators and complete forging plants;
- Extrusion presses for ferrous and non-ferrous materials;
- Plants for longitudinal cutting and for transversal cutting to size of sheet and plate in all non-ferrous metals and stainless steel;
- Level 1, 2, 3 and 4 plant automation systems;
- Cranes and lifting equipment.

In the long product rolling plant sector, the Danieli Group is world market leader in terms of both the number of plants in use and annual sales and, in particular, is the undisputed technological leader for level of automation as well as plant reliability, productivity and achievable product quality.



Daniemi 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 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 The Team

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.



Italy,
Thailand

DANIELI CONSTRUCTION / Since 2003
Turnkey construction, erection and systems engineering

Danieli Construction International operates worldwide with 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.



Italy

DANIELI PLANT ENGINEERING / Since 1964
Turnkey Plants and Systems Engineering

We supply integrated plants for the metal industry, including technologies, auxiliary plants, construction, and after-commissioning assistance. We provide customers with a single-point responsibility, ensuring project delivery time assurance and total investment cost certainty.



Italy,
USA

DANIELI AUTOMATION & DIGI&MET / Since 1969
Process Control Systems

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



Italy,
USA,
India,
China,
UAE

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

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, oil & gas, power generation plants.



Italy

DANIELI TELEROBOT / Since 1992
Advanced Robotics

With more than 25 years of experience focused on robotic applications for harsh and unconventional environments, Danieli Telerobot is the technological partner to provide tailor-made solutions integrating industrial robotics and process automation in Industry 4.0 systems and architectures.



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

With more than 50 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 CENTRO RECYCLING / Since 1998
Scrap Processing Plants

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 CORUS IJMUIDEN / Since 1977
Integrated Steelmaking Plants

Danieli Corus has firm roots in IJmuiden, where steel production started in 1924 and quickly developed towards world benchmark for Blast Furnace ironmaking and BOF steelmaking.



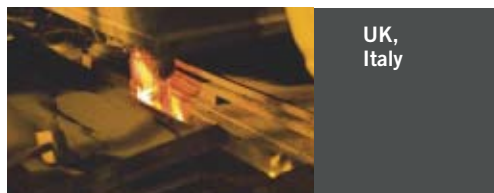
DANIELI CENTRO MET / Since 1914
Electric Steelmaking and Casters

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 CENTRO GERMANY / Since 2011
Oxygen Converter Steelmaking Plants

Danieli Centro Germany is a steelmaking center of competence, where proven oxygen converter specialists interact with experts on substance systems, process models, and technological packages, as well as with the pioneering Danieli R&D Researchers.



DANIELI DAVY DISTINGTON / Since 1951
Thick and Thin Slab Casters

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



Italy,
USA,
Germany

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

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.



Italy,
USA

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

Danieli Fata Hunter is one of the world leaders in implementing single 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.



USA

DANIELI KOHLER / Since 1959
Air Wiping Equipment for Zinc Coating

Danieli Kohler is world leader in the supply of highly technological equipment, with more than 150 installations in molten metal coating lines of all types.



Italy,
Sweden

DANIELI MORGÅRDSHAMMAR / Since 1856
Long Product Rolling Mills

We believe in what we build day by day and we are what we produce. This is written in our DNA since 1856. From bigger to smaller, from heaviest to longer, from smaller to faster, simply undisputable features in the metals industry.



Germany

DANIELI FRÖHLING / Since 1947
Specialty Mills and Strip Finishing Lines

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.



Italy

DANIELI CENTRO TUBE / Since 2004
Seamless Pipe Plants

Through a highly qualified and long lasting 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.



Italy,
Sweden

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

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.



Italy

DANIELI BREDA / Since 1950
Extrusion And Forging Plants

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.



France,
Italy

DANIELI ROTELEC / Since 1977
Ems and Induction Heating Systems

Danieli Rotelec is a leading company in the manufacture of electromagnetic stirrers for conicasters and induction bar edge heaters for hot strip mills, offering a unique combination of metallurgical process know-how, and expertise in designing/self-manufacturing of equipments.



Italy

DANIELI CENTRO COMBUSTION / Since 1981
Heating systems

Equipment is bespoke to suit the needs of each client and includes cutting-edge technologies which 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.



Italy,
Thailand

DANIELI HYDRAULICS / Since 2008
Industrial Hydraulic and Lubrification 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.



Italy

DANIELI OLIVOTTO FERRE' / Since 1927
Heat Treatment Furnaces

With over 800 references, Danieli Olivotto Ferre' is able to supply a wide range of economic and sustainable heating solutions and modern heat treating furnaces covering a whole range of appliances and services for the metals industry.



Italy

DANIELI CENTRO CRANES / Since 1958
Heavy-Duty Cranes

Design and supply of cranes and lifting systems for the 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.



Italy

DANIELI ENVIRONMENT AND SYSTEMS / Since 1973
Green Technology and Systems

A division that specializes in environmental protection, offering a full range of proprietary technologies for air pollution control, water treatment, energy saving, energy recovery, solid waste recovery, and noise reduction.



Italy, Austria,
China, India,
Russia,
USA, Brazil,
Thailand

DANIELI SERVICE / Since 1962
Technical Service and Original Spare Parts

Danieli Service works closely with steel and nonferrous metal producers worldwide in order to enhance performance of their plants, providing global solutions based on state-of-the-art equipment and digital systems.

Danieli Answers to be a step ahead

— Latest Danieli Revolutionary Technologies on industrial bases

A compendium of the latest revolutionary realizations now operating on an industrial basis, along with some consolidated, “A Step Ahead” technologies implemented over the past year.

— **Danieli Q3** innovative and proactive pulpit for no-man-on-the-floor approach

From a single Q3 pulpit the whole production line or even more production lines can be safely and efficiently controlled by a few operators. Q3 pulpit enriches, simplifies and empowers the operators' experience, making the system capable of providing the right information at the right time by collecting Big Data directly from the plant and monitoring the



area with 360° video cameras that allow the operator to navigate in a safe way into areas that are dangerous or not directly accessible. Events that require interaction with the user are conveniently proposed as questions directly on the OA (Operator Assistant).

In operation at
**AST Terni and
Acciaierie Venete, Italy**



AUTOMATION



— The actions to be performed can be previously programmed or directly learnt from the historical decisions

Latest revolutionary realizations / Automation

DIGI&MET

— **Danieli Robotized Systems** from liquid steel to finished products

Q-Robot systems cover all operations in the metal production chain. Efficiency of operations and reassignment of humans to safer and healthier tasks and environments is the main target of robotics migration. Operations and Level 0 digitalization is the first step to improve the maturity level of the production plant, making it fully suitable to DIGI&MET platform.

In operation at several installations in Europe, USA and Asia



Q-ROBOT

DIGI&MET

— Safely and precisely executed operations guaranteeing full repeatability and reliability



— **Danieli Q-Drive**
powerful frequency
converters
for rolling mills

Danieli Automation original, Q-DRIVE medium-voltage frequency converters with power ratings up to 30 MVA efficiently control main motors of rolling stands, particularly for hot-strip, plate and cold mills. Combined with new motors, transformers and gear boxes, Q-DRIVE provides more power and torque resulting in increased rolling capabilities.

In operation at
Tokyo Steel, Japan,
and in progress at
TATA Steel IJmuiden,
Netherlands



Q-DRIVE

Latest revolutionary realizations / Automation



— More power for
more strength: more
productivity and more
new products

DIGMET

Q-ONE / Danieli DigiMelter
The revolutionary system
to melt steel



— Q-ONE:
an impressive increase
of active power
availability and melting
efficiency

**IRONMAKING
AND STEELMAKING**



Q-ONE

Part of Danieli DigiMelter, Q-ONE technology is an innovative and dynamic solution for power-quality control for electric arc furnaces, increasing power availability and efficiency by handling irregular loads in a more flexible and reliable way, and maintaining power factors close to unity, with electrode and energy savings.

In operation at
ABS Sisak, Croatia



Latest revolutionary realizations / Iron and Steelmaking

— **Danieli Zero Bucket
EAF with ECS
scrap-preheating system**

High-performance and environmentally friendly steelmaking technology characterized by a very stable and smooth process. Compact arrangement with limited space requirements and highest productivity resulting from very short power-off and very fast power-on times. No buckets moving, no smoke generation, low noise emissions. A trendsetting installation.

**In operation
at Guihang, China**



— 37 min tap-to-tap time;
335 kWh/tls electric power
consumption resulting
in lower conversion costs



— Danieli scrap yard and metal management

A revolutionary realization that combines and integrates automatic scrap recognition with its handling, from the truck arrival to the bucket charging into the EAF. Danieli application introduces the innovative, real-time solutions of Dynamic Yard 3D mapping, scrap and bucket charge-tracking that complete the fully integrated metal processing concept.

In operation
at ABS, Italy



— The perfect scrap mix: scrap recognition at arrival and automatic handling

Latest revolutionary realizations / Iron and Steelmaking

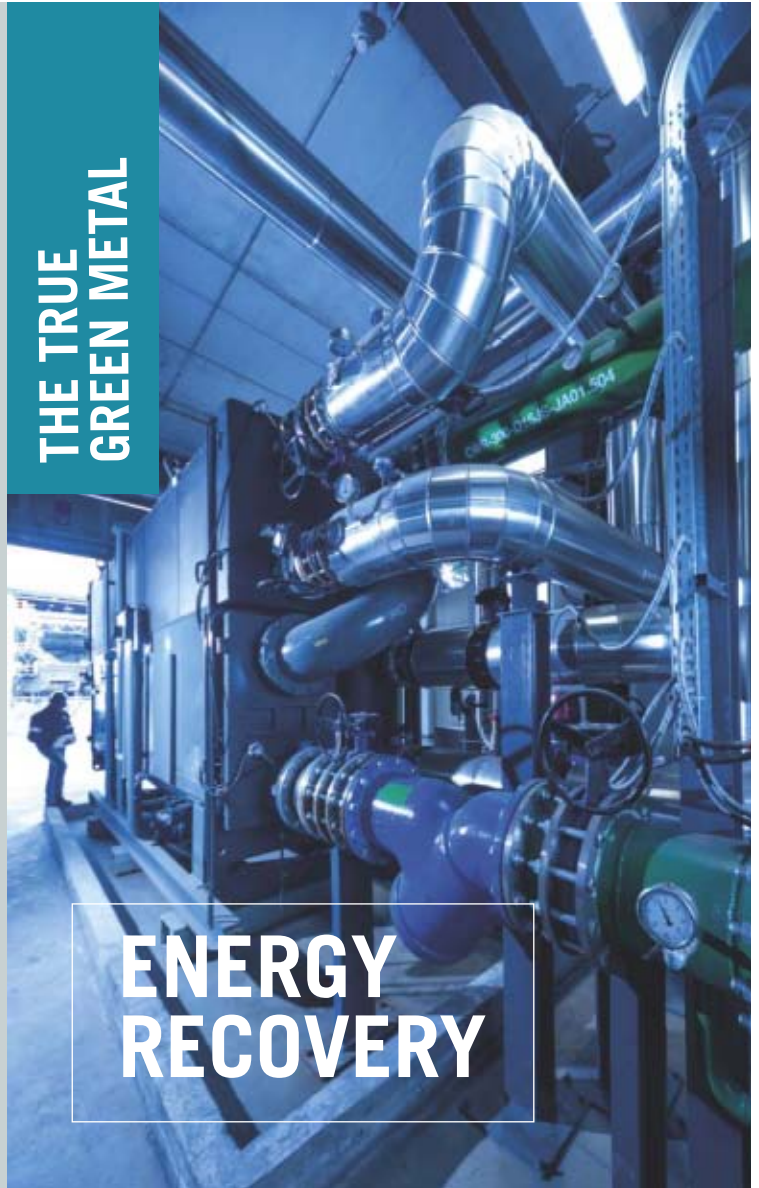
— Danieli Energy recovery through adsorption chiller

Thermal power recovery from hot water, producing cold water to be used for refrigerating and conditioning air for civil and industrial use. An environmentally friendly solution allowing low operational and maintenance costs, reducing the CO₂ emissions.

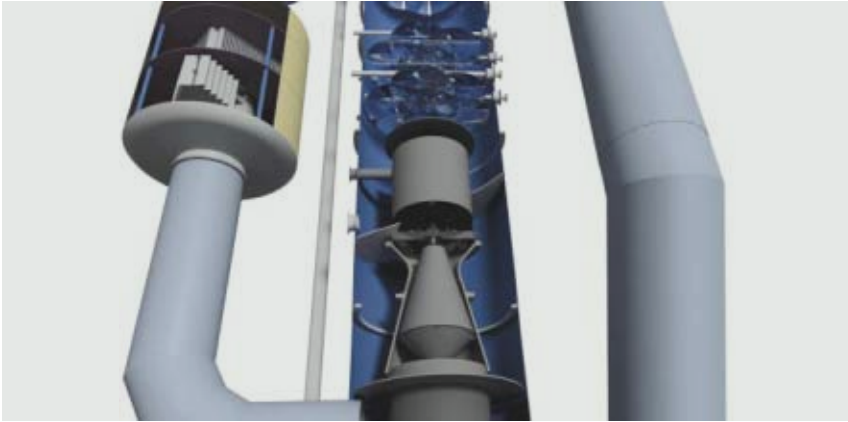
In operation at Acciaierie di Verona, Italy



— Exploiting residual energy available from water-cooling circuits, for heating and air cooling



— Danieli Advanced Gas-Cleaning System for BFs and BOFs



In engineering stage for ArcelorMittal, Kryvyi Rih, Ukraine

Dry BF-gas cleaning has the indisputable advantage of eliminating water consumption and improving power plant efficiency. The solution is based on low-pressure pulse cleaning of the bag filters. BOF-gas cleaning technology using an annular gap scrubber increases the gas-liquid contact and decreases the pressure drop.

— Danieli fume-treatment plant noise reduction



Under erection at Nucor Steel Gallatin, USA

Based on a previous Danieli patent adopted in several fume-treatment plants, a newly developed solution avoids noise dispersion from giant stacks dedicated to EAF air-pollution control. Using a combination of geometry and noise dissipative materials, the persistent dispersion due to air vortex can be completely avoided.

— Danieli Zero-liquid discharge water-treatment plants



Installation in progress at Tashkent, Uzbekistan

A technological package to reduce environmental impact by recovering blow-down water, with proper crystallization process to avoid any water discharge that may exceed limits on salt content. ZLD technology is applicable to new and existing water-treatment plants.

— **Danieli Universal Endless**
for flexible hot rolled coil
production

This a revolutionary solution that offers high product quality and maximum production flexibility at the most competitive costs. One line produces in three different operating modes: coil-to-coil, semi endless and full endless.



— The only plant
in the world able to
produce HRC in coil-
to-coil, semi-endless
and endless mode

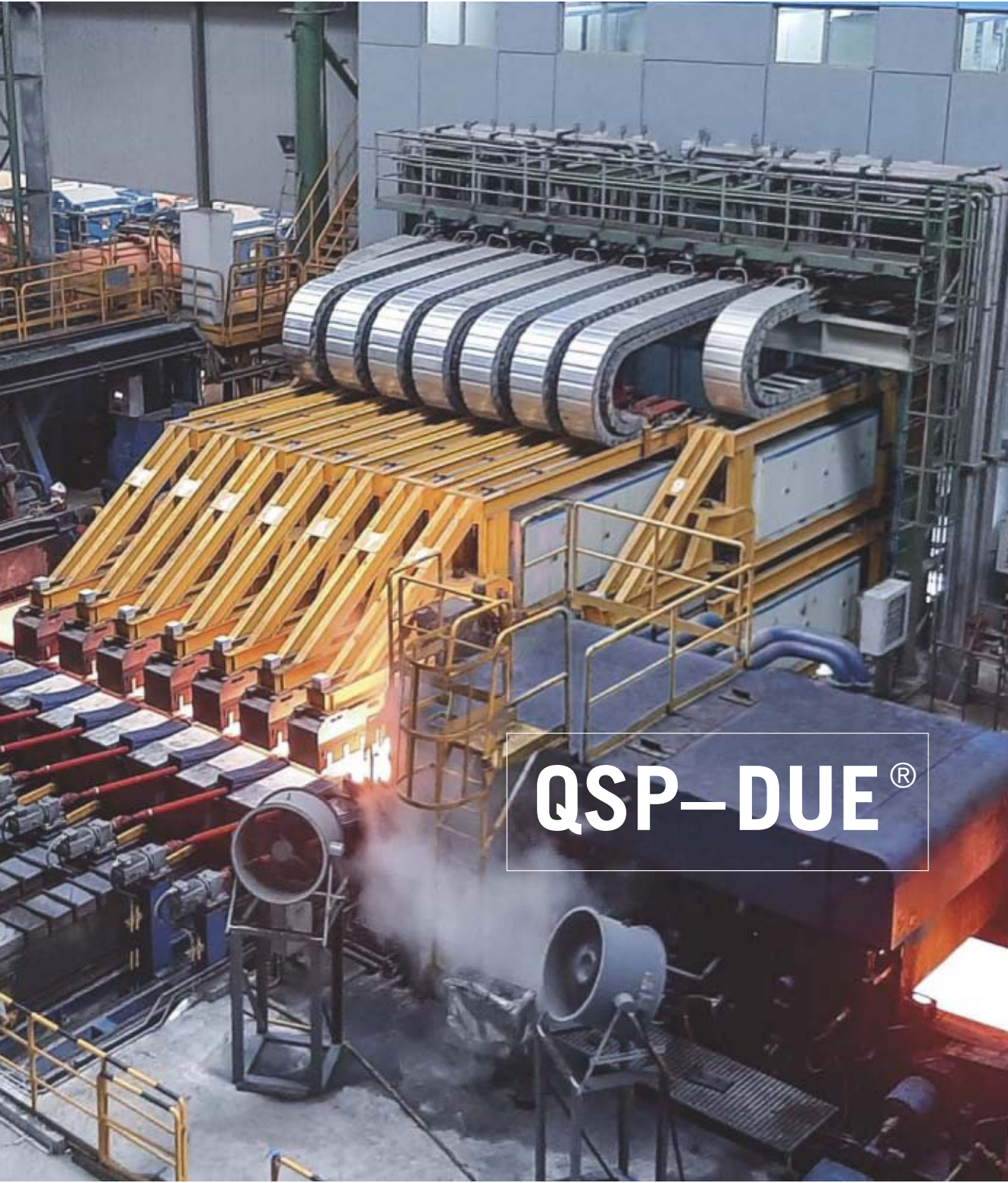


FLAT PRODUCTS



Covered by several Danieli patents this is a compendium of all the latest developments, featuring Danieli Automation advanced induction-heating technology.

In operation at
Shougang Jintang, China



QSP-DUE[®]

Latest revolutionary realizations / Flat Products

— **Danieli** Plate mill revamps that compete with brand new plants

Project underway at
JSW Steel USA, Texas

Extensive modernization applicable to each of the descaling, rolling, cooling, hot/cold levelling and shearing areas.

Advanced Danieli Automation L2 process control system features Plan View Rolling for plant-yield optimization and Mechanical Property Estimator Q-MPE to predict the plates' properties.

The sum of these leads to improved surface quality and geometrical tolerances, along with improved overall plant yield and efficiency.



— **Danieli** Intensive cooling for flat-rolling mill runout tables

In operation at
OMK, Russia



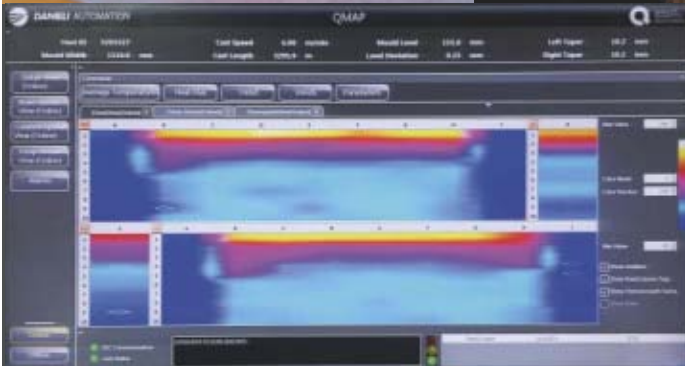
Microalloy elements are needed to obtain high mechanical properties in flat products. Danieli has patented a particularly efficient new cooling unit, positioned at the beginning of the hot-strip mill runout table, capable of reducing the traditionally needed microalloy content by increasing the cooling rate. Such a result is obtained without increasing the total water flow rate and the feeding pressure of the laminar cooling.



— Danieli Multi-Mode Electromagnetic Brake for thin-slab casters

Independently controlled electromagnets, as part of the Danieli Rotelec-patented Multi-Mode Electromagnetic Brake - MM-EMB[®], produce a static permanent magnetic field crossing the mould that, in addition to standard braking function, is able to generate stabilizing and damping functions that address the specific flow problems of thin-slab casters.

In operation at
Tangshan Iron & Steel, China



— Higher speed and improved product quality due to drastic reduction in surface defects

Latest revolutionary realizations / Flat Products

— Danieli Benchmark Cold Mill Complex

A compendium of advanced, reliable, integrated processes for consistent quality-strip production. Original Turboflo pickling, Danieli 6-high tandem mill featuring OSRT (Optimized Shaped Roll Technology), and auto-adaptive heat-treatment in HDGL furnace technologies. Proprietary X-JET coating control to manage zinc thickness deviation.

In operation at
Yıldız Demir Çelik,
Turkey



— I4.0 technology featuring plant multivariable performance coordination and data analysis, to support technological debugging



— **Danieli** Continuous Coating technology for high-quality, double-coated strip



4th line to be supplied to Steel Dynamics Inc., USA

Equipped with Danieli FATA Hunter single-slide design coaters for more accurate paint application and the innovative, double-shell oven design for higher curing performance. New ovens with innovative recirculation system and original Clean Air System significantly contribute to achieving the highest quality coating standards and energy efficiency.

— **Danieli** Double-stand Aluminium Hot Mills for high-quality strip



In operation at KUMZ Aluminium, Russia

Representing the top technology for a flexible production of high-quality alloys, double-stand hot mills can produce hard alloys in both coils and plates, with end uses stretching from the packaging/industrial markets up to the aerospace and automotive industry. Finished mill-product widths range up to 4,500 mm in plates, up to 2,800 mm strip in coils.

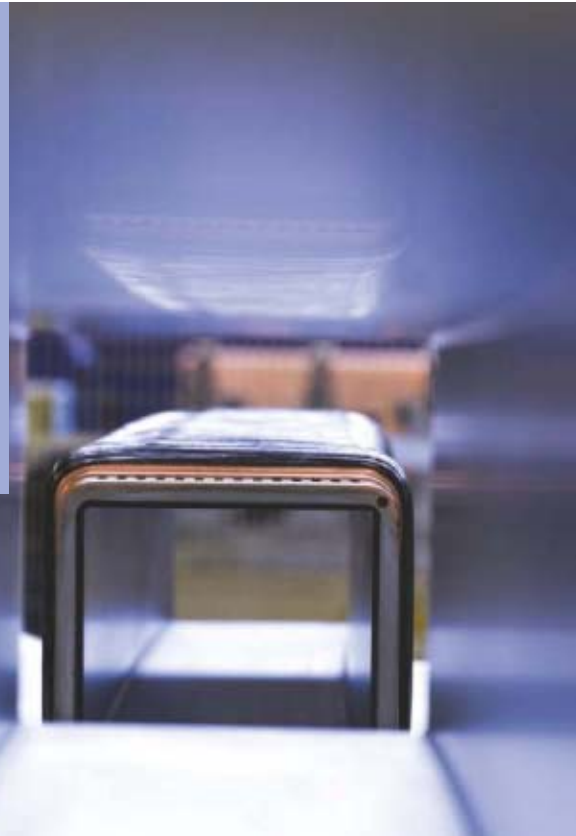
— **Danieli FastCast**
**High-capacity
quality billet production**

Covered by Danieli patents, this is the only proven, industrial technology for casting premium-quality billets up to 8 m/min. This is the result of further mould design developments characterized by new copper mould materials and coatings, enhanced oscillating path and more efficient primary cooling, within the FastCast Cube technology package.



— The only casting technology producing premium-quality billets up to 8 m/min

LONG PRODUCTS



In operation at
CMC Steel Arizona, USA

FASTCAST

Latest revolutionary realizations / Long Products



— **Danieli The Drawer**
Superior SBQ finishing
without peeling

Thanks to its rolling-drawing capability, The Drawer makes it possible to produce ready-to-use, hot-rolled bars with high dimensional tolerances and roundness of 1/8 DIN, often avoiding downstream peeling operations. It features patented solutions and four-roll technology in cross and X-shaped cross configuration. Danieli Automation HiPROFILE laser profile gauge continuously measures and certifies the top results.

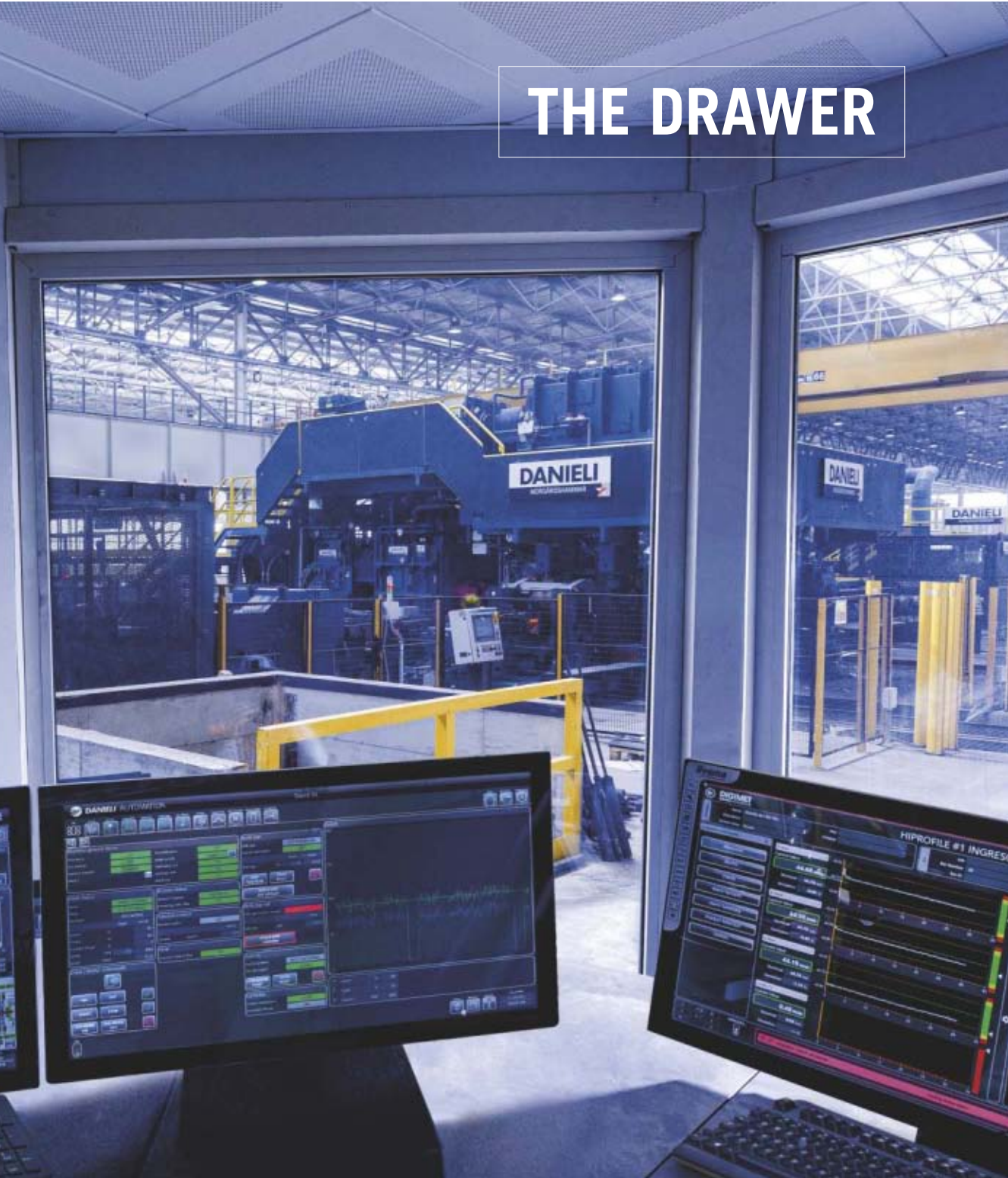


— Ready-to-use
hot-rolled bars with
dimensional tolerances
of 1/8 DIN



In operation at
Simec, Mexico,
and in commissioning at
Acciaierie Venete, Italy

THE DRAWER



Latest revolutionary realizations / Long Products

— **Danieli H3 WRM**
Benchmark
high-speed wirerod
mill technology

With 188 wirerod mills supplied, Danieli plants incorporate the best-available rolling, in-line heat treating and finishing technologies, in full compliance with Industry 4.0 approach. Acciaierie di Verona plant produced the first coil after just 19 months from contract signature, with strict size tolerances reached from the very beginning.

In operation at
Acciaierie di Verona,
Italy



H3 WRM



— Top product
quality, quick
startup and
production capacity
achieved in two
months



— **Danieli ESED 4.0**
The new patented
drive for extrusion
presses

ESED 4.0 drive system is equipped with a patented, “clutch like” Torque Current Equalizer that speeds up the motor before pumps require maximum delivery and pressure. This way, pressure spikes and electric current peaks are reduced, as is the dead-cycle time. Fixed-delivery pumps mounted on a skid, with electrical cabinet/inverters and relevant piping, minimize the footprint, erection and start-up time.

In operation at
BBC, Italy



Latest revolutionary realizations / Long Products



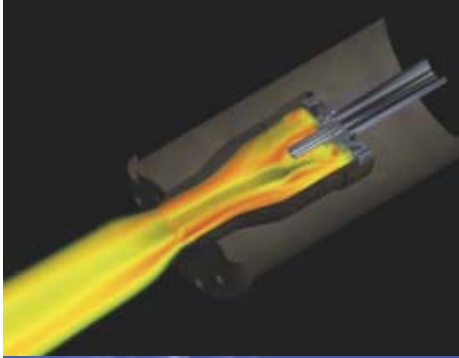
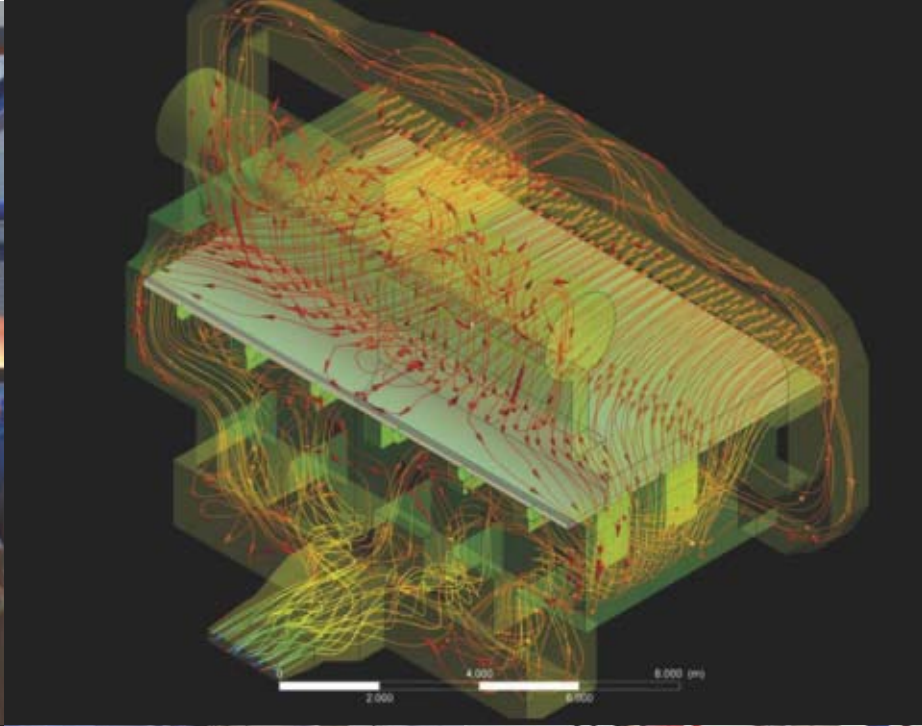
— A Start and Stop
device for extrusion
presses, reducing energy
consumption





Danieli activities

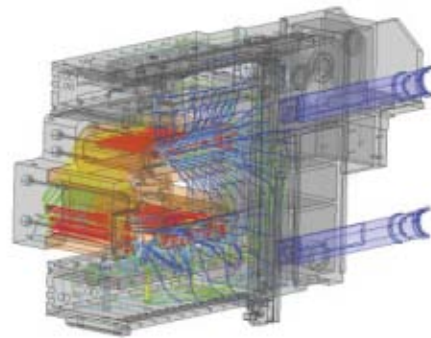
Research and development
Engineering and design
Automation and Digi&Met
Production centers
Turnkey projects and construction
Service and customer support
Sustainability / Green Metal



Danieli Research and Development imagines, designs, builds, and tests the processes and equipment for the Metals Industry of the next 20 years

**Extensive,
thorough research
activity**

by a passionate and committed, multidisciplinary team of more than 100 people. Continuous theoretical analysis, lab testing and strict cooperation with customers in industrial tests are driving the development and implementation of a wide range of innovative solutions.



The resources and ability to develop new technologies and technological packages are fundamental assets for Danieli. While Danieli naturally works toward technologies that sustain and develop the current business, it focuses on innovative research into groundbreaking ideas, concepts, approaches, technologies, and capabilities. Here are some of the main research strands during last year.

- Integrating DRP and EAF, to provide a real solution to reduce CO2 footprints.
- Improving EAF continuous scrap charging by ECS Zero Bucket system and integrating Q-ONE power converter system for AC EAF electrical supply.
- Further improving Q-MELT technological package for EAF automatic control, and “no man on the floor” concept.
- Co-rolling technology for long (MI.DA.) and flat products (DUE), also significantly reducing energy consumption.

- Developing advanced metallurgical technologies for in-line heat treatment, avoiding further manipulation and reducing use of micro-alloys.
- New-generation, high-productivity pickling to increase flexibility and yield with innovative controls.
- Improving the zinc pot technological package to increase air-knife efficiency and product quality.
- Low NOx system (burner/heat exchanger/waste gas recirculation) for radiant-tube heating.
- Developing a process control toolset for managing and analyzing production data using a clustering-based, machine-learning system integrated with Level 2.
- Q3Platform developing IIOT for metals industry to deliver AI by means of ML and MDL.
- Q3 Premium to predict quality in metals manufacturing and to avoid defects.



Danieli Engineering and Design a multidisciplinary, multicultural team combining the best skills

**1,500 engineers
and technicians**

**covering all the disciplines
from civil engineering to
automation, passing through
mechatronic, hydraulics,
and electricals, supported by the
most advanced tools.**



Our Global Engineering Team approaches the challenges that the market offers us every day, in order to remain a step ahead. Today, industrial design is inevitably multidisciplinary and multicultural, with a concurrent engineering approach to transform the ideas or insights of new physical and chemical processes into new plants, respecting time and cost. The wide scope of Danieli's Metals Industry Technology gives our designers the possibility to exchange experiences, pooling their expertise to achieve continuous improvement process.

These collaborative opportunities also enhance the innovative potential for our products. During the design phase the most modern 3D software is being used to develop machinery and plants in synergy with FEA analysis, in order to simulate the structural behavior of the equipment or plastic deformation of the metal during the process, or the suction lines of the new EAF canopy system to avoid dust emissions. The Design Team is one link of the value chain and works strictly in connection with procurement and production in order continuously improve our products and reach the project targets.



Danieli Automation
power electronics, know-how
and I4.0 smart solutions
simplifying metals complexity

DIGI&MET

DIGI&MET is the cross-functional business unit developing and implementing digital transformation, using Artificial Intelligence tools and an innovative business process approach to improve supply chains, plant efficiency, products quality, plant utilization and OpEx.



Danieli Automation is the company within the Danieli Group responsible for transferring technological know-how from other Danieli technological divisions to end-users, supplying the interface between plant process and operator. Our mission is to provide engineering, electrical solutions, power electronics, process automation and control systems for the metals industry, covering the wide spectrum of Danieli technologies from iron ore to long and flat products. We design and develop power electronics for high-performance drives, for induction-heating systems and for innovative melting technologies. Special instruments have been developed by Danieli Automation for quality assessment during production and to

have the required feedback for sophisticated control systems. Robotic applications have been designed to improve plant safety and production efficiency. Software algorithm models, computerized quality and production control systems are developed in-house thanks to the synergistic relationship with the Danieli technological teams. By cooperating with mechanical designers, we achieve optimized and standardized solutions, resulting in best performances and quicker plant startups. Competence, reliability and experience are key factors for our success in plant upgrades, together with the world-wide presence and digital collaboration tools ensure prompt and efficient customer support.



Seven Danieli Production Centers worldwide to ensure the same quality everywhere



We operate advanced manufacturing plants in Europe, China, India, Thailand, and Russia to better supply customers, worldwide. Plants, overall, cover an indoor area of 500,000 sqm with 2,500 highly skilled technicians who provide 5 million productive hours per year, working 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, checking the chemical

and physical properties of the products before and after treatment.

- Assemble and complete final tests that ensure performance and reliability, in cooperation with commissioning teams.

Advanced planning tools, real-time traceability systems, 3D measuring machines, and metallurgical labs give us overall project control from in-house design and manufacturing to on-site startup and commissioning. We produce the most strategic and complex machines that incorporate the company's know-how at top-quality standards.

All Danieli workshops are fully owned and managed by Danieli experts and can be seen as one unified workshop.

Danieli does not compromise the quality and reliability levels of the equipment supplied.

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.

Danieli Volga / Russia

Total surface: 250,000 m²;
Workshop area: 10,000 m²;
Technical and administrative
offices: 1,800 m².
Employment: 90 engineers.
Start of operations: 2014.

Danieli Austria

Total surface: 40,000 m²;
Workshop area: 6,000 m²;
Technical and administrative
offices: 1,400 m².
Employment: 40 engineers.
Start of operations: 2008.



Danieli Headquarters / Italy



Danieli Volga / Russia



Danieli India



Danieli Thailand



Danieli Germany

Total surface: 4,200 m²;
Workshop area: 2,800 m²;
Technical and administrative offices: 1,400 m².
Employment: 140 engineers.
Start of operations: 2005.

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.

Danieli Thailand

Total surface: 525,000 m²;
Workshop area: 90,000 m²;
Technical and administrative offices: 13,000 m².
Employment: 900 engineers.
Start of operations: 2005.

Danieli China

Total surface: 200,000 m²;
Workshop area: 90,000 m²;
Technical and administrative offices: 12,000 m².
Employment: 950 engineers.
Start of operations: 2007.



Danieli Austria



Danieli Germany

Danieli Workshops Worldwide
Seven Production Centers worldwide to ensure the same quality everywhere









Danieli Turnkey product-in-hand projects, global expertise to avoid risks, minimize CapEx and OpEx and to maximize ROI

200 People

providing engineering services and tailor-made plant optimizations

3,000 People

providing skilled and fast-track construction and erection services

1,200 People

providing plant commissioning and customer assistance in managing process and production organization



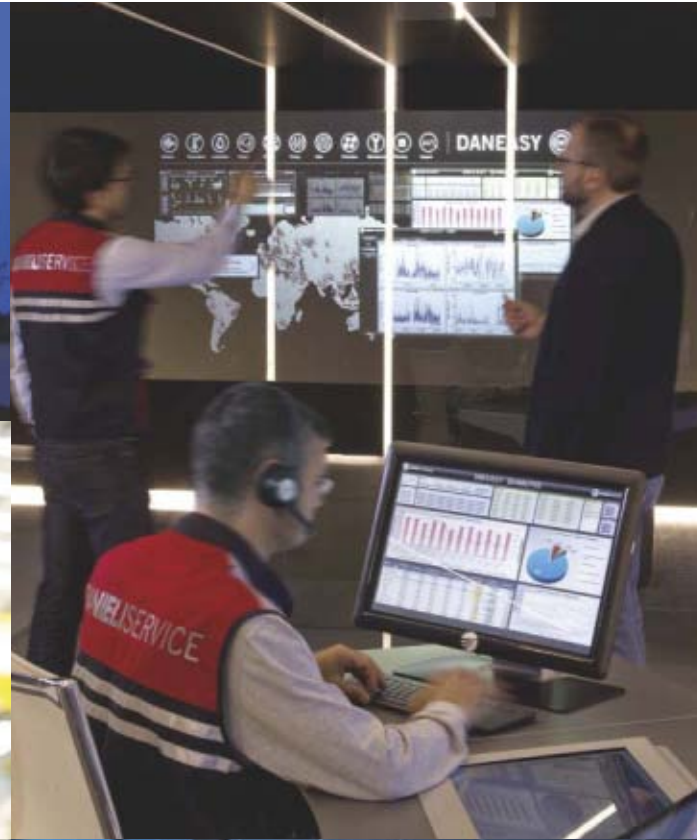
Danieli Plant Engineering, together with Danieli Construction International and Danieli Commissioning and Ramp-up Services are the ideal EPC Partner. Customer satisfaction and on-time plant operation hand-over are the main goals. Danieli TK Team acts either as a multi-referenced main contractor or as 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 customers, Danieli addresses all project requirements to avoid risks, to minimize CapEx and OpEx and to maximize ROI.

To achieve these targets, Danieli provides:

- joint assessment of the market requirements, identifying and finding the “value pools” driving the strategic selection of new plant locations;
- definition of a tailor-made winning solution for 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 of budgets, schedules and performances, always bearing in mind the value for our customers;

Danieli: a step ahead in the TK Project Business approach and execution.



Danieli Service and Customer Support optimizing resources to create new business ecosystems

10,000
hours / year

of technical support
and consultancy for
productivity and quality
improvement



Danieli Service supports steel and nonferrous metals producers through the lifecycle of their plants and equipment, providing a wide range of services 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 “Maintenance Excellence”. Danieli Service strongly believes that the future is cooperation, to create an ecosystem based on

trust, solid partnership and operational KPIs, to achieve true synchronization of interests for mutual benefits.

This cooperation is the real added-value of our proposition: we will cooperate closely with our partners on the same targets and objectives, reaching challenging targets together with their team, and empowering and growing along with them.

In addition, the value added by our digital tools fully embedded into the service rendered will give you an “entire ecosystem”, able to drive your actions and monitor, measure and analyze performances.



Danieli Green Metal Technologies knowledge, experience and commitment to sustainability



Low emissions, energy and recovery, and safe operations shape the Danieli approach, developing innovative solutions that anticipate relevant standards



DRI-EAF steelmaking has a 50% lower carbon footprint than BF-BOF, which can be reduced further through the use of CCS technologies and partially substituting natural gas for hydrogen. Upgraded BFs use mechanization and automation for energy savings and emissions reductions. ECS reduces EAF energy consumption, TTT and GHG emissions. Q-ONE cuts EAF power-on time and electrode consumption. Latest-generation FTPs with Pulse-Jet bag filters and chemical injection control residual dust, noise and pollutants. WTPs are committed to Zero-Liquid Discharge, including recovering blow-down water through crystallization. Zero-Slag Discharge means slag is not landfilled, but becomes a secondary raw material. With Zero-ASR, automotive shred-

der residue (SYNCA) with low inert contents can replace up to 30% of carbon injected to the EAF. Endless Casting Rolling technologies like MI.DA. and QSP-DUE are revolutionizing steel production, with no reheating or product loss through scale. Electric induction represents a sustainable, flexible reheating option to control and equalize temperatures, increasing product quality and reducing GHG, NOx and dust emissions. For gas-fired furnaces, Danieli Centro Combustion ultra-low NOx burners optimize flame patterns, with high radiant-tube efficiency and temperature uniformity for indirect heating. For automation, Q3-OPT schedules activities to manage know-how and complexity; and Q3-DEMS constantly monitors energy and resources to convert information into know-how.



Main events of the year

Significant events
of the Group's consolidated
international standing

Main events of the year



Main orders acquired

— Minimills, ironmaking and steelmaking plants

Americas

Usiminas, Brazil

Contract to replace 180-t converter #4 of BOF plant #2 at Ipatinga integrated steelworks.

SIDOC, Colombia

Danieli Q-Smartec water-cooling technology to reduce electrode consumption and cut EAF production cost, at Acopi.

Nucor Steel Gallatin, USA

New fume-treatment plant for meltshop to ensure compliance with local regulations, and stack dust emission less than 4 mg/Nm³.

Nucor Steel, USA

Water-treatment plants for MIDA micromill projects at Sedalia (MO) and Frostproof (FL).

Nucor Steel Gallatin, USA

Reconfiguration of thin-slab casting and rolling mill with Danieli QSP® - Quality Strip Production technology, with a new melt shop, caster, stands and mill upgrade.

North Star BlueScope Steel, USA

Two 310-sht capacity EOT charging cranes designed and manufactured in accordance with American standards.

Aceros Arequipa, Peru

Crane package for the meltshop expansion: two 230-t capacity charging and teeming cranes, three scrap yard, one caster maintenance, and two billet handling cranes.

Europe

Acciai Speciali Terni, Italy

Two Q-Smartec dynamic EAF electrode cooling systems will reduce electrode consumption for the 1-Mtpty meltshop, part of ThyssenKrupp Group.

Colfer, Italy

Brownfield combination shredding and grinding mill, with downstream systems.

Ural Steel / Metalloinvest, Russia

Contract for a large-scale technical overhaul of two blast furnaces at Novotroitsk, with new shells, furnace linings, and one top charging system based on compact DANCU distributor.

Severstal Cherepovets, Russia

Danieli Centro Combustion will supply a new coal test oven for a coke sinter BF shop, to evaluate different coal burdens, for OpEx optimization.

Severstal Cherepovets, Russia

Sublance systems for three 350-t converters, helping to cut steel production costs while maintaining efficiency and quality.

Severstal Cherepovets, Russia

Complete Danieli Corus blast furnace and gas cleaning system to start production by late 2020.

SSAB Oxelösund, Sweden

Second contract for hot-blast stove technology after successful stove rebuild project at Luleå.

HEP- Hrvatska elektroprivreda, Croatia

EPC and LTSA contract for construction of modern CCP-Combined-Cycle Power Plant using only gas fuel, with electrical output of 150 MWe and heat output of 114 MWt.

Middle East and Africa

RIVA Industries, Morocco

800,000-tpy meltshop with FastArc™ EAF, plus Q-Melt Suite, and four-strand FastCast™ billet caster, to be installed at Medz an Jorf Lasfar.

Diler Demir Çelik, Turkey

New vacuum degassing station with a movable tank with fixed and lifetable cover, at Dilovasi meltshop.

Kuwait Steel, Kuwait

Order for an Ecogravel® process sized to treat approx. 230,000 tpy of EAF and LF slag and exhaust refractory.

East, SE Asia / Asia Pacific

Luzhou Xinyang, China

Two 100t UHP EAFs with zero-bucket technology for a new meltshop.

Valin Xiangtan, China

New five-strand bloom caster featuring EMS, soft and hard reduction, and LPC for special carbon steel grades.

Hengyang Valin Steel Tube, China

Caster upgrade featuring “Eco Power Moulds” and Q-Mould to increase sections and productivity of top-quality blooms.

Huaigang I&S, China

Q-SOFT technological package to upgrade the mould exit areas with new withdrawal units for #2 billet caster.

Maanshan I&S, China

Five-strand bloom caster will produce three section sizes, from 250x250 up to 380x450 mm in high-carbon grades.

Jianbang Group, China

MIDA plan t for the Shanxi Tongcai Industry to produce 600,000 tpy of quality rebar from 12 to 32 mm dia in endless mode.

Maanshan Group, China

China's first complete Q-Robot Cast Ladle installation serving two-strand Danieli caster for heavy beam-blanks.

Pinggang Group, China

Guilin Pinggang I&S ordered China's first ECR-MIDA plant for endless production of 1.2 Mtpty of wire rod and rebar.

Taiyuan I&S Group, China

Contract for design and supply of proprietary “Hoogovens” cooling and lining technology, for relining of one of China's largest BF.

Baosteel, China

Q-Robot Melt Sample robotized station for step toward Industry 4.0.

EAF meltshop, Asia

Revamp including updated EAF to improve performance, maintenance and safety, and achieve 40% production increase.

PT The Master Steel, Indonesia

New, 80-t EAF and modernized LF and five-strand caster at Raya Bekasi plant.

Anglo Asia Group, Siam Services Ltd, Thailand

Special grinder mill line for treating aluminium UBC materials.

Siam Yamato Steel Thailand

Two Q-Robot Melt Sample systems for EAFs at Rayong.

Tokyo Steel, Japan

Cloud-based Q-ASC system for EAF meltshop Automatic Scrap Classification.

Echo Tech Pty Ltd, Australia

Preshredder, shredder and downstream treatment line for non-ferrous materials.

Central and South Asia

JSC “Uzbek Metallurgical Plant”, Uzbekistan

1-Mtpty minimill with QSP Compact technology for HRC strip, plus complete electrical and integrated plant process control.

TMZ and Metprom, Uzbekistan

New, Zero Liquid Discharge water-treatment plant to complete new Danieli cold mill complex.



— Flat product casting, rolling and strip processing lines

Americas

JSW Steel, USA

Replacement of primary descaler, hot plate leveler and plate shearing line #1, in Baytown, TX.

Steel Dynamics, USA

Technologically advanced CCL for CR and HDG steel strip, to produce 0.25-Mtpy of double-coated material for construction and white goods applications.

Ternium Pesqueria, Mexico

Fully automatic slab handling facilities with integrated management system to feed 4 Mtpy HSM.

ArcelorMittal LP Canada

"No-man operations" with three Q-Robot for flat and long products marking.

Europe

NLMK Dansteel, Denmark

Customized design for two 160-t EOT cranes, with two trolleys and four 40-t hoists each.

Laminoirs des Landes, France

Hydraulic shear to cut hot plates up to 50 mm thick and 3,500 mm wide, at Tarnos.

CD Waelzholz, Germany

Danieli Fröhling to relocate and upgrade slitter with a new drum shear and other equipment to enhance material and scrap handling and boost output.

Acciai Speciali Terni, Italy

Two Danieli Centro Cranes EOT hot mill cranes with remote monitoring systems.

Acciai Speciali Terni, Italy

Danieli Automation upgrade for slab caster #3 process control system to align L1 and L2 systems with caster #7 automation system.

AARTEE E&C, Italy

Complete automation for pickling line and replacement of existing DC converters at Piombino.

NLMK Metiz, Russia

Danieli Centro Combustion bell annealing furnace system to recrystallize steel wire coils in 100% N₂ atmosphere.

Tata Steel Ijmuiden, The Netherlands

Upgrade for hot-strip finishing mill main drives and inter-stand equipment, for a nominal production capacity of 5.2 Mtpy.

Middle East and Africa

Columbus Stainless, South Africa

Turnkey caster electrical and automation system revamp.

Erdemir, Turkey

Turnkey inspection and conditioning plant for steel slabs, at Zonguldak/Eregli.

East, SE Asia / Asia Pacific

Jianlong Group Shanxi, China

Engineering and supply of CCM3 slab caster, with 3Q technology packages and complete automation and process control.

Ningbo Poweray Alloy Material, China

Two 20-high cold-finishing mills to roll Cu alloys down to min. thickness of 0.03 mm, at max. width of 650 mm.

Tangshan Donggang, China

Danieli Kohler X-JET air-wiping equipment for two new, specialty steel galvanizing lines in Hebei province.

Youli, China

Danieli Fata Hunter twin-roll casting line to produce hot-rolled and coiled magnesium strip from 4 to 7 mm thick.

Henan Tongren Aluminium, China

A new tension leveling line for Sanmexia plant to uncoil, crop, side-trim, stitch, clean, level and recoil.

Ningbo Powerway Alloy Material Co., China

New slitting and trimming line to increase plant capacity of automotive aluminium strip.

Shandong Ruifeng, China

Three strip-coaters for a new line in Boxin, Shandong, for architectural and appliance industries products.

Hoa Phat, Vietnam

16 new SHS stands, relevant lubrication and hydraulic systems, electrical and automation equipment to upgrade Kinh Monh rolling mill #2, in Hai Phong.

Hoa Sen Group, Vietnam

New furnace and air-wiping equipment to modernize two galvanizing lines at Hoa Sen Nghe An plant.

— Long product casting and rolling plants. — Seamless pipe mills

Americas

Nucor Steel, USA

QTB quenching and self-tempering section for multi-strand deformed bar rolling, Marion, OH.

Hydro Extrusion North America, USA

60-MN front-loading direct extrusion press for Phoenix, AZ, plant, the largest Al press in the USA West Coast.

Nucor Steel, USA

Two spooler lines for new MIDA micromill wire rod rolling mills at Sedalia, MO, and Frostproof, FL.

Steel of West Virginia, USA

Customized universal finishing stand for structural beams, channels and special shape steel sections

EVRAZ North America, USA

New rolling mill to produce 100-m premium-quality rails for heavy-haul and high-speed rails, in Pueblo, CO.

Vallourec Star Muskogee, USA

Turnkey combustion system revamp for heat treating of seamless pipes.

Spectra Aluminium, Canada

A 28-MN front-loading direct extrusion press and 5,000 kg/h high-efficiency gas billet oven to be installed in Bradford, Ont.

Aceros Alfa, Honduras

New roughing mill with seven ESS cantilever stands, plus all electrical controls and automation.





Aceros Arequipa, Perú

Two roughing mill stands, plus electrical equipment and integrated L1 system.

Europe

Trinecké Železárny, Czech Rep.

Danieli Automation 3Q LPC off-line Liquid Pool Control model simulation for two casters.

Elbe-Stahlwerke Feralpi, Germany

2-MVA induction furnace and K-Welder line for endless billet rolling in Riesa mill.

Metra Group, Italy

Danieli Breda 55-MN short-stroke press to be upgraded to 75 MN, at Rodengo Saiano.

Riva Acciaio, Italy

Mill revamp, plus new finishing section and CSU Compact Sizing Unit, to improve special steel rounds tolerances.

SN Seixal, Portugal

Rolling mill modernization featuring K-Welder EWR machine and new intermediate and finishing stands.

Showa Denko, Spain

Custom-designed Danieli Breda 35-MN graphite extrusion press for carbon electrode production.

ProfilGruppen, Sweden

Danieli Breda 28-MN ESED 4.0 front-loading press, including control technology. .

Novorossiysk Rolling Plant (NPZ), Russia

New wire rod mill with Danieli Centro Combustion reheating furnace.

AEMZ and NPZ, Russia

Two H³ high-speed rolling mills, 600,000 tpy and 500,000 tpy, for wire rod and wire rod coils.

OMK, Russia

Hot mill featuring Danieli FQT - Fine Quality Train technology and finishing lines for new seamless pipe complex at Vyksa Steel Works, for 500,000 tpy of OCTG and line pipe products.

Abinsk Electro Metallurgical Works, Russia

Sund Birsta coiling and KNDelta binding machinery for one-ton, 12-m bundles.

Centravis, Ukraine

Danieli Breda runout system for pipes to improve metallurgical quality and reduce process inconsistency.

Middle East and Africa

El Masry Steel, Egypt

Danieli Automation L1 system and process control for reheating furnace.

Diler Demir Çelik, Turkey

Six-strand caster revamp including provision for two more strands with FastCast[®] package at Dilovasi.

Çelsantaş Çelik, Turkey

Main electrical and automation equipment for new light section rolling mill

East, SE Asia / Asia Pacific

GFG Alliance, Australia

High-tech, 750,000-tpy heavy-section and rail mill at Whyalla Steelworks.

SGIS Songshan I&S, China

Modern 0.6 Mtpy rolling for wire rod and coiled bars, with in-line heat treatment of hot-rolled stock, including DSC Danieli Structure Control.

Dazhou Hangda I&S, China

1.4-Mtpy high-speed bar mill for 12 to 40-mm dia rebar in HRBF 400E – 500E grades.

Luzhou Xinyang I&S, China

New rebar mill to produce construction grades using UFG- Ultra Fine Grain process, at max speed 45 mps.

Mianzhu City Desheng, China

Multi-strand mill to roll 12 to 40-mm dia rebar at up to 230 tph, starting from 165-mm billets.

Baotou Steel, China

Wire rod mill modernization with Danieli 4-pass high-speed finishing block (TMB) performing low-temperature rolling (LTR).

Yunnan Qujing Chenggang, China

High-speed bar mill for 8- to 40-mm rebar and 14- to 40-mm bar at max. 45 mps.

Shagang Group, China

Two HiGrind billet grinders for over 100,000 tpy throughput in full skin-pass mode.

Baotou Steel, China

Four-pass TMB high-speed finishing block for smooth wire rod and rebar wire.

Minyuan I&S Group, China

New mill for 12- to 40-mm rebar, with advanced multi-strand slit-rolling system.

Chengde Jianlong Special Steel, China

Danieli Automation Q3-Intelligence advanced business analytics solution suite.

Fujian Sangang Mingguang, China

Fully-automatic EWR line, controlled by I4.0-compatible Danieli Automation package.

Tung Ho, Vietnam

In-line water-quenching system for 10- to 43-mm straight rebars.

Pomina Steel, Vietnam

New electrical and automation equipment for reheating furnace and bar rolling mill at Phu My.

Central and South Asia

JSW Steel, India

220-tph walking-beam reheating furnace for wire rod mill at Vijayanagar-Tornagallu.

BRSM, Bangladesh

Rebar mill expansion in Chittagong to increase output 13% to 105 tph.

SAIL Bokaro, India

New thyristor convertors, transformer, and interfacing with existing automation system for skin-pass mill.

Plant startups and commissioning

— Minimills, ironmaking and steelmaking plants

Americas

Deacero Ramos, Mexico
Six-strand billet-bloom caster upgrade with FastCast Cube and EcoPower Mould technologies.

Gerdau Midlothian, USA
Q-MELT process control suite for EAF “B”, with FAC released after 15 days of operation.

Europe

ArcelorMittal Zenica, Bosnia
BF #4 restart after comprehensive rebuild, from the tuyere belt upwards, with a new Danieli Corus hearth design.

Stena Recycling AB, Sweden
Brownfield baler installation for automotive industry scrap, at Oskarshamn.

AST Terni, Italy
New complete process control and automation system for slab caster, featuring Q-COOL and Q-MAP packages.

Riva Thy Marcinelle, Italy
8-strand billet caster new automation and process control with 3Q pulpit with operator assistant, area and plant performance indicators.

Middle East and Africa

Yazici & Diler, Demir Celik, Turkey
Two new, 1600-ton side-compression shears with productivity up to 65 tph.
MKE, Turkey

Turnkey, meltshop for carbon and alloyed special steel complete, featuring 30-t EAF, LF and VD.

East, SE Asia / Asia Pacific

Infraone Build, Australia
Two 1400-ton side-compression shears to process heavy and oversized scrap at Laverton and Brisbane.

Guihang Metal Products, China
First Danieli Zero-bucket EAF with ECS scrap preheating in China, operating at Chizhou.

SeAH Besteel, South Korea
New Q-Melt system to upgrade EAF #3 at Gusan.

Hoa Phat Steel, Vietnam
First of four new BFs operating at the greenfield 4 Mtpy integrated plant in Dung Quat.

Siam Yamato Steel Thailand
Two Q-Robot packages implemented in SYS Rayong EAF meltshop for “no-man operations”.

Central and South Asia

Tata Steel, India
Danieli Corus recovery program solved process irregularities after a “chilled” BF hearth at Kalinganagar.

BSRM Steel Mills, Bangladesh
A 55-ton LF and 3-strand billet caster to produce 160-mm square billets.

ArcelorMittal Temirtau, Kazakhstan
Modernized Level 1 and Level 2 automation systems for slab caster.

— Flat product casting, rolling and strip processing lines

Americas

Logan Aluminium, USA
High-speed slitting line, part of larger new complex supplied by Danieli.

Mubea, USA
Flex Rolling Mill producing coils with variable thicknesses over its rolling direction to be used on special stamped automotive parts.

Europe

voestalpine Stahl, Austria
Top slab quality and equipment reliability demonstrated from the start with CC8 caster in Linz.

AMAG, Austria
Preparation line and high speed, five-head trimming, double recoiler, and slitting lines.

CD Waelzholz, Germany
Danieli Fröhling scrap cutter processing specialty steel strip with tensile strength up to 1600 N/mm².

ALRO SA, Romania
18-MN stretcher for thin aluminum plates installed at Slatina.

JSC Vyksa, Russia
Intensified cooling module in Danieli Hot Strip Mill 2000 for enhanced product quality and system efficiency.

Middle East and Africa

Tosyali Toyo, Turkey
200-mpm continuous galvanizing line with coating uniformity over the whole range of strip thicknesses.

Yildiz Lar, Turkey
Tandem cold mill at new complex in Izmit (Kocaeli), following pickling, galvanizing, batch annealing lines and temper mill.

Tezcan, Turkey
First Galvalume® strip line in Turkey, processing up to 350,000 tpy of CR strip.

United I&S, UAE
250,000-tpy cold-mill complex with in-line pickling, CR mill, and CGL for HR and CR coils.

East, SE Asia / Asia Pacific

Shougang Jingtang, China
Revolutionary Danieli Universal Endless DUE®: the world's only plant producing HRC in coil-to-coil, semi-endless and endless modes in one line.

Shandong Rizhao, China
CC4 caster relocated to Rizhao restarted in just 16 months.

Chinalco Central China Copper, China
Danieli Fröhling 20-high CR mill, relocated from Shanghai to Huangshi, and quickly commissioned.

Dongjixing Machinery Co. Ltd, China
HiPAC implemented in just seven days, improving cold reversing mill automation process control.

Henan Mingtai, China
High-speed slitting line commissioned 20 months from start of project.



Zhongwang Tianjin, China

Second high-speed trimming line started.

Shandong Rizhao, China

Hot and cold levelers with a new shifting system and automatic cassette change.

Tangshan I&S, China

Danieli thin-slab caster supplied in 2012 upgraded with MM-EMB® to improve slab quality and productivity.

Mubea, China

Flex Rolling Mill producing coils with variable thicknesses over its rolling direction to be used on special stamped automotive parts.

Tokyo Steel, Japan

Cold rolling mill upgraded with Q-DRIVE frequency converters at Okayama.

Ton Dong A, Vietnam

Second HDGL started at the cold mill complex in southern Vietnam.

Ton Dong A, Vietnam

1,250-mm triple-coat continuous coil-coating line in Binh Duong province.

Hoa Phat, Vietnam

Danieli HDGL #2 started at Pho Noi A, part of 350,000-tpy CR strip coating complex.

Central and South Asia**JSW Vijayanagar Steel, India**

First Danieli continuous Galvanizing/Galvalume line started at Karnataka.

— Long product casting and rolling plants
— Seamless pipe mills

Americas**Commercial Metals Co., USA**

K-Spool line upgrades CMC Oklahoma MIDA® minimill with four-pass fast-finishing block and horizontal spooler stations.

Tenaris Tamsa, Mexico

Roller-hearth annealing furnace for steel tubes up to 5 tph in Veracruz.

Pacific Steel, Mexico

Four-strand billet caster for commercial and specialty steels in Guadalajara.

Deacero Ramos Arizpe, Mexico

500,000-tpy rolling mill for bars and light sections mill started after 20-month project.

Europe**Třinecké Železářny, Czech Republic**

Hy-Power® hydraulic oscillation system for bloom casting.

Elbe Stahlwerke Feralpi, Germany

Modernized WRM with three-stand Compact Sizing Block, water-treatment line and high-speed laying head.

Acciaierie di Verona, Italy

New high-speed WRM produced its first coil 19 months after contract signature.

Acciaierie Venete, Italy

HY-POWER electro-hydraulic actuator oscillating system for bloom caster #2 at Sarezzo.

AESW, Russia

New coil compactor with 4KNB binding unit, the second at Abinsk.

La Farga your**CopperSolutions, Spain**

20-tph line for Cu-FRHC rod, 8 to 12 mm dia., near Barcelona.

Middle East and Africa**Tosyali Algeria, Algeria**

EWB® Endless Welding Rolling line on 187-tph bar mill.

Rajhi Steel, KSA

Billet caster carbon steel cooling chamber replaced with stainless steel unit.

East, SE Asia / Asia Pacific**Fujan Tsingtuo, China**

Finishing equipment for two WRM, with 10-pass fast-finishing block and laying head.

Lung Ching, Taiwan

New main drives, auxiliary drives, motor control centers, LV distribution and L1 automation for bar and wire rod mill.

Topy Industries Ltd., Japan

K-Spool for up to 240,000 tpy of bars in compact coils, and FFB Fast-Finishing Block with HiProfile measuring system.

Feng Hsin Steel, Taiwan

745,000-tpy high-speed rebar mill, plus electrical and automation systems.

Hoa Phat Dung Quat, Vietnam

First bar and WR rolling mill at Dung Quat plant.

Central and South Asia**Bhilai Steel, India**

900,000 tpy bar and high-speed WRM at Chhattisgarh.

Aarti Strips, Nepal

Rolling mill with in-line QTB for deformed bars at Birat Nagar.

— Extrusion and forging presses
— Inspection, conditioning and cold finishing lines

Europe**SIJ Acroni, Slovenia**

Upgraded slab-grinding plant resumed normal daily production after one-week shutdown.

BBC Group, Italy.

Complete ESED 4.0 aluminium extrusion plant at Matera.

Graftech Ibérica, Spain

35-MN press with new graphite extrusion technology for electrodes.





Danieli
The experience
of innovation
Steelmaking
Division



Danieli Steelmaking Division

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.



Steelmaking Division Structure

ABS Acciaierie Bertoli Safau Spa	Steelmaking Plant (Udine, Italy)
ABS Sisak doo	Steelmaking Plant (Sisak, Croatia)
Qualisteel Srl	Cold Finished Bars Production Unit (Udine, Italy)
ESW Röhrenwerke	Seamless Tubes Rolling Plant (Eschweiler, Germany)
ABS Centre Métallurgique Sarl	Research & Development Centre (Metz, France)
ABS Deutschland	Sales Agency (Ratingen, Germany)
ABS Scandinavia	Sales Agency (Oerebro, Sweden)
ABS Iberica	Sales Agency (Bilbao, Spain)

Steelmaking Division Executive Board

CARLA DE COLLE
Chairman

ALESSANDRO TRIVILLIN
CEO

SALVATORE CATANIA
HR Director

ANDREA CHITTARO
Chief Special Projects Officer

GLADYS CODARINI
Chief Business Compliance Officer

MIRTA FIOR
Logistics & Planning Director

GIUSEPPE FLABOREA
Finance & Administration Director

GIUSEPPE GIACOMINI
Plant Director

STEFANO SCOLARI
Chief Business Development Officer





Sales and operating results

In thousands of euro	June 30, 2019	June 30, 2018
Net revenues	1,044,412	991,274
Gross operating margin (EBITDA)	117,676	121,831
Depreciation, amortization, and write-downs	(63,658)	(59,678)
Operating income (EBIT)	54,018	62,153
Net financial income/(charges)	(912)	(476)
Profit before tax (EBT)	53,106	61,677
Income taxes	(24,203)	(17,244)
Net profit	28,903	44,433
Segment assets	1,130,917	1,134,991
Increase in investments in tangible and intangible assets	62,797	43,378
Segment liabilities	436,404	474,027

ITALY > Acciaierie Bertoli Safau Spa (ABS)

The ABS company reported sales and other income of 931.3 million euro for the period 2018/2019 (928.3 million euro in 2017/2018), with a net profit of 59.6 million euro compared with the previous year, which closed with a profit of 59.5 million euro.

The market, in which we operate, has drastically changed compared to the last year.

If 2017 and 2018 even more were characterized by a dynamism and an increase record in the demand in the Auto, Truck and Oil & Gas sectors, the first six months of 2019 gave the start to a phase of counter-tendency and a net contraction on all the geographic markets and in all the industrial sectors.

The only positive exception is the Wind Power Generation and Railway sectors.

Germany, the locomotive of Europe, already in the third quarter of 2018, for the first time, gave a negative signal with a reduction of 0.2%. The decline in the exports linked to the slowdown in demand following the China-US trade war but also the diesel car crisis weighed heavily on the German economy.

The sharp fall in German exports thus held back the entire Eurozone which between April and June 2019 grew only 0.2% against + 0.4% in the previous quarter. For Italy, zero growth is confirmed, the second worst figure after the German one. The two economies are in fact closely linked by subcontracting constraints in the Auto and Truck molding sectors such as the Mechanical Engineering and construction sectors. In June 2019, industrial production suffered an exceptional contraction throughout the Euro area.

At the same time, non-EU exports have slowed down towards countries such as the USA, Turkey and part of the UK due to geopolitical tensions that have remained unresolved to date.

The sales approach has been characterized by value maintenance policies through the renewed search for

the optimal product-to-customer mix as well as the desire to consolidate ongoing development projects. Despite the efforts made, in different contexts and for different contracts related to the mentioned markets, we have noticed a different approach by the operators that have begun to request important reductions in the base price.

The differential between real demand and supply in the steel sector, no longer controlled by the effect of apparent demand for stocks, did not allow the maintenance of the price positions held for three quarters, triggering an initial contraction and reduction in the value.

European producers are now looking for the right balance between productive march and market demand also to dampen the incentive effect of selling through the price lever.

Constant commitment to research and development has led to the achievement of excellence both in products and in production processes. Under the first aspect, the research on materials is fundamental because it is increasingly felt by customers the need to have lighter products with the same mechanical characteristics; to signal the important results obtained that led to obtaining the approval to directly provide Deutsche Bahn, the German railways and ZF, one of the world leaders in the production of automotive gearboxes.

In terms of infrastructure investments, the Financial Year 2018/2019 has seen major upgrades throughout the plant.

In the steelworks, the continuous casting tower MCC2 was replaced and the new EAF kiln drawn off was started.

In Luna Department a newly developed Metalloscope for round and square section bars with lengths up to 12.5 meters has been installed and put into operation, which can identify very small defects of 0.1 mm in depth and 2 mm in length over the entire surface bars.

In Blooming Area, the power-center of the Reversible 800 rolling mill was revamped, increasing its reliability and energy efficiency.

In the Heat Treatments Department, the Sottri1 treatment furnace combustion system was revamped, introducing regenerative burners with a significant reduction in emissions and consumption.

From June 2019 ABS is cardio-protected thanks to the installation of 9 defibrillators distributed throughout the plant and a plan for training emergency teams.

End-of-life transformers have been replaced with last-generation transformers insulated with organic ester which, compared to traditional oil, has low flammability and is biodegradable.

The construction of the new QWR wire rod mill is underway and the civil works of the furnace and of the shed plinths are proceeding quickly.

CROATIA > [ABS Sisak doo.](#)

During the 2018/19 financial year, the Company faced various problems that, quarter by quarter, have strongly affected the final result.

As already highlighted at the end of the 2017/18 financial year, the difficult situation in finding personnel has affected the ability to comply with the planned production increase since September with the 3rd production shift. The plan, which then included the gradual inclusion, in the second part of the fiscal year, of the 4th production crew, in order to, firstly, reach and then to, constantly, exceed the 20.000 tons of special steel production, was not respected due to the changed market conditions and the delay in the implementation of the new QONE plant.

The QONE investment, which will allow the Company to produce without power restrictions (decided by HOPS, the owner of the electric power distribution network), on electrical arc furnace, due to the flickers, unfortunately saw a progressive delay of its final implementation, until it was foreseen in the next financial year. Furthermore, the expected benefits, in terms of efficiency of the production process, which should have supported the improvement of costs, have not yet occurred.

Consequently, the difficulties at the beginning of the fiscal year, due to the recruitment of people and their training, together with some plant failure events, were not recovered in the following months due to the concomitant negative effect of the market contraction (both in terms of price of sales and in terms of volumes) and the delay in the improvement of operating and management costs, also linked to the postponement of the implementation of the QONE. The Company has operated, especially in the last quarter of the year, with trying, even with extraordinary actions, to contain the negative financial effects due to the above and to support the implementation of the QONE.

On the Customer side, despite the market contraction, has seen some positive results, first of all the certification for ABS Sisak to be official supplier of the

customer Rothe-Erde, who is part of the ThyssenKrupp group. The necessary staff growth can only further support the qualitative improvements of the product offered by ABS Sisak, already identified, and which are necessary in an increasingly competitive market. Together with reduction of operative costs.

In this scenario, also the part related to the investments planned for the next financial year has slowed down waiting to verify all the benefits expected from the implementation of the QONE and waiting to define the production strategy of the next years linked to the QWR plant by ABS Cagnacco. Consequently, it was decided to activate necessary investments, at this time, to the part linked to the safeguard and ordinary management of the Plant. In total, the figure is around € 1.3 million. Regarding the investments planned in the previous year, leaving aside the most important, both in economic terms and in absolute terms, namely the QONE, it is worth highlighting the completion of the investment to improve the lay-out of the Scrap Park. Expected improvements are in phases that will also be extended to the next fiscal year.

ITALY > [Qualisteel Srl](#)

In the period Qualisteel operated guaranteeing cold finishing activities on ABS products, completing their verticalization: both rolled bars and ground bars were processed where profitability was higher.

The company reported sales and other income of 9.1 million euro for the 2018/2019 financial year, compared with 8.7 million euro in the 2017/2018 financial year, with a net profit of 0.9 million at 30 June 2019.

In the past financial year Qualisteel achieved the record of ground material (about 15,000 t) and finished material (about 55,000 t), but an even more important goal: safety, there was zero injuries.

The company continued in the search for production efficiency, through the search for tools with better performance in terms of performance and Life Cycle Cost and with the investment in a new filtering machine for the peeling emulsion.

FRANCE > [ABS Centre Metallurgique \(ACM\) Sarl](#)

ACM is based in Metz and represents for the Group a centre of excellence for the research and study of steel production, covering the entire operating chain, from the raw material to the finished product developed according to specific customer and market needs. A team of twenty-three engineers and technicians develop the research activities through a variety of projects aimed at improving the operation in the processes and / or the quality of the product. During the year, the need to find solutions aimed at lightening the parts produced by ABS customers, while guaranteeing high mechanical performance, led to complete the range of innovative bainitic steels available in ABS offer.



The research, however, has not only concerned products in the strict sense but aimed at developing numerous digital twins in order to support the processing and involved metallurgical mechanisms understanding.

Besides research activities, ACM obtained the accreditation according to the international standard ISO 17025 (General requirements for the competence of testing and calibration laboratories) and consequently offers its competencies to various typologies of markets and customers.

GERMANY > [ABS ESW Röhrenwerke](#)

During the financial year 2018/2019 the company has undergone a series of significant delays in the completion of the new inline heat treatment furnace, mostly related to the technical complexity of the same and thus only making it possible to start carrying out the first tests at the end of the year. These tests will be completed by the end of 2019. This postponement has penalized substantially the result of the period preventing the expected savings and delaying the planned productive restructuring for this year. Despite the fact that the market has recorded a decrease in the second quarter of 2019 and that no recovery is foreseen for the third quarter, nevertheless the forecast for 2020 remains positive.

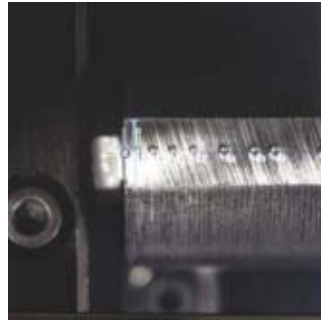
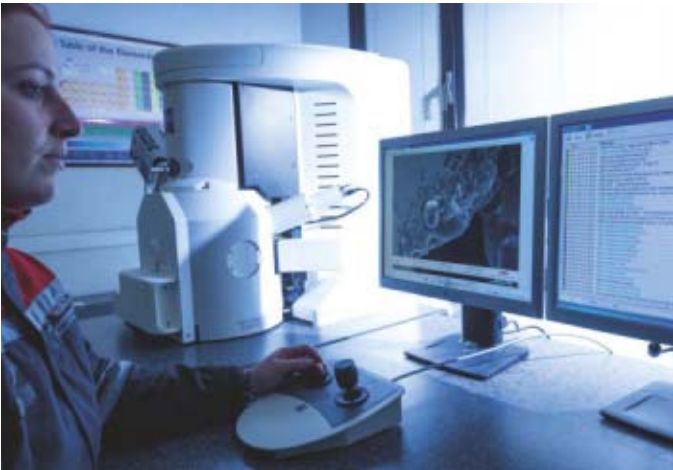
Referring to internal activities, a marketing plan is being developed with the purpose of identifying new market and new product opportunities with better margins. In addition to supporting this, we are proceeding with the reinforcement of the Commercial workforce, we are creating the Marketing function, but we are also scouting and selecting external collaborations.

It is believed that the interventions that were carried out in the plant, i.e. not only the new heat treatment furnace, but also the replacement of the cooling tower, the rebuilding of the rotary furnace hearth and the block processing saw replacement, will help increase the productivity for the next year with a decrease in OpEx.

We have also set up a large pool of selected external suppliers for raw materials (in the past 100% of raw materials were supplied by ABS) which we began to develop in the previous financial year reaching 70%. With this, it will be possible to guarantee some savings.

Additionally, our production planning has improved. The OTP "On Time Produced" index by the end of FY 18-19 reached 90% and our Quality Product index of non-conform material has fallen in the last months to below 1,5%.

The concentration of the Product Mix towards higher added value products, the new inline heat treatment furnace, the increase in production efficiency, the widening development of External Raw material suppliers outside the Group are the basis of the expected economic improvements for the financial year 2019/2020.



Quality

Quality Dept, as part of Customer's Team, co-operates with direct Customers (forging / machining companies), OEM (Original Equipment Manufacturer) and End-users in developing solutions which aim to optimize transformation processes and to improve the properties of steel parts, ensuring high customization level and continuous technical support. Same effort is put on internal production processes aiming to ensure high quality at sustainable costs.

Moreover, this year ABS maintained or renewed these certifications:

- IATF 16949 and ISO 9001 for Quality Management System.
- CE Marking according to the Construction Products Regulation 305/2011/UE (EN 10025-1 and EN 10343).
- American Bureau of Shipping, Bureau Veritas, DNV GL and Lloyd's Register approvals for marine applications.
- TÜV approval according to the Pressure Equipment Directive 97/23/EC and AD2000 Merkblatt W0.

Safety

Regarding emergency management, the installation of an alarm system throughout the plant has been completed. In the event of particularly serious emergencies, this system signals the need to evacuate the buildings. For fire prevention purposes, the installation of specific tags on all fire extinguishers (fire extinguishers, hydrants, etc.) has also been completed, allowing monitoring of the outcome of periodic checks and the state of operation.

Through information acquired from the analysis of the main causes of accidents, which highlight the predominance of the behavioral factor, over the past year ABS has launched a project involving the managers to investigate the issue of individual responsibility, at the same time establishing good operating practices to be shared with all staff.





**Sustainability:
willing to go beyond**

ABS identifies sustainability as one of its core values and a strategic factor for long-term growth vision. On a daily basis it works to integrate the social and the environmental variables in its core business. Technological innovation is the keystone of the environmental component and it is also strictly related to people, their skills and involvement. Among the most relevant activities in the road map, there are:

— Energy Savings. During the FY 18/19, the projects promoted by ABS in accord with GSE are numerically doubled involving all the areas including steel plant, rolling plant, heat treatment and ancillary services. A project we particularly care about is the ABS internal heating project. This plant implementation will make it possible to heat up office buildings, canteen and changing rooms by reusing the thermal effluent of the Rotoforgia plant heating furnace. This means energy-efficiency and smart use of heat for smart industry.

— Environment. Today Life Cycle Assessments, LCA, provide the best framework for assessing the potential environmental impacts of products. That's why ABS decided to apply this methodology to develop its first project of screening for our production cycle.

The target of this project is to help us identify improvement areas from the technical, management, logistic point of view and to guide the re-design and re-thinking of products and processes, in order to minimize their environmental footprint, through optimization of the consumption of natural resources and waste minimisation, within the framework of the Circular Economy.

— Health & Safety. Another important step to state that safety is a priority within our organisation was done this year: at the end of November Cargnacco Plant was audited and the BS OHSAS 18001, the international standard which provides a framework to identify, control and decrease the risks associated with health and safety, within the workplace has



been renewed, while Qualisteel achieved it on May 31. In the last financial year ABS equipped its headquarters with 9 semiautomatic defibrillators in order to reduce intervention time below 5 minutes in the event of cardiac arrest because the timeliness and efficiency of rescue can become a decisive element in case of emergency.

Training & Information

Over 11,000 hours of safety training were organised with the participation of over 3,600 people, meaning that, on average, each ABS worker took part in 3 different courses on health and safety at work. The figure shows the important effort that the company makes annually in order to spread specific technical skills and promote awareness among all workers.

This year's courses covered several topics, including major accident risk, use of work equipment such as forklifts and overhead cranes, use of PPE. The "Alcohol and Work" programme continues to be active, with periodic checks aimed at excluding, for staff assigned to tasks at risk, problems relating to alcohol addiction and the use of drugs.

Product mix

- Ingots** up to 130 t
- Forged bars** up to 1,000 mm
- Blooms** up to 850 mm
- Rolled bars** up to 500 mm
- Bar in coils** up to 60 mm
- Peeled bars** up to 300 mm
- Ground bars** up to 160 mm
- Seamless tubes** up to OD 244 mm

Surface finish

As-cast, As-rolled, Shot-blasted, Rough-forged, Peeled-reeled, Rough-turned, Ground

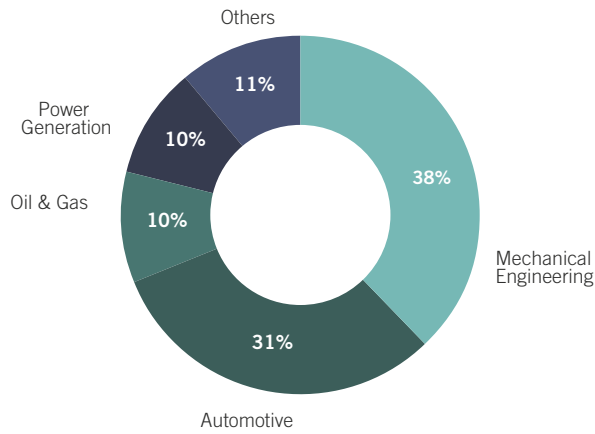
Heat treatments

Shearability annealing
Soft annealing
Isothermal annealing
Spheroidizing annealing
Normalizing
Hardening and tempering

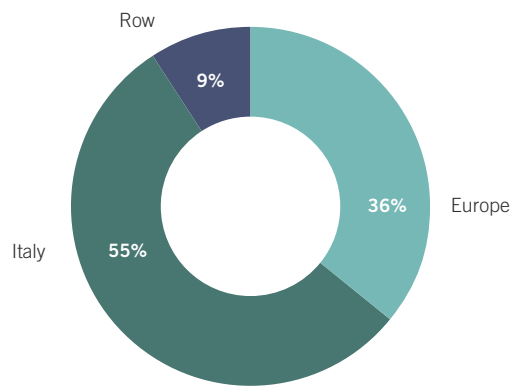


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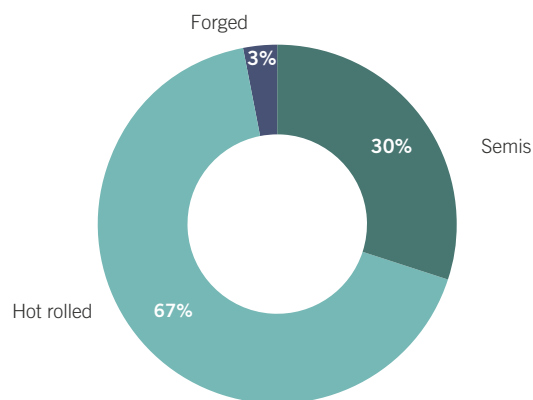
Industrial aggregate from EAF slag recovery, for bituminous conglomerates, cement mixes, and concrete.



End Use. During the last fiscal year ABS consolidated its position in the reference markets, and opened to others. The shipments slightly changed: improving their percentage (Mechanical Engineering and the Others) or lightly decreased (Power generation, Oil&Gas and Automotive).



Geographical Area. ABS confirms both its good position on the domestic market (54.9%) and its traditional export activity. The great part of the export goes to European countries (36.5%).



Products. The overall volumes delivered during the fiscal year 2018/2019 and produced in the Udine steelmaking plant record a reduction of 3% and maintain the same break down by product with an important quote in hot-rolled product shipments.



**NEW INVESTMENT IN DANIELI STEELMAKING
QWR WIRE ROD MILL UNDER CONSTRUCTION**

The investment in the new QWR wire rod mill is part of the expansion project being implemented at ABS Cargnacco and refers to the production of coils from 5.5 to 25 mm in diameter, given ABS' willingness and need to be even more resilient to changing market conditions.

Coil production is not a novelty for ABS, but the range of sizes the new plant can produce will add to the portfolio of products being supplied. Service, quality and punctuality are just some of the musts of our supply, backed by an extensive, practical use of innovative technologies. The "zero man on the floor" approach will in fact translate into an advanced capability to remotely control the process and greater attention to the product, starting from its traceability. The wire rod produced in the new rolling mill will stand out for its dimensional tolerances and surface defects, both under 0.1 mm. This is guaranteed by the automation system and the installation of measuring equipment (i.e. Hiprofile, Hi test, etc.), and not only.

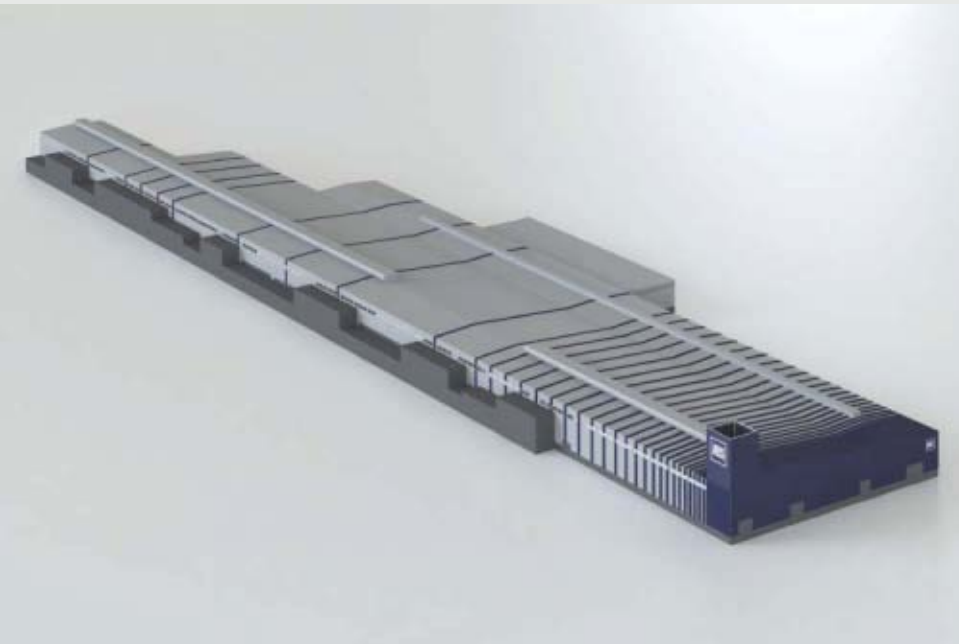
Temperature monitoring throughout the entire rolling process will make it possible to achieve a grain size of 9 or finer as per ASTM standards, while the EDC system, designed to obtain a very fine pearlite, will contribute to maximizing the mechanical properties and workability of the finished product.

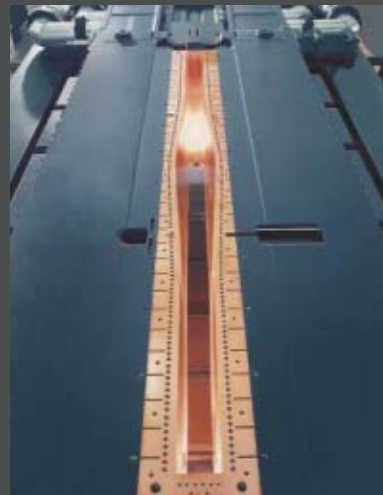
The rolling mill is also designed to minimize processing costs (energy consumption, section changing time, personnel employed, etc.) by applying the concepts of Industry 4.0.

The steels can be annealed right in the plant's furnaces during production. The coils will then be stored in an automatic warehouse designed to safeguard their surface quality, all the while ensuring a high degree of process flexibility with short lead times on orders.

The plant will be fitted with the most recent, innovative and consolidated technologies that Danieli can offer in terms of the process and the design of mechanical and automation equipment.







Danieli Group History



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 (Morgårdshammar), 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 plantmaking 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 it began investing in Industry 4.0 technologies 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 itself, it is an ideal laboratory for metallurgical research as well as equipment/processes testing.



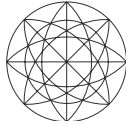
Danieli Group Milestones



Danieli's objective is constant technological improvement. Danieli is recognized as one of the most innovative and reliable companies in the metals producing industry. On the right page are shown some of the technological milestones Danieli implemented through continuous investments in innovation, together with high-quality in-house

manufacturing, our own process automation, construction, project management and customer service. These are the basis of the Danieli strategy that will allow us to maintain our leadership and expand our market share in plantmaking in the coming years. Please visit our website for the complete list of our contribution to the history of the metals producing industry.

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DANIELI

DANIELI TEAM
A CENTURY OF PARTNERSHIP
EXPERIENCE

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