

DANIELI  
YEAR 2018





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Danieli Year 2018

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  
refer to the period  
01.07.2017 / 30.06.2018

## Letter to the Stakeholders

### Dear Shareholders, Customers and Colleagues

Results for the fiscal year 2017 / 2018:		
(millions of euro)	2017 / 18	2018 / 19
	Group Results	Group Forecast
Revenue	2,706	2,750 / 2,850
EBITDA	229	220 / 230
Order book	2,954	2,900 / 3,100

The fiscal year 2017/18 ended according to forecast, with sales and EBITDA improved compared to 2016/17 by respectively 9% and 13.%.

#### Market and Scenario Forecast

The two main business segments, plant making and steel making, have shown different trends by comparison to the previous fiscal year.

In fact, as anticipated in the previous Letter to the Shareholders for fiscal year 2016/17, the plant-making segment still feels the effects of the serious crisis that steel makers experienced during 2015, 2016 and 2017.

This has reduced considerably not only steel makers' new investments, but also the purchase prices of new plants.

Consequently, the suppliers of steel-making equipment and plants also have suffered from this crisis, because of the under-absorption of fixed costs and narrow sales margins.

At the end of 2017, thanks to the customs tariff policies applied in the USA and then progressively also in Europe, as well as to the limitations imposed on the imported steel quantities, in the USA and then gradually also in Europe and in other countries, in addition to steel consumption increase steel makers saw an increase in demand and in revenue margins.

Consequently, the demand for new steel-making plants also has increased, starting from spring 2018.

In spite of this, the plant-making division is expected to record low margins also for the fiscal year 2018/19, since its invoiced value will include the low-priced sales of plants of 2017. However, an improvement is expected starting from 2019/20, certainly as a result of a reduction in the under-absorption costs, and we also will try hard to improve sales margins, which today are not yet adequate.

This will depend also on the success of the currently ongoing restructuring policies aimed at reducing overcapacity in the organizations of the major plant makers worldwide, as well as on these firms' determination to pursue positive balance sheets.

In contrast, the steel-making segment recorded a positive result in the second half of the year for the reasons noted above and is expected to maintain the same trend during the next fiscal year. The big question is how long this positive situation for the steel market will last, as it depends on among other things the USA policy, but also on the trends of the world economy.

At the moment we are gearing up for good market conditions estimated for the next 12 to 18 months' period and to organize ourselves for the next market downturn.

#### Technological Achievements

As regards our technological achievements, which are essential for us to remain a step ahead of our competitors, the following list details the most significant ones:

### Plant Making

— We started up two high-tech plants for VAS and VASD (voestalpine Stahl, Austria). This concerns a continuous casting machine producing high-quality steel slabs and a new wirerod mill whose main features in terms of quality and flexibility are unmatched worldwide. The commissioning of these plants was achieved to the customer's full satisfaction.

— The second MI.DA. endless plant was started up successfully in the USA. Steel makers are showing a growing interest in this compact plant which, besides being competitive in terms of CapEx and OpEx, can be considered environmentally friendly because of the substantial reduction in CO2 emissions, energy and water consumption and noise it allows the operators to achieve.

— Danieli Automation has obtained important successes with the new generation of high power drives, induction heaters, and steps towards Industry 4.0 and robotization.

— Finally, the outlook for FATA EPC is very good in relation to orders of environmentally friendly power plants, not only gas-powered processes but also based on concentrated solar power technologies. The future prospects for the latter cutting-edge technologies are very promising, if results come up to expectations.

### Steel Making

With the steel market on the upswing, the outlook for the steel-making segment is very good.

From a technological point of view, ABS (Acciaierie Bertoli Safau) will proceed with its Industry 4.0 and robotization program.

It will continue to pursue competitiveness and high added-value products, as well as to progressively mitigate its environmental impact while improving its safety strategy.

### Competitiveness:

### Plant Making

Most probably in the near future (in the next 5 to 8 years) our additional competitors in several fields will be Chinese companies that can benefit from approximately 40% lower costs and from the fact that they operate in a local market that

alone accounts for 50% of the global one, and therefore from a domestic customer base.

Obviously, the Chinese competitiveness should be considered as one of the benchmarks that need to be monitored carefully. Certainly, such factors as “innovaction” and quality will contribute to counter this new competition, which in turn is improving in quality and the number of patents it lists.

Therefore, our next goals include the strengthening of the activity of our China-based workshops and engineering departments in order to remain cost-competitive with the Chinese plant-makers, while always maintaining high levels of product quality and technology to be front runners.

In parallel we also will improve the competitiveness and productivity of our production plants in Thailand, India, Russia and Europe, to serve the local markets efficiently.

Moreover, competition from Germany and Japan has been very strong lately – during the market downturn - due to an overcapacity in relation to demand.

Therefore, restructuring plans are ongoing and we hope that this, combined with an increase in demand, will help sales prices to improve.

### Steel Making

In anticipation of a possible market downturn that is likely to occur in 12 or 18 months' time, we are working to improve productivity, OpEx and service to the customer.

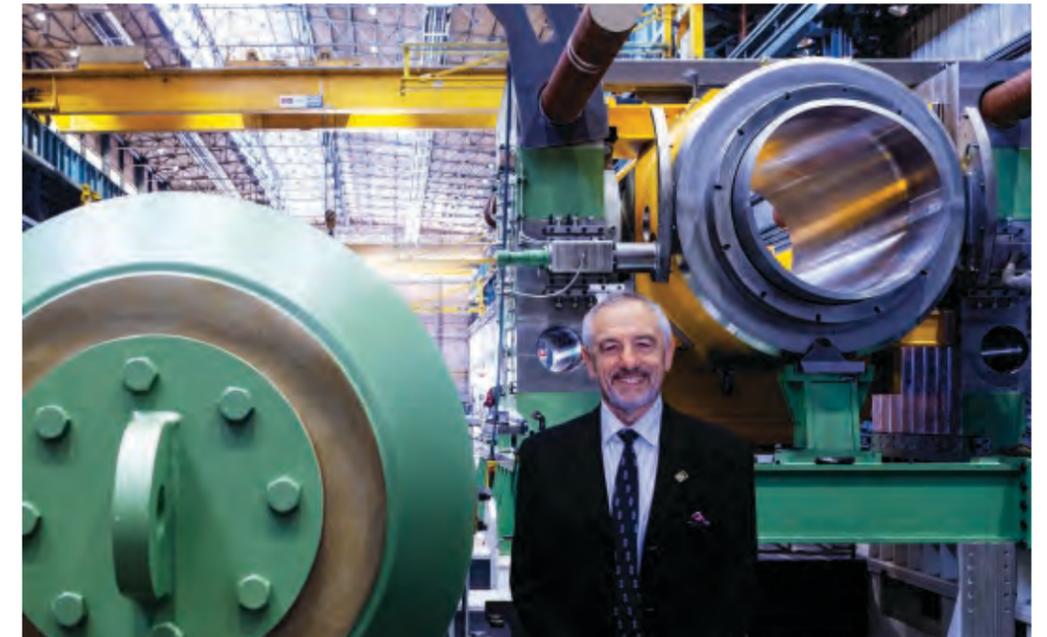
We believe that investing in metallurgical research and further developing our more downstream activities and Industry 4.0 technologies will enable us to improve considerably the competitive level of our company.

### Teamwork and Leadership

Obviously, the above-mentioned goals in general can be achieved more easily if supported by efficient teamwork and positive leadership.

In order to enhance teamwork within the company, together with a continuous updating in line with technological developments, which is essential to be able to innovate and compete, we also will further expand the activities of Danieli Academy.

In addition to its technological efforts, Academy will focus more on soft-skills training in relation to the different specializations and duties.



The working environment, services to staff (including the provision of nursery and preschool facilities), and a sports centre equipped with a summer campus for the employees' children, are under continuous improvement.

Also, the “environmentally friendly and safe” policy is being constantly enhanced and implemented in our workshops, and then integrated into the design solutions of our plant-making division.

One of the most successful examples is the MI.DA. project, which is becoming a global benchmark for reducing the environmental impact of a steel-making plant.

Our company is well aware of the fact that, in order to secure its future, it must produce profit and that in order to produce profit the average intellectual level and motivation of the team, together with an adequate consideration of merit, must be constantly improved.

And this applies as well to the protection of the environment and safety in the workplace, in addition to a stimulus to innovate with a view to the customers' satisfaction.

Also worth mentioning on this point is the promotion of social initiatives outside the company, referring here to cultural activities and to the maintenance of historical heritage.

In order to maintain the positive trend detailed above, including profits, continuous investments are necessary and in this regard we wish to thank our shareholders and stakeholders for the trust they place in our company: through the last 15 years they have allowed us to invest on average 85% of our profits back into the company.

### Conclusions

To conclude, in short:

— Results have been in line with forecasts.

— Even if the current fiscal year 2018/19 is expected to be better than the past 2017/18, the invoiced value for the plant-making segment will show the effects of the sales of plants at low prices during the crisis period, which are not yet sufficiently improving due to the strong competition among plant makers for overcapacity and market leadership.

— On the plus side, however, it is certain that the backlog of the plant-making division will progressively improve, and this should positively impact the financial statements of the fiscal year 2019/20 compared to 2018/19, which in any case will be better than the previous one.

— For the steel-making division, the fiscal year 2018/19 is expected to bring excellent results.

— The current plan for investments in “innovaction”, technology and “green steel” solutions will be pursued further. Moreover, a particular focus will be given to staff training and soft skills, with a view to the team's continuous improvement in support of competitiveness and customer satisfaction.

— The shareholders have agreed to leave as usual a large part of the profits (85%) in the company to finance innovation and investments and to remain financially strong.

*Gianpietro Benedetti*

CHAIRMAN OF THE BOARD OF DIRECTORS

## Some thoughts about market strategy

Our industry is emerging from one of the longest price slumps in recent memory.

This has had major repercussions for our company - leading to a significant optimization of resources, which from a peak of 11,000 employees has dropped to the current number of 9,358 - and in the world. Production and productivity are at recession levels, and a market recovery is needed to respond to market demands.

But how have we managed to come out of this stronger than before?

We were quick to make the decision to upgrade our organization and then implement our plan in order to remain competitive; we diversified at the right time and in the right way by investing in both the steelmaking segment and in plantmaking with the acquisition of Fata SpA; we never stopped investing in resources and technology; and above all, in spite of the strong market pressure and trends (not least the under absorption that cut our profit margin) we never renounced our international nature, as evidenced by the numerous manufacturing and engineering facilities we have all over the world.

Owning large factories certainly caused us to suffer in the last few years of the market slump, as they require a continuous work flow to support themselves and be sustainable. But now they are again a formidable asset to our organization, enabling us to be more competitive and to perform better than our competitors who shop around.

Now we have to keep evolving to remain “a step ahead”. The choices that were made several years ago are no longer applicable or current, and the ones we make at the present time will not be applicable in the future. With these thoughts in mind, and the optimistic outlook of the current market cycle, let’s take a look at the main points of the medium-to-long-term strategy we are working on, where the focus is on a single unchanging goal, the satisfaction of our customers.

### Flexibility

The planning of activities and the method used to fill job orders must not be confused with inflexibility and bureaucracy. In fact, we are working towards improving the way we respond to the short-term performance of a single project, as well as our ability to anticipate fluctuating market trends in the long term. This is currently our mantra; while recognizing the positive aspects

of a lean, agile and responsive organization, we have to put ourselves in a condition in which there is no risk of losing these characteristics due to an under- or oversizing that is unrelated to real market conditions. As everyone knows, this market is highly changeable and has recently shown that it can undergo sudden, major changes in a short time.

### Innovation

Everything we do has to be founded on a solid basis of skills and knowledge, of which innovation is the backbone, innovation that is increasingly being done for and with our customers/partners. Innovation at 360 degrees on products, processes, mechanics and automation, which is becoming more and more closely connected with digitization.

Investing in resources for innovation has never stopped, but in the last few years it actually has been given a boost thanks to the partnerships we set up with various customers, with the new research center and the new Digi&Met division, a true breeding ground for Industry 4.0 applications for steelmaking.

### Job Order Filling

We are guided by the knowledge that the best way to satisfy our customers is to give them what we promised within the specified timeframe and with the quality they expect from us. One result is a renewal of the job order filling process. More satisfaction means more profit and therefore a more promising future. We feel that shifting the company’s focus towards the customer is necessary and cannot be delayed; this is the reason that currently we have several specific projects under way within the Group to achieve this.

### We do not shop around for noble equipment

One of our strengths and strategic qualities that sets us apart from our competitors is that we own our factories. More than 50% of steel consumption is in Asia, where we have a strong presence with workshops in China, Thailand, and India. Having full control over our manufacturing means that we can guarantee high-quality standards, and the fact that we are physically close to these markets means shorter lead times and more efficient after-sales service. The result of this is increased focus on details that demonstrates value to our customers. In



short, it encourages the creation of long-term relationships, or even better, Endless Partnerships. Having our own factories is good, being present where the steel is produced and used is even better, but it’s not enough! What is required is an unwavering commitment to continuously improving our supply chain and internal productivity toward customer satisfaction, in terms of quality and costs.

### Activity Planning

Our business involves complex projects with long lead times, and each project differs from the previous one. It is obvious that Planning is a significant and substantial part of all our processes. Starting from the first sales negotiations, through to project kick-off and all the activities to prepare for the startup of a new plant, planning is fundamental to reach the desired standards and to assure the customer that we can deliver what was promised in the contract. We are working on organization, tools and procedures to quicken the pace in this direction. And let’s not forget that careful planning is the variable that

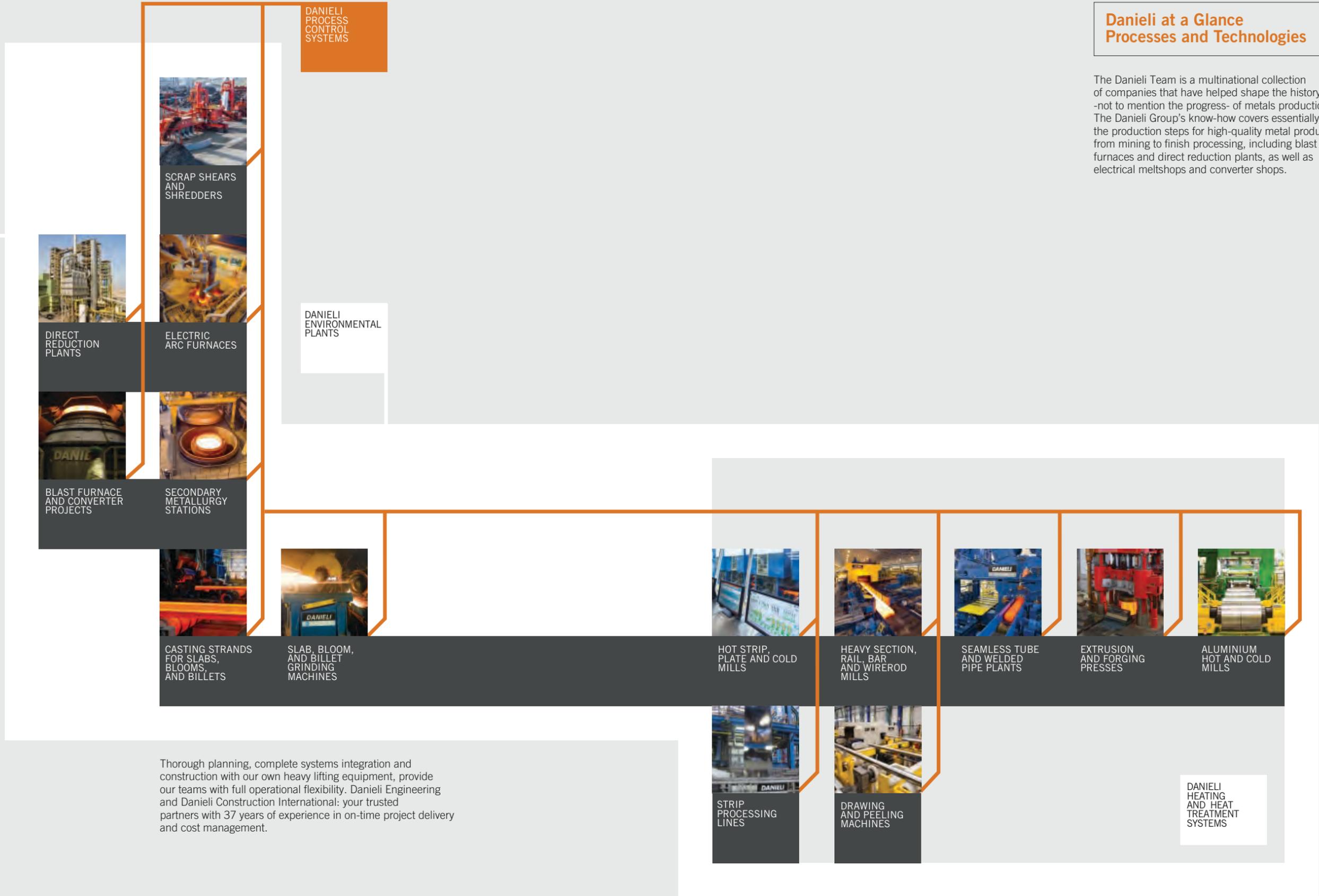
allows our workshops to be effective and efficient while reaching their maximum potential.

### People

We mentioned the importance of being close to markets and being flexible in monitoring them, giving attention to the customer, innovation, workshops and supply chain, all working together to achieve quality in terms of time and costs and continuously seeking excellence in all technological aspects. To fulfill this requirement we can count on the excellence of our human capital. We must never stop striving for merit, encouraging it in our colleagues, rewarding it and praising it, thereby fostering a spirit of initiative in all 9,000 of our employees. Passion and accountability in the people who work at Danieli are intangible assets, great qualities to be nurtured so that we can continue to be recognized as a partner of reference.

*Giacomo Mareschi Danieli, CEO  
Alessandro Trivillin, CEO*

DANIELI  
TURNKEY  
PLANTS  
SUPPLIED  
WORLDWIDE



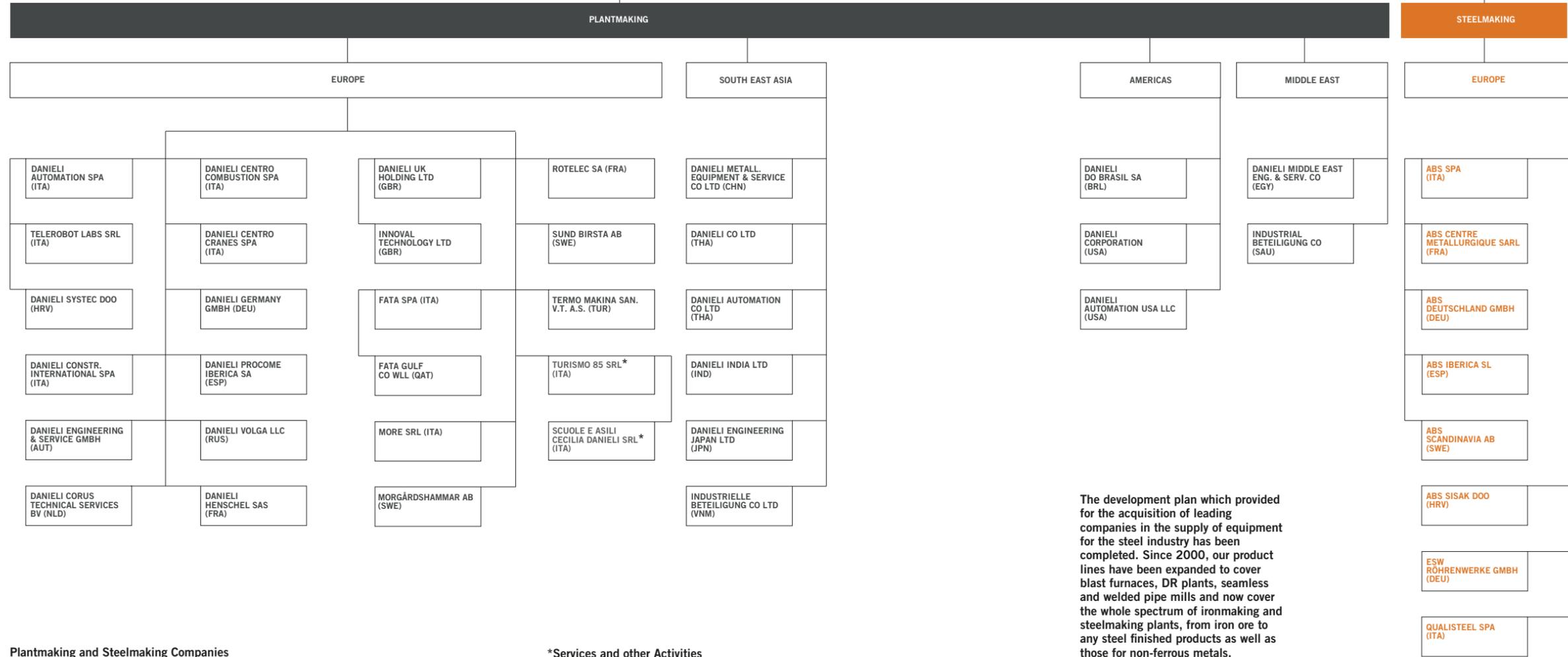
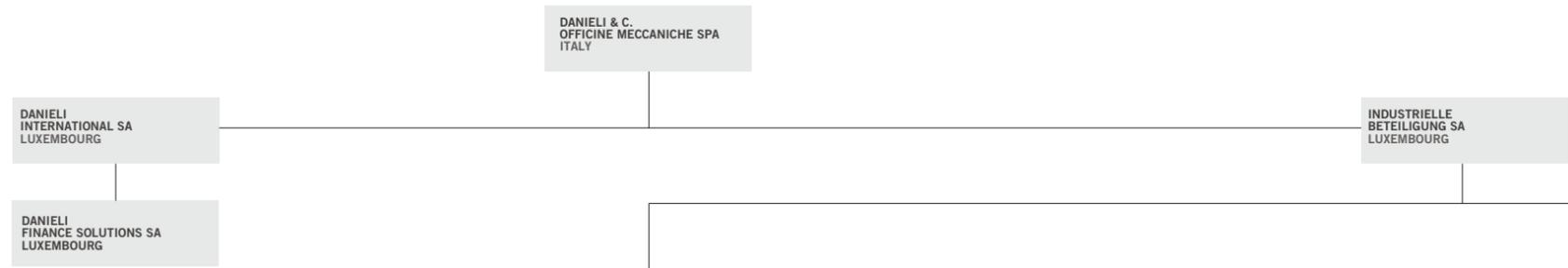
### Danieli at a Glance Processes and Technologies

The Danieli Team is a multinational collection of companies that have helped shape the history -not to mention the progress- of metals production. The Danieli Group's know-how covers essentially all the production steps for high-quality metal products, from mining to finish processing, including blast furnaces and direct reduction plants, as well as electrical meltshops and converter shops.

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.

# Danieli at a Glance Group Structure

## Finance Companies



## Plantmaking and Steelmaking Companies

\*Services and other Activities

## 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
- CARLA DE COLLE  
Chairman Steelmaking
- ALESSANDRO TRIVILLIN
- GIACOMO MARESCHI DANIELI
- ALESSANDRO BRUSSI
- WERNER AUER
- ROLANDO PAOLONE
- LUCA FERRARES
- ANTONELLO MORDEGLIA

## Danieli Year 2017/18

(thousands of euro)	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Order backlog	3,682,000	3,387,000	3,225,000	3,206,000	3,079,000	3,155,000	2,814,000	2,532,000	2,954,000
Sales revenue	2,583,317	3,118,485	3,081,108	2,782,294	2,944,102	2,765,940	2,508,352	2,490,912	2,705,600
Net income	201,040	192,461	174,578	163,165	153,577	161,738	87,999	50,540	58,400
Total net worth	1,028,314	1,185,896	1,292,113	1,427,266	1,548,396	1,713,744	1,777,158	1,817,828	1,853,000
Research and development	150,000	139,000	146,000	140,000	150,000	200,000	185,000	175,000	185,000
Employees	8,663	9,392	10,037	10,944	11,424	10,954	9,419	8,959	9,358
Consolidated net income per share (euro)	2.60	2.50	2.51	2.20	2.06	2.17	1.19	0.68	0.78
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	26,202	26,193	25,002	23,075	23,075	8,195	8,195	8,195	8,195
Dividend per ordinary share (euro)	0.33	0.33	0.33	0.30	0.30	0.10	0.10	0.10	0.10
Dividend per non-convertible saving share (euro)	0.3507	0.3507	0.3507	0.3207	0.3207	0.1207	0.1207	0.1207	0.1207

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.

## Danieli Group

The average year-on-year growth of the global economy for 2018 of 3.9% is higher than 3.7% in 2017: however, growth is differentiated between emerging countries and developing economies, improving by 4.9%, and stable and mature economies with an average growth rate that is lower but stable by 2.4%.

The worldwide growth outlook for 2019 is stable, with a projected GDP growth rate of 3.9% still driven by emerging and developing economies.

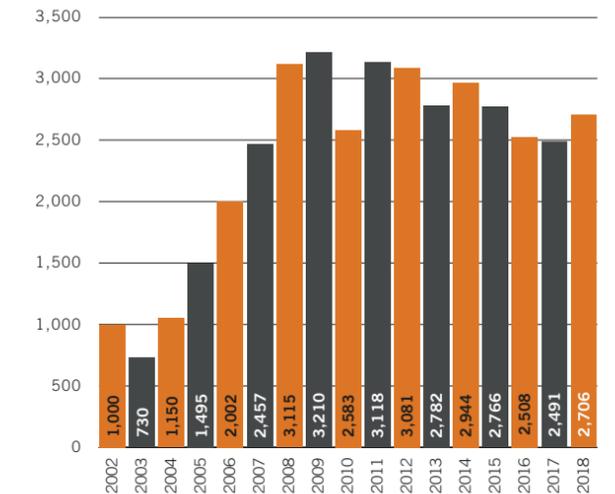
USA is growing well with consumption supported by a protected and financially strong domestic market, Japan is stable, while India and China always maintain high growth at 7.3% and 6.6%, respectively, well supported by public investment programmes developed by their governments.

China is gradually shifting its development model towards an economy more directed to internal services and consumption albeit production and infrastructure investments are still crucial to ensure sustained growth. In 2018, Europe recorded a slight decrease compared to 2017, and with the prospect of a still declining but resilient 2019, sustained by the low cost of money, a still low price of energy factors and the solidity of exports. The increase in the price of oil and main raw materials relaunched the economies of the producer countries, while a coordinated monetary policy by the main central banks, together with the implementation of stimulus tax policies allowed the strengthening of growth in countries with mature economies, improving the quality and competitiveness of internal production and reducing Chinese exports made less competitive by the adopted protectionist measures.

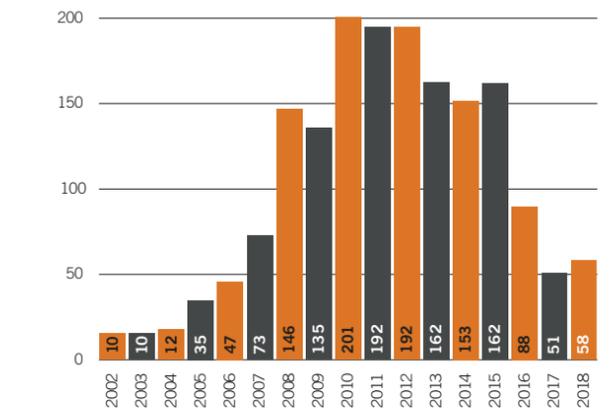
The development of applied research and the promotion of training implemented across the board by professionals remain the best possible tool (together with bureaucratic simplification and a stimulus financial policy) to promote the re-shoring of many industrial activities migrated in past years to Low Cost countries and now available again in economically developed countries competitively with innovative and quality products.

(millions of euro)

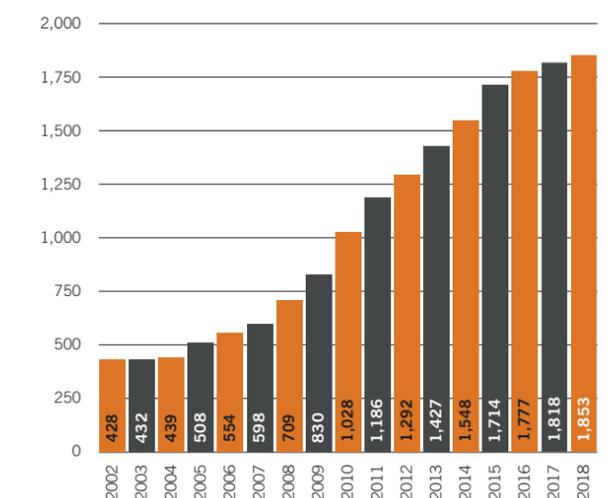
### Danieli Group: Sales Revenue



### Danieli Group: Net Income



### Danieli Group: Net Worth



(millions of euro)

## The steel market

Worldwide steel production reached nearly 881 million tonnes in the first half of 2018, up by 4.6% compared to the same period of 2017, which reached approximately a total of 1,691 million tonnes over 12 months.

The forecasts for 2018 show an overall increase by nearly 4.0-4.5%, with Asia (driven by China and India) up by 5.5% and advanced countries, together with emerging ones, with a more limited increase of approximately 2.0-2.5%.

The plant utilisation average coefficient compared to the maximum theoretical level reached approximately 78.5% at the end of June 2018, improving definitely compared to 73% in June 2017.

The steel market improved in 2018 with the expectation of stabilising further in 2019.

Producers confirmed increasingly their greater care in operating plants worldwide in a sustainable way by using the new technologies available (Green Steel) by reducing both GHG emissions and energy consumption per ton and reducing waste to make production to the community and the environment more efficient and socially sustainable.

In 2018, the demand for steel in China increased, driven by domestic consumption, while exports 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 out of China, the application of mercantilist and protectionist policies supported the domestic market, where the availability of scrap and its competitive cost made producers from electrical furnace competitive, also favoured by their inherent flexibility in production. Customer service, high-quality finishing and production quality 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 general improvement is expected in the second half of 2018 and in 2019, with private investments and public infrastructure projects that will come into effect both in countries with emerging economies and in mature and developed economies.

## The market for steel making plants

The maintenance of a high level of steel production in the world and the interest in further consolidating production in geographical areas still not well-served by current producers, and in others 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 both in new plants, in addition to updating technologically and developing those already existing that allow flexible and quality production, using the 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 used in mechanical engineering, car making and infrastructure.

Anti-dumping policies implemented by 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 2019.

To maintain competitiveness in a "New Normal" market, Danieli invested in technologies that, while maintaining customer focus, improve plant productivity and with it value added per capita also by developing the DIGIMET project that makes operational the principles of revolution 4.0 in the steel industry to ensure total control of the production variables both when devising and commissioning the plants but also to speed up production processes by reducing costs and optimising production efficiency.

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 steel 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

Seventeen production units and design centres:

Danieli & C SpA / Italy
Danieli Automation SpA / Italy
Danieli Centro Cranes 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 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

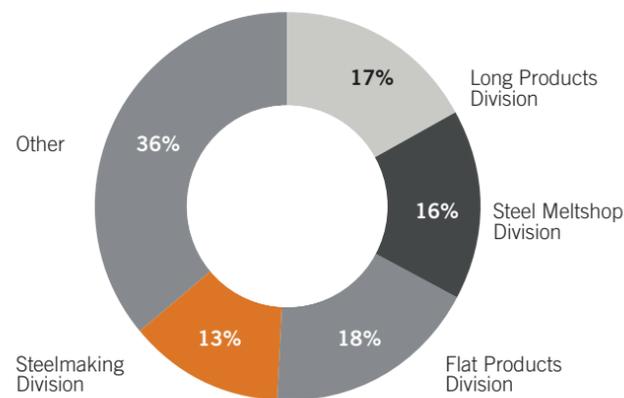
Danieli Kohler / USA, Italy
Air Wiping Equipment for Zinc Coating
Danieli Fata Hunter / UK, USA, Germany, Italy
Casting, rolling and painting plants for aluminium strip
Danieli Fata EPC / Italy, USA, India, People's Republic of China, UAE
Construction of Turnkey Industrial Plants
Danieli Fröhling / Germany
Specialty Mills and Strip Finishing Lines
Danieli Morgårdshammar / Italy, Sweden
Long Product Rolling Mills
Danieli Centro Tube / Italy
Seamless Pipe Plants
Danieli W+K / Germany, Italy
Longitudinal and Spiral Welded 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 tonnes, 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.

Danieli Group:  
Order backlog  
at June 30, 2018,  
per product line.  
The order backlog  
amounts to  
2,954 M Euro.



## Highlights of the consolidated income statement as at June 30, 2018

(\*) The Normalised gross operating margin (Adjusted EBITDA) excludes "non-recurring" charges and costs of 11.1 million euro incurred in the financial year ended June 30, 2018 (22.5 million euro in 2016/17), of which:  
— 6.3 million euro in the Plant Making segment (16.8 million euro in 2016/17) for restructuring and reorganisation in Fata S.p.A., related to costs incurred in the second half of 2017 on specific problematic projects and other projects with delayed start in markets not normalised  
— 4.8 million euro in the Steel Making segment (5.7 million euro in 2016/17), related to the consolidation of the learning curve of production activities, incurred in the second half of 2017 at the newly acquired steelworks ESW Röhrenwerke GmbH in Germany.

(\*\*) 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) and the Adjusted one are measures used by the issuer to monitor and evaluate the performance of the Danieli Group, although not defined as an accounting measurement within IFRS. Consequently, the criteria for determining these economic figures may not be consistent with the one used by other entities, and therefore may not be altogether comparable.

in millions of euro	June 30, 2018	June 30, 2017	Change
Revenues	2,705.6	2,490.9	9%
<b>Normalised gross operating margin</b>			
(Adjusted EBITDA) (*)	239.9	225.0	
% of revenues	8.9	9.0	
<b>Gross operating margin (EBITDA) (**)</b>			
% revenues	8.5	8.1	13%
<b>Depreciation, amortization and write-downs</b>			
of fixed assets	(124.9)	(132.2)	
Operating income	103.9	70.3	48%
% revenues	3.8	2.8	
<b>Net financial income/(charges)</b>			
	(19.6)	(6.6)	
Companies measured at equity	0.6	(0.7)	
Profit before tax	84.9	63.0	35%
Income taxes	(26.9)	(12.9)	
Net profit for the period	58.0	50.1	16%
% revenues	2.1	2.0	
<b>Profit (Loss) attributable</b>			
to non-controlling interests	0.4	0.4	
Net profit attributable to the Group	58.4	50.5	16%
% revenues	2.2	2.0	

### Danieli Group structure

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

The company's revenues amounted to 853.7 million euro (935.3 million euro in 2017) with EBITDA of 20.5 million euro (37.1 million euro in 2017) and net profit of 206.4 million euro (13.6 million euro in 2017). During the year, the company received an intra-group dividend of 218 million euro, which enabled it to fully rebalance its indebtedness towards third parties and other Group companies.

In this period, the company maintained a sizeable volume of turnover in line with the previous year, while the operating income was 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 by increasing 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 management of exchange rates and cash-flow related to job orders in progress, while it was penalised in the financial year by charges for discounting financial receivables for which

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 2018/2019 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 International SA, which invests liquidity in the international financial markets through the company Danieli Finance Solutions S.A.

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

As at June 30, 2018, the main economic and financial data were as follows:

— revenues: 2,705.6 million euro up by 9% compared to 2,490.9 million euro as at June 30, 2017;

— Group's net profit: 58.4 million euro, marking an increase of 16% compared to 50.5 million euro as at June 30, 2017;

— consolidated shareholders' equity: 1,853.0 million euro, up by 35.2 million euro compared to 1,817.8 million euro as at June 30, 2017;

— positive net financial position: 836.7 million euro, down by 75.8 million euro compared to 912.5 million euro as at June 30, 2017.

The Group order book is well-diversified by geographical area and by product type and as at June 30, 2018 amounted to approximately 2,954 million euro (of which 393 million euro in the special steel making segment) up by 17% , compared to 2,532 million euro as at June 30, 2017 (of which 375 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 loan procedures still being finalised.

The rationalisation process in the Plant Making sector continued with particular attention to competitiveness in terms of innovation, technology, quality, efficiency and customer service, with:

— development of innovation and production of 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.

The integration process with Fata S.p.A. was completed during the year, still generating in the period some restructuring and reorganisation costs quantifiable in approximately 6.3 million euro related to contingent situations that we consider to be non-recurring and not repeatable in the coming years. The budget of Fata S.p.A.: for 2018/2019, the company expects a return to profit thanks to the good level of orders acquired during the period and the measures taken to rationalise the structure and re-engineer the products sold.

In the Steel Making segment, investments downstream of the production plants continued to be completed 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 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. During the period, the company completed a radical restructuring that brought about 4.8 million euro in non-recurring expenses and was able to operate more efficiently from the first half of 2018 with a market for seamless tubes that was once again receptive thanks to the recovery of the energy sector in general. For the 2018/2019 financial year, ESW may show positive operating margins, thanks to the investments made to modernise the plants by removing "bottlenecks" and improving the finishing of the products.

The ABS Sisak plant in Croatia was gradually restarted from the end of 2017 with a growing margin after two years of plant shutdown and, thanks to the new investments underway, it will be able to reach a high utilisation coefficient already at the end of 2018, with a return to profit.

In the Plant Making segment, investments will be approximately 10/15 million euro per year, in addition to those for research and innovation, which are still high, whereas important new investments are being studied in the Steel Making segment to increase

the rolling capacity of the plants and that will be implemented over the next two financial years. The level of revenues of the Group increased by 9% compared to the previous year with almost constant turnover in plant segment (Plant Making) and an increase in turnover in the steel segment (Steel Making), which also shows higher production volumes compared to 2016/2017 thanks to the restart of ABS Sisak and despite the restructuring (now completed) of the ESW pipe manufacturer, which will be able to operate more efficiently in the next financial year. Revenues for the Plant Making 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 107.0 million euro, to be normalised to 113.3 million euro after being subjected to charges of approximately 6.3 million euro related to non-recurring and restructuring costs occurred in FATA for problematic projects and/or projects very late in coming into force.

Revenues for the Steel Making segment are well above the budget at the beginning of the year and have a profitability of 121.8 million euro, to be normalised to 126.6 million euro, taking into account non-repeatable costs of approximately 4.8 million euro following the restart of the restructuring of the pipe manufacturer ESW Röhrenwerke GmbH acquired last year in Germany.

Therefore, the 2017/2018 financial year has an improved operating profitability (EBIT) compared to the previous year, albeit affected in both operating segments:

— in the Plant Making segment, for extraordinary expenses of approximately 6.3 million euro related to non-recurring and restructuring costs occurred in FATA for problematic projects and/or projects very late in coming into force.  
— in the Steel Making segment for approximately 9.3 million euro due to the effect of the restructuring in ESW and some write-downs on goodwill made in the period since the related economic requirements were no longer met.

The production sold during the financial year by the Steel Making segment (ABS Group) reached approximately 1,280,000 tons (up by 15% 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 Plant Making (engineering and plant construction) and Steel Making 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 and without significant extraordinary charges.

In particular, in the Steel Making segment, a good 2018/2019 is expected, without one-off negative influences, with greater efficiency in production (having completed the homologation of the products processed by the ROTOFORGIA plant) and with the full operation of ABS Sisak and a production with profitable margins of the ESW pipe manufacturer in Germany.

The operating income of the Plant Making segment is expected to grow in 2018/2019, equally distributed throughout the main product lines (steelworks,

## Revenues by geographical area

in millions of euro	Year to June 30, 2018	%	Year to June 30, 2017	%	Change
Europe and Russia	1,411.3	52.2	1,107.4	44.5	27.4%
Middle East	481.8	17.8	572.3	23.0	-15.8%
The Americas	277.6	10.3	275.2	11.0	0.9%
Far East	534.9	19.8	536.0	21.5	-0.2%
<b>Total</b>	<b>2,705.6</b>	<b>100</b>	<b>2,490.9</b>	<b>100.0</b>	<b>8.6%</b>

## Key consolidated financial ratios

Profitability ratios	Description	June 30, 2018	June 30, 2017
ROE	<u>Group profit for the year</u> Group shareholders' equity	3.1%	2.8%
ROI	<u>Operating income</u> Net capital employed	9.8%	7.4%
	<u>GOM (EBITDA)</u> Shareholders' equity	12.3%	11.1%
	<u>GOM (EBITDA)</u> Financial charges (*)	12.19	15.97
GOM (Adjusted EBITDA)	<u>GOM (Adjusted EBITDA)</u> Revenues	8.9%	9.0%
GOM (EBITDA)	<u>GOM (EBITDA)</u> Revenues	8.5%	8.1%
	<u>Gross financial indebtedness</u> GOM (EBITDA)	2.18	2.60
ROS	<u>Operating income</u> Revenues	3.8%	2.8%
Financial charges over revenues	<u>Financial charges</u> Revenues	0.70%	0.53%
Capital ratios	Description	June 30, 2018	June 30, 2017
Debt to equity ratio	<u>Gross financial indebtedness</u> Consolidated shareholders' equity	29.7%	39.8%
Financial independence	<u>Consolidated shareholders' equity</u> Total assets	39.5	37.8%
Primary structural margin	<u>Consolidated shareholders' equity</u> Non-current assets	167.1%	157.1%
Secondary structural margin	<u>Consolidated shareholders' equity + non-current liabilities</u> Non-current assets	204.9%	178.7%
Current ratio	<u>Current assets</u> Current liabilities	148.2%	133.2%
Quick ratio	<u>Current assets (- Inventories)</u> Current liabilities	106.4	98.3%
Profit indicators		June 30, 2018	June 30, 2017
Revenues per employee (thousands of euro)		289.1	278.0

(\*) net of interests on discounting operations.

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.

long products and flat products), with essentially homogeneous profitability in all geographical areas concerned, and a successful contribution to the Group from the Parent company and from main operating affiliates.

Thanks to investments made in both operating segments, the Danieli Group proposes to offer its customers 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 on investments in euro and those denominated in foreign currencies (essentially in USD), with a negative effect on the income statement only related to the alignment of the exchange rates of the latter essentially to the exchange rates in force on June 30, 2018.

Group EBITDA as at June 30, 2018 was 228.8 million euro, an increase by approximately 13% on 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.

The Normalised EBITDA as at June 30, 2018 of 239.9 million euro increased by 7% compared to the previous financial year and reflects the margins deriving from the development in 2017/2018 of the order book present as at July 01, 2017 gross of the extraordinary charges incurred in the financial year and considered one-off and not repeatable. Net financial income came to a negative 5.8 million euro, (after exchange rate alignment) affected by discounting charges calculated on financial receivables with deferred payment; the management of the par exchange rate was negative due to the strengthening of the euro against the US dollar, but with a less significant change as at June 30, 2018 compared to the end of the half-year as at December 31, 2017. Cash management was in any case handled prudently, maintaining a high solvency profile while closing the year with a satisfactory net cash position. Total taxes for the period amounted to 26.9 million euro (12.9 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.

The net profit for the period came to 58.0 million euro, increasing by 16% compared with 50.1 million euro as at June 30, 2017.

### Consolidated revenues by geographical area

In the Plant Making segment, the geographical distribution of revenues is based primarily on the volume of 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.

As for Steel Making, 36.6% of revenues were concentrated in Europe and Russia as at June 30, 2018 (compared to 52.2% of total revenues of the area), while as at June 30, 2017, that region

accounted for 29.7% of steel making revenues and 44.5% of the total.

The Net Invested Capital increased compared to the previous financial year allowing to cover the investments completed in the financial year in both operating segments with an increasing Working capital thanks to the payments of advances from customers on new orders acquired during the period. This situation, with expectations of continuing positive cash flows in the next few years, is expected to allow the Group to repay its debt to banks, with a further reduction in gross financial indebtedness, already decreased during the period by 172.7 million euro.

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 52.4 million euro as at June 30, 2018 (196.3 million euro as at June 30, 2017). 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 20.2 million euro (20.6 million euro as at June 30, 2017), included in other liabilities.

The remaining customer advances, amounting to 650.8 million euro as at June 30, 2018 and 405.7 million euro as at June 30, 2017, 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, 2018 decreased by 75.8 million euro compared to the previous year reaching the amount of 836.7 million euro, and it is penalised by a debt of 20.0 million euro to be paid contractually for business combinations but only against the collection from third parties of an at least equivalent positive flow, thus not resulting in a real negative effect on the group's cash. This amount is still important, stemming partly from advances collected on current contracts and partly from a careful financial management of production on job orders, and will enable the Group to finance the important investments in research and development in the Plant making segment as well as those required for the new plants of the Steel making 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 absorbed during the financial year to cover disbursements on investments made, and with a decrease in working capital by 173.0 million euro (compared to 52.5 million euro in the previous year). The net cash flow from operations amounted to 10.1 million euro (87.2 million in the previous period) and allowed the financial coverage of net operating

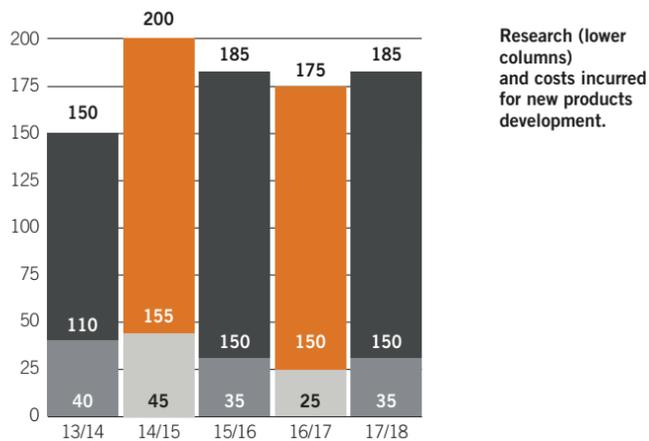
investments, of 83.5 million euro (75.1 million euro as at June 30, 2017). Hence, a final cash absorption, after financing operating investments, of 73.4 million euro (whereas it was positive by 12.1 million euro as at June 30, 2017). The total positive change in the net financial position, down by 75.8 million euro, in any case includes the outlay for the payment of dividends in November 2017, amounting to 8.2 million euro.

### Investments and research activities

The main investments in tangible and intangible fixed assets in the period, totalling 74.6 million euro, were as follows:

- 43.4 million euro for new finishing plants completed in ABS and used in the steel making segment 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;
- 31.2 million euro for new machine tools installed in production facilities abroad, with the objective of improving efficiency and expand the market for sales of 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 35 million euro for direct and indirect research activities (almost entirely supported by the Plant Making segment for approximately 2% of the relevant turnover), with the management of a volume of innovative projects of approximately 150 million euro (approximately 10% of the turnover of the Plant Making segment).



## 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 our 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:

- Strengthening the Governance of Sustainability within the Group;
- The development and implementation of a specific reporting procedure of non-financial information, by defining the methods, responsibilities and timing, as well as specific levels of control of data and information;
- The identification and assessment of specific non-financial risks, related to the Group's main sustainability issues, and their integration into the business risk management process.

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 it 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") and affiliates (Steel Making segment), by using 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 (Plant Making segment), by offering a complete range of machines from primary process management to the manufacture of finished goods (essentially from ore to finished product) and 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 assessment of the relevant issues and their materiality was carried out for the steel sector (Steel Making) in detail by involving the internal and external stakeholders of the Group, whereas for the machinery sector (Plant Making) the involvement was directed towards the internal stakeholders given the greater extent and variety of companies involved at world level despite having a production with low environmental impact as a whole.

The process followed by the company was based on the preparation of questionnaires submitted to the main stakeholders to collect information in an

independent manner and across the board. The analysis with the results of the materiality and the identification of the relevant issues was then submitted to the attention of 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 2017/2018 Report on Corporate Governance and Ownership Structure (approved by the Board of Directors on September 25, 2018) 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.

Over the year, Danieli developed and applied its own Organisation, Management and Control Model for the prevention of offences 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, 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. Internal regulations aimed at preventing environmental offences (where the Parent company, ABS, Danieli Met. Equipment & Service (China) Co. Ltd. and Danieli Co.Ltd, Danieli India Ltd. obtained the ISO 14001 certification) and offences in the field of safety at work (where the Parent company, ABS, Danieli Automation S.p.A., Danieli Met. Equipment & Service (China) Co. Ltd., Danieli Co.Ltd, Danieli India Ltd. and Danieli Corporation (USA) obtained the OHSAS ISO 18001 certification) are particularly important in this area. 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 is a member of the ETS system (Emission Trading System) for the calculation and certification of 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 company asked its employees to confirm that they have read the Code of Ethics, which was sent to all

**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 organisations
Trade unions	Universities and Research Centres	

**Material aspects 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 Training and Development	Support to local communities Protection of human rights	Occupational health and safety 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

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. 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 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 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 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.

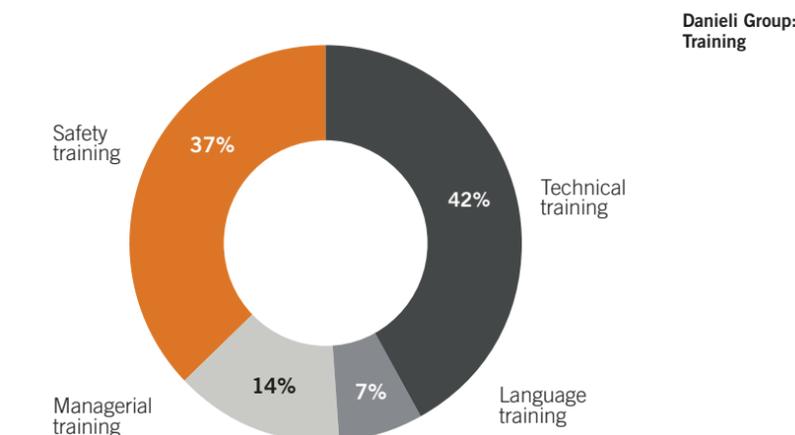
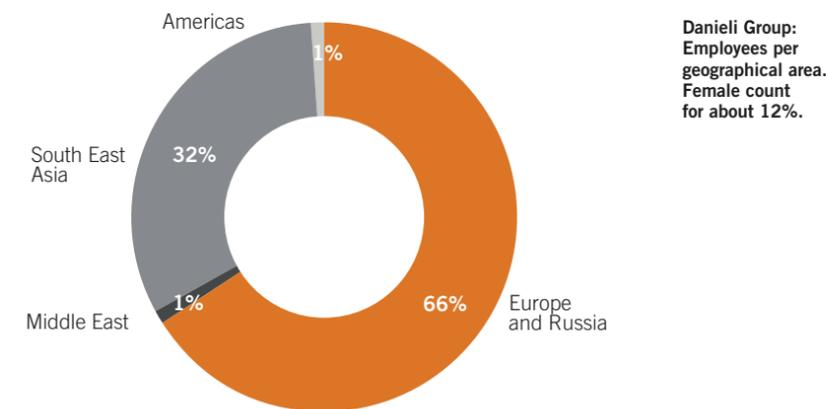
Preliminary due diligence procedures were implemented and are regularly applied to the main contractual partners of the company, which envisage the use of software systems that allow to carry out analytical checks (as defined by the transparency principles issued by the World Bank) in order to preventively 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 Managers and 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

**Human Resources**

	June 30, 2018		June 30, 2017	
	Plantmaking	Steelmaking	Plantmaking	Steelmaking
Danieli & C SpA in Italy	2,233		2,119	
Italian affiliates	889	1,199	861	1,180
Foreign offices and affiliates	4,679	358	4,559	240
	<b>7,801</b>	<b>1,557</b>	<b>7,539</b>	<b>1,420</b>

**Figure by category**

	June 30, 2018	June 30, 2017
Apprentices	134	108
Blue collars	3,035	2,865
White collars and Middle managers	5,971	5,757
Managers	218	227
<b>Total employees</b>	<b>9,358</b>	<b>8,957</b>



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. During the period, there were no violations of facts and/or behaviour not in compliance with the provisions of the Code of Ethics that required an in-depth intervention by the Internal Audit and/or the Supervisory Board.

**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 wages,  
 — 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 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 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 in belonging 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 2017/2018 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, a project was implemented for flexible benefits for all Italian employees working in Italy and abroad and other similar formulas for other employees abroad where required by local regulations.

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, the Metasalute Fund for health care and a general coverage programme against accidents of the working personnel operate whereas the Danieli Foundation also 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.

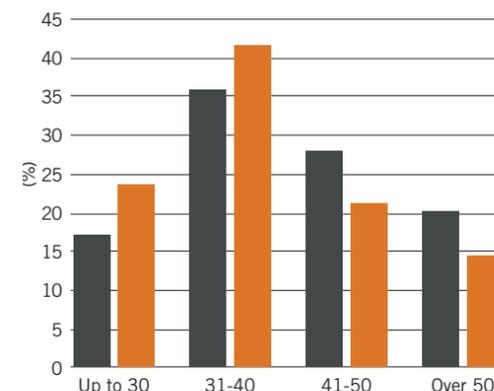
The health of workers is guaranteed in the workplace also with the help of an internal Company Health Service present in all production units that carries out a health surveillance program with prevention and control procedures, information campaigns and periodic inspections.



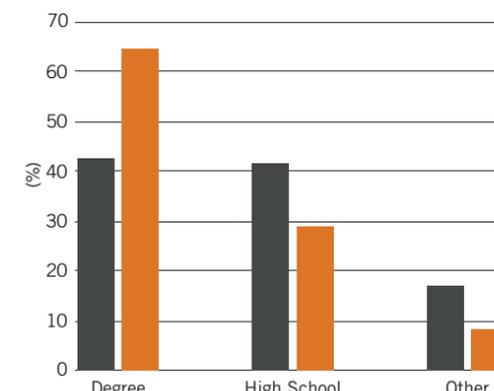
Danieli Group: Injury frequency indicator



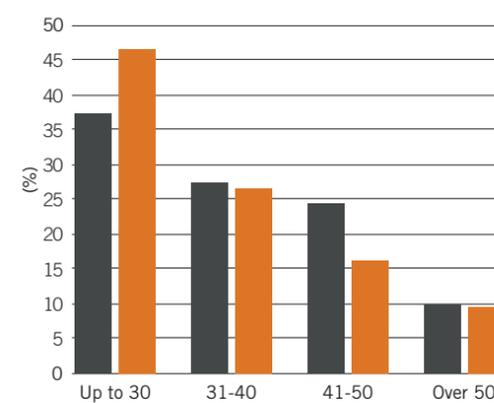
Danieli Group: Injury severity indicator



Danieli Group: Age of Employees



Danieli Group: Educational level



Danieli Group: Seniority of Service

Male  
Female

The Parent company, ABS, Danieli Automation S.p.A., Danieli Met. Equipment & Service (China) Co. Ltd., Danieli Co.Ltd, Danieli India Ltd. and Danieli Corporation (USA) have an OHSAS 18001 certified management system. In particular, the subsidiary ABS received the certification in January 2013 and in November 2016, the inspection was carried out during which non-compliance was not found.

The company approach for the prevention of accidents and injuries has achieved overall positive results through the years; in particular, in the period in question, there was a significant drop both in the frequency and severity of injuries. The trend of the severity index remained substantially in line with the previous year, while the frequency index increased slightly in relation to the Steel Making activities following the start of production at ESW Röhrenwerke GmbH and ABS Sisak d.o.o., with operating practices that are not yet optimal and subject to a continuous process of revision and improvement.

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 2017/2018 tax year, training activities on safety were carried out totalling approximately 45,287 hours involving approximately 9,049 persons. 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 (1,304 courses equal to approximately 122,300 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 increasing 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, ITS 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, ITS 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 di Udine and sponsors each year the Mechatronic Course that has 2 classes totalling 50 students.

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. The “Ideathon ABS” contest allowed university students and young graduates to contribute with an innovative idea to be applied in ABS to make the business activity “smarter” and more profitable.

The goal is to contribute to build a stable education path of integration between university and companies, aiming to stimulate and develop, in the young, the culture of knowledge, entrepreneurship, innovation, the satisfaction of achieving results and teamwork, keys to future innovative development.

#### 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;
- 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;
- evising 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 our network thanks to existing firewalls.

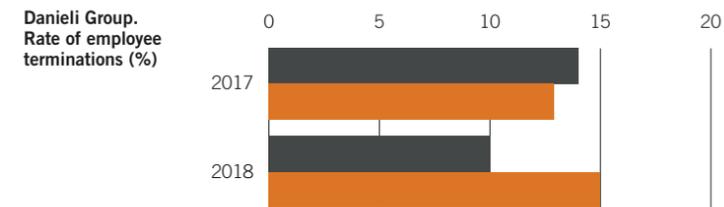
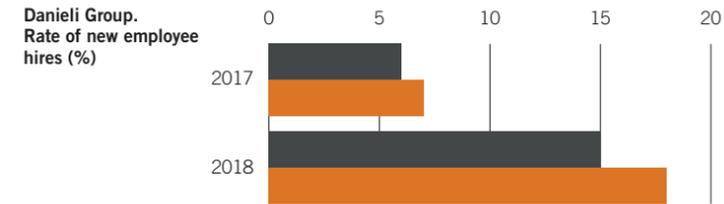
#### Research, Development And Product Quality

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);



■ Male  
■ Female

— and completing with the implementation of prototypes and/or industrial equipment in the laboratory or at our 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 150 million euro includes both prototype and direct research and related expenditure for innovative projects without 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 inaugurated 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 our customers new alloys for industrial applications.

#### 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 9001:2105; 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 by ABS 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.

#### 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 Steel Making and Plant Making 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 our customers;
- promoting knowledge of environmental regulations and generating widespread awareness of their importance, by example and through systematic

<b>Energy - GRI 302-1</b>	June 30, 2018	June 30, 2017
Energetic consumption by type of fuel and process		
<b>LPG</b> by production process (GJ)	9.820	6.751
<b>Methane gas</b> by production process (GJ)	3.107.090	3.142.149
<b>Diesel</b> by production process (GJ)	33.763	40.510
<b>Petrol and other fuels</b> (GJ)		
For company cars (owned and rented) (GJ)	2.104	470
<b>Electricity consumed</b> (GJ) of which	3.816.477	3.560.721
<b>Electricity purchased</b> (GJ) of which	3.808.754	3.560.721
Electricity from renewable sources (GJ)	1.712.094	1.683.364
Electricity from non-renewable sources (GJ)	2.096.660	1.877.357
<b>Internally produced and self-consumed electricity (GJ), of which</b>		
produced by photovoltaic plant (GJ)	2.502	0
produced by an ORC (Organic Rankine Cycle) plant (GJ)	5.220	0
<b>Total energy consumption (GJ)</b>	<b>6.969.253</b>	<b>6.750.601</b>

Note: The conversion factors used are taken from the Department for Environmental, Food & Rural Affairs (DEFRA), Greenhouse gas reporting conversion factors 2017.

#### Total volume of water withdrawn with a breakdown by source

<b>GRI 303-1</b>	June 30, 2018	June 30, 2017
Surface water utilisation (m <sup>3</sup> )	252,392	54,734
Groundwater utilisation (m <sup>3</sup> )	1,519,684	1,398,939
Municipal water utilization (m <sup>3</sup> )	281,702	276,230
Total water utilisation (m <sup>3</sup> )	2,053,778	1,729,903

#### Greenhouse gas emissions into the atmosphere (t)

<b>GRI 305-1</b>	June 30, 2018	June 30, 2017
Scope 1 CO <sub>2</sub> direct emissions	277,367	307,425

#### GRI 305-2

Location-based Scope 2 CO <sub>2</sub> indirect emissions	435,366	408,524
Market-based Scope 2 CO <sub>2</sub> indirect emissions	512,524	481,438

#### Other pollutant emissions into the atmosphere

<b>GRI 305-7</b>	June 30, 2018	June 30, 2017
NOx Nitrogen oxide (t)	701	639
SOx Sulphur oxide (t)	18	11
Dust (t)	79	23
CO (t)	1,595	281
Dioxins and furans (PCDD/F) (g)	1	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.

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;  
— 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.

During the launch of new projects (especially in the Plant Making 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, ABS, Danieli Met. Equipment & Service (China) Co. Ltd., Danieli Co. Ltd, and Danieli India Ltd. have an ISO 14001 certified management system. The subsidiary ABS, whose business activities are highly energy-intensive, implemented also an ISO 50001 certified energy management system in which an energy audit is carried out every 4 years.

Energy consumption and water withdrawals are the main indicators of the environmental impact of the Group's production processes, since there are no significant impacts in terms of direct emissions but only indirect ones. In particular, as part of energy efficiency initiatives, the Parent company installed two photovoltaic systems covering the roofs of industrial buildings and the company ABS 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

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. The portion of electricity purchased from renewable sources does not have Certificates of Guarantee of Origin. Therefore, the calculation of indirect CO<sub>2</sub> emissions according to the Scope 2 Market-based logic also takes this portion into account

For ABS, which operates in the Steel Making segment, greenhouse gas emissions are certified on the basis of the Emission Trading System (ETS). Therefore, the emission factors used for ABS are those required by the EU ETS regulations. For the other Group companies, the emission factors used are those proposed by Terna for Location-based Scope 2 indirect emissions (Terna, International Comparisons 2015), and the residual mixes for Market-based Scope 2 indirect emissions (Association of Issuing Bodies, European Residual Mixes 2016, 2016).

Reading the data, it can be seen that 95% of energy consumption, 87% of water utilisation and 97% of direct CO<sub>2</sub> - Scope 1 emissions are related to the Danieli Group's Steel Making segment, while the residual portion is related to the Plant Making segment, which has a much lower environmental impact than the steel making segment, which requires careful and continuous assessment of all the environmental parameters associated with production.

Due to the specific nature of its activities, the Steel



**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.**

Making 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) our 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 our 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.

Danieli also took part in the Carbon Disclosure

Survey resulting in 2017 among the most deserving subjects within the Italian and European companies with a stable position in the ranking thanks to the commitment carried out in developing SustSeel (increasing efficiency in steel production) and Green Steel (minimising environmental impacts in steel production) solutions for the Group and for our customers.

On June 5, 2017, Danieli undertook with SBTi (Science Based Targets Initiative) to define, within the next 24 months and on the basis of the Science Basis Criteria, the targets for reducing emissions by pointing out the commitment to achieve an improvement in the results both in Scope 1 but also in Scope 2 and Scope 3 as defined by the Green House Gas Protocol updated in June 2017 in collaboration with World Resources Institute.

To mitigate the environmental impact of the steel industry, ABS has also created in Pozzuolo del Friuli a "forest", i.e. a natural park on a 26 hectare site and with more than 10,000 tall trees, which is the largest ever created in Europe. 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 company and the entire Steel-making sector are the Group's most impactful companies in terms of raw material consumption. Therefore, the following table shows the materials used during the year by ABS only, in which non-recyclable materials include gases and refractory materials, whereas recyclable materials include scrap and packaging

#### 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 machinery 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 suppliers for about 2,000 customers;  
— in the machinery sector, there are about 4,500 suppliers for about 500 customers.

The main suppliers are subject to technical and ethical prequalification according to the Code of Ethics, company anti-corruption directives and relations between individuals and the management of privacy. 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 our 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 Plant Making segment, there is a high presence of high-tech knowledge-intensive suppliers that are part of a "make of buy" strategy with an impact on noble components and on solutions offered to our customers.

In the Steel Making 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.

### 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 took also part in tangible support actions in favour of the people damaged in summer 2016 by the earthquake in Central Italy.

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)
- Family party and open factory in ABS
- 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.

The last investment made by the Danieli Group is in the company Telefriuli S.p.A., 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 non-employees 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 and only for kindergarten

Score summary statement.

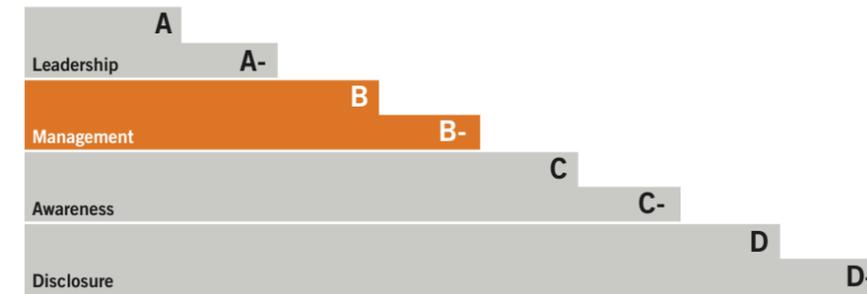
Companies at Management level are taking further steps to effectively reduce emissions, indicating more advanced environmental stewardship. This good result signals that Danieli & C Officine Meccaniche SpA is measuring and managing its impact. Danieli & C Officine Meccaniche SpA has developed a policy and strategic framework within which to take action and reduce negative climate change impacts.

Sector benchmark.

The bar chart above shows the count of scores achieved by sector peers in the industrial sector.

The band of Danieli & C Officine Meccaniche SpA is coloured red.

Score Levels



F: Failure to provide sufficient information to CDP to be evaluated for this purpose

Waste

GRI 306-2	June 30, 2018	June 30, 2017
<b>Total hazardous waste (t), of which</b>	37,127	34,612
disposed of	13,118	12,086
recovered	24,009	22,526
<b>Total non-hazardous waste (t), of which</b>	156,501	123,562
non-hazardous waste disposed of	110,960	87,113
non-hazardous waste recovered	45,541	36,449
<b>Tons of waste (t)</b>	193,628	158,174

Materials purchased by weight (MT)

GRI 301-1	June 30, 2018	June 30, 2017
Non-recyclable gases (m <sup>3</sup> )	61,907,613	58,556,634
Purchased non-recyclable materials (t)	159,241	143,762
Purchased recyclable materials (t)	1,233,479	1,162,269

Raw material consumption figures refer only to the company ABS.

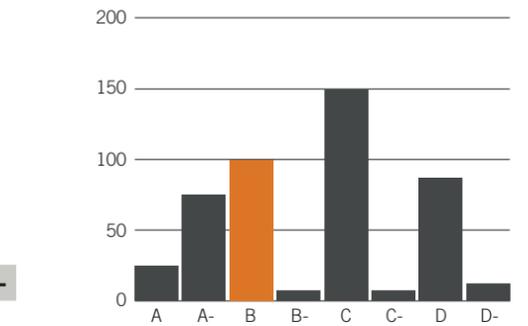
Directly generated and distributed economic value

in millions of euro	June 30, 2018	June 30, 2017
A. Directly generated economic value	2,718.8	2,504.8
B. Distributed economic value	2,547.3	2,334.4
<b>(A - B) Economic value retained</b>	171.5	170.4

Analysis of the distributed economic value

in millions of euro	June 30, 2018	%	June 30, 2017	%
A. Operating costs	2,027.6	79.6	1,856.0	79.5
B. Personnel remuneration	442.0	17.4	425.1	18.2
C. Public administration remuneration	35.1	1.4	20.9	0.9
D. Venture capital remuneration	8.3	0.3	8.2	0.4
E. Third party remuneration	(0.4)	0.0	(0.4)	0.0
F. Non recurring ancillary components	27.6	1.1	15.7	0.7
G. Lender remuneration	6.1	0.2	7.7	0.3
H. Donations and sponsorships	1.1	0.0	1.2	0.1
<b>Total distributed economic value</b>	<b>2,457.3</b>	<b>100.0%</b>	<b>2,334.4</b>	<b>100.0%</b>

Sector benchmark



children, an annual course that provides a day every other week to spend at a teaching farm in the area.

Moreover, 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). It ensures a certification of skills released by Cambridge Esol.

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).

### 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 is registered with the Italian association METALFER.

### Directly generated and distributed economic value

The following tables 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 of June 30, 2016 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, 2018. Alignment of currency items to the exchange rate prevailing on September 25, 2018 would not result in significant changes in unrealised exchange differences during the period compared to the figure recorded as at June 30, 2018.  
 Except for what has already been discussed, no other events occurred after June 30, 2018 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

The coordinated work of the governments of major industrialised countries brought about a slow but clear improvement in the economic recovery for the manufacturing, mechanical engineering and steel making industries that may further develop in 2019 with an accommodating policy for credit and investments.  
 In any case, steel consumption remains strong in 2018 and 2019 in absolute terms, growing significantly in ASIA and recovering in other countries.  
 Given this scenario, we expect that the Steel Making segment (ABS) will therefore perform satisfactorily in 2018/2019 with an efficient production mix and good production volumes.  
 For the Plant Making segment, turnover is expected to grow in 2018/2019, thanks to the order book as at June 30, 2018, and with a better operating income,

result of a more careful management of operating costs and a precise planning of plant start-ups.  
 The general improvement of the geopolitical climate, which in part limited trade in some areas of the world, 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.  
 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, 2018, which we submit for your approval, show a profit of 206,367,347 euro that we propose be allocated as follows:

Dividend payable from Nov. 21, 2018 (distribution date Nov. 19, 2017; registration date Nov. 20, 2017)			
to the 37,918,320 <sup>(1)</sup> ordinary shares	euro	3,791,832	
euro 0.100 per share			
to the 36,479,670 <sup>(2)</sup> savings shares	euro	4,403,096	
euro 0.1207 per share			
<b>Total dividends</b>	<b>euro</b>	<b>8,194,928</b>	
<b>To extraordinary reserve</b>	<b>euro</b>	<b>198,172,419</b>	
<b>Total net profit for the year</b>	<b>euro</b>	<b>206,367,347</b>	

(1) net of 2,961,213 ordinary treasury shares held on September 25, 2018.

(2) net of 3,945,363 savings treasury shares held on September 25, 2018.



The officially recognised "Cecilia Danieli" primary school, for all employee and local families. The school curriculum enriches the traditional education with courses dedicated to the English language, linked to a workshop approach to new information technologies.

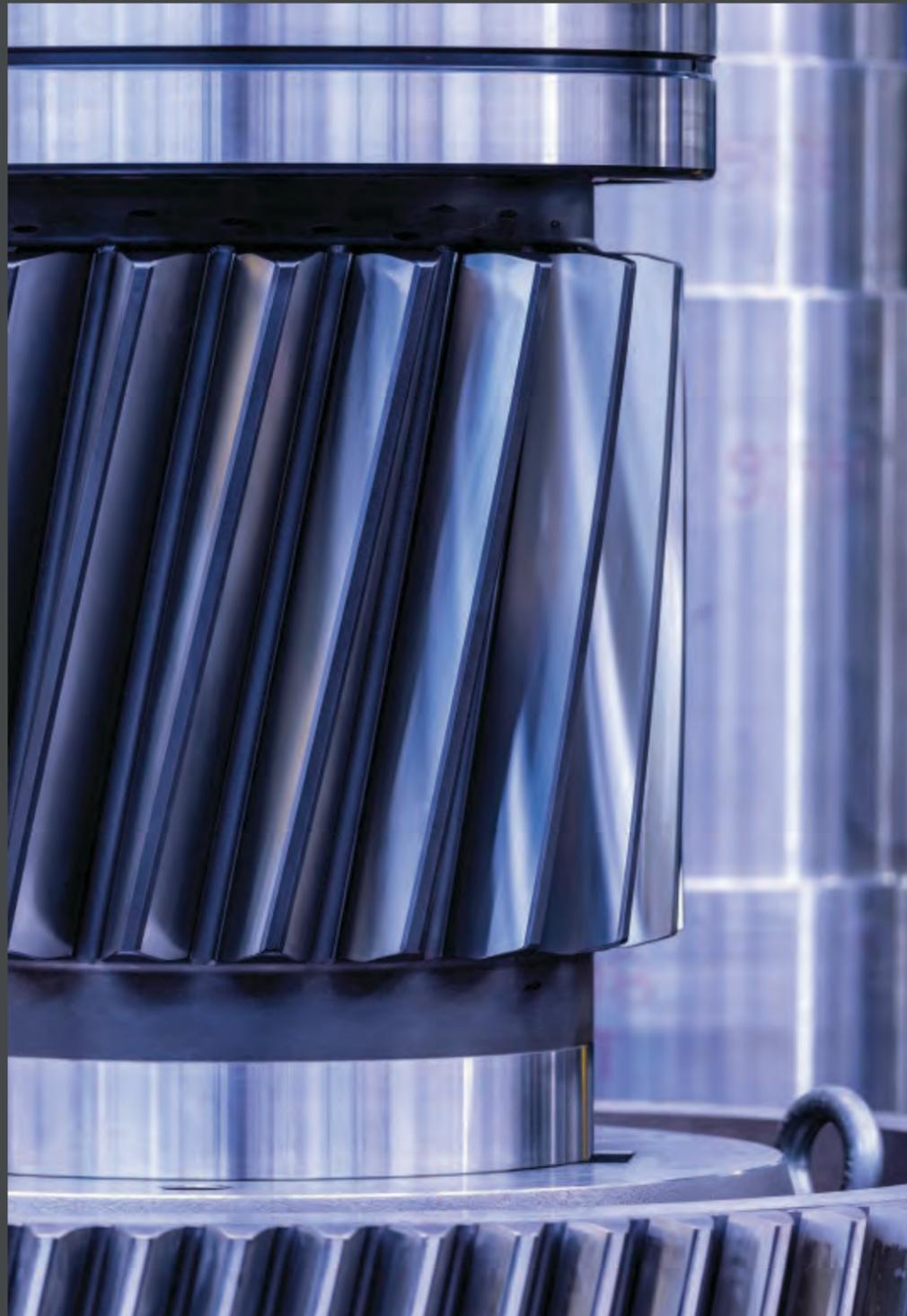
Moreover, the Danieli company nursery school accommodates employee and non-employee families' needs through work-schedule flexibility and opening days, and kindergartens, caring for children from 3 to 6 years of age with the same flexibility of working hours and hospitality.



Left: The "Fathers and Sons" exhibition in Illegio (Udine): a journey through 60 paintings and sculptures from the 4th Century BC to the 20th Century, to rediscover successful, imperfect or absent, human and divine paternity.  
 Right: The Castle of Udine (Leo von Klenze, 1850; Monaco, Galerie Meier). Danieli's contribution will consist of improvements to the external structure and facilities as well as a series of extraordinary maintenance works.



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



Danieli  
The Reliable  
and Innovative  
Partner  
in the Metals  
Industry  
Plantmaking  
Division

**Group Executive Board**

**GIANPIETRO BENEDETTI**  
Chairman

**ALESSANDRO TRIVILLIN**  
Supply Chain, Manufacturing, Procurement, Logistics, Governance of Operations and Quality, Customer Service, Human Capital Management, Academy, Controlling, Legal Affair, Internal Audit and Information Technology

**GIACOMO MARESCHI DANIELI**  
Group Technical Commercial Sales, Macroplanning, Costing and Tendering, Danieli Plant Engineering, Commissioning, Danieli Construction, General Services

**ALESSANDRO BRUSSI**  
Finance and Administration

**WERNER AUER**  
Flat Products Plants, Danieli Germany, Danieli Corus Technical Services

**ROLANDO PAOLONE**  
Long Products Plants, Group Technical Director, Danieli Research Center, Process Automation, Products Competitiveness

**ANTONELLO MORDEGLIA**  
Danieli Automation and Digi&Met 4.0

**Executive Managing Staff**

**Special projects**  
D. Fabro

**Group Technical and Commercial Sales, Macroplanning**  
M. Di Giacomo, G. Ximeris

**Human Capital Management**  
S. Stafisso, C. Benedetti

**Danieli Academy**  
Junior Recruitment and Development, Kindergarden and Primary School  
P. Perabò

**Finance, Administration, Contracting, Controlling**  
A. Brussi, L. Ferraresi

— Administration, Controlling  
A. Deana, M. Marinutti

— Finance and Contracting  
A. Brussi, A. Mareschi Danieli, R. Grosso, M. Ius

— Legal Affairs  
F. Londero

— Internal Audit, Turn Around Project  
L. Ferraresi

**Information Technology**  
A. Stewart, M. Cappa

**Danieli Product Lines, Sister Companies, Customer Service, Manufacturing, Procurement, Logistics Management**

**Group Technical Sales, Key Account Management, Marketing,**  
M. Di Giacomo, G. Ximeris, A. Diasparro

**Costing and Tendering, Macroplanning**  
P. Menta, E. Parisi, M. Chiandetti

**Research Center**  
G. Marconi, C. Tomat

**Danieli Plant Engineering**  
M. Pitton, S. Giacomelli

**Technical Sales and Project Directors**  
M. Pitton, D. Fabro, L. Tambosco, G. Nigris, R. Pezzano

**Danieli Engineering Products**  
M. Pitton, 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  
F. Casarsa, M.P. Cudicio

**Danieli Centro Cranes**  
— Heavy-Duty Cranes / Automated yards  
L. Argiolas, A. Vrech

**Danieli Hydraulics**  
— Industrial Hydraulic and Lubrication Equipment  
F. Casarsa, C. Benini

**MI.DA.® - Micromill Danieli**  
A. De Luca, A. Tellatin

**Layout and Basic Engineering**  
G. Caimano, A. Panizzi

**Danieli Epc and Site Management Services**  
A. Lombardi

**Danieli Construction International Spa**  
S. Baici, A. Heltai, E. Gardina, G. Furino, A. Di Minin

**Fata EPC (Italy)**  
A. Lombardi, S. Pagani

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

**Danieli Automation and Digi&Met 4.0**  
A. Mordeglia, A. Ardesi, A. Todisco, A. Brussi, S. Stafisso, M. Ometto

**Danieli Automation Spa**  
A. Mordeglia, A. Ardesi, A. Todisco, M. Ometto, E. Plazzogna, E. Gigante, A. Mestroni, G. Brunetti, S. Martinis, F. Perotti, G.B. Vallarino, R. Guido, R. Poboni, S. Vasinis

**Digi&Met 4.0**  
A. Mordeglia, M. Ometto, A. Ardesi

**Danieli Rotelec (France)**  
F. Guastini, P. Declerc

**Danieli Taranis LLC (USA)**  
A. Nardone, W. Dow, C.J. Feather

**Danieli Systec Doo (Croatia)**  
S. Stafisso, A. Todisco, R. Košmerl

**Elsid Cheda Ltd (Russia)**  
E. Cuzzot

**Danieli Automation Co Ltd (Thailand)**  
M. Oliviero

**Danieli Telerobot Labs Srl (Italy)**  
D. Corsini, F. Becchi

**Danieli Customer Service**  
E. Brusini, M. Zanco

**Technical Service and Spare Parts**  
A. Vallan, P. Bahadian Bardy, G. De Lorenzo, M. Padovan, A. Zanon, A. Viviani, C. Garland

**Danieli Corporation (USA, Canada)**  
— Marketing, Engineering, Project Management, Site Assistance, Service  
P. Losso, B. Malan, L. Rossetto, F. Palagiano

**Danieli Mexico (Mexico)**  
— Service, Sales, Marketing, Project Management  
A. Voltolina, G. Nigris, A. Vallan

**Danieli Do Brasil Ltda (Brasil)**  
— Service, Marketing, Engineering, Project Management, Site Assistance  
L. Mottes, F. Turibio, W. Souza

**Danieli Engineering and Services Austria GmbH (Austria)**  
— Service, Marketing, Engineering, Site Assistance  
S. Bergamasco, G. Ranc

**Ironmaking and Converter Steelmaking**  
W. Auer, N. Bleijendaal

**Danieli Corus Technical Services BV (The Netherlands)**  
— Blast Furnace and Oxygen Steelmaking Technologies  
W. Auer, N. Bleijendaal, R. Jonkman, G. Apeldoorn, F. Van Gool

**Electric Steelmaking, Continuous Casting**  
R. Sellan, L. Morsut

**Danieli Centro Met (Italy)**  
— Electric Meltshops / Billet, Bloom, Beam blank casters / Slab casters  
P. Burin, D. Lestani, A. Della Vedova, M. Knights, H. Koblenzer, A. Sgrò, M. Massimo

**More Srl (Italy)**  
— EAF Special technologies  
L. Londero, M. Iacuzzi

**Danieli Centro Recycling (UK, Germany, France)**  
— Scrap Recycling Technologies  
G. Carnelutti, A. Betts, G. Lovadina

**Danieli Procome Iberica SA (Spain)**  
— Charging systems for EAF, DRP and Pelletizing Plants  
G. Nigris, A. Aldama, J. De Blas

**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, C. Sahlin

**Danieli Centro Maskin (Italy)**  
— Inspection and Conditioning Plants, Cold Finishing Lines  
S. Orlando

**Flat Products**  
L. Sandrin, H. Hödl

**Danieli Wean United, Danieli Fata Hunter (Italy)**  
— Hot and Cold Rolling / Processing Lines / Aluminium Hot and Cold Rolling Mills and Stretchers  
S. Berger, C. Bilgen, M. Bullfone, S. Dolzan, R. Holz, I. Koshyk, T. Settimo, A. Coari, M. Mazza, M. Turchetto, L. Vignolo

**Danieli Kohler (USA)**  
— Air Wiping Equipment  
G. Kohler, M. Turchetto

**Innoval Technology Ltd (UK)**  
— Process Technology and Advisor Services for Aluminium Flat Product Mills  
T. Farley, G. Mahon

**Danieli Germany GmbH (Germany)**  
— Flat Products Rolling / Metallurgical Engineering for Final Applications  
J. Schröder

**Forging, Extrusion, Seamless and Welded Pipes**  
M. Totis

**Danieli Centro Tube (Italy) Danieli W+K (Germany, Italy)**  
— Seamless Pipe Mills, Welded Pipe Mills  
C. Bartolini, E. Cernuschi, S. Bettinelli, G. Grandi

**Danieli Breda (Italy)**  
— Extrusion and Forging Presses  
C. Bartolini, A. Galli, P. Fraternala

**Heating Systems and Heat Treatment Furnaces**

**Danieli Centro Combustion Spa Danieli Olivotto Ferrè (Italy) Danieli Centro Combustion India**  
— Heating Systems and Heat Treatment Furnaces  
A. Donetti, E. Mozzi, C.A. Migliardi

**Danieli Asia**  
A. Menocci, B. Mockmongkonkul, D. D'Odorico, F.D. Martino, F. Esposito, G.S. Rao, D. Ambrosino, G. Ximeris, L. Ferraresi

**Danieli Metallurgical Equipment & Services Co Ltd (China)**  
— Engineering, Project Management, Site Management, Manufacturing and Service for Danieli Products  
F.D. Martino, D. Ambrosino, L. Coianiz, J. Guo, M. Meloni, D. Pedrocchi, C. Zhang

**Danieli Co Ltd (Thailand and Vietnam)**  
— Engineering, Project Management, Manufacturing and Service for Danieli Products, Hydraulics, Pressure Vessels  
A. Menocci, B. Mockmongkonkul, D. Ambrosino,

G. Charoenvananatee, D. D'Odorico, T. Nammisa, N. Nakamura, N. Patrizi, N. Sathichoke

**Danieli India Ltd (India)**  
— Engineering, Project Management, Site Management, Manufacturing and Service for Danieli Products  
F. Esposito, G.S. Rao, B. Ghosh, R. Hisaria, A. Todisco, A. Pandey, S. Jain, S. Banerjee, S. Singh, V. Vipra, H. Mehdipour

**Danieli Engineering Japan Ltd (Japan)**  
— Engineering and Service  
A. Mordeglia, N. Nakamura

**Manufacturing, Procurement and Logistics**  
M. Crosti

— Governance of Operations  
G. Cruder, L. Marson

— Worldwide Manufacturing  
M. Rinaldis

— Worldwide Procurement  
C. Pittini, M. Del Giaccio

— Worldwide Logistics  
E. Copetti

— Buttrio Workshops  
M. Muroi

**Quality Control**  
M. Gavasso, R. Balestra,

**Danieli Volga LLC (Russia)**  
— Marketing, Service, Engineering, Project Management, Manufacturing  
A. Colussi, I. Doro, P. Deano, M. Rinaldis, A. Polulyakh

**Termo Makina San. V.T.A.S. (Turkey)**  
— Sales, Marketing, Service, Cranes and Meltshop Equipment Manufacturing  
M. Zanco, M. Crosti, T. Yilmaz

## Main events of the year

Significant events of the Group's consolidated international standing.



From top left to right: Celebration of project completion for the Blast Furnace No. 4 reconstruction at ArcelorMittal Zenica, Bosnia and Herzegovina; Signing ceremony for a FQT seamless pipe complex for OMK Vyksa Steel Works, Russia; Contract signing for a 0.5-Mtpy electric steel meltshop rehabilitation project in the MENA region;

Official inauguration of CC8 slab caster for special steels at voestalpine Stahl, Austria; Official inauguration of the world's most modern wire rod mill at voestalpine Wire Technology, Austria; official groundbreaking ceremony for the scrap-based Danieli Nano Mill at Las Lomas, Bolivia.

## Sales and operating results

### Danieli Plantmaking

In thousands of euro	Plantmaking	
	June 30, 2018	June 30, 2017
Net revenues	1,726,778	1,787,718
Gross operating margin (EBITDA)	106,973	137,079
Depreciation, amort. and write-downs	(65,184)	(80,035)
Operating income	41,789	57,044
Net financial income/(charges)	(18,583)	(5,657)
Profit before tax	23,206	51,387
Income taxes	(9,652)	(10,428)
Net profit	13,554	40,959
Segment assets	3,586,252	3,855,146
(increases in investments in tangible and intangible fixed assets included)	31,199	45,220
Segment liabilities	2,394,200	2,635,814
Net financial position	951,772	1,052,598

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

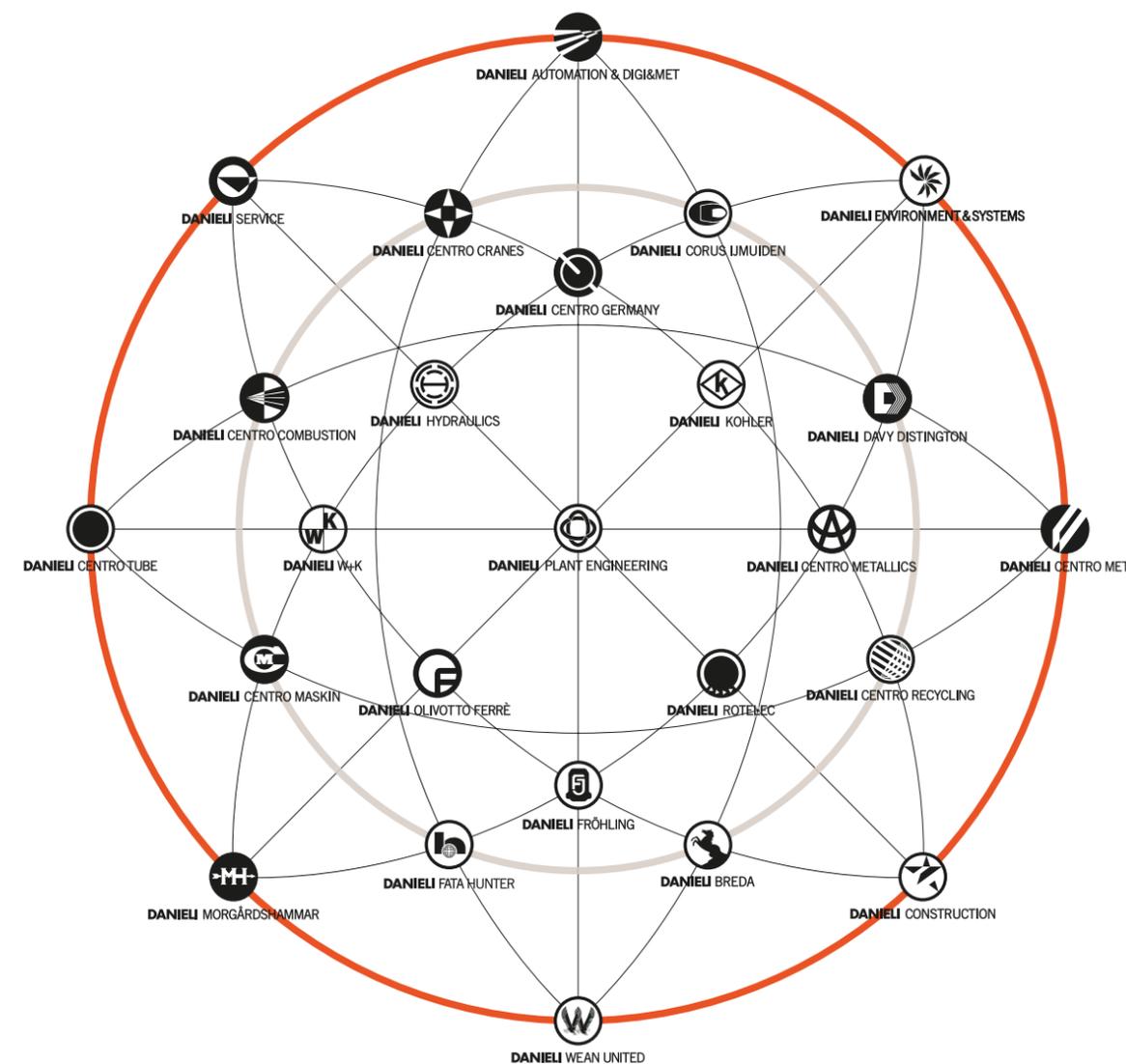
- Mines;
- Pellet production plants;
- Blast furnaces;
- Direct reduction;
- Scrap shredders;
- Steelworks for production of liquid steel;
- Concasters for blooms, billets; slabs; thin slabs;
- Rolling mills for long products;
- Rolling mills for seamless tubes;
- Lines for welded tubes;
- Hot and cold 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.

## Danieli Plantmaking The Team

<b>Danieli Plant Engineering</b>	Since 1964	Italy	Turnkey Plants and Systems Engineering
<b>Danieli Fata EPC</b>	Since 1965	Italy, USA, India, China, UAE	Turnkey Plant Engineering, Procurement, Construction
<b>Danieli Automation &amp; Digi&amp;Met</b>	Since 1969	Italy, USA	Process Control Systems
<b>Danieli Centro Metallics</b>	Since 1987	Italy	Ore Processing and Direct Reduction Plants
<b>Danieli Corus IJmuiden</b>	Since 1977	The Netherlands	Integrated Steelmaking Plants
<b>Danieli Centro Germany</b>	Since 2011	Austria, Germany	Oxygen Converter Steelmaking Plants
<b>Danieli Centro Recycling</b>	Since 1998	Italy, UK, France, Germany	Scrap Processing Plants
<b>Danieli Centro Met</b>	Since 1914	Italy, Austria	Electric Steelmaking and Long Product Casters
<b>Danieli Davy Distington</b>	Since 1951	UK, Italy	Thick and Thin Slab Casters
<b>Danieli Wean United</b>	Since 1901	Italy, USA, Germany	Flat Product Rolling Mills and Strip Processing Lines
<b>Danieli Kohler</b>	Since 1959	USA, Italy	Air Wiping Equipment for Zinc Coating
<b>Danieli Fröhling</b>	Since 1947	Germany	Specialty Mills and Strip Finishing Lines
<b>Danieli Fata Hunter</b>	Since 1936	Italy, USA	Aluminium Casting, Rolling, and Coil Coating Lines
<b>Danieli Morgårdshammar</b>	Since 1856	Italy, Sweden	Long Product Rolling Mills
<b>Danieli Centro Tube</b>	Since 2004	Italy	Seamless Pipe Plants
<b>Danieli W+K</b>	Since 1968	Germany, Italy	Longitudinal and Spiral Welded Pipe Plants
<b>Danieli Centro Maskin</b>	Since 1953	Italy, Sweden	Conditioning, Drawing, and Finishing Plants
<b>Danieli Rotelec</b>	Since 1977	France, Italy	EMS and Induction Heating Systems
<b>Danieli Hydraulics</b>	Since 2008	Italy, Thailand	Industrial Hydraulic and Lubrication Equipment
<b>Danieli Breda</b>	Since 1950	Italy	Extrusion and Forging Plants
<b>Danieli Centro Combustion</b>	Since 1981	Italy	Heating Systems
<b>Danieli Olivotto Ferrè</b>	Since 1927	Italy	Heat Treatment Furnaces
<b>Danieli Centro Cranes</b>	Since 1958	Italy	Heavy-duty Cranes
<b>Danieli Environment and Systems</b>	Since 1973	Italy	Green Technology and Systems
<b>Danieli Construction</b>	Since 2003	Italy, Thailand	Turnkey Construction, Erection, and Systems Engineering
<b>Danieli Service</b>	Since 1962	Italy, Austria, China, India, Russia, USA, Brazil, Thailand	Technical Service and Original Spare Parts

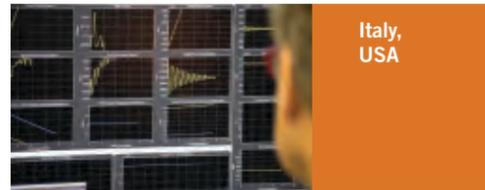


Danieli Team's mission is to serve Customers with competitive plants and process technology/ automation to produce quality with the lowest depreciation and production cash costs and to offer friendly after-sale service involving highly qualified, specialized engineers.

The 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,  
USA

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

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.



Austria,  
Germany

**DANIELI CENTRO GERMANY**  
Oxygen Converter Steelmaking Plants  
/ Since 2011

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.



UK,  
Italy

**DANIELI DAVY DISTINGTON**  
Thick and Thin Slab Casters  
/ Since 1951

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

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

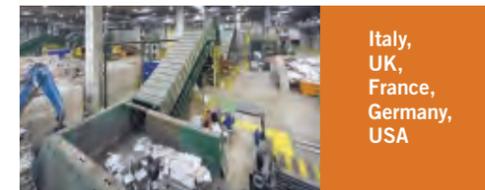
We supply integrated plants for the metal industry, including technologies, auxiliary plants, construction, and after-commissioning assistance. We provide customers with a single-point responsibility, ensuring project delivery time assurance and total investment cost certainty.



Italy

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

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.



Italy,  
UK,  
France,  
Germany,  
USA

**DANIELI CENTRO RECYCLING**  
Scrap Processing Plants  
/ Since 1998

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



Italy,  
USA,  
Germany

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

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



Italy,  
USA,  
India,  
China,  
UAE

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

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



The  
Netherlands

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

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



Italy,  
Austria

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

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



USA

**DANIELI KOHLER**  
Air Wiping Equipment for Zinc Coating  
/ Since 1959

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.



Germany

**DANIELI FRÖHLING**  
Specialty Mills and Strip Finishing Lines  
/ Since 1947

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



Italy

**DANIELI CENTRO TUBE**  
Seamless Pipe Plants  
/ Since 2004

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.



France,  
Italy

**DANIELI ROTELEC**  
Ems and Induction Heating Systems  
/ Since 1977

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**  
Heating systems  
/ Since 1981

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,  
USA

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

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.



Germany,  
Italy

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

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



Italy,  
Thailand

**DANIELI HYDRAULICS**  
Industrial Hydraulic and Lubrication Equipment  
/ Since 2008

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'**  
Heat Treatment Furnaces  
/ Since 1927

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,  
Sweden

**DANIELI MORGÅRDSHAMMAR**  
Long Product Rolling Mills  
/ Since 1856

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.



Italy,  
Sweden

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

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



Italy

**DANIELI BREDA**  
Extrusion And Forging Plants  
/ Since 1950

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.



Italy

**DANIELI CENTRO CRANES**  
Heavy-Duty Cranes  
Since 1958

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.



**DANIELI ENVIRONMENT AND SYSTEMS**

Green Technology and Systems  
/ Since 1973

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



**DANIELI CONSTRUCTION**

Turnkey construction, erection and systems engineering  
/ Since 2003

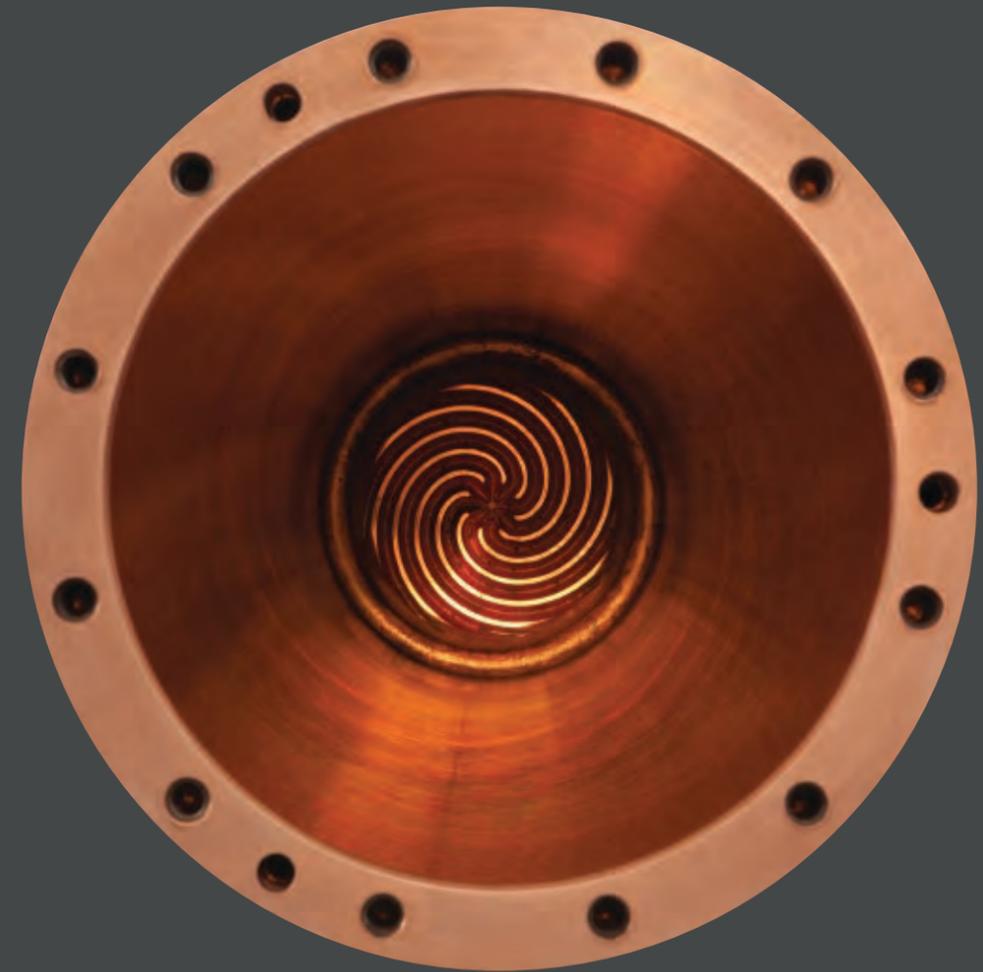
Danieli Construction International operates worldwide with own handling and transportation equipment and through specialized and trained people covering a full range of services related to Civil and MEIP (Mechanical, Electrical, Instrumentation, Piping) installations for industrial plants.



**DANIELI SERVICE**

Technical Service and Original Spare Parts  
/ Since 1962

Always close to our partners. Counting on Danieli Service support means becoming more than just a customer: it means becoming a partner in the strategic challenges requested by market developments, so as to be always a step ahead in CapEx and OpEx.



Danieli Innov\_action  
To be a step ahead



Danieli Research and Development  
imagine, design, manufacture,  
and test the processes and equipment  
for the Metals Industry  
of the next 20 years

**Research and Development  
projects carried out  
in the financial year 2017/2018**

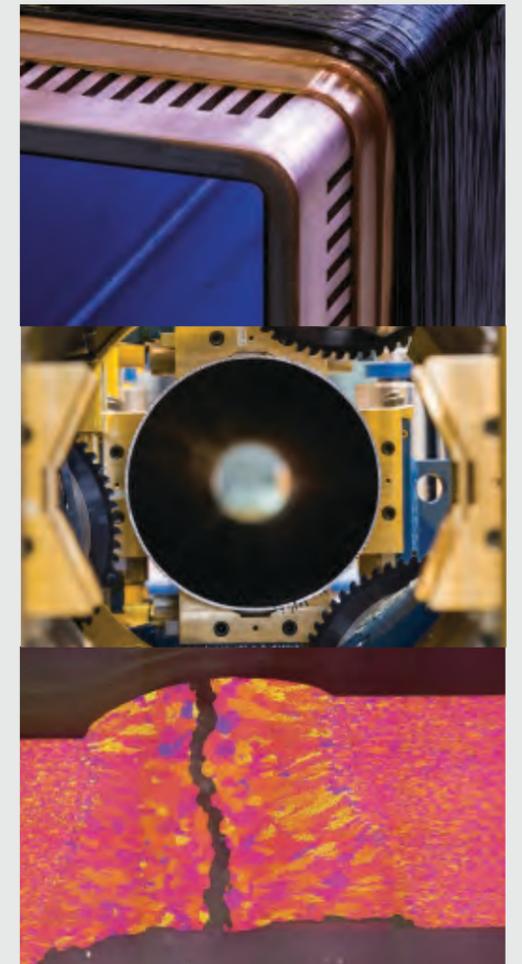
**Ironmaking, Steelmaking,  
and Continuous Casting plants**

- First industrial installation of the innovative DANCU-Danieli Charging Unit for Blast Furnaces and DRP reactors.
- Development and tests of a new process for the recovery of the fines in DRP plants.
- Completion of a new slag stopper system.
- Development and installation of a technological package for automatic scrap yard management, with the aim of identifying and tracking scrap quality.
- Successful industrial installation of an improved scrap continuous charging system as part of the Q-MELT technological package for automatic EAF operation.
- Continued development of an innovative meltshop design based on the concepts of continuous melting and maximized digital control, and an environmental friendly approach.
- Industrial test for a new billet shape for the ECR-Endless Casting Rolling plants to reach a productivity of over 90 tph per strand and reduced containment.
- Successful industrial tests of an innovative soft reduction system for round blooms.

- Successful industrial tests for a new-design mould plates for thin slab caster. More than double service life and better product quality.
- Development of an innovative and 'green' secondary cooling system for slab and bloom casters.
- Continued design development of slab caster segment rolls to improve their service life and the product quality.
- Continued improvement of SEN and tundish design for thin- and thick-slab casters.
- Development of an innovative monitoring system for slab caster segment rolls.

**Rolling Mills for Long Products**

- Plant-wide improvement of wire rod rolling mills for specialty steels.
- Successful industrial installation of the first, innovative, four-roll sizing mill for the production of top-quality SBQ bars.
- Continued improvement in endless rolling technology by the combined use of billet welding machines and spooler systems.
- Development of the Smart Guide: a new-generation roller guide series.
- Prototype tests for a fully automatic ring-change system on ESS cantilever rolling stands (no man on the floor).
- Development of a robotized labeling system for coils.
- Development of a monitoring





In 2017/2018 Danieli Group invested 35 MEuro in direct and indirect research activities, and more than 150 MEuro in the management of innovative job orders.



system for rolling mill consumables by RFID technology.

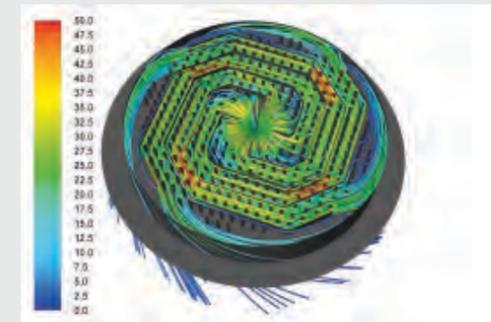
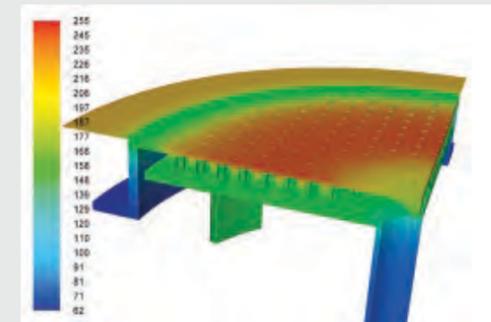
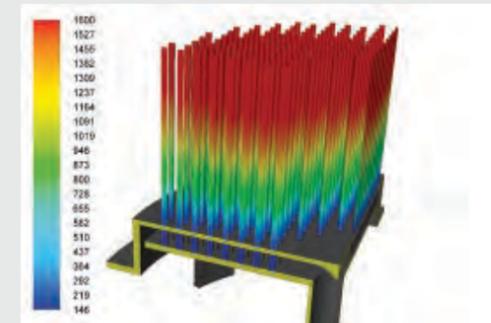
- Successful installation of the Jumbo RD: the world's largest straightener for heavy beams.
- Successful installation of a new-design disc saw for cutting of hot blooms.

#### Hot and Cold Strip Mills and Processing Lines

- Start of industrial production of the transverse induction heating system for hot strip mills.
- Successful installation of the improved thermal treatment system for hot strip mills (run-out table).
- Industrial application of the newly developed innovative direct quenching system for plates.
- Development of improved cooling systems for strips and plates with a fast regulation time.
- Continued development of numerical models for metallurgical process design and L2 process control.
- Studies for alternative strip coating materials and systems.
- Continued development of a new-generation high-productivity pickling line together with an innovative control system.

#### Seamless Pipe Mills

- Continued development of the FQT-Fine Quality Train technology and design.
- Successful industrial application of an optimized cold pilger mill technology.
- Successful installation of a unique 3-roll CRM-Cross Rolling Mill for superior-quality, oversize special pipes.
- Development and tests of the HPE-Hot Pull Elongator technology for seamless pipe rolling mills.



#### Non-ferrous Metals

- Industrial installation of an innovative system for adaptive modular cooling of aluminium extruded profiles.
- Startup of an innovative plant for the production of copper wire in coils.
- Development of a new lubrication system for aluminium cold rolling mills.

#### Heating Systems

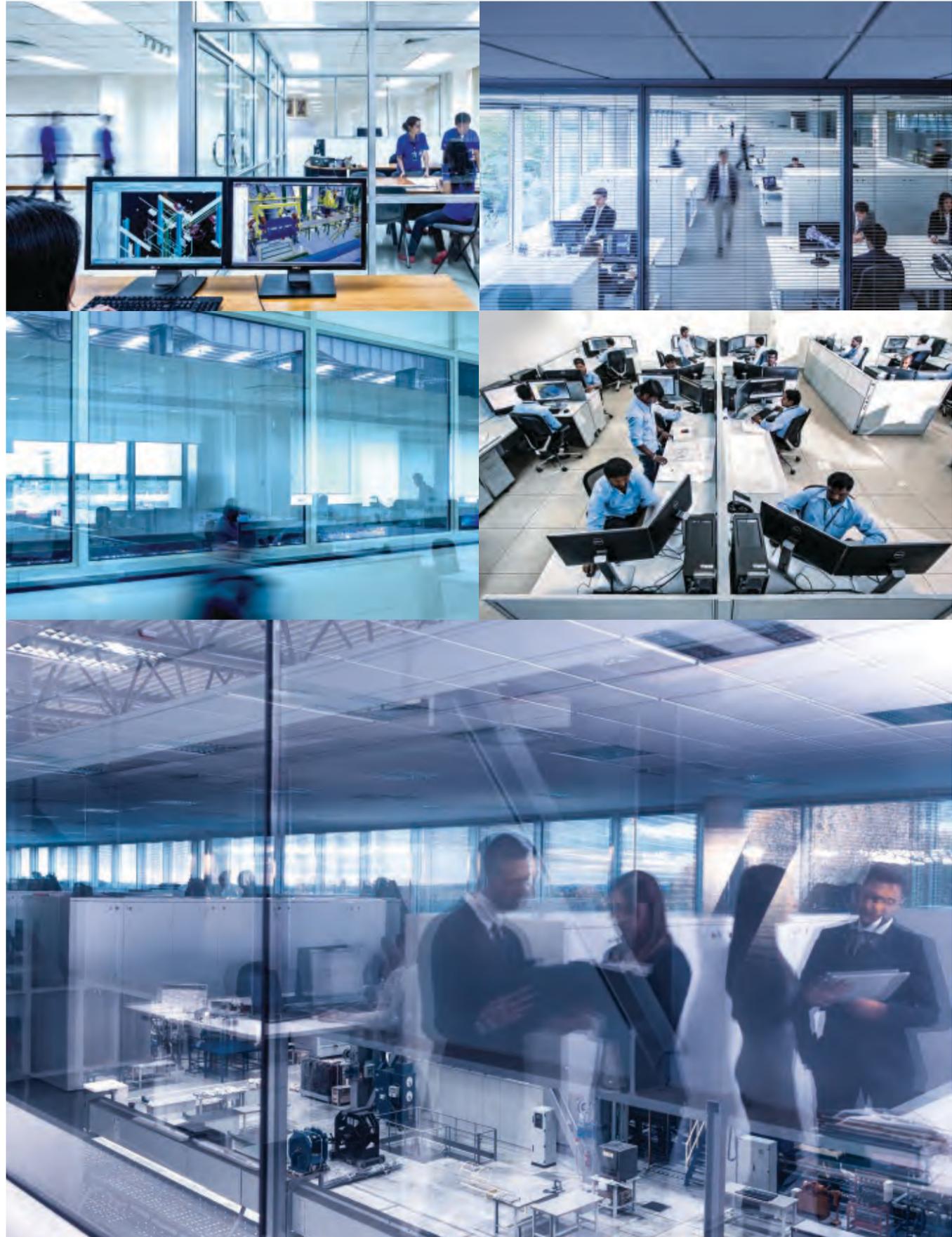
- Continued development and testing of burners and heat exchangers for radiant-tube heating systems (radiant tube U and W type).
- Development and testing of regenerative burners for low and high LHV.
- Further improvement of the high-efficiency jet coolers for hot dip galvanizing lines.
- Development and testing for burners used in the furnace' free-flame sections, focusing on sub-stoichiometric combustion to prevent strip oxidation
- Continued tests on Rige application for reheating large furnaces, using Natural Gas.
- Continued tests on ultra-low NOx burners for both reheating and process line furnaces, focusing on the use of low calorific value gas (below 3,000 kcal/Nm<sup>3</sup>).

#### Automation and Process Control Systems

- Successful industrial installation of a second Q-Melt package for fully automatic EAF operation.
- Completion of the Q-TEMP package for temperature tracking in vacuum degassing systems.
- Industrial installation of the advanced temperature monitoring

system for BOF converters.

- Continued development of the Energy Monitoring System for plant-wide energy consumption optimization.
- Continued improvement of the Q-CAST package series (LPC, QMAP, QCORE, QCOOL, QMOD) for flat-product and long-product conticasters.
- Evolution of the HiPAC technology, the Danieli Automation platform for real-time control.
- Development of the Q-BOX package for optimized pinch roll operation at very high rolling speeds.
- Continued testing and optimization of Q-ONE power converter system for AC EAF electrical supply.
- Application of Q-LIVE virtual reality simulator in a hot-dip galvanizing line and in an aluminium rolling mill.
- Continued tests on the Q3-PREDICTIVE machine learning applications for process optimization, quality prediction, and material properties forecasting.
- Continued development and application of teh Automatic Scrap Yard concept with AI-based material classification and 3D real-time inventory.
- Development and first plant tests of Q-AFS slag level detection system based on 4.0 radar technology.
- Successful installation of Q-ROBOT CAST Ladle with sampling and lancing functions.
- Installation of cutting-edge release technological packages for conventional and thin slab casters.
- Industrial application of Q-SHAPE DSD for draw sizing control in SBQ rolling mills.
- Development of Q-TECH package for offline dimensioning of flat products plants based on automation models Q.



Engineering Design Process  
 Multidisciplinary, perfect integration  
 of tools and human knowledge  
for the success of the project

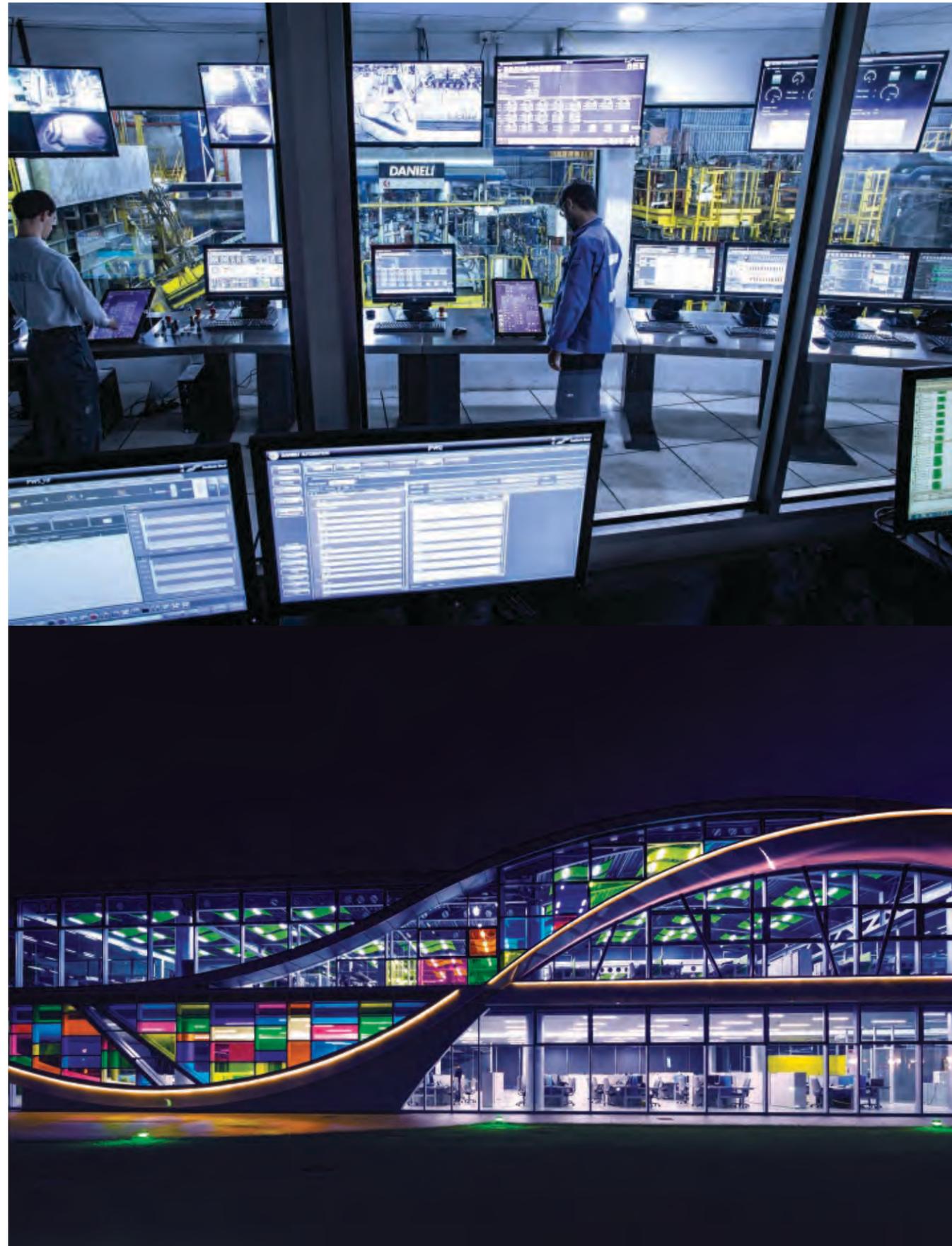
1,600  
 engineers and  
 technicians that cover  
 all the disciplines  
 from civil to  
 automation passing  
 through mechatronic,  
 hydraulics, and  
 electricals.



**The strength of a Company  
 is directly proportional to the  
 strength of its Engineering Team.**

This sentence explains how Danieli approaches the Engineering Design Process. The global Engineering Team of Danieli counts more than 1,600 engineers and technicians that cover all the disciplines from civil engineering to automation, passing through mechatronic, hydraulics, and electrical systems engineering. For the design, Danieli uses the latest generation of 3D CAD programs, able to interface with any kind of CAD available on the customer side. Modelling tools for Multibody and Multiphysics simulations, to properly read the physical phenomena are commonly used during the development of the project. Finite Element Modelling, to forecast the plastic deformation as well as torque and load during hot and

cold rolling, which is fundamental in the design of the rolling mills for sections, heavy beams and rails, is regularly used to support the Design Team. Most of the basic design is realized at the headquarters in Buttrio, where more than half of the technicians are located. A well proven team effort will ensure the perfect integration of the various disciplines. Perfect integration of tools and human knowledge is fundamental to the success of the project. Multidisciplinary review meetings are regularly planned to follow up the activities from the timing and technical points of view. During these assessments, procurement and production teams are involved to cover and anticipate any potential issue. The Danieli Design Team has experience and strong competencies in all the processes relevant to the fields of metal transformation.



## Danieli Automation and Process Control Systems know-how and Smart solutions to step toward Industry 4.0 simplifying metals complexity



Danieli Automation is the company within the Danieli Group responsible for the transfer of technological know-how from other Danieli technological divisions to end users, supplying the interface between plant process and operator. Its mission is to provide process automation and control systems for the metals industry, covering the wide spectrum of Danieli technologies, ranging from iron ore to long and flat products. Software algorithm models,

computerized quality and production control systems are developed in house and are the means to transfer Danieli process know-how to final users, thanks to the synergistic relationship with Danieli and the technological background shared with the parent company. This co-operation with the mechanical designers has led to optimized and standardized solutions, resulting in best performances and quicker plant start-ups.

### **DIG&MET**

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



## Seven Danieli Production Centers worldwide to ensure the same quality everywhere



### Danieli Quality Philosophy

At Danieli we are aware that know-how is not only the technological process and design expertise but it is also the manufacturing capability that we have developed and consolidated over time with the aim of offering our customers cutting-edge equipment and prompt service. We can boast advanced manufacturing plants in all the most important steel markets: China, India, Thailand, Russia, and, obviously, state-of-the-art technology in Europe. The plants cover an indoor area of 500,000 sqm and employ 2,500 highly skilled technicians who provide five millions of productive hours per year and work in a safe and eco-friendly environment. In particular, we are able to:

- Weld thicknesses up to 1,000 mm on products weighing up to 500 tons.
- Carry out boring, milling, turning, and grinding operations on 250 machine tools equipped with the latest generation numerical controls and special tools able to work on eight axes simultaneously.
- Produce high-precision gears and perform all types of heat treatment by checking the

chemical and physical properties of the products before and after treatment.

— Assemble and complete final tests that ensure performance and reliability over time with teams that also are in close connection with commissioning.

Thanks to all this and also to advanced planning tools, real-time traceability systems, 3D measuring machines, and metallurgical labs, we have overall control of our projects from in-house design and manufacturing to on-site startup and commissioning. Therefore, we produce internally the most strategic and complex machines that incorporate the company's know-how at top-quality standards. In fact, Danieli doesn't want to compromise the quality and reliability levels of the equipment supplied. That's why the workshops abroad are completely owned and managed by Danieli, and can be seen as a whole workshop, where culture, and high standards of quality and reliability guarantee the same excellent results we have at the headquarters workshops in Italy, and allow us to claim "Danieli workshops: same quality worldwide".



**Danieli Headquarters / Italy**  
 Total surface: 320,000 m<sup>2</sup>;  
 Workshop area: 92,000 m<sup>2</sup>;  
 Technical and administrative offices: 28,000 m<sup>2</sup>.  
 Employment: 1,800 engineers.  
 Start of operations: 1962.



**Danieli Volga / Russia**  
 Total surface: 250,000 m<sup>2</sup>;  
 Workshop area: 10,000 m<sup>2</sup>;  
 Technical and administrative offices: 1,800 m<sup>2</sup>.  
 Employment: 90 engineers.  
 Start of operations: 2014.



**Danieli Austria**  
 Total surface: 40,000 m<sup>2</sup>;  
 Workshop area: 6,000 m<sup>2</sup>;  
 Technical and administrative offices: 1,400 m<sup>2</sup>.  
 Employment: 40 engineers.  
 Start of operations: 2008.

**Danieli India**  
 Total surface: 320,000 m<sup>2</sup>;  
 Workshop area: 41,000 m<sup>2</sup>;  
 Technical and administrative offices: 2,500 m<sup>2</sup>.  
 Employment: 500 engineers.  
 Start of operations: 2013.



Seven Danieli Production Centers worldwide  
 to ensure the same quality everywhere

**Danieli / Germany**  
 Total surface: 4,200 m<sup>2</sup>;  
 Workshop area: 2,800 m<sup>2</sup>;  
 Technical and administrative offices: 1,400 m<sup>2</sup>.  
 Employment: 140 engineers.  
 Start of operations: 2005.



**Danieli Thailand**  
 Total surface: 525,000 m<sup>2</sup>;  
 Workshop area: 90,000 m<sup>2</sup>;  
 Technical and administrative offices: 13,000 m<sup>2</sup>.  
 Employment: 900 engineers.  
 Start of operations: 2005.

**Danieli China**  
 Total surface: 200,000 m<sup>2</sup>;  
 Workshop area: 90,000 m<sup>2</sup>;  
 Technical and administrative offices: 12,000 m<sup>2</sup>.  
 Employment: 950 engineers.  
 Start of operations: 2007.

## Italy

Danieli Headquarters  
Buttrio

Sales, design, engineering,  
manufacturing, assembly, project  
management, R&D, after-sales service.



## Russia

Danieli Volga  
Dzerdzhinsk, Nižnij Novgorod

Sales, engineering, procurement,  
manufacturing, project management,  
after-sales service, site services.



## India

Danieli India  
Sri City, Andhra Pradesh

Sales, engineering, procurement,  
manufacturing, assembly, project  
management, after-sales service.



## China

Danieli China  
Changshu, Shanghai

Sales, design, manufacturing,  
assembly, project management,  
after-sales service.



## Thailand

Danieli Thailand  
Rayong / Industrial Area

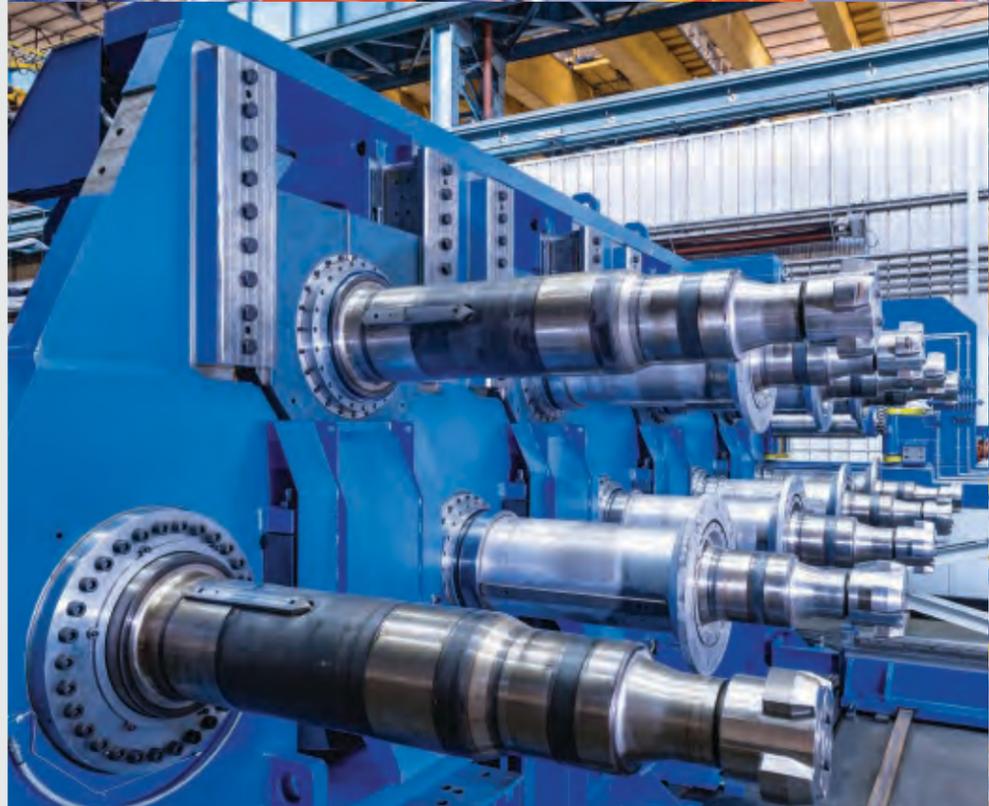
Sales, design, engineering,  
manufacturing, assembly, project  
management, after-sales service.

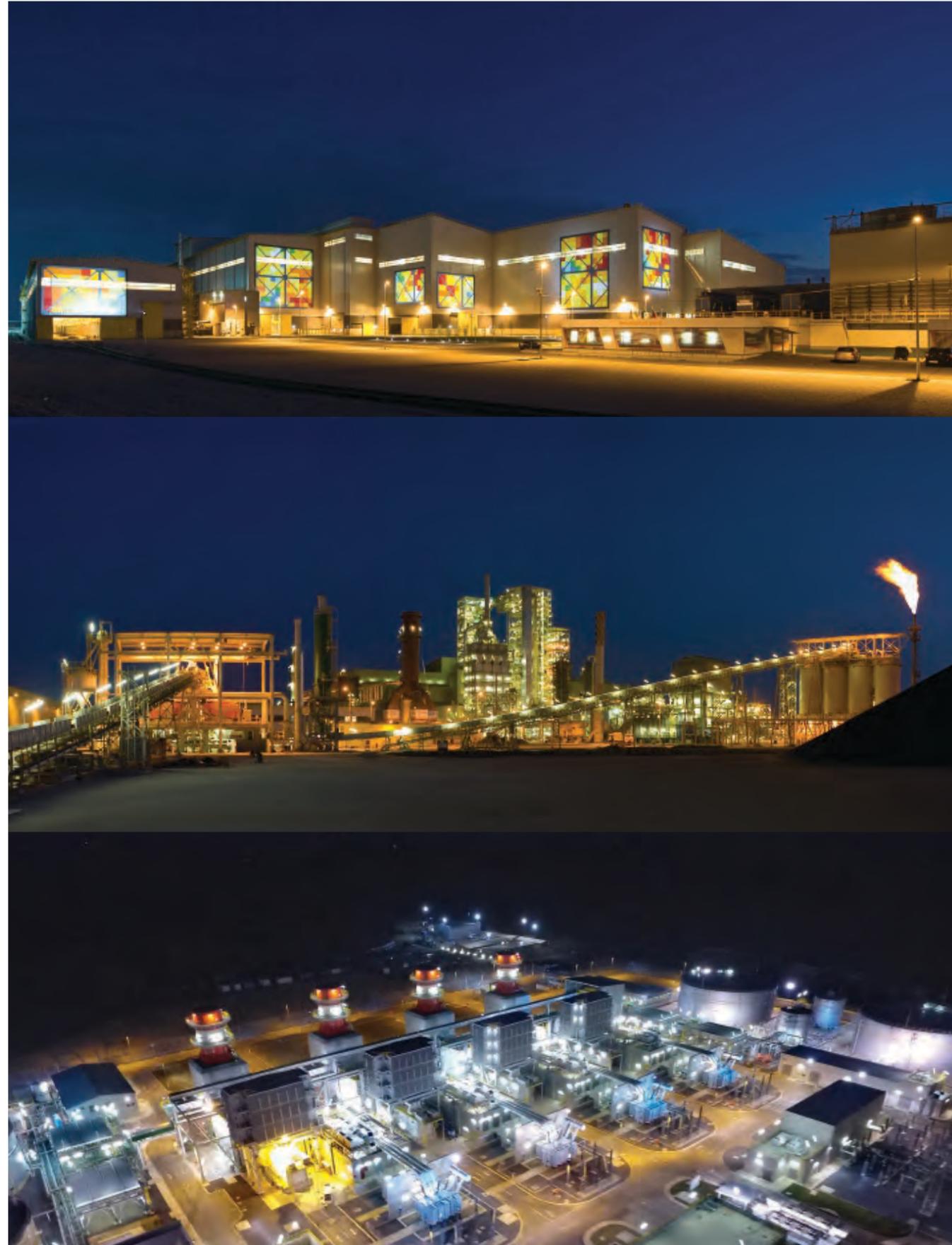


Right, top: Assembly shop at Danieli HQ in Buttrio.  
 Right, bottom: Assembly and functional testing operations of a nine-roller Jumbo straightener (2,500-cm<sup>3</sup> modulus) for ultra-heavy sections, including parallel-flange beams and columns with up to 1,138-mm web wide, up to 476-mm flange height, up to 140-mm flange thickness and up to 1,377-kg/m linear weight.

Bottom: Automated vertical warehouse for simplified, quick and accurate picking operations, with no risks to the operators' safety.

Right page, top: Assembly of pay-off reels for a high-speed (Danieli Turboflo® process) CPL-Continuous Pickling Line.  
 Right page, bottom: Assembly of a carousel coiler for a PLTCM line. The carousel coiler makes it possible to maximize production capacity due to the lack of stoppage time for coil evacuation, and the well-known advantages of the continuous rolling process over the batch mode.





Danieli Turnkey and Product-in-hand projects a high-end, global expertise to avoid risks, to minimize CapEx and OpEx and to maximize ROI

200 People

providing engineering services and technologically advanced plant solutions

3,000 People

providing skilled and fast-track construction and erection services

1,200 People

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



Danieli Plant Engineering together with the construction and advisory service arms of Danieli (i.e.: Danieli Construction International and Danieli Commissioning and Ramp-up Services) represents today the ideal EPC Partner for the metals industry owners', worldwide, since the Danieli TK Team acts either as a multi-referenced main contractor or as a reliable and knowledgeable business provider, capable of developing products and services with value-added solutions.

Thanks to its extensive, in-house knowledge of plant processes, equipment and operations, and its ability to act in partnership with the customers from the beginning of the project and through to production stabilization, Danieli addresses all project requirements to avoid risks, to minimize CapEx and OpEx and to maximize ROI. To reach the above targets, Danieli grants to the customer a "Service" characterized and driven by the following main fundamental guidelines:

- joint assessment of the market requirements and finding of the "value pools" where the production of a new plant could be located most strategically;

- definition of a tailor-made winning solution of the plant, fit-to-purpose with state-of-the-art, own engineered and manufactured equipment, granting economic, social, and environmental sustainability;

- execution of the TK Project as EPC main contractor with single-point responsibility via a trouble-free implementation on budget, schedule and performances, always bearing in mind, throughout the whole project life, to create value to our customers;

In other words: a real step ahead in the TK Project Business approach and execution.



Danieli Service and Customer Support sharing and optimization of resources to create a new business ecosystem for our mutual benefit

65,000 hours / year of technical support and consultancy for productivity and quality improvement



**The new paradigm of Customer Service**

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

With continuous investment in our technology, people, and a critical focus on improving customer service, we achieved our highest sales revenues on record in the last financial year (2016/17) but are now adapting at a faster rate to meet the increasingly complex and challenging economic climate of the "New Normal". In recognition of the latter, the next phase of our evolution includes the development of a more synchronised approach and an expansion of our services to include total asset management. Together with our suppliers, our customers and their customers, our vision is to create a common platform to enable the sharing and optimization of resources and the creation of a new "business ecosystem" for our mutual benefit.



**Water treatment and consumption decrease**

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

**Fume treatment and noise reduction**

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



**Energy saving through reduction of emissions**

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

**Solid waste and recovery**

The circular economy calls for the recovery and recycling of all the waste materials produced in a steel making plant such as slag and dust. Danieli through its patented Indutec™ process and Ecogravel™ plant, is able to eliminate the problem of hazardous wastes by turning them into an economic value as recycled material to be reused in the production cycle (such as pig iron and inert slag) or salable products in the market (such as conglomerate materials for civil construction products and for paving of the roads, or crude zinc oxide). At end of the production cycle, there is no waste discharged to the ecosystem.

Danieli Green Metal Technologies  
 knowledge, experience  
 and commitment  
to ensure operational health,  
 sustainability and competitiveness



More and more restrictive limits on the use of natural resources, on the emissions, on the production of wastes, on noise impacts - both inside the plant working areas and in the surrounding environment - will be applied for the metals production sector. To respond to

this new trend of environmental obligations, the industrial producers require reliable partners with knowledge, experience and commitment to ensure operational health, sustainability and competitiveness, without slowing the production of metals.



Main orders acquired

— Minimills, ironmaking  
and steelmaking plants



**Americas**

**Nucor Corp., USA**  
No. 1 MI.DA.-Micromill Danieli to produce 380,000 tpy of rebars.

**Nucor Corp., USA**  
No. 2 MI.DA.-Micromill Danieli to produce 380,000 tpy of rebars.

**Deacero Ramos, Mexico**  
Q-Melt® Dynamic Heat Suite for the automatic control of the EAF for higher productivity and lower energy consumption.

**Europe**

**Van Merksteijn Int.I., The Netherlands**  
900,000-tpy scrap-based, green steel minimill for the production of wire rod for concrete reinforcement and mesh products.

**Asil Çelik, Turkey**  
Complete meltshop modernization, including reconstruction of the EAF and secondary metallurgy stations and installation of Q-Melt® and a series of technological packages to further reduce the OpEx and improve profitability.

**Kroman Çelik**  
PTC 1760H triple acting scrap baler, and a CIB 1400-15L side compression scrap shear; one of the largest and most productive of its category.

**Central Asia**  
New 300-t BOF vessel, with increased reaction volume, complete with new suspension system and trunnion ring, slag shields, and coupling.

**Gruppo Cividale, Italy**  
Q-ONE power system on a 30-tons AC Electric Arc Furnace.

**Evraz ZSMK, Russia**  
A Q-TEMP VD technology package to enable continuous liquid steel temperature monitoring in the existing vacuum degassing unit without the necessity of vacuum killing. This will ensure constant and accurate temperature measurement, reducing treatment cycle and increasing VD productivity.

**SN Maia (Megasa Group), Portugal**  
Automatic EAF tapping system to execute complete furnace tapping remotely from the main pulpit, increasing operation safety and improving process control.

**ÓAM Ózdi Acélművek (Max Aicher Group), Hungary**  
High-efficiency fume treatment plant to treat fumes and dust emissions of the primary and secondary suction lines of a 67-t EAF and LMF.

**Africa and Middle East**

**ETRHB, Algeria**  
800,000-tpy MI.DA. Micromill Danieli for 8 to 40 mm rebar production.

**MENA Region**  
450,000-tpy minimill for rebar production, on a turnkey basis.

**UB Group FZE, UAE**  
New electric steel meltshop to produce up to 500,000 tpy of billets, mainly based on 70-t EAF and LF; material handling system, fume treatment plant, four-strand conticaster, and complete electrical and automation systems.

**Main orders acquired**

— Minimills, ironmaking and steelmaking plants



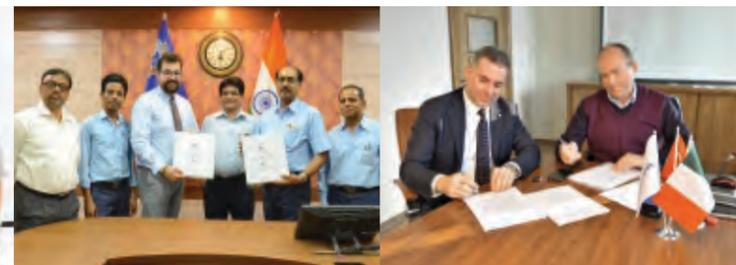
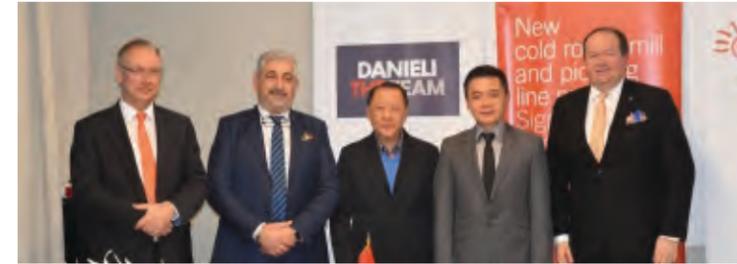
**Main orders acquired**

— EPC



**Main orders acquired**

— Flat product casting, rolling and strip processing lines



**Far East**

**Guilin Pinggang, China**

1.2-Mtpy MI.DA. Micromill Danieli with twin-strand conticaster and two separate rolling lines for straight bars and wire rod; a world's first.

**Shanxi Jianbang, China**

1.2-Mtpy MI.DA. Micromill Danieli with twin-strand conticaster and two separate rolling lines for straight bars and wire rod; a world's first.

**Agha Steel Industries, Pakistan**

MI.DA.-Micromill Danieli to produce 400,000 tpy of rebars.

**SeAH Besteel, Korea**

Q-Melt® suite on their EAF No. 3 to reduce process variability and OpEx.

**Dalipal Pipe Co., China**

EAF equipped with the Q-Melt Model advanced dynamic heat-process control system.

**Guihang Metal Products, China**

120-t EAF equipped with ECS-continuous charging scrap system, to replace an induction melting furnace.

**Qingyuan Tsingshan S.s., China**

150-t EAF equipped with ECS-continuous charging scrap system, to guarantee a tap-to-tap time of 40 min.

**Chizhou Gui Hang Metal, China**

130-t EAF equipped with ECS-continuous charging scrap system, to replace an induction melting furnace.

**Hegang Laoting, China**

Two Sublance and Advanced Slag Control System on 260 ton converters.

**Nghi Son, Vietnam**

>Zero Scale Pit™< water treatment plants to complete the order for two new conticasters caster and high-speed bar mill projects.

**Europe**

**ENEL, Italy**

EPC contract to build a 4.26-MW Concentrated Solar Plant in Sicily

**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.

**Africa and Middle East**

**ALBA-Aluminium Bahrain, Bahrain**

EPC contract for the Fume Treatment Center for the new Anode Baking Furnace within smelter's Line 6 Expansion Project.

**ALBA-Aluminium Bahrain, Bahrain**

EPC contract for the supply and installation of electrical bulk material inside the Smelter-Carbon Area within smelter's Line 6 Expansion Project.

**ALBA-Aluminium Bahrain, Bahrain**

EPC contract to expand the industrial port to enhance the capacity of the unloading, handling, and storage of raw materials (alumina and petroleum coke).

**Americas**

**Logan Aluminum, USA**

A DiamondFlex 6-high Cold Rolling Mill; the fastest and most powerful Cold Mill in the world.

**Europe**

**Tatmetal, Turkey**

Tandem Mill with five, 6-high stands to produce high-strength quality grades with superior flatness.

**Yildiz Demir Çelik, Turkey**

Second Hot Dip Galvanizing Line to add 400,000-tpy capacity to the complex and to expand the products range to GI and Zinc-Aluminum coated coils.

**Wieland-Werke, Germany**

High-performance slitting line for thin-gauge copper alloys strip for automotive and electronics industry applications.

**TMZ, Uzbekistan**

500,000-tpy Cold Mill Complex, including Push-Pull Pickling Line, Two-stand Cold Mill, Hot-Dip Galvanizing Line.

**Rusal Krasnoyarsk, Russia**

2-high Research Rolling Mill. Homogenizing furnace for billets and slabs.

**Severstal, Russia**

Continuous Pickling Line for Cherepovets Steel Complex, to process 2-Mtpy of carbon and engineering steel grades.

**Far East**

**Hoa Phat Steel, Vietnam**

QSP complex -including two vertical-curved casters, a twin-strand shuttle furnace, and a 2+4 stands hot strip mill- to produce up to 3.5 Mtpy of HRC in commercial and special steels. Danieli Automation will provide a complete electrical and automation package. Danieli Construction will perform the erection of the complete supplied technological equipment.

**Shandong Nanshan Aluminium, China**

Order for a 4,500-mm Plate Hot Rolling Mill and for a 2,350-mm 4-high EDT-Electro Discharge Texturing Cold Rolling Mill to produce coiled sheet aluminium strip material to meet the demand for automotive flat products.

**Main orders acquired**

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



**Europe**

**Megasa Group, Spain**

Bar mill and wire rod mill modernization projects in Spain and Portugal.

**Lech-Stahlwerke, Germany**

Order for a package of eight EOT cranes (FEM class A7/M7), each with 15t lifting capacity, to serve the 1.1-Mtpy bar mill.

**Abinsk Electric Steel, Russia**

New wire rod line to produce up to 500,000-tpy of commercial and special construction steel grades in coils of up to 2,000 kgs.

**OMK Vyksa Steel Works, Russia**

Order for a 500-ktpy seamless pipe complex for the production of OCTG seamless pipes (Casing and Tubing), Linepipe and Industrial pipes with the range of 2" 7/8 to 10" 3/4, based on the newest FQT process technology- and a finishing center, complete with a heat treatment line, and Quality Assurance and Finishing lines.

**ArcelorMittal Kryvyi Rih, Ukraine**

Upgrading of the "250-4" bar mill through the installation of a new 200-tph walking-beam reheating furnace and a five-pass rougher. This will make it possible rolling of larger billets in order to produce up to 1 Mtpy of straight and spooled rebars.

**Diler Demir Çelik, Turkey**

Six-strand billet caster upgrade to extend production to SBQ grades. The project includes the complete replacement of the equipment installed on the caster curve.

**Kardemir Karabük, Turkey**

Order for a high-tech five-strand billet conticaster for high added-value SBQ steel grades for mechanical engineering and automotive applications.

**Kroman Çelik, Turkey**

The modernization project of the Danieli high-speed wire rod mill supplied in 2006 aims to increase final product quality and the finishing speed.

**Far East**

**Maanshan Iron and Steel China**

Two-strand conticaster for Jumbo Beam Blanks up to 1,300x510x140 mm.

**Plant startup and commissioning**

— Minimills, ironmaking and steelmaking plants

Main events of the year



**Americas**

**SIMEC, Mexico**

Startup of the steel meltshop that completes the 600,000 tpy minimill for SBQ products for automotive applications.

**Africa and Middle East**

**Egyptian Steel, Egypt**

Startup of a MI.DA<sup>®</sup> Micromill Danieli for the production of 530,000 tpy of rebars.

**MENA Region**

Startup of a MI.DA<sup>®</sup> Micromill Danieli for the production of 350,000 tpy of rebars.

**Union Chlorine, UAE**

Final acceptance of a "greenfield" plant for production of caustic soda, hydrochloric acid, and sodium hypochlorite, built on a turnkey basis.

**SMC-Standard Metallurgical Company, Nigeria**

Startup of a 250,000-tpy Nano meltshop comprised of a 40-t DC EAF, Ladle Furnace, 2-strand conticaster for billets, and the related fume treatment plant.

**Europe**

**ArcelorMittal Zenica, Bosnia and Hercegovina**

Recommissioning of the 2,003-m<sup>3</sup> blast furnace No. 4 after rebuilding cooling and lining systems.

**MMK Magnitogorsk, Russia**

Recommissioning of the 1,554-m<sup>3</sup> blast furnace No. 1 after rebuilding cooling and lining systems.

**Baku Steel Company, Azerbaijan**

Startup of a steel meltshop upgraded with the installation of a 3-strand conticaster and a series of technology packages to improve the level of plant performance.

**MKE, Turkey**

Startup of a steel meltshop supplied on a turnkey basis to produce up to 120,000 tpy of liquid steel in special engineering grades for ingot casting.

**Far East**

**ViJa Steel, Vietnam**

Startup of a MI.DA<sup>®</sup> Endless Casting and Rolling line to produce 350,000 tpy of rebar products.

**SAIL Rourkela Steel Plant, India**

Recommissioning of the 1,491-m<sup>3</sup> blast furnace No. 1 after rebuilding cooling and lining systems.

**Agha Steel, Pakistan**

Startup of a steel meltshop revamped through the complete reconstruction of the EAF and installation of a new fume treatment plant.

**Hoa Phat Steel, Vietnam**

Recommissioning of the 477-m<sup>3</sup> blast furnace Kinh Mon No. 2 after rebuilding cooling and lining systems.

**Plant startup and commissioning**

— Flat product casting, rolling and strip processing lines



**Europe**

**voestalpine Stahl, Austria**

Record startup of a slab caster producing top-quality exposed automotive grades. After five weeks, the new caster was already producing on five shifts, and during the first 13 weeks covered almost all the contractual steel products.

**OCM Kirov, Russia**

Official inauguration of one of the most advanced rolling mill for copper strip. The four-high mill produces copper strips up to a width of 1,050 mm, at finish thickness ranging from 5 to 0.5 mm.

**Yildiz Demir Çelik, Turkey**

Startup of a temper mill, batch annealing furnaces, and a HDGL as part of the 1.5-Mtpy cold mill complex for pickled/cold rolled/galvanized and annealed/skin-passed coils for high quality applications.

**Tezcan, Turkey**

Startup of the 350,000-tpy hot dip galvanizing line No. 3 for CR strip in LC, MC and HSS grades.

**Far East**

**SAIL Rourkela Steel Plant, India**

Recommissioning of the 1,491 m<sup>3</sup> blast furnace No. 1 after rebuilding cooling and lining systems.

**JSW Tarapur, India**

Startup of DCR-Double Cold Reduction mill part of a 200,000-tpy tinplate complex.

**Henan Zhongfu Ind. Co., China**

Final acceptance of a high-speed (1,500 mpm) trimming line for aluminium strip with thickness ranging from 0.1 to 0.8 mm and max. width of 2,150 mm.

**Rizhao Steel, China**

Final acceptance of a 2-Mtpy continuous pickling line featuring the patented Turboflo pickling technology to run stably at 400 mpm.

**Anshan Iron & Steel, China**

Final acceptance for a Multi-Cassette Leveler processing 4,100-mm wide plates in thicknesses from 5 to 70 mm, in a mix of grades that include HSS for construction and military applications.

**Henan Mingtai, China**

Startup of a 1,500-mpm trimming line for lighter-gauge strips and for intermediate trimming (and slitting up to three strips) of thicker material up to 2.5 mm with a width of 2,650 mm.

**Zhongwang Tianjin, China**

Startup of a 1,500-mpm trimming line for can stock aluminium strip as part of a complex of six longitudinal cutting lines and associated packing line equipment

**Ton Dong A, Vietnam**

Final Acceptance of a state-of-the-art two-stand cold reversing mill and a 180-mpm galvanizing line for top-quality GL coated products.

**Hoa Phat Steel Sheet, Vietnam**

Startup of a 400,000-tpy cold mill complex comprising a push-pull pickling line, two reversible cold mill stands, and two hot dip galvanizing lines.

**Hoa Sen Group, Vietnam**

Startup of a 180,000-tpy hot-dip galvanizing line for high-quality paint and roofing products.

**Plant startup and commissioning**

— Long product casting and rolling plants  
— Seamless pipe mills



**Americas**

**Deacero Ramos Arizpe, Mexico**

Startup of a rolling mill for light bars and medium sections, as part of a 1.5-Mtpy minimill.

**Africa and Middle East**

**Alfapipe Ghardaia, Algeria**

Successful commissioning of an 80-in. HSAW welded pipe plant (the first of two lines ordered from Danieli) specifically designed to process high wall thickness pipes up to 25.4 mm for gas & oil transfer systems.

**Europe**

**voestalpine Wire Technology, Austria**

Official inauguration of the most modern wire rod mill in the world. The mill products meet the highest technological standards of the most demanding applications (e.g. automotive, power generation) and unconditionally meets every Industry 4.0 standard.

**SAM, Riva Group, France**

Final acceptance of two high-speed shears for automatic head and tail cropping of 5.0 to 20 mm wire rod, complete with the Active Pinch Rolls package for top-quality coils.

**Acciaierie di Verona, Italy**

Startup of the six-strand billet conticaster that will feed the 750,000-tpy high-tech Danieli wire rod mill.

**Far East**

**Tokyo Steel, Japan**

Final acceptance of a five-strand conticaster for billets and blooms. The machine features an utmost flexibility and was conceived to cast three sections simultaneously and with different cutting lengths, at a pace of up to 48 tph per strand.

**Tokyo Steel, Japan**

Successful commissioning of an 8-laser heads HiProfile PR88300 gauge, to perform accurate profile measurement of large beams and channels up to 600 mm, at Tokyo Steel's Utsunomiya Works.

**Topy Industries, Japan**

Startup of a 240,000-tpy K-Spool line operating two horizontal spooler stations producing 1- to 3.5-t compact coils of rebar at coiling speeds of up to 35 mps.

**Sichuan Liu He Forging, China**

Startup of an innovative rolling mill for medium round and flat bars of stainless and special steels for supercritical applications.

**Changcheng S.S., China**

Startup of a bar-in-coil line to process up to 300,000 tpy of 20 to 40-mm-diameter martensitic stainless steels bars.

**Feng Hsin, Taiwan**

Final acceptance of a new, high-speed rolling mill to produce 745,000 tpy of quality rebar from 10 to 36 mm.

**SAIL BSP, India**

Startup of a high-tech 900,000 tpy bar and rod mill for carbon and engineering steels.

**Fuco Steel, Vietnam.**

Startup of a 600,000-tpy rolling mill for wire rod, rebars, and small sections.

## Plant startup and commissioning

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

Main events  
of the year



### Americas

#### Indalum, Mexico

Startup of a complete aluminium extrusion plant, including 28-MN extrusion press, rapid heating billet furnace, and intensive cooling system for automotive profiles.

#### Kaiser Aluminium, USA

Startup of a 35-MN extrusion press after the revamping of the billet loading area.

### Europe

#### Extrugasa, Spain

Startup of a 47-MN extrusion press, front-loading type, equipped with ESED 2 - Energy Saving Electrical Drive.

#### Metra, Italy

Startup of a 70-MN revamped extrusion press.

#### Nisva, Italy

Startup of a 6-ton chain-track drawing machine for high-speed drawing of top-quality special engineering steel bars.

### Asas, Turkey

Startup of a 13-MN extrusion press equipped with a new billet loader to reduce the dead cycle time.

#### JSC Volgograd Steel Works "Krasny Oktyabr", Russia

Startup of a peeling line equipped with a CTM/PL 250 peeling machine for bars up to 205 mm.

#### UMMC Tyumen, Russia

Commissioning of billet conditioning and bar cold processing facilities part of a 550,000-tpy minimill plant for special steel long products.

### Far East

#### Ningbo Powerway Alloy Material, China

Startup of a 300-mpm chain-track drawing machine for Cu-alloys drawn bars.

#### Wanchuang, China

Startup of a 32-MN extrusion press for aluminium alloys.

Digi&Met: the Center for innovative leadership. The opening was celebrated on October 25, 2018, in a festive ceremony followed by "The Challenges of Innovation" Conference.

The new space stimulates creativity and encourages idea and knowledge sharing with an open plan and other features such as standing desks and collaboration areas. With its particular structure and an interesting design it aims to inspire and trigger passion for innovation.

Digi&Met is more than just a concept. It is an idea factory. A forefront of designing solutions for the success of our customers.



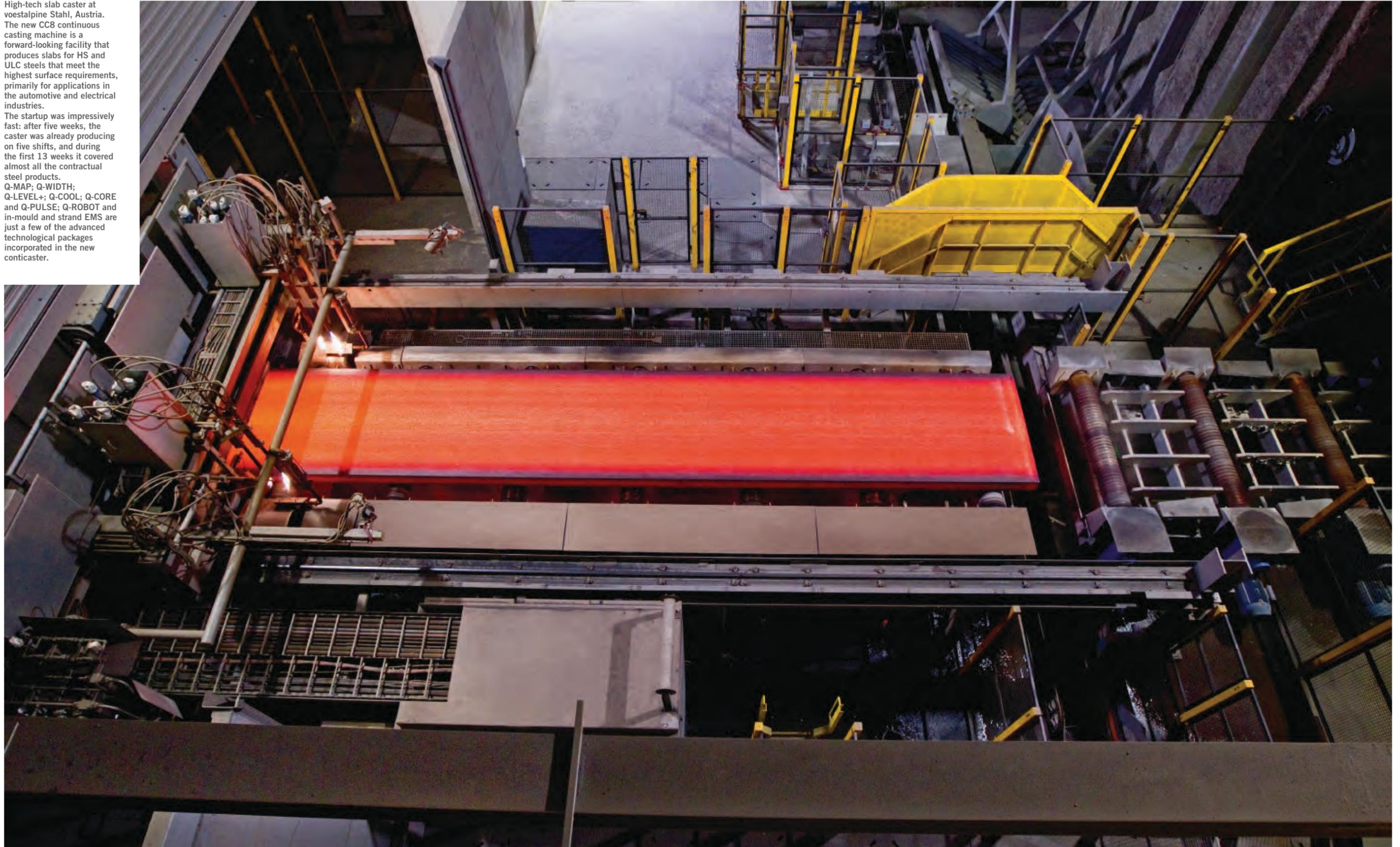
Algerian Qatari Steel (AQS) minimill will produce up to 2 Mtpy of bars and wirerod. For the timely execution of such a complex project Danieli deployed its unique, in-house reliable resources, know-how and “turnkey” capabilities:

- More than 320,000 hours of project management, project engineering, detail design and coordination.
- Consistently deploying a construction workforce at the site of more than 2,000 skilled workers and supervisors.

The full lump-sum turnkey implementation has included 11,959 concrete piles and CFA columns; 140,000 m<sup>3</sup> of concrete technological foundations; 25,000 t of steel structures; 3,600 t of piping; and 42,000 t of electromechanical equipment.



High-tech slab caster at voestalpine Stahl, Austria. The new CC8 continuous casting machine is a forward-looking facility that produces slabs for HS and ULC steels that meet the highest surface requirements, primarily for applications in the automotive and electrical industries. The startup was impressively fast: after five weeks, the caster was already producing on five shifts, and during the first 13 weeks it covered almost all the contractual steel products. Q-MAP; Q-WIDTH; Q-LEVEL+; Q-COOL; Q-CORE and Q-PULSE; Q-ROBOT and in-mould and strand EMS are just a few of the advanced technological packages incorporated in the new conticaster.



The Egyptian Steel MI.DA.-Micromill Danieli No. 2, located in Al Ain Al Sokhna, is a technological twin to the IIC-Plant installed in Beni Suf. The latter was the first MI.DA., boosting plant productivity up to 830,000 tpy. The plant was designed for the world's highest productivity: 75 tph in a single, endless line. Further to the complete L1/L2 automation and process control systems, Danieli Automation supplied its Q3MET L3 Manufacturing Execution System, the Q3DMMS Maintenance Management System, and the Q3Intelligence Business Intelligence solution.



Control pulpit in a modern wire rod mill.  
In 2010, Danieli Automation developed the 3Q platform: the first application in the world to be used as a digitalized operator interface and as an operator guide in decision-making.

The digital pulpit, based on 3Q Automation platform provides a comfortable and safe work environment combined with ergonomic and friendly user interfaces.



450-ktpy hot-dip galvanizing line at Tosyali Toyo, Turkey. Dedicated to GI production, the line processes CR strip in LC, MC, and HSS grades for automotive products, at speeds of up to 200 mpm, achieving a uniform and low-thickness zinc coating (down to 40 g/m<sup>2</sup> each side).

First galvanized coil was produced 1.5 months ahead of schedule; another example of efficiency and expertise that confirms Danieli's reliability as a fast-track supplier of strip processing lines.





Danieli  
The tradition  
of innovation  
since 1813  
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, Rotoformed 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

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

### Steelmaking Division Executive Board

**CARLA DE COLLE**  
Chairman

**ALESSANDRO TRIVILLIN**  
CEO

**FABIO BRUNETTI**  
Head of Controlling

**FEDERICO BUIATTI**  
Chief Business Support Officer

**SALVATORE CATANIA**  
HR Director

**ANDREA CHITTARO**  
Quality Director

**GLADYS CODARINI**  
Chief Operations Officer

**CLAUDIO DUSIO**  
Purchasing Director

**MIRTA FIOR**  
Logistics and Planning Director

**GIUSEPPE FLABOREA**  
Finance & Administration Director

**GIUSEPPE GIACOMINI**  
Plant Director

**STEFANO SCOLARI**  
Chief Business Development Officer

**CHIARA TASSIN**  
Chief Information Officer (CIO)





**Sales and operating results**

**Danieli Steelmaking Division Companies**

In thousands of euro	June 30, 2018	June 30, 2017
Net revenues	991,274	739,858
Gross operating margin (EBITDA)	121,831	65,403
Depreciation, amortization, and write-downs	(59,678)	(52,161)
Operating income (EBIT)	62,153	13,242
Net financial income/(charges)	(476)	(1,563)
Profit before tax (EBT)	61,677	11,679
Income taxes	(17,244)	(2,472)
Net profit	44,433	9,207
Segment assets	1,134,991	1,009,565
Increase in investments in tangible and intangible assets	43,378	28,352
Segment liabilities	474,027	411,069



**Acciaierie Bertoli Safau Spa (ABS)**

**ITALY**

The ABS company reported sales and other income of 928.3 million euro for the period 2017/2018 (722.6 million euro in 2016/2017) compared with approximately 1,163,000 tonnes shipped, with a net profit of 59.5 million euro compared with the previous year, which closed with a profit of 17.3 million euro. The steel market showed a good performance in financial year 2017/2018 with a positive first half and a second half in further growth in both sales and company margins. The second half of the year showed good volumes and margins both in sales and in the acquisition of orders, confirming the constancy in production costs and thus projecting a positive trend also for 2018/2019. In the year under review, the start-up of the new ROTOFORGIA plant was completed, with a complete "fine-tuning" of the production cycles and flows of the entire production process and obtaining good results in terms of internal health values in the rolling process, also on products with larger sections and extremely challenging characteristics, as currently required by today's market. During fiscal year 2017/2018, the market was characterised by a good dynamism in global demand from all segments of interest for ABS. The sales policy was directed towards the search for value through the analysis of the specific needs of the customer and the conscious search for the optimal product-customer mix; this aspect, together with the positive market trend, influenced the positive growth of the average price, which showed an improvement of 20% compared to the previous year. As far as the end markets of use are concerned, the

Automotive and Mechanical Engineering sectors showed strong demand, while the volumes of steel required for Oil&Gas applications remain, in quantitative terms, still far from the records in tonnes expressed in the years 2006/2008. Extra-EU exports have remained vigorous and dynamic in all major areas of the world, including the US, despite the introduction of duties by the US government. Regarding plant and infrastructure investments, the new Rotary Cutting Machine was installed and put into production in the Marte Line, which allows the trimming and cutting to size of Rotoforgia and Blooming products with an improvement in efficiency and productivity of the product line. The new Galdabini cold-straightening machine has been put into service in the Rotoforgia and Blooming product finishing service centre. Thanks to a 2,500-ton press, it is possible to straighten bars with sections up to 600 mm and weights up to 30 tonnes, completely automatically without operator intervention. In the Luna rolling line, the Bordioni line was started up after its revamping, with the aim of obtaining better performances regarding geometry, binding and dimensional flexibility of the roll, such as to satisfy the most stringent requests of customers in the industry. The lighting system was upgraded, and the WiFi network was installed in a wide-ranging manner, allowing 100% logistical operation even during night shifts. In the field of environmental sustainability, the expansion of the Fumi 2 plant was also finalised, providing more than double the EAF furnace's fume extraction capacity compared to the past, placing ABS absolutely in line with best practices and with the new standards set by AIA 2016, while doubling its extraction capacity.



Thanks to the innovation of production processes, and the research conducted by ABS Centre Metallurgique also in collaboration with important end-users, ABS is able to produce thousands of different types of steel and is already working in a perspective of development for totally different new products, which will be strategic in future years and intended for specific increasingly growing niche markets. ABS confirms its strategy aimed at supplying high quality finished products, the company's point of excellence, with the objective of achieving positive results in the future thanks to a continuous diversification of the product range created to meet market demand and to acquire further niches (high profitability) of the same. The order book at 30 June 2018 amounted to approximately 525 thousand tonnes, compared to approximately 250 thousand tonnes at 30 June 2017; this level of orders maintains the company's visibility in the short/medium term and requires precise production planning, together with flexible management in the organisation of work and plants.



**Abs Sisak**

**CROATIA**

The company resumed production in September 2017 and during the first half of 2018 progressively increased production volumes which, operating in three shifts, will stabilise at around 350,000 tonnes at the end of 2018. The negative operating result was therefore influenced in general by the non-constant production, realising at 30 June 2018 a loss of 21.9 million hrk, equal to 2.9 million euro (loss of 15.0 million hrk equal to 2.0 million euro at 30 June 2017). The new system of duties and controls applied in the EU to prevent dumping by some Ukrainian, and then Chinese producers first allowed them to operate during the year with prices and margins that were once again profitable. The 2017/2018 financial year is therefore affected by the costs of restarting and the learning curve necessary to operate again in efficiency, while the 2018/2019 financial year will be better thanks also to a greater depth of vision and better saturation for the production plants.



Investments in progress will enable better energy management for electric furnaces with the activation of a Danieli's innovative QONE plant to reduce grid disturbances and improve production efficiency (valued around 8 million euro) and other investments to facilitate the increase in production already underway. Joint activities with the local University of Metallurgy continue and have been strengthened thanks to the collaboration between the University itself and the ABS Metallurgical Research Centre (ACM).

**Qualisteel Srl**

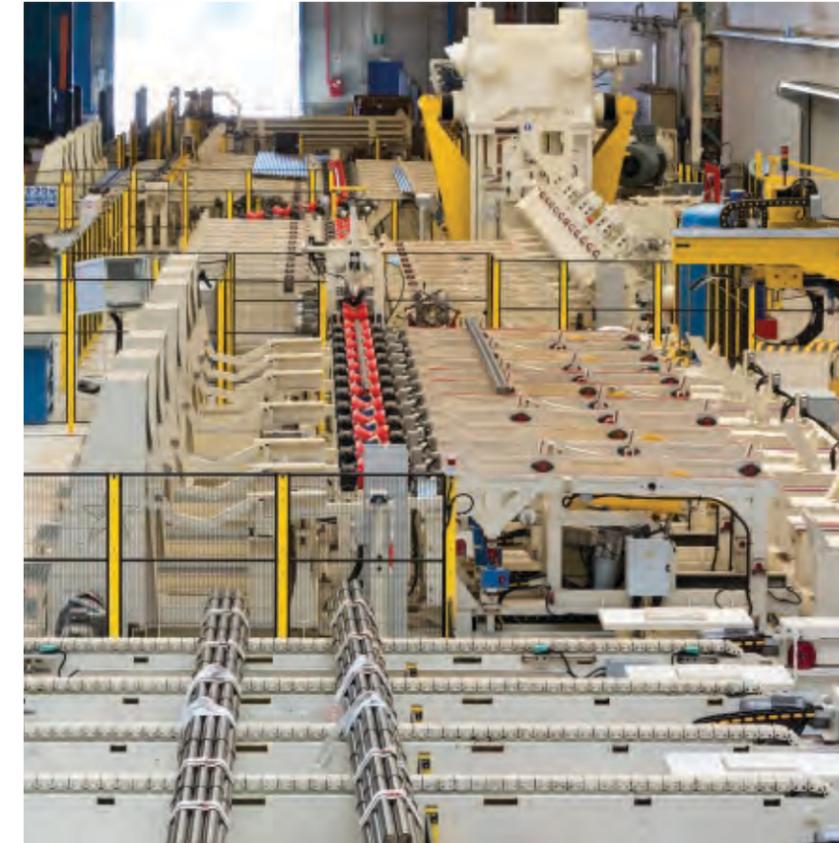
**ITALY**

In the period Qualisteel S.r.l. operated guaranteeing cold finishing activities on ABS products, completing their verticalization: both rolled bars and polished bars were processed where profitability was higher. The company reported sales and other income of 8.7 million euro for the 2017/2018 financial year, compared with 7.9 million euro in the 2016/2017 financial year, with a break-even result at 30 June 2018. The company has continued the process of lean manufacturing and creating production efficiency by improving production logistics to deliver compliant products with greater delivery guarantee and shorter packaging times.

**Abs Centre Metallurgique (Acm) Sas**

**FRANCE**

ACM is based in Metz and represents for the Danieli Group a centre of excellence for the research and study of steel production, covering the entire operating chain, from the raw material (scrap) to the finished product developed according to specific customer requirements. A team of twenty 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 the development of a range of completely innovative bainitic steels specifically designed for specific customer needs. The research, however, has not only concerned products in the strict sense but also numerous technologies to support the different areas of the company. The tools used were the most varied depending on the needs from image analysis to support operators during the work of selection and classification of scrap rather than in the testing of products up to the study of inclusions. The above is just one of many partnerships created with customers and directly with OEMs in order to improve the service offered in line with the best market trends.

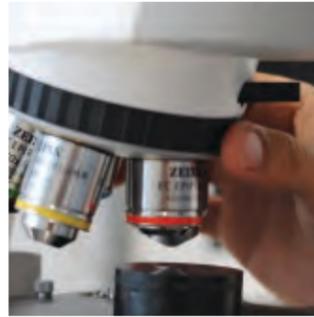


**ABS ESW Röhrenwerke**

**GERMANY**

During the 2017/2018 financial year, the company continued to restructure its production structure in order to return to operation as soon as possible with a positive operating margin. Unfortunately, the results are still not satisfying with sales of 74.0 million euros and a loss of 10.3 million euros. However, the market is still receptive, and the planned investments are now being completed, as they can be started already in the second half of 2018. During the first half of 2018, activities were gradually implemented up to nineteen shifts per week (compared to the previous fifteen shifts), with the sales mix moving towards products with higher added value due to the quality of the starting material (high-alloy steels) or for post-production processing and controls. It is believed that the interventions carried out on the plants and on the production, planning will bring good results immediately in the next financial year with a decrease in OpEx costs, a better quality of the products and an increase in production volumes. The installation of the new heat treatment plant directly in the process line will allow a significant reduction in production costs, with energy savings as well as a drastic reduction in delivery times. The insertion of a cooling box will, in fact, allow a controlled cooling of the pipes managing the temperatures of tempering in the plate, before carrying out the normalization and remediation of the same. The increase in production efficiency, the growth of the market (both in terms of volumes and prices) and the widening of the production mix in terms of the size and quality of the tubes sold are at the basis of the economic improvements expected for the 2018/2019 financial year, which has as its objective the return to profit for the company.





### Quality

Quality Dept, as a part of Customer's Team, co-operates with direct Customers (forging / machining companies), OEM (Original Equipment Manufacturer) and Endusers 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 UNI EN ISO 9001 for Quality Management System.

— CE Marking according to the Construction Products Regulation 305/2011/UE (EN 10025-1).

— American Bureau of Shipping, Bureau Veritas, Det Norske Veritas and Lloyd's Register approvals for marine applications.

— TÜV approval according to the Pressure Equipment Directive 97/23/EC and AD2000 Merkblatt W0.

And obtained this new certification:

— CE Marking according to the Construction Product Regulation 305/2011/UE ( EN 10343 ).



### Sustainability: willing to go beyond

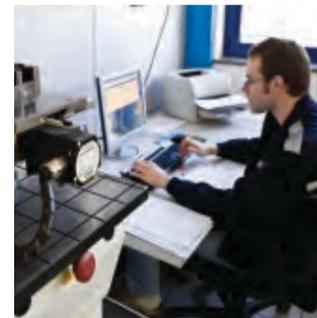
ABS identifies sustainability as one of its core values and a strategic factor for long-term growth vision. On a daily basis it works to integrate the social and the environmental variables in its core business. The technological innovation is the keystone of the environmental component and it is also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

— Energy Savings. During the AF 17/18, 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 building, canteen and changing rooms re-using 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 to 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 Cagnacco Plant has been audit 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 on 31 of May Qualisteel achieved it. In the last fiscal year ABS in collaboration with Regional helicopter rescue service (HEMS) has made a helipad pitch for the occasional landing because the timeliness and efficiency of the rescue can become a decisive element in case of illness or accident.



### 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 particular tasks at risk, problems relating to alcohol addiction and the use of drugs.

### ABS WINS THE STEELIE AWARD

The winners of the 9th Steelie Awards were announced at the Annual Dinner of the World Steel Association on October 16.

Acciaierie Bertoli Safau S.p.A., won the trophy (Steelie) for the Rotoforgia innovative project in the category Innovation of the year!

The new Rotoforge (RF) installed at ABS' "Linea Marte" facility is a prototype, the first in the world, and promises to revolutionize production of forged products through introduction of a continuous production process while overcoming the traditional limitations of rolling and forging. It involves use of a series of continuous technologies in addition to the RF, such as a new walking beam furnace and a new cutting section for continuous operation.

Rotoforgia is a hybrid, which has a similar production process and characteristics to a rolling mill through the use of a forge, as it exerts much

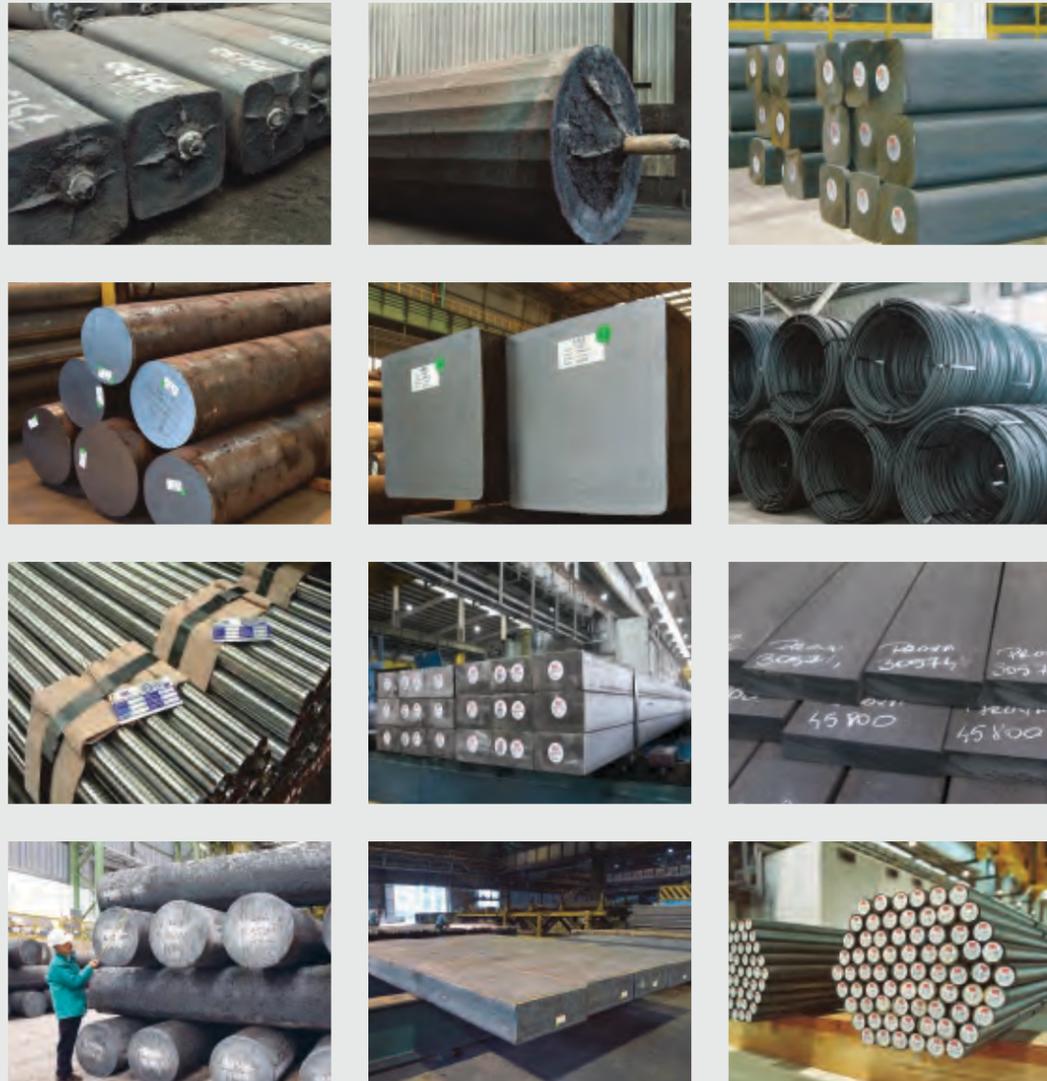
greater mechanical pressure on the individual pieces than those exercisable by classic rolling mills, ensuring internal health characteristics of steel at par with forged products. Traditional hot-rolled mills achieve a maximum reduction per rolling pass of only about 60-70 mm, for each transit of the charge on the section with opposed cylinders (lacking however, optimal homogeneity in the heart of the piece).

Rotoforgia allows a higher reduction per rolling pass – up to 200 mm for each transit. The use of large rolls and the consequent reduction of feeding angles allows for a reduction in the number of rolling passes required even for heavier starting products, thereby improving productivity. Overall, central health internal soundness, commonly measured using ultrasound methods and expressed in FBH (flat bottom hole) of the Rotoforging process is close to 2 mm, typical of forged products. In comparison, rolled products settle at values of around 10 mm FBH.



Kosei Shindo, President, Representative Director, Nippon Steel and Sumitomo Metal Corporation (NSSMC) with Gianpietro Benedetti, Member of the Board of Directors, Acciaierie Bertoli Safau S.p.A.

**ABS / A wide range of special steels products**



**Product mix**

- Ingots** up to 130 t

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- Forged bars** up to 1,000 mm

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- Blooms** up to 850 mm

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- Rolled bars** up to 500 mm

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- Bar in coils** up to 60 mm

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- Peeled bars** up to 300 mm

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- Ground bars** up to 160 mm

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- Seamless tubes** up to OD 244 mm



**Ecogravel®**

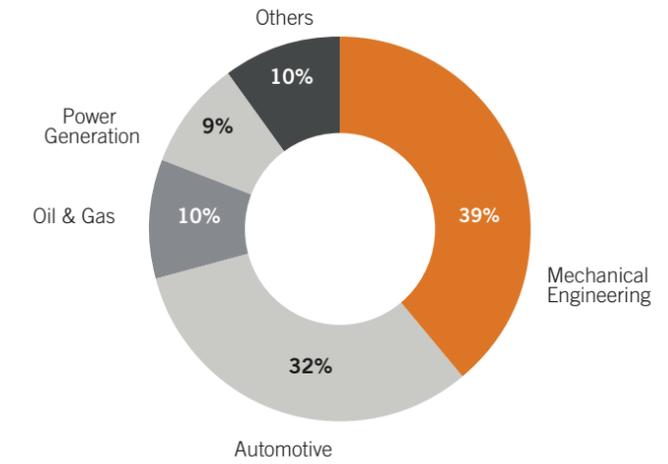
**Industrial aggregate** from EAF slag recovery, for bituminous conglomerates, cement mixes, and concrete.

**Surface finish**

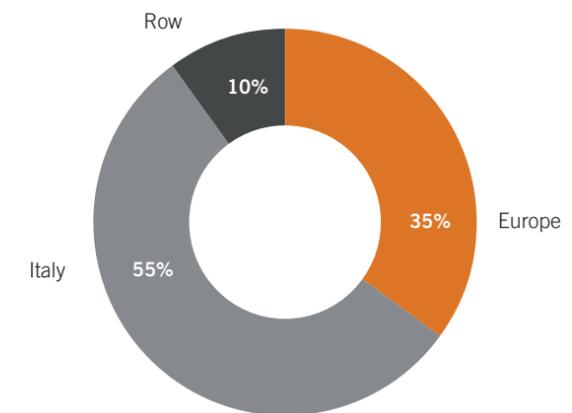
As-cast, As-rolled, Shot-blasted, Rough-forged, Peeled-reeled, Rough-turned, Ground

**Heat treatments**

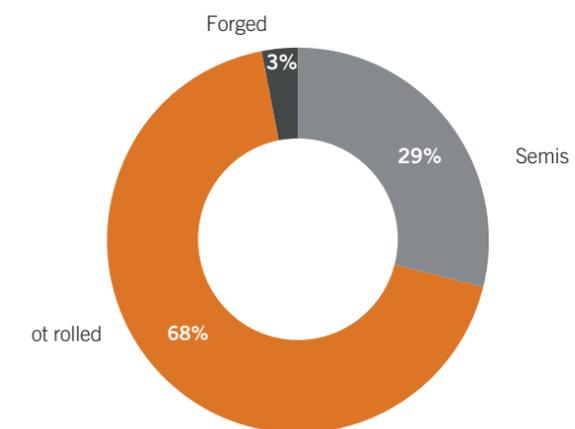
Shearability annealing  
Soft annealing  
Isothermal annealing  
Spheroidizing annealing  
Normalizing  
Hardening and tempering



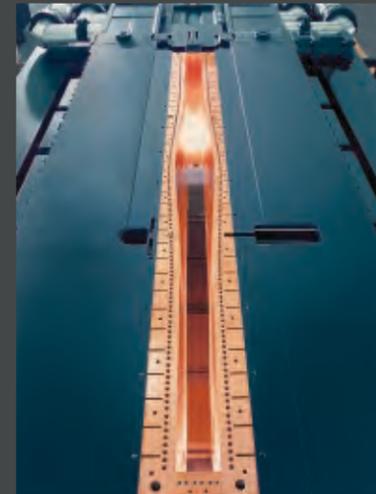
**End Use.** During the last fiscal year ABS consolidated its position in the reference markets, and opened to others. The shipments slightly changed: improving their percentage (Mechanical Engineering and the Others) or lightly decreased (Power generation, Oil&Gas and Automotive).



**Geographical Area.** ABS confirms both its good position on the domestic market (55%) and its traditional export activity. The great part of the export goes within European States (35%).



**Products.** The overall volumes delivered during the fiscal year 2017/2018 and produced in the Udine steelmaking plant increased (+6.5%), with an important quote in hot-rolled products shipments.



## 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/Concaster-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 Distinguon), French (Rotelec), American (Wean Industries, United Engineering), and Dutch (Corus Technical Services) companies, leaders in their specific fields of activity, and the continuous development of the acquired process technologies and equipment, Danieli has become a global player in plant making over the full range of products, from ore, scrap and treating; to flat, long, tubular, forged and extruded products processing; and fume, water and slag treating. At the end of the 1990s the internationalization process was

completed with the construction of fully owned and directly managed design and production centers in China, Thailand, Vietnam and India, followed by Russia, Turkey, and Brazil, all of which were added to the European plants already existing in Italy, Sweden, and Germany, guaranteeing the same excellent quality equipment and service produced at Danieli Headquarters.

Beginning in 1969, through Danieli Automation, the company has developed its own automation systems, including instrumentation and power control technologies. Danieli Automation has grown considerably in the past 20 years. In particular, in 2015 they began investing in Industry 4.0 and purchased a company specialized in the use of robots.

In 1995 Danieli acquired a steelmaking company - ABS - which today is among the European leaders in engineering steels production. In addition to being a profitable business in itself, it is also used as a laboratory for metallurgy, equipment/processes, and their related automation.

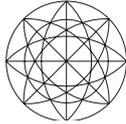
## Danieli Group Milestones



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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SPAIN RUSSIA TURKEY USA BRAZIL  
THAILAND INDIA CHINA JAPAN

