

# BUSINESS MODEL AND FACTS 2019/20

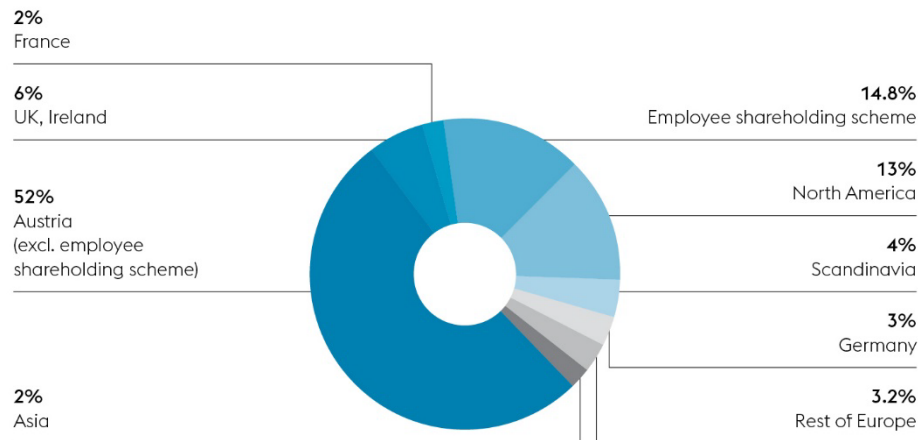
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Investor Relations

# voestalpine GROUP

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# voestalpine GROUP OWNERSHIP STRUCTURE



## Largest individual shareholders (as of March 31, 2019)

Raiffeisenlandesbank Oberösterreich Invest GmbH & Co KG	< 15 %
voestalpine Mitarbeiterbeteiligung Privatstiftung	14.8 %
Oberbank AG	8.1%

## Information regarding shares

Share capital	EUR 324,391,840.99, divided into 178,549,163 no-pare-value shares
Shares in proprietary possession as of March 31, 2020	28,597 shares
Market capitalization as of March 31, 2020 Based on total number of share minus repurchased shares	EUR 3,308,878,690.81

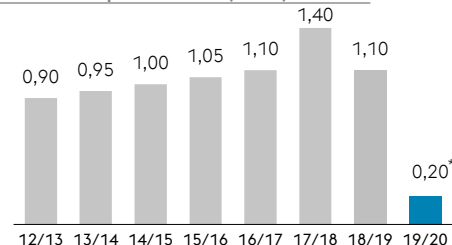
# voestalpine GROUP

## INVESTMENT INTO voestalpine SHARES

### Strong focus on the creation of sustainable shareholder value

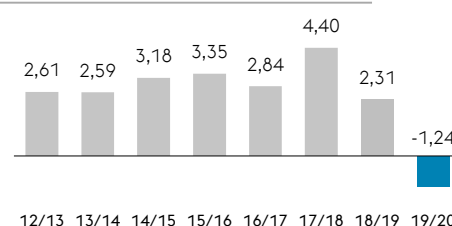
- » voestalpine, a **listed company** for more than **20 years** – total **shareholder return** since IPO: 612% (as of March 31, 2020)
- » Proven, solid business model - leading market positions in major business segments based on **innovative product solutions**
- » Dependence on “**classic**” **steel cycle now limited** due to consistent focus on high-quality “downstream” niche products
- » **Reduced earnings volatility** due to sound business model with broad diversification of products by both region and industry
- » Long-term **growth perspective** in downstream businesses
- » Leading European position in **efficiency & profitability**

Dividend per share (in €)



\*As proposed to the AGM

EPS – earnings per share (in €)



**Continuous dividend payment since IPO in 1995 – average dividend yield 3.8%**

# voestalpine GROUP

## MANAGEMENT BOARD

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**Herbert Eibensteiner**

Chairman of the Board (CEO)

Started with voestalpine in 1989, member of the Board since 2012

**Robert Ottel**

Chief Financial Officer (CFO)

Started with voestalpine in 1997, member of the Board since 2004

**Hubert Zajicek**

Head of Steel Division

Started with voestalpine in 1993, member of the Board since 2019

**Franz Kainersdorfer**

Head of Metal Engineering Division

Started with voestalpine in 1996, member of the Board since 2011

**Franz Rotter**

Head of High Performance Metals Division

Started with voestalpine in 1981, member of the Board since 2011

**Peter Schwab**

Head of Metal Forming Division

Started with voestalpine in 1993, member of the Board since 2014

The Members  
of the Board  
have had  
**a long-term  
commitment  
and years of  
experience**  
with the  
voestalpine  
Group!

# voestalpine GROUP

## SUCCESSFUL BUSINESS MODEL

### voestalpine - a leading technology group

- » voestalpine is a leading technology group with combined materials and processing expertise
- » Its business units hold top positions globally
- » The group focuses on product and system solutions based on steel and other metals of the highest quality in technology-intensive industries and niches
- » Clear focus on the most promising long-term strategic sectors, such as mobility and energy
- » Long-term relationships with customers, suppliers, and R&D institutions as key drivers of innovation



All business units are in the top 3 in Europe or worldwide

# voestalpine GROUP

## PRODUCTION & SALES SITES



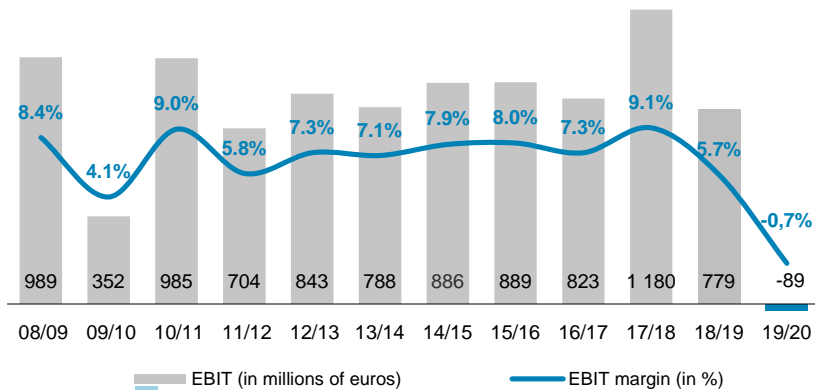
**One Group – 500 sites – 50 countries – 5 continents**

# voestalpine GROUP

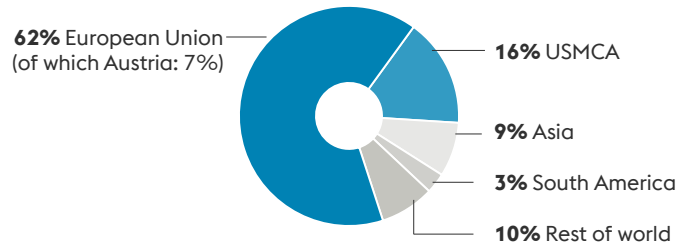
## KEY DATA

### voestalpine Group (revenue breakdown for 2019/20 (EUR 17.7 billion)

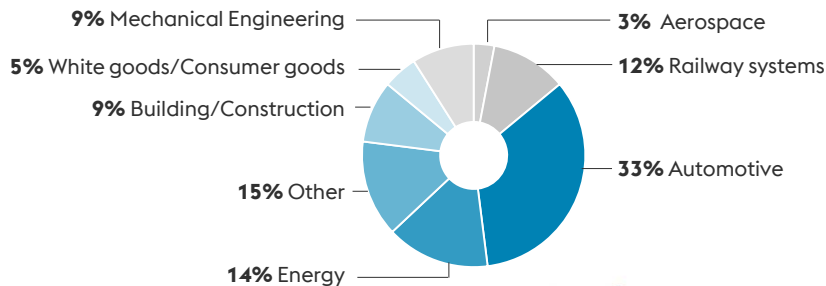
- Technology corporation with headquarter in Linz, Austria
- Diversified by markets, products and regions
- Based in Europe with international growth strategy
- Market focus on mobility and energy segments



### By region (as percentage of divisional revenue)



### By industry sector (as percentage of divisional revenue)





# voestalpine GROUP

## COMPANY STRUCTURE AND MARKET POSITIONS

voestalpine Group (BY 2019/20)

35%



### Steel Division

#### Global quality leadership

...in highest **quality steel strip** and market leader in **heavy plate** and **foundry products** for the most sophisticated energy applications.

22%



### High Performance Metals Division

#### Global leadership

...in **tool steel**; leading position in **high speed steel**, **aircraft**, **special forgings** and **powder technology**. Innovation leader in **additive manufacturing**.

22%



### Metal Engineering Division

#### Global leadership

...in **railway infrastructure**; European market leader in specially treated **wire**; leading position in **seamless tubes** for special applications and **high-quality full welding solutions**.

21%



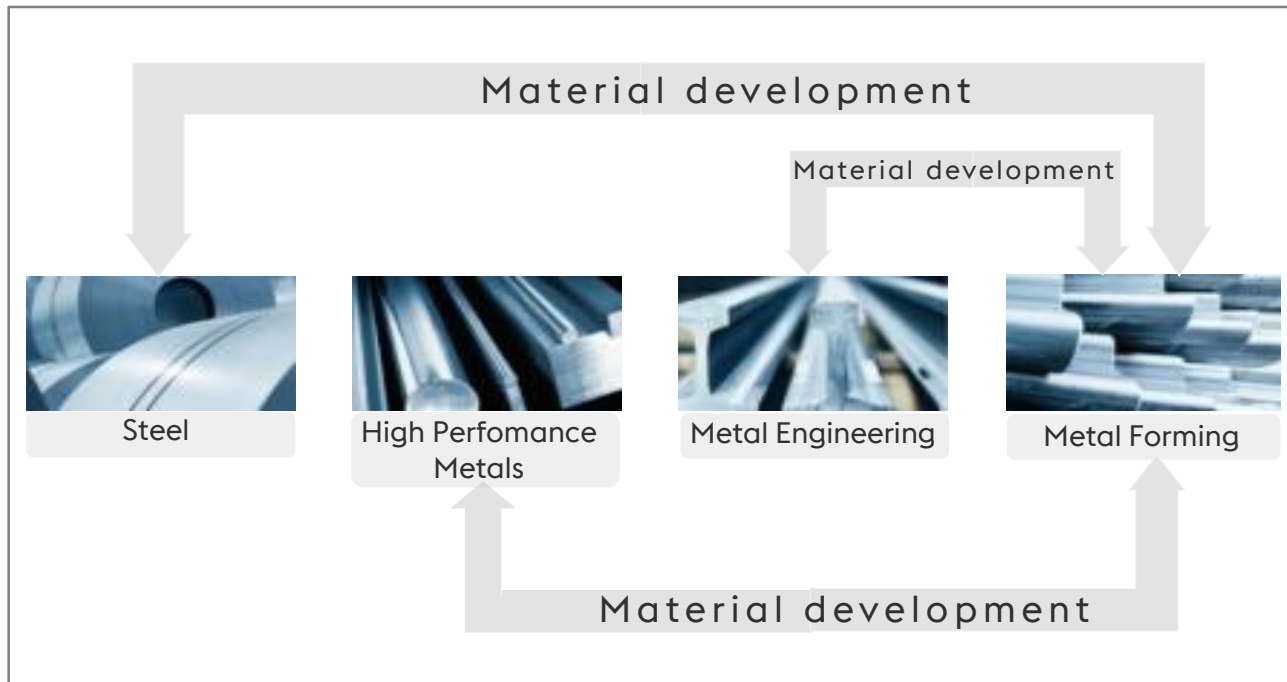
### Metal Forming Division

#### Global leadership

...in defined **high-tech** niches with **highest quality** demands supplying **metal processing solutions** with a global network for generating maximum customer value.

# voestalpine GROUP

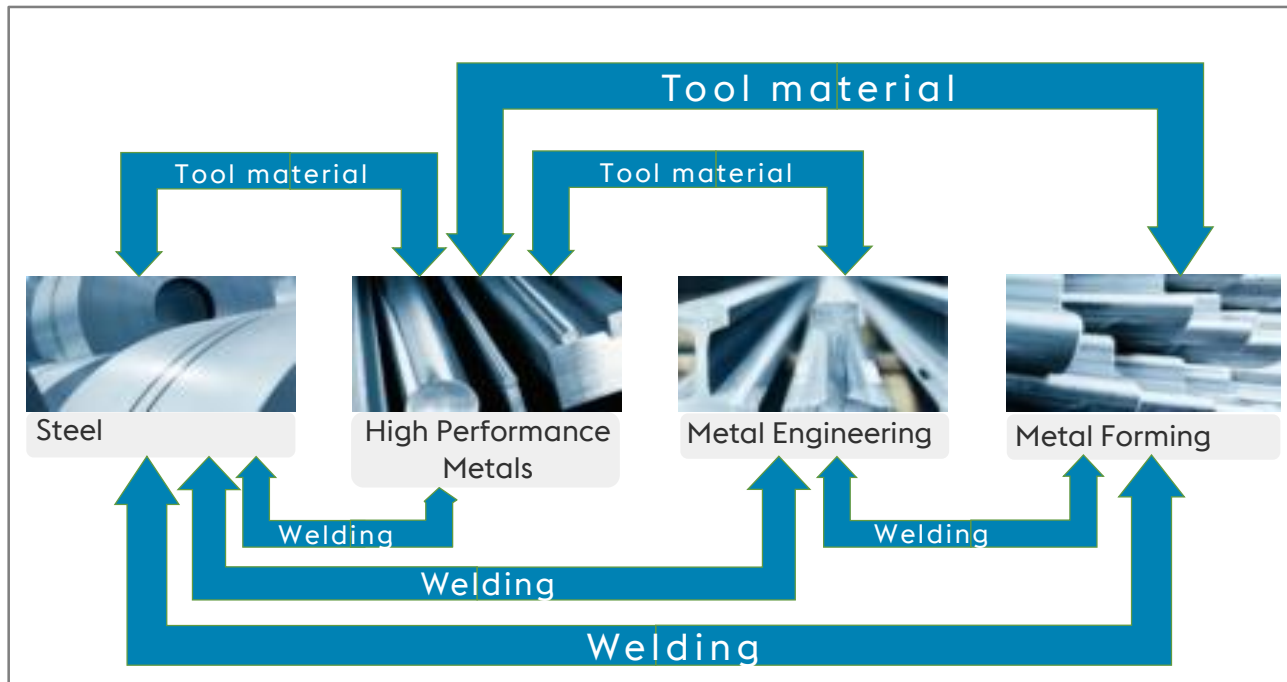
## COLLABORATION WITHIN THE GROUP



- » Group-wide R&D projects
- » Combining metallurgical know-how of the Steel Division with the processing know-how of the Downstream Divisions
- » Deep understanding of technical requirements along the value chain
- » Joint development of new grades of materials and new products

# voestalpine GROUP

## COLLABORATION WITHIN THE GROUP



- » Special materials (high-strength and ultra high-strength steels, ultra wear-resistant heavy plate and rails) require specialities in processing (tool steel) and joining (welding consumables)
- » voestalpine is a one-stop shop for special materials and components and appropriate solutions for processing and joining

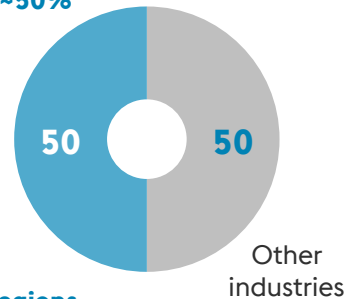
# voestalpine GROUP

## STRATEGIC PRINCIPLES

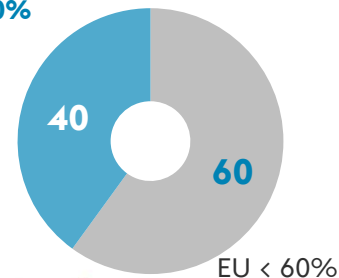
- » Steel as the **sole basic material**, additional use of **alternative materials** in processing activities
- » Portfolio expansion only in **core businesses** or in core-business-related areas
- » **Downstream activities** as drivers of further expansion
  - » Consistent extension of the value chain toward attractive end-customer segments
- » Growth focused on markets **outside Europe** (NAFTA, Asia)
- » Industry segments with **highest technology** and **quality** demands as preferred partners
- » **Technology** and **quality leadership** in products and services
- » Strong **customer orientation** – permanent cost and efficiency management – continuous process optimization
- » Minimum **top-3 position** as the clear objective of each business unit

### 2025/26 targets

Mobility ~50%



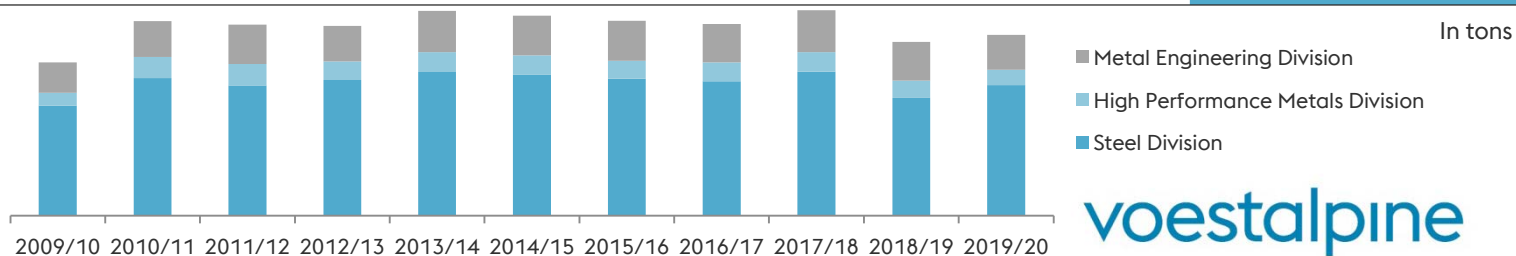
Other Regions  
> 40%



# voestalpine GROUP

## CRUDE STEEL PRODUCTION

	Steel Division	High Performance Metals Division	Metal Engineering Division	Group
BY 2011/12	5,161,368	850,059	1,561,065	<b>7,572,492</b>
BY 2012/13	5,377,838	742,716	1,408,018	<b>7,528,571</b>
BY 2013/14	5,702,910	782,673	1,632,855	<b>8,118,438</b>
BY 2014/15	5,583,895	774,665	1,570,000	<b>7,928,559</b>
BY 2015/16	5,429,051	712,698	1,591,591	<b>7,733,340</b>
BY 2016/17	5,333,435	745,941	1,516,615	<b>7,595,991</b>
BY 2017/18	5,712,004	775,006	1,653,173	<b>8,140,182</b>
BY 2018/19	4,666,285	682,948	1,545,308	<b>6,894,541</b>
BY 2019/20	5,173,096	614,339	1,385,491	<b>7,172,925</b>



# STEEL DIVISION

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# STEEL DIVISION

## GROUP STRUCTURE

### Most significant group subsidiaries

- voestalpine Stahl GmbH
- voestalpine Grobblech
- voestalpine Texas
- voestalpine Giesserei Linz
- voestalpine Steel & Service Center
- voestalpine Eurostahl
- Logistik Service

### Steel Division

### BU Steel Strips & Pre-processings

### BU Heavy Plate

### Products

- Hot rolled strips
- Cold rolled strips
- Electrolytic galvanized strips
- Hot dip galvanized strips
- Organic coated strips
- Linepipe plates
- Offshore plates
- High-strength plates
- Structural steels

# STEEL DIVISION PRODUCTION & SALES SITES

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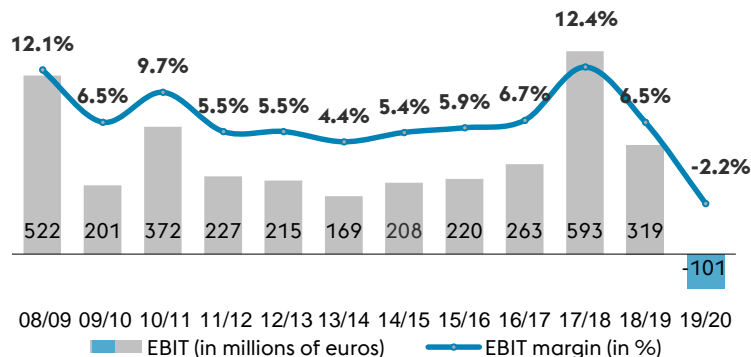
# STEEL DIVISION

## KEY DATA

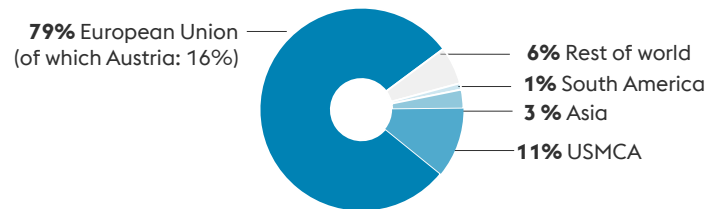
### STEEL DIVISION (revenue breakdown 2019/20 (EUR 4.6 billion)

#### Global quality leadership

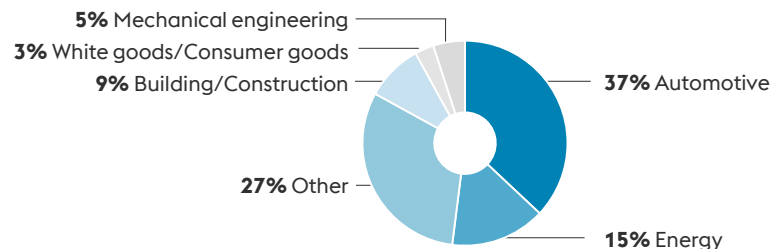
Global quality leadership in highest quality steel strip and global market leader in heavy plate for the most sophisticated applications as well as casings for large turbines.



### By regions (as percentage of divisional revenue)



### By industry sector (as percentage of divisional revenue)



# STEEL DIVISION

## PRODUCTION & SHIPMENT FIGURES (IN TONS)

Production	Crude steel	Shipments	Heavy Plate	Hot rolled	Cold rolled	Surface tr.	Misc.	Total
Q1 2016/17	1,242,729	Q1 2016/17	154,370	289,784	267,640	693,026	3,960	1,408,780
Q2 2016/17	1,319,710	Q2 2016/17	161,460	251,581	218,910	591,549	3,290	1,226,790
Q3 2016/17	1,330,719	Q3 2016/17	174,130	263,464	235,160	594,936	3,760	1,271,450
Q4 2016/17	1,440,277	Q4 2016/17	170,570	321,660	288,270	671,580	3,530	1,455,610
<b>BY 2016/17</b>	<b>5,333,435</b>	<b>BY 2016/17</b>	<b>660,530</b>	<b>1,126,489</b>	<b>1,009,980</b>	<b>2,551,091</b>	<b>14,540</b>	<b>5,362,630</b>
Q1 2017/18	1,440,616	Q1 2017/18	187,150	292,170	284,030	618,140	3,720	1,385,210
Q2 2017/18	1,408,392	Q2 2017/18	199,370	246,400	238,320	567,300	3,510	1,254,900
Q3 2017/18	1,452,803	Q3 2017/18	171,350	266,060	238,290	581,870	3,420	1,260,990
Q4 2017/18	1,410,193	Q4 2017/18	179,500	302,340	274,720	632,430	4,390	1,393,380
<b>BY 2017/18</b>	<b>5,712,004</b>	<b>BY 2017/18</b>	<b>737,370</b>	<b>1,106,970</b>	<b>1,035,360</b>	<b>2,399,740</b>	<b>15,040</b>	<b>5,294,480</b>
Q1 2018/19	1,218,475	Q1 2018/19	151,150	280,810	244,940	601,150	3,490	1,281,540
Q2 2018/19	533,634	Q2 2018/19	102,430	240,390	208,700	544,070	3,740	1,099,330
Q3 2018/19	1,456,840	Q3 2018/19	130,920	248,270	213,270	554,880	3,590	1,150,930
Q4 2018/19	1,457,336	Q4 2018/19	126,490	283,580	266,830	647,100	3,730	1,327,730
<b>BY 2018/19</b>	<b>4,666,285</b>	<b>BY 2018/19</b>	<b>510,990</b>	<b>1,053,050</b>	<b>933,740</b>	<b>2,347,200</b>	<b>14,550</b>	<b>4,859,530</b>
Q1 2019/20	1 342 184	Q1 2019/20	116,770	267,560	241,770	589,130	2,740	1,217,970
Q2 2019/20	1 243 247	Q2 2019/20	120,755	225,610	221,011	565,952	2,893	1,136,221
Q3 2019/20	1 205 307	Q3 2019/20	121,477	242,247	220,106	558,950	3,114	1,145,893
Q4 2019/20	1 382 358	Q4 2019/20	114,947	294,002	278,451	640,257	3,124	1,330,781
<b>BY 2019/20</b>	<b>5 173 096</b>	<b>BY 2019/20</b>	<b>473,949</b>	<b>1,029,419</b>	<b>961,337</b>	<b>2,354,290</b>	<b>11,871</b>	<b>4,830,866</b>

# STEEL DIVISION OVERVIEW

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- » The Steel Division is a strategic partner for Europe's well-known automobile manufacturers and major suppliers
- » Additionally, it is one of the largest suppliers to the European consumer goods and white goods industries as well as to the mechanical engineering sector. voestalpine produces heavy plate for the energy sector that is used under extreme conditions in the oil and gas industries, for example, for deep-sea pipelines or in the permafrost regions of the world
- » Furthermore, the division is a global leader in the casting of large turbine casings



High quality steel sheet



Heavy plate for oil & gas industry

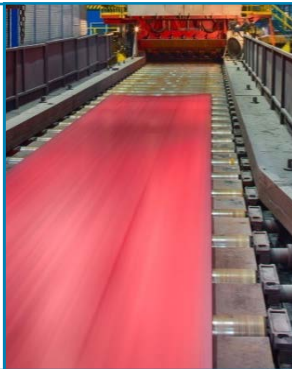
# STEEL DIVISION PRODUCTION SITES

Flat steel production,  
Linz (Austria)



- » Competence center for flat carbon steel in the voestalpine Group
- » Fully integrated plant with coking plant, blast furnaces, steel shop, and rolling mills at a single location

Heavy plate mill, Linz  
(Austria)



- » Manufacture of high-quality heavy plate for applications in demanding market niches
- » Focus on the global energy sector
- » Investments in state-of-the-art production plants

Steel service centers in  
Austria, Poland, Romania



- » Top three position in Europe
- » International footprint to realize the local supply and follow-the-customer strategy

Hot briquetted iron site in  
Texas (USA)



- » High-quality pre-material for steel production
- » Internal supply of blast furnace operations in Linz & Donawitz
- » External deliveries primarily for electric arc furnace steel producers globally

Foundry, Linz  
(Austria)



- » Steel casting for the energy (e.g. turbine housings) and mechanical engineering industries
- » Non-ferrous casting for the automotive industry (sliding elements and cam units for stamping facilities)

# STEEL DIVISION

## POSITION & STRATEGIC APPROACH

### Market position

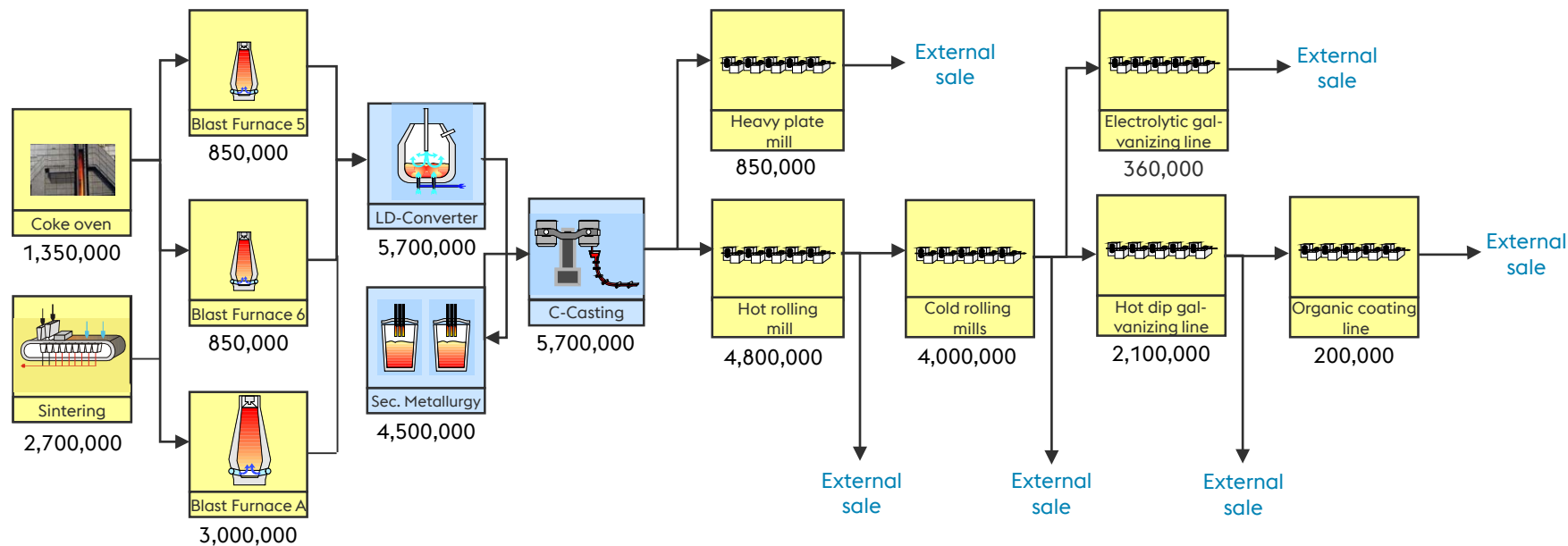
- » Global quality leadership in flat steel
  - » Automotive industry's leading supplier and first-choice partner for future developments
    - » High strength and advanced high strength steel grades
    - » Press hardening steel with cathodic corrosion protection
  - » Superior position for non-grain oriented electrical steel in Europe
  - » Leading worldwide supplier of heavy plate for most demanding applications in energy industry
  - » One of the largest suppliers to the European household appliance industry (market share ~20%)

### Strategic approach

- » Continuous increase in share of high quality products based on comprehensive R&D and technology upgrades
  - » Press hardening steel for considerably lower weight in automobiles
  - » Vacuum-treated steel for ultra-low carbon contents and very pure steel grades
  - » Electrical steel sheet with highest electro-magnetic properties
  - » Special steels to withstand high pressure for the deepest pipelines and for use in arctic regions
  - » Materials to increase efficiency in the energy sector
  - » Well aligned & utilized facilities & long-term partnerships with customers

# STEEL DIVISION MATERIAL FLOW

Capacities in mtons



# STEEL DIVISION INNOVATIONS

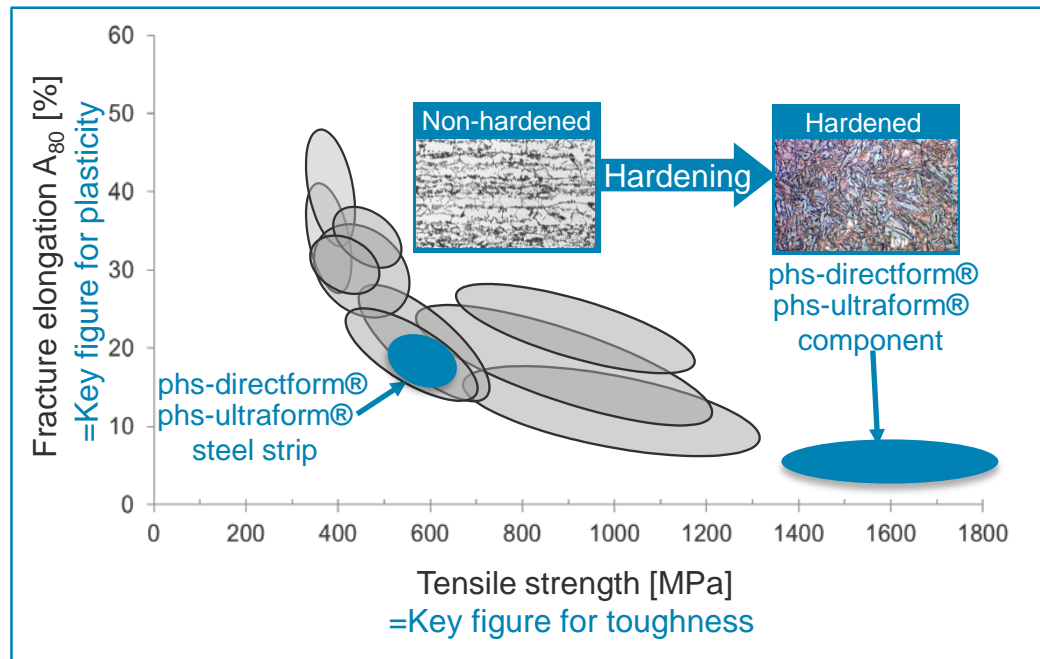
## toughcore®

- » toughcore® heavy plate is known for its extremely high toughness, “toughness to the core,” based on the remarkably fine microstructure throughout the entire cross-section
- » toughcore® heavy plate enables unique combinations of properties in terms of thickness, strength, extreme toughness and optimum weldability
- » Applications: offshore structures, pipelines, cranes and mining equipment in extreme conditions

## isovac®

- » isovac® electrical steel for the highest energy efficiency
- » Best electromagnetic and mechanical properties based on a state-of-the-art continuous annealing line
- » Innovative electrical steel for use in the consumer goods, electrical, automotive and energy industries
  - » For electric motors in a wide variety of applications
  - » For wind and hydroelectric power generators
  - » Non-grain-oriented electrical steel for highest energy efficiency in electro-mobility

# STEEL DIVISION INNOVATIONS



## phs-directform®, phs-ultraform®

- » phs-ultraform® combines the benefits of press-hardened components with the high-quality corrosion resistance of galvanized steel strip
- » phs-directform®, the global innovation developed by voestalpine, is a directly hotformed, hot-dip galvanized steel strip to be used in corrosion-resistant light-weight components for the automotive industry



# STEEL DIVISION

## HBI-PLANT IN CORPUS CHRISTI, TEXAS

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- » Largest and most modern HBI (hot-briquetted iron) plant worldwide
- » Produces 2 million tons of high quality HBI annually
- » Uses more environmental-friendly natural gas instead of coke, in the reduction of iron ore pellets
- » Own deep-sea port, handling 5m tons of iron ore pellets and HBI each year
- » Pre-material from Texas supplies both external customers and Austrian steel sites in Linz & Donawitz
  - » Clients use HBI to produce sophisticated steel grades at electric arc furnace operations



# STEEL DIVISION

## PRODUCT PORTFOLIO 2018/19

### Heavy plate

- » Heavy plate for use under extreme conditions; focus on the energy sector
- » Applications: sour-gas resistant plates for line pipe, corrosion-resistant steels for refineries, high strength plates for offshore-platforms and cranes, structural steels in steel construction and bridge building
- » Shipments: c. 500 tons a year
- » Market volume in European Union c. 10m tons a year

### Hot-rolled steel strip

- » Product portfolio ranges from mild steel to ultra-high strength steel grades for most demanding applications
- » Applications: for the building sector (roof, cladding), tube industry, plant, and warehouse construction
- » Shipments: c. 1,050k tons a year
- » Market volume in European Union c. 30m tons a year

### Cold-rolled steel strip

- » Very thin steel strip with best surface appearance
- » Applications: for electrical & electronic devices such as refrigerators, ovens, washing machines or televisions; for the radiator as well as automotive industry
- » Shipments: c. 600k tons a year
- » Market volume in European Union c. 10m tons a year

### Electrical steel

- » Non-grain oriented electrical steel with the best electro-magnetic properties
- » Applications: for electric motors, generators, and transformers in electrical appliances and machinery; special focus on electro-mobility
- » Shipments: c. 350k tons a year

# STEEL DIVISION

## PRODUCT PORTFOLIO 2018/19

### Electrolytic-galvanized steel strip

- » For highest corrosion protection and best surface quality
- » Applications: for exterior parts in automotive, mechanical engineering, household appliance, and electrical industries
- » Shipments: c. 250k tons a year
- » Market volume in European Union c. 2.5m tons a year

### Hot-dip galvanized steel strip

- » High degree of corrosion resistance; from extremely mild to advanced high strength steel (AHSS)
- » Applications: in the tubes & sections, warehouse, household appliance, consumer electronics, and automotive industries
- » Shipments: c. 1,900k tons a year
- » Market volume in European Union c. 22m tons a year

### Organically coated steel strip

- » Coated steel with optimum surface & processing properties
- » Applications: in building & construction (roof-, wall- and sandwich panels) and in household appliance industry
- » Shipments: c. 200k tons a year
- » Market volume in European Union c. 5m tons a year

### Hot briquetted iron (HBI)

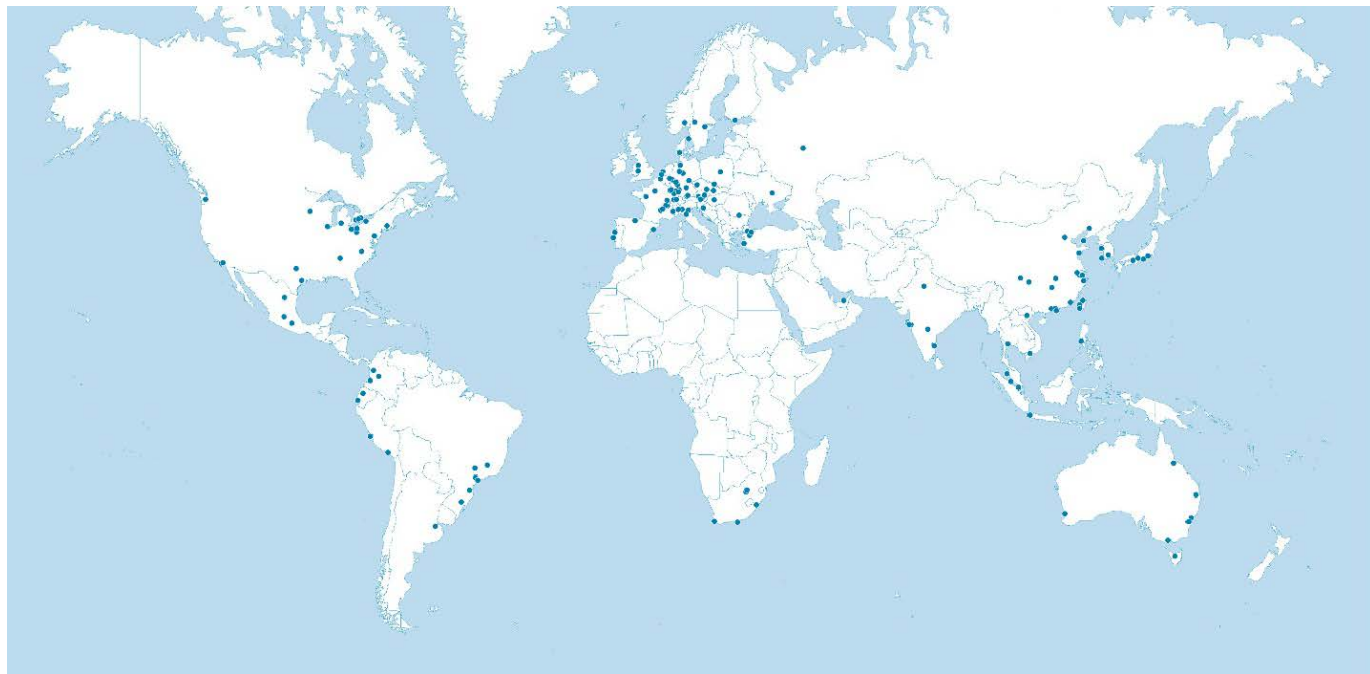
- » Can be used as a scrap supplement in electric arc furnaces for the production of most demanding steel grades
- » Use in blast furnaces to boost productivity and to reduce the coke consumption or in blast oxygen furnaces as a low-residual substitute for scrap
- » HBI from voestalpine distinguishes by low residual levels (Cu, Cr, Ni, Mo, Sn) as well as favorably low phosphorous and sulphur levels

# HIGH PERFORMANCE METALS DIVISIONS

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# HIGH PERFORMANCE METALS DIVISION PRODUCTION & SALES SITES

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# HIGH PERFORMANCE METALS DIVISION

## GROUP STRUCTURE

### Most significant group subsidiaries

- voestalpine High Performance Metals GmbH
- voestalpine BÖHLER Edelstahl
- Buderus Edelstahl
- Uddeholms
- Villares Metals
- voestalpine BÖHLER Aerospace
- voestalpine Böhler Bleche
- EschmannStahl
- voestalpine High Performance Metals Deutschland
- voestalpine High Performance Metals Italia
- voestalpine High Performance Metals Pacific
- voestalpine High Performance Metals Corporation
- Eifeler Coatings Technology

### High Performance Metals Division

HPM BU  
(Production)

Value-Added  
Services BU  
(Distribution)

### Products & services

Tool steel (plastic mould, cold work tool steel, hot work tool steel, high speed steel)

Special materials (for oil & gas, energy, machine building, aviation & automotive industries)

Closed-die forged products (for aviation, energy, machine building & automotive industries)

Premium service provider for tool steel & special materials (heat treatment, sawing, milling, grinding, drilling coating,...)

# HIGH PERFORMANCE METALS DIVISION

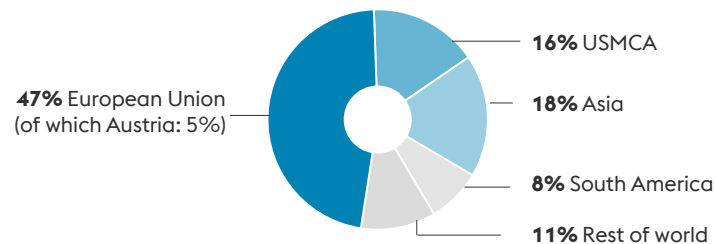
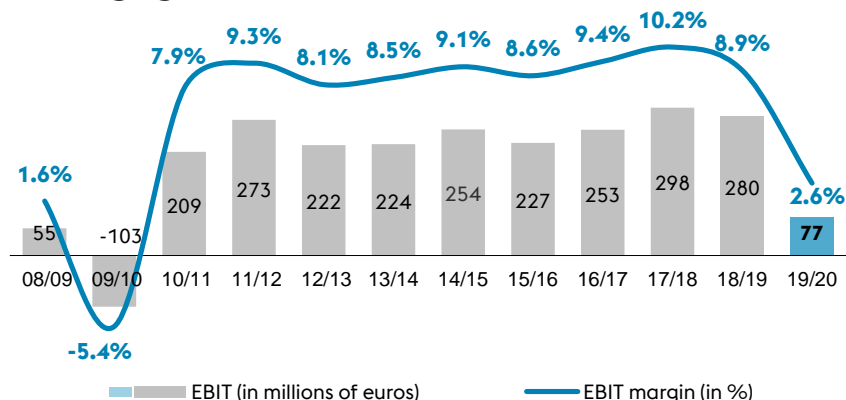
## KEY DATA

**High Performance Metals Division** (revenue breakdown 2019/20 (EUR 2.9 billion)

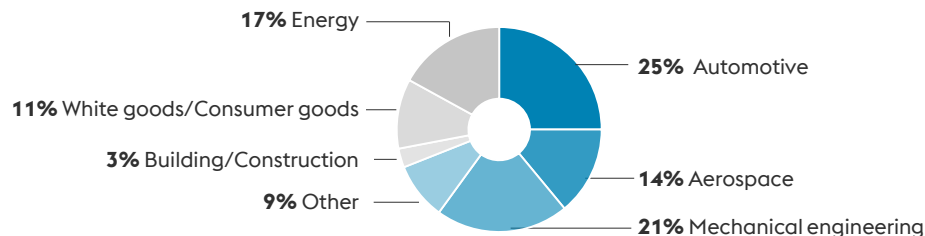
**By regions** (as percentage of divisional revenue)

### Global leadership

Worldwide leadership in tool steel;  
leading position in high-speed steel and  
special forgings.



**By industry sector** (as percentage of divisional revenue)



# HIGH PERFORMANCE METALS DIVISION

## PRODUCTION & SHIPMENT FIGURES (IN TONS)

Production	Crude steel	Shipments	Tool steel	Other HPM*	Forging	Other	Total
Q1 2016/17	194,045	Q1 2016/17	65,480	65,511	12,152	21,429	164,571
Q2 2016/17	178,126	Q2 2016/17	62,265	64,772	10,603	21,084	158,724
Q3 2016/17	173,528	Q3 2016/17	59,970	63,761	9,337	19,086	152,153
Q4 2016/17	200,242	Q4 2016/17	68,310	68,960	12,780	23,710	173,760
<b>BY 2016/17</b>	<b>745,941</b>	<b>BY 2016/17</b>	<b>256,024</b>	<b>263,004</b>	<b>44,872</b>	<b>85,309</b>	<b>649,209</b>
Q1 2017/18	203,395	Q1 2017/18	64,008	71,015	11,579	22,107	168,710
Q2 2017/18	170,104	Q2 2017/18	62,340	73,615	11,876	21,073	168,904
Q3 2017/18	187,839	Q3 2017/18	60,838	72,056	10,995	23,658	167,548
Q4 2017/18	213,668	Q4 2017/18	66,658	76,340	13,777	23,252	180,028
<b>BY 2017/18</b>	<b>775,006</b>	<b>BY 2017/18</b>	<b>253,844</b>	<b>293,027</b>	<b>48,228</b>	<b>90,091</b>	<b>685,189</b>
Q1 2018/19	204,485	Q1 2018/19	61,237	81,097	13,662	23,332	179,328
Q2 2018/19	183,407	Q2 2018/19	56,842	77,372	12,974	21,111	168,298
Q3 2018/19	166,465	Q3 2018/19	53,648	78,367	12,004	19,193	163,212
Q4 2018/19	128,591	Q4 2018/19	55,408	84,803	14,201	23,107	177,519
<b>BY 2018/19</b>	<b>682,948</b>	<b>BY 2018/19</b>	<b>227,136</b>	<b>321,638</b>	<b>52,840</b>	<b>86,743</b>	<b>688,358</b>
Q1 2019/20	174,519	Q1 2019/20	47,784	78,929	13,513	17,277	157,504
Q2 2019/20	155,063	Q2 2019/20	45,926	73,620	10,976	16,541	147,062
Q3 2019/20	130,442	Q3 2019/20	42,331	71,659	7,517	16,089	137,596
Q4 2019/20	154,315	Q4 2019/20	46,569	78,245	9,759	16,983	151,557
<b>BY 2019/20</b>	<b>614,339</b>	<b>BY 2019/20</b>	<b>182,610</b>	<b>302,453</b>	<b>41,765</b>	<b>66,891</b>	<b>593,719</b>

\* HPM = High Performance Metals



# HIGH PERFORMANCE METALS DIVISION

## OVERVIEW

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- » The voestalpine High Performance Metals Division is the leading global manufacturer of high performance metals, which have specially developed material properties with regard to high resistance to wear, polishability, and toughness
- » Customers for these materials are the automotive and consumer goods industries in the segment of tool steel applications as well as the power plant construction industry and the oil and gas industries in the segment of special components
- » The division is also a leading supplier of forgings for the aviation and power generation industries



Aircraft components

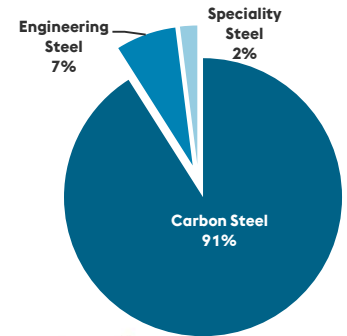
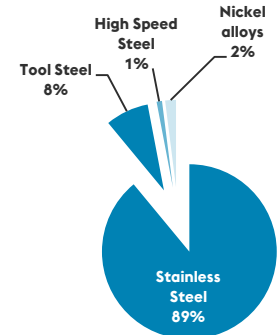


Tool steel

# HIGH PERFORMANCE METALS DIVISION

## CHARACTERISTICS OF SPECIAL STEEL

- » Production of special steel as a niche business within the steel universe
- » Main characteristics of special steel include high alloy content, high level of purity (low sulphur and phosphorus content), and a huge variety of different steel grades
- » Special steel is produced in comparatively small batches relative to carbon steel
- » Special steel products are typically manufactured in electric arc furnaces using scrap as input material
- » Carbon content of tool steel is higher in comparison to stainless steel
- » Each tool steel grade focuses on specific forming processes, like plastic moulding or high pressure die-casting, and offers a distinctive combination of properties
  - » Such as high surface hardness, high wear resistance, heat resistance, and corrosion resistance)
- » Tool steel requires 24-hour delivery service and customized on-site service
  - » This is why the High Performance Metals Division maintains the largest global service center network



# HIGH PERFORMANCE METALS DIVISION

## MAIN PRODUCTION SITES

Böhler, Kapfenberg (Austria)	Buderus, Wetzlar (Germany)	Uddeholm, Hagfors (Sweden)	Villares, Sumaré (Brazil)
<ul style="list-style-type: none"> <li>» Brand name: Böhler</li> <li>» Capacity: ~200,000 tons</li> </ul> <p><u>Products</u></p> <ul style="list-style-type: none"> <li>» Hot work tool steel</li> <li>» Cold work tool steel</li> <li>» Plastic mould steel</li> <li>» High speed steel</li> <li>» Special stainless steels &amp; nickel based alloys for oil &amp; gas, thermal power generation, and aviation industries</li> <li>» Open-die forging products for thermal power generation and oil &amp; gas sector</li> <li>» Closed-die forgings, mainly for aviation industry</li> </ul>	<ul style="list-style-type: none"> <li>» Brand name: Buderus</li> <li>» Capacity: ~400,000 tons</li> </ul> <p><u>Products</u></p> <ul style="list-style-type: none"> <li>» Specialist in plastic mould steel</li> <li>» Engineering steel for wind energy</li> <li>» Open-die forging products</li> <li>» Closed-die forging products for commercial vehicle, mechanical engineering, surgical instruments &amp; cutlery industries</li> </ul>	<ul style="list-style-type: none"> <li>» Brand name: Uddeholm</li> <li>» Capacity: ~130,000 tons</li> </ul> <p><u>Products</u></p> <ul style="list-style-type: none"> <li>» The only global tool steel specialist</li> <li>» Hot work tool steel</li> <li>» Cold work tool steel</li> <li>» Plastic mould steel</li> </ul>	<ul style="list-style-type: none"> <li>» Brand name: Villares Metals</li> <li>» Capacity: ~130,000 tons</li> </ul> <p><u>Products</u></p> <ul style="list-style-type: none"> <li>» Hot work tool steel</li> <li>» Cold work tool steel</li> <li>» Plastic mould steel</li> <li>» High-speed steel</li> <li>» Special stainless steels &amp; nickel based alloys for surgical implants, welding electrodes, chemical, aviation, and oil &amp; gas industries</li> <li>» Open-die forged parts for wind &amp; thermal power generation, oil &amp; gas sector, sugar &amp; alcohol industry, and railway industry</li> </ul>

# HIGH PERFORMANCE METALS DIVISION

## MARKET POSITION & STRATEGIC APPROACH

### Market position

- » Worldwide leader in tooling industry in terms of global presence, quality and profitability
  - » No. 1 in tool steel, No. 2 in high speed steel
  - » No. 1 in powder-metallurgical tool steel & high speed steel
- » Most comprehensive service network for tooling industry
- » High performance metals for extremely demanding applications: industry leader in many markets & products
  - » No. 1 in antimagnetic drill collars for oil and gas production
  - » High growth supplier of nickel-based alloys
- » Aircraft forgings
  - » Worldwide market leader in structural parts for the aviation industry (medium size)

### Strategic approach

- » Strengthening its leading market positions through organic growth and acquisitions in defined industries
- » Fostering its position as leading service provider for the tooling industry
  - » Continuous expansion of global service offerings, such as processing, heat treatment, and coating
- » Developing new products based on core competencies and the existing metallurgical foundation
  - » Powder metallurgical steel for additive manufacturing
- » Cross-company utilization of competencies & capacities

# HIGH PERFORMANCE METALS DIVISION

## MARKET SITUATION

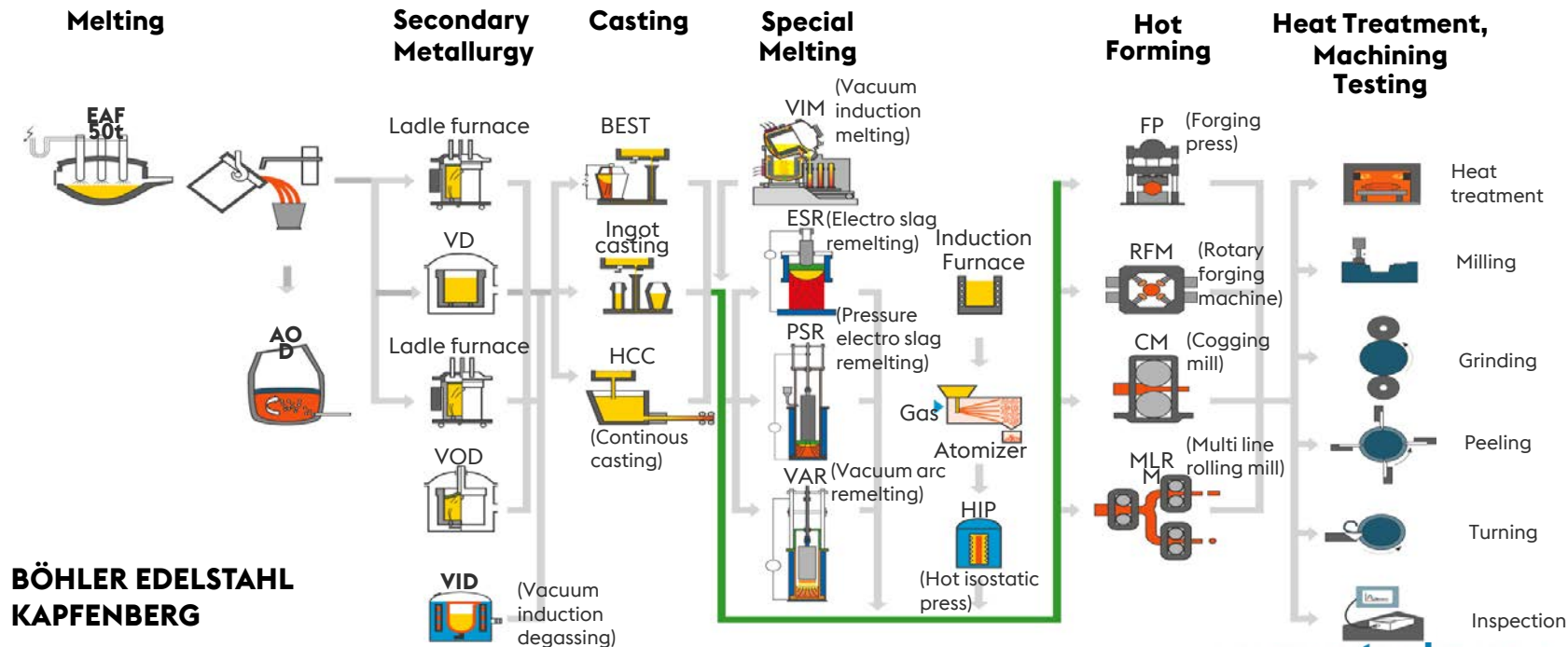
- » Automotive and consumer goods industries are typical back-markets for tool steel: manufacturing all mass-products in these segments with forming and cutting tools
- » Main business drivers for tool steel
  - » Change of the design rather than the number of products produced with the tool
- » Oil, gas, and petrochemical industries, power generation, and aircraft industries as back-markets for special materials
- » Main business drivers for special steels & nickel based alloys
  - » Exploration of new oil/gas resources
  - » Replacement and construction of new power plants
  - » Development of passenger miles and cargo in the aircraft industry



Sun glasses made with plastic mould steel

# HIGH PERFORMANCE METALS DIVISION

## FLOW OF MATERIALS (EXAMPLE)



**BÖHLER EDELSTAHL  
KAPFENBERG**

voestalpine AG

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voestalpine

ONE STEP AHEAD.

# HIGH PERFORMANCE METALS DIVISION

## ADDITIVE MANUFACTURING







- » Additive manufacturing – the next industrial revolution in the manufacturing of low volume serial parts
- » Additive manufacturing has characteristics that are superior to traditional manufacturing methods:

Design – complexity for free	Economic – cost advantages	Speed – time to market	Greater efficiency
<ul style="list-style-type: none"><li>» Increased geometric freedom</li><li>» Designing “mechanical properties”</li><li>» New geometric combinations possible, such as variable wall thickness, non-linear holes</li></ul>	<ul style="list-style-type: none"><li>» Increased functionality of parts</li><li>» Economical low volume production</li><li>» No tooling costs</li><li>» Low storage costs</li></ul>	<ul style="list-style-type: none"><li>» Simplified supply chain</li><li>» Production on demand</li><li>» Reduced set-up times</li><li>» Reduced lead-times</li></ul>	<ul style="list-style-type: none"><li>» Reduced raw material consumption</li><li>» Weight reduction (aerospace, automotive)</li></ul>

- » voestalpine as a solution provider (one-stop shop) within additive manufacturing for powder & parts
  - » Powder development & production in Sweden & Austria
  - » Design & production of additive manufacturing components
  - » Heat treatment & post-processing

# HIGH PERFORMANCE METALS DIVISION

## PRODUCT PORTFOLIO

	Tool steel				Special materials	
	Plastic mould steel	Cold work tool steel	Hot work tool steel	High speed steel	Special materials for aviation	Special materials for oil & gas
						
<b>Material strengths</b>	<ul style="list-style-type: none"> <li>» High wear resistance</li> <li>» Adequate corrosion resistance</li> <li>» Good machinability &amp; polishability</li> </ul>	<ul style="list-style-type: none"> <li>» High wear resistance</li> <li>» Excellent hardness &amp; toughness</li> </ul>	<ul style="list-style-type: none"> <li>» Thermal shock resistance &amp; high toughness</li> </ul>	<ul style="list-style-type: none"> <li>» High performance (powder metallurgical) steel for excellent toughness and cutting properties</li> </ul>	<ul style="list-style-type: none"> <li>» Highest metallurgical purity for superior specific strength &amp; fracture toughness</li> </ul>	<ul style="list-style-type: none"> <li>» Expanded corrosion resistance &amp; high strength</li> </ul>
<b>Applications</b>	<ul style="list-style-type: none"> <li>» For production of large numbers of identical parts for use in every day life</li> <li>» Especially for consumer goods</li> </ul>	<ul style="list-style-type: none"> <li>» For cold forming tools, such as cutting &amp; pressing tools, dies, knives, stamping and drawing tools</li> </ul>	<ul style="list-style-type: none"> <li>» Pressure die-casting</li> <li>» Hot extrusion</li> <li>» Open die-forging</li> <li>» Plastic processing</li> </ul>	<ul style="list-style-type: none"> <li>» Cutters</li> <li>» Drillers</li> <li>» Cold work tools</li> <li>» Metal saws</li> </ul>	<ul style="list-style-type: none"> <li>» Highly stressed &amp; damage intolerant safety parts</li> <li>» Such as for engine components, landing gear, wing parts</li> </ul>	<ul style="list-style-type: none"> <li>» Components in oil &amp; gas drilling and production</li> <li>» For anti-magnetic drill collars, valves, pumps, flowlines, connectors, fasteners, bolts</li> </ul>



# HIGH PERFORMANCE METALS DIVISION

## SPECIAL FOCUS ON AIRCRAFT

- » Aviation industry expertise
  - » Special materials for the aerospace industry, providing maximum strength and high corrosion resistance with the lowest possible weight
  - » Near net shape forging solutions - expertise in materials combined with complex geometries
  - » Forging titanium alloys, high alloy steels, and nickel-based alloys
  - » Forging jet engine disks and structural parts for aircraft (engine mounts, landing gear components, pylon parts, structural parts for fuselages, etc.)
- » Strategic approach in the aviation industry
  - » Expanding the value chain (final machining)
  - » Investing in high-tech forging lines to meet growing market demand (one open-die forging line for long products, one forging line for closed-die forgings)



Aircraft engine

# HIGH PERFORMANCE METALS DIVISION

## AVIATION EXPERTISE

### *Requirements:*

High-spec parts for the aviation industry made of steel, nickel-based alloys, and titanium alloys

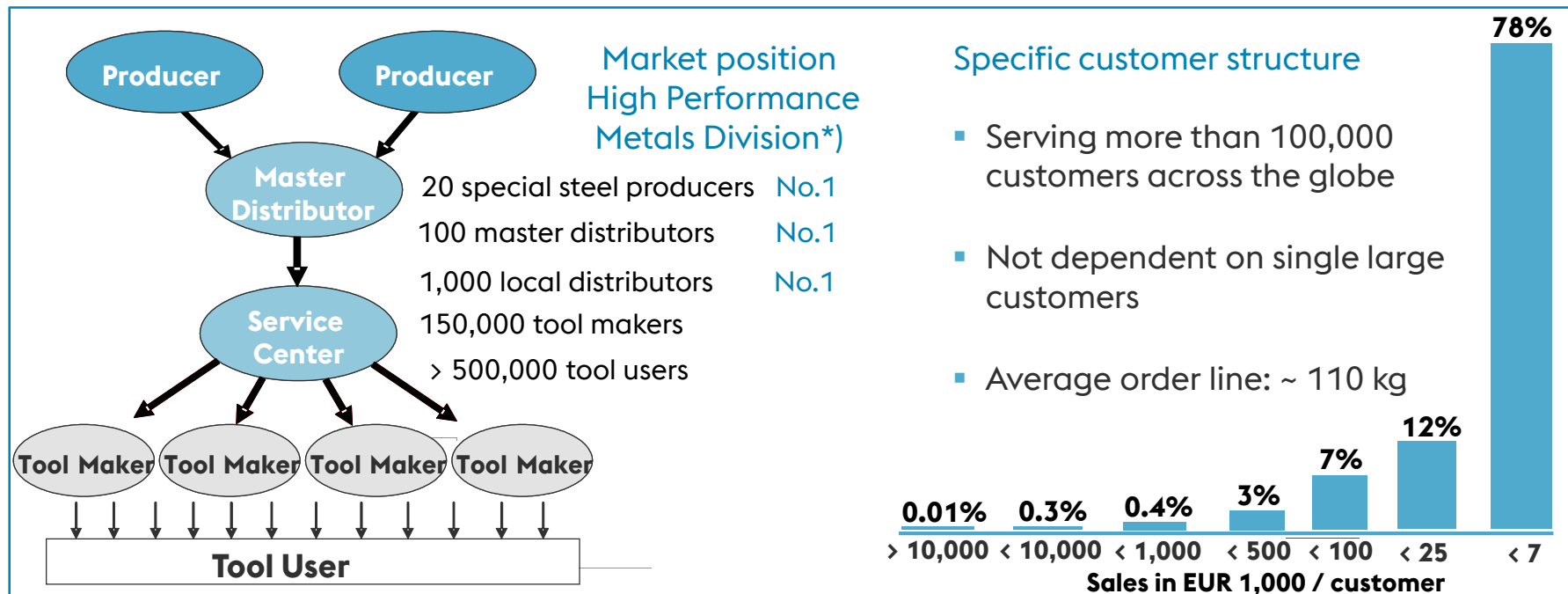
### *Applications:*

From fasteners to structural parts for wings, landing gear & discs for aero-engines



# VALUE-ADDED SERVICE BU

## VALUE CHAIN & COSTOMER STRUCTURE



# METAL ENGINEERING DIVISION

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# METAL ENGINEERING DIVISION PRODUCTION & SALES SITES

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# METAL ENGINEERING DIVISION GROUP STRUCTURE

## Most significant group subsidiaries

- voestalpine Metal Engineering GmbH Co KG
- voestalpine Stahl Donawitz
- voestalpine Schienen
- voestalpine VAE
- voestalpine Wire Rod Austria
- voestalpine Tubulars
- voestalpine Böhler Welding

## Metal Engineering Division

BU Steel

BU Rail Systems

Industrial Systems

## Products

Premium quality steel for rails, tubes and wire rod

Rails (head-hardened rails with lengths of up to 120 meters)

Turnout systems (turnouts, setting & locking systems, fixed infrastructure asset monitoring, hazard alert systems)

Signaling (intelligent, tailor-made signaling solutions for complete customer satisfaction)

Wire Technology (drawn wire, wire rod, special wire)

Tubulars (seamless tubes for the oil & gas sector, automotive and mechanical tubes)

Welding (medium- and high-grade alloy welding filler materials, welding equipment)

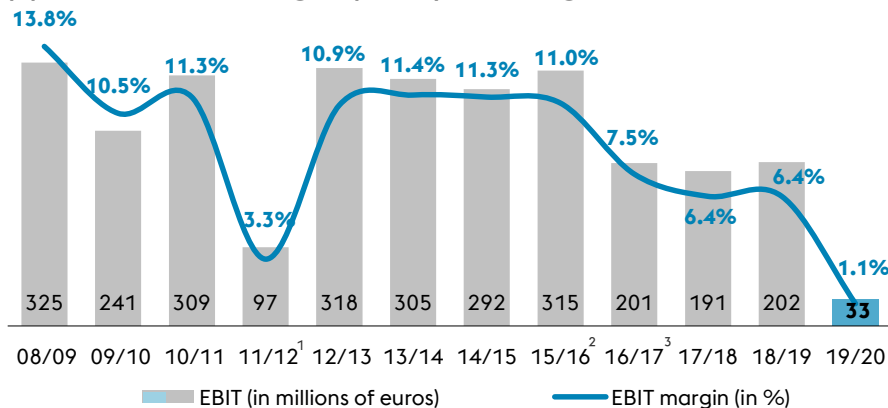
# METAL ENGINEERING DIVISION

## KEY DATA

**Metal Engineering Division** (revenue breakdown 2019/20 (EUR 2.9 billion)

### Global leadership

Worldwide market leader in turnout technology;  
European market leader in rails and specially treated wire;  
and leading position in seamless tubes for special applications and high quality welding consumables



**voestalpine AG**

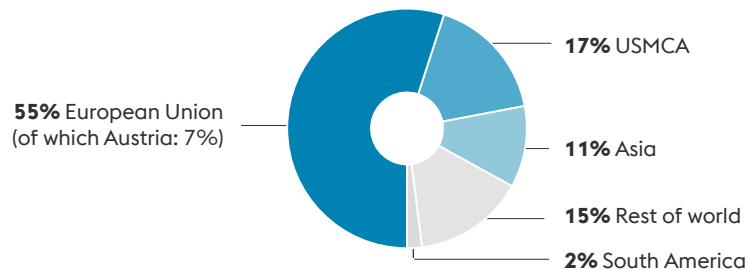
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<sup>1</sup> One off: EUR 205 million of provisions

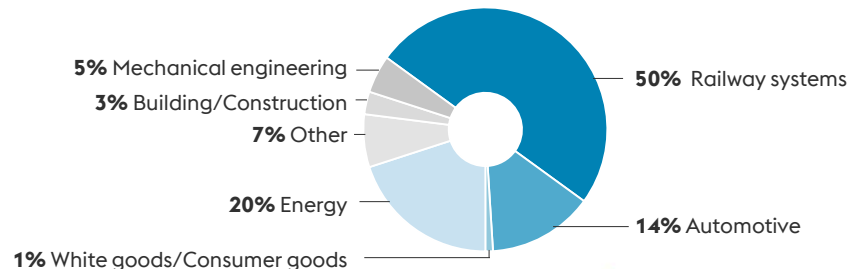
<sup>2</sup> EBIT adjusted: EUR 252 million, EBIT margin adjusted: 8.8%

<sup>3</sup> EBIT adjusted: EUR 217 million, EBIT margin adjusted: 8.1%

**By regions** (as percentage of divisional revenue)



**By industry sector** (as percentage of divisional revenue)



**voestalpine**

ONE STEP AHEAD.

# METAL ENGINEERING DIVISION

## PRODUCTION & SHIPMENT FIGURES (IN TONS)

Production	Crude steel	Shipments	Rails	Wire Rod	Seamless tubes*	Billets & Blooms	Total
Q1 2016/17	405,302	Q1 2016/17	150,228	161,142	49,767	41,103	402,240
Q2 2016/17	281,137	Q2 2016/17	144,997	144,316	44,082	32,227	365,622
Q3 2016/17	416,556	Q3 2016/17	122,507	145,798	69,436	43,073	380,814
Q4 2016/17	413,620	Q4 2016/17	134,934	169,653	93,870	37,778	436,235
<b>BY 2016/17</b>	<b>1,516,615</b>	<b>BY 2016/17</b>	<b>552,666</b>	<b>620,908</b>	<b>257,155</b>	<b>154,181</b>	<b>1,584,910</b>
Q1 2017/18	412,842	Q1 2017/18	135,122	161,398	104,704	37,442	438,666
Q2 2017/18	410,215	Q2 2017/18	140,900	145,280	88,250	40,450	414,880
Q3 2017/18	425,747	Q3 2017/18	137,070	144,097	89,829	42,070	413,066
Q4 2017/18	404,369	Q4 2017/18	139,241	153,443	100,361	51,598	444,643
<b>BY 2017/18</b>	<b>1,653,173</b>	<b>BY 2017/18</b>	<b>552,333</b>	<b>604,218</b>	<b>383,144</b>	<b>171,560</b>	<b>1,711,255</b>
Q1 2018/19	408,055	Q1 2018/19	140,979	157,389	121,378	32,775	452,521
Q2 2018/19	322,156	Q2 2018/19	125,333	141,723	96,573	28,528	392,157
Q3 2018/19	418,593	Q3 2018/19	137,397	123,589	92,701	30,384	384,071
Q4 2018/19	396,505	Q4 2018/19	126,593	145,240	114,852	36,931	423,616
<b>BY 2018/19</b>	<b>1,545,308</b>	<b>BY 2018/19</b>	<b>530,302</b>	<b>567,939</b>	<b>425,504</b>	<b>128,618</b>	<b>1,652,363</b>
Q1 2019/20	394,333	Q1 2019/20	136,139	131,693	90,055	27,019	384,906
Q2 2019/20	352,456	Q2 2019/20	141,735	122,239	68,376	20,254	352,604
Q3 2019/20	316,433	Q3 2019/20	118,429	113,571	70,357	23,276	325,633
Q4 2019/20	322,268	Q4 2019/20	131,825	131,959	58,243	31,342	353,369
<b>BY 2019/20</b>	<b>1,385,491</b>	<b>BY 2019/20</b>	<b>528,128</b>	<b>499,462</b>	<b>287,031</b>	<b>101,891</b>	<b>1,416,512</b>

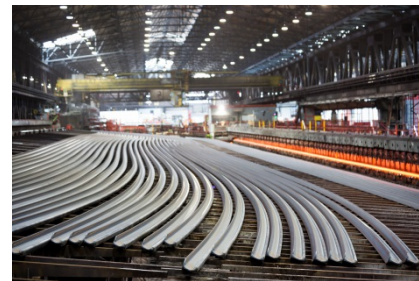


# METAL ENGINEERING DIVISION

## OVERVIEW

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- » The voestalpine Metal Engineering Division has developed a leading position on the global railway market with its ultra-long, head-hardened HSH© rails with a length of up to 120 meters
- » Furthermore, the division is the largest global provider of highly developed turnout systems as well as track-based monitoring systems for all railway applications
- » The division also has a leading market position in the specially treated wire segment, for sophisticated seamless tubes for the oil and gas industries worldwide, and high quality welding consumables



Production of rails



Turnout systems

# METAL ENGINEERING DIVISION

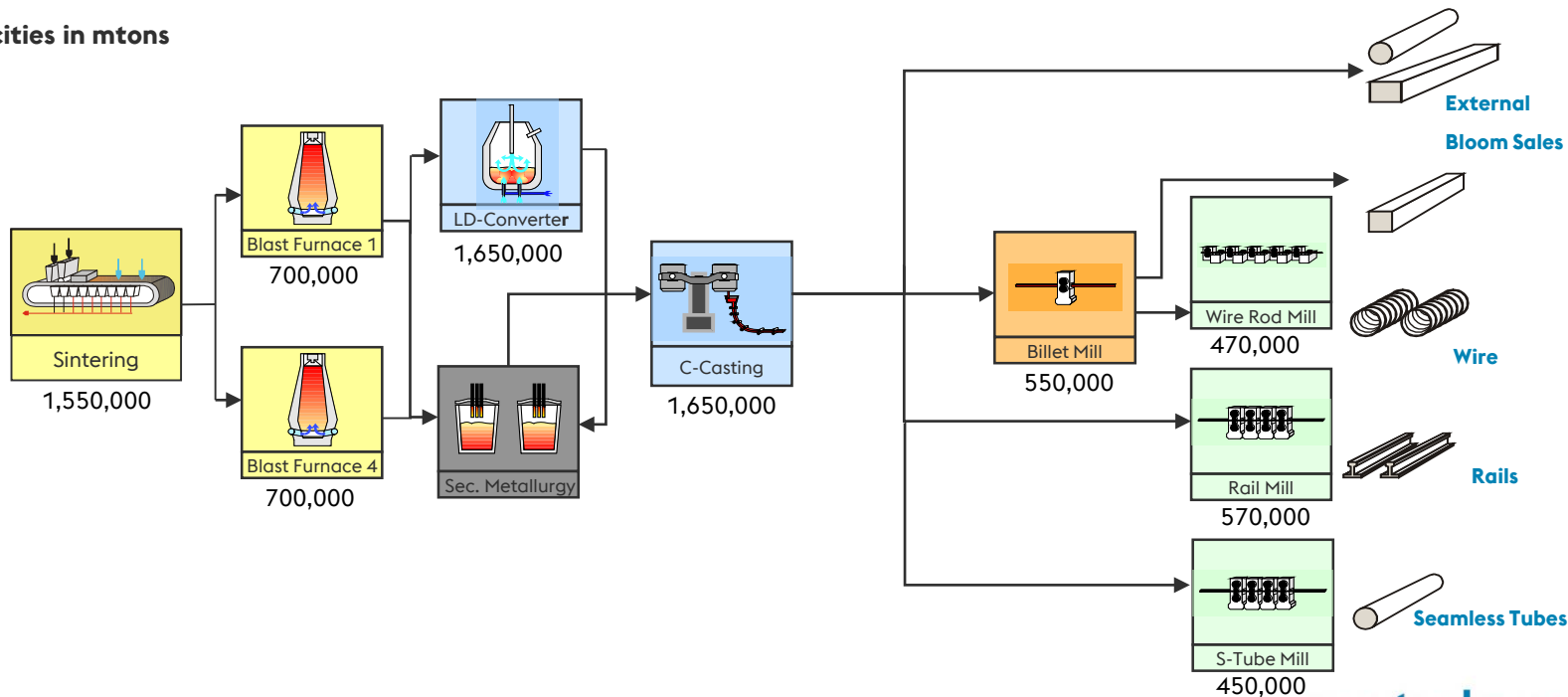
## MAIN PRODUCTION SITES

Steel	Railway Systems			Industrial Systems		
	Rails	Turnout Systems	Signaling	Tubulars	Wire Technology	Welding
<ul style="list-style-type: none"> <li>» 2 blast furnaces and 1 BOF-steel shop located in Donawitz</li> <li>» Annual capacity of c. 1,650m tons of crude steel</li> <li>» Over 500 different steel grades</li> </ul>	<ul style="list-style-type: none"> <li>» 1 rail production site located in Donawitz (Austria) with a capacity of c. 600,000 tons</li> <li>» Modern rail rolling mill</li> <li>» In-line heat treatment technology patented worldwide</li> </ul>	<ul style="list-style-type: none"> <li>» 44 international sales and production sites worldwide</li> <li>» Manufacturing of turnouts for any kind of traffic (mix traffic, high speed, heavy haul, light rail)</li> </ul>	<ul style="list-style-type: none"> <li>» Innovative point operating, locking, detection systems, signaling solutions, diagnostic systems for fixed assets and rolling stock</li> </ul>	<ul style="list-style-type: none"> <li>» 1 production site in Kindberg (Austria) with a capacity of c. 400,000 tons a year</li> <li>» JV with NOV Grant Prideco (USA)</li> <li>» Focus on OCTG products</li> </ul>	<ul style="list-style-type: none"> <li>» Wire rod production in Donawitz (Austria) with a capacity of c. 550,000 tons</li> <li>» 4 wire processing (drawn wire) locations in Austria, Germany, Italy and China</li> <li>» Special wire manufacturing in Fürstenfeld (Austria)</li> </ul>	<ul style="list-style-type: none"> <li>» 12 global production sites (Austria, Germany, Italy, Sweden, Belgium, Mexico, Indonesia, India, Brazil)</li> </ul>

# METAL ENGINEERING DIVISION

## MATERIAL FLOW

Capacities in mtons



# METAL ENGINEERING DIVISION

## STEELBASE IN DONAWITZ, AUSTRIA

- » Compact LD steel plant, one of the most modern in the world
- » Highest material requirements, specially defined by modern technologies
- » Focus on production of ultra-clean special steels for application in the railway, automotive, and oil industries
- » Intensive co-operation between steel plant and downstream units leading to innovative product solutions



# RAILS

## CHARACTERISTICS

- » Steel plant in Donawitz optimized for rail manufacture
- » Wide range of premium rails and rail sections
- » Unique feature: heat treatment in sync with rolling cycle
- » Two fully computerized rail stock-yards to ensure just-in-time rail supply
- » One-stop-shop to supply rail infrastructure companies

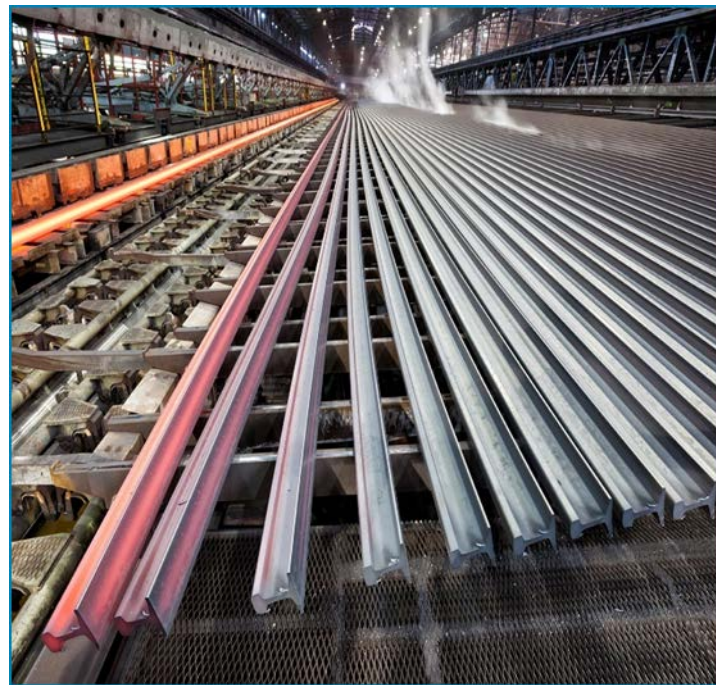




# RAILS

## DEMANDS ON MODERNS RAILS

- » Rails have to be extremely flat, very hard & wear resistant on the head while simultaneously providing distinctive elasticity
- » Consistent advancement of rail grades due to higher speeds, more powerful locomotives, and increasing force on rail tracks
- » Different requirements for rails depending on type of traffic
  - » Heavy haul: extreme load on a small surface
  - » High speed: enormous stress at accelerating and breaking zones
  - » Light rail: highly stressed on tight curves



# RAILS

## POSITION & STRATEGIC APPROACH

### Market position

- » Top (market and/or technological) positions in all market segments (heavy haul, mixed traffic, light rail)
- » Most cost-efficient, patented heat treatment process
- » Most modern integrated logistic services
- » New rail grades to improve head check damage resistance
- » Capacity of > 600,000 tons in Donawitz (Austria)
- » c. 70% share of heat-treated premium rails
- » Market share in Europe c. 25%
- » Approx. 350 customers in more than 60 countries

### Strategic approach

- » Strengthen global position as premium supplier of rails in all product & market segments
- » Focus on R&D to improve premium rails (mixed traffic, heavy haul, transit)
- » Differentiate products with a focus on sustainable customer benefit
  - » Maximize operational rail service life-time
  - » Minimize maintenance-related interventions
  - » Substantially decrease life-cycle cost
  - » Significantly increase track availability

# RAILS

## PRODUCT SOLUTIONS AGAINST RAIL DAMAGE

### voestalpine rail grades for all kinds of traffic

Pearlitic heat-treated rails for all mixed traffic and high-speed traffic areas



High resistance to rolling contact fatigue due to delayed crack initiation and slower crack propagation

Ultra-high carbon heat-treated rails for tracks with extreme loads (heavy haul)



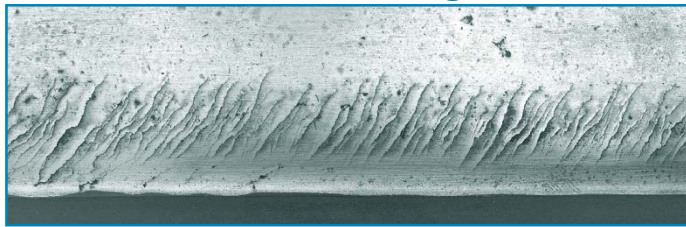
For curves and straight tracks. Maximum resistance to rail corrugation

High-strength grooved rails for tramway track curves (local traffic)



Lessens abrasive wear, which is the dominant damage pattern on tight curves

### Roll contact fatigue



*Head checks: small cracks at the edges due to continuous high dynamic forces*



*Squats: V-shaped or half-moon-shaped hollows, especially from heavy haul traffic. Tears are growing beneath the surface*



# TURNOUT SYSTEMS & SIGNALING PRODUCT PORTFOLIO

- » A turnout consists of a switch and a crossover and includes setting, locking, detecting, and monitoring devices
- » voestalpine Turnout Systems offers a tried and proven product portfolio for any kind of traffic (high speed, heavy haul, urban transport)
- » Maintenance-free setting systems located inside the turnouts
- » Diagnostic systems for fixed infrastructure assets and rolling stock
- » “Plug and Play” turnouts: pre-assembled in workshop to enable quick installation and minimize downtime
- » Local manufacturing sites in most important rail infrastructure markets (balancing any local market weakness, ensuring good customer relations and joint development, and enabling know-how sharing within the group)



# TURNOUT SYSTEMS & SIGNALING

## POSITION & STRATEGIC APPROACH

### Market position

- » World market and technology leader in turnout systems
- » Global market share roughly 35%
- » Sole provider of integrated turnouts (setting, locking, and monitoring systems)
- » Maintenance-free diagnostics of rolling stock (hazard alert systems) & fixed installations
- » Pre-installation at turnout-plant (“plug & play”)
- » Close-to-market production and distribution centers in all important railway markets worldwide

### Strategic approach

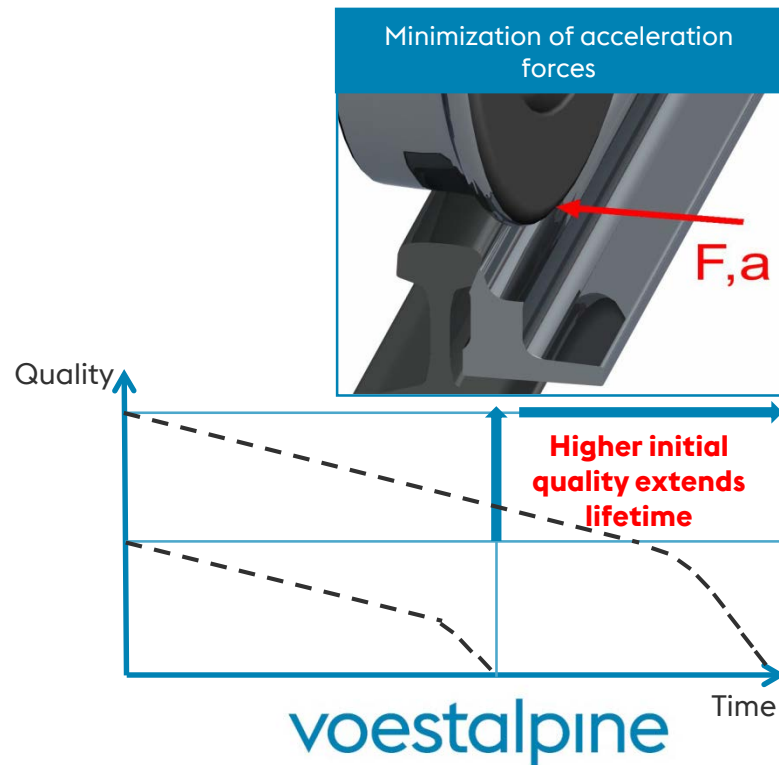
- » Further global expansion in turnout, signaling, and logistics
- » Strengthening of customer-specific R&D-activities
- » Intensified co-operation and leverage of synergies between Rail Technology & Turnout Systems



# TURNOUT SYSTEMS

## PRODUCT REQUIREMENTS & LIFE-CYCLE COSTS

- » Turnouts must be reliable in the icy temperatures of the Rockies and the humid heat of the Everglades
- » Special corrosion protection for areas of high humidity
- » Higher initial quality significantly extends the life-time of the turnout
- » Parameters influencing life-cycle costs
  - » Geometric optimization of curve radius
  - » Material requirements (use of manganese steel for special parts)
  - » Low-maintenance components



# WIRE TECHNOLOGY PRODUCT PORTFOLIO

- » Wire rod, drawn wire, and special wire with a focus on the high quality segment
- » Cold heading steel, cold extrusion steel, ball bearing steel, and spring steel for the automotive industry (most important customer segment with c. 60% share)
- » Shaped wire for flexible pipes in the oil & gas industry
- » Pre-stressed wire used in the building & construction industry (bridge construction)
- » Wire for the production of welding fillers
- » High-strength extra-fine saw wire used in the solar & photovoltaic industries



**Quality leadership in wire rod and drawn wire in Europe**

# WIRE TECHNOLOGY

## WIRE USE IN THE AUTOMOTIVE INDUSTRY

- » Extension springs
- » Shock absorber springs
- » Windscreen wiper springs
- » Crankshaft springs
- » Valve springs
- » Steel cord for car tires
- » Cylinder head bolts
- » Wheel nuts



- » Spark plug housings
- » Ball roller bearings
- » Injection unit parts
- » Electric window motor spindles
- » Steering wheel rim
- » Steering rods
- » Rod bolts
- » Piston pins

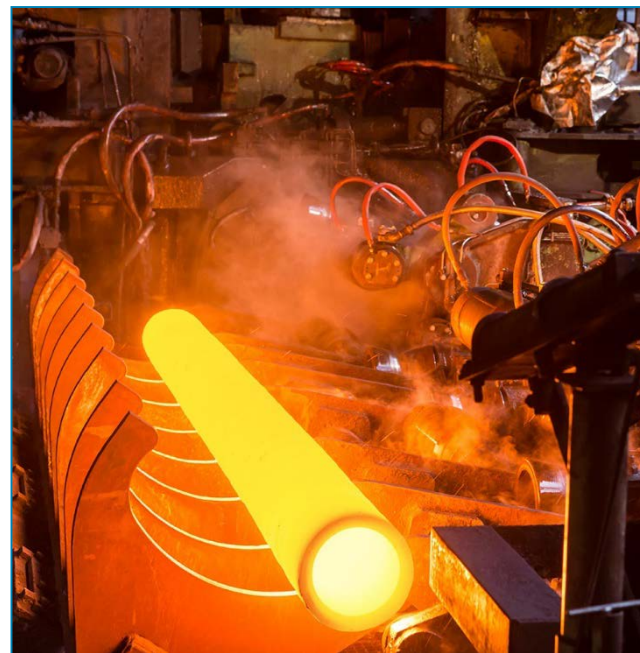


# TUBULARS

## INDUSTRY SEGMENTS & PRODUCTS

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- » Oil & gas sector (~80% share)
  - » Oil Country Tubular Goods (OCTG): seamless tubings & casings, accessories, proprietary grades, premium connections (VAsuperior®, VAGT®, VAF, VAroughneck®)
  - » Line pipe
  - » Green pipes for drill pipes
- » Automotive industry (~10% share)
  - » Automotive tubes: axles, fly wheels, vibration absorbers
- » Mechanical engineering industry (~10% share)
  - » Mechanical tubes: mining & tunnelling



# TUBULARS

## PRODUCT REQUIREMENTS & STRENGTHS

- » For critical applications involving high pressures and temperatures, reliability is vital and premium seamless tubes are the preferred option
- » A premium product differs in terms of pressure resistance, curvature characteristics, horizontal plasticity, and sour gas and carbon dioxide resistance
  - » Temperature in a borehole  $> 150^{\circ}\text{C}$ . and up to 600 bars of pressure
  - » Highest quality requirements for premium connections in gas exploration
- » voestalpine Tubulars has long-term experience in pipe production for the oil & gas industry and industrial segments
- » Fully integrated from raw material to final product, latest technology for seamless tube production (capacity ~400,000 tons)
- » Recent investments: new testing facilities, advances in heat treatment, expanded dimensions



voestalpine

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# WELDING CONSUMABLES

## MARKET POSITION

- » Specialist in medium and high alloyed welding consumables
- » Top European player, ranked number two in Europe with ~15% market share, number four globally
- » 12 global production sites (5 outside Europe) and 34 distribution centers in 28 countries
- » Restructuring process finalized with production concentrated on core products and fewer brands
- » Comprehensive product portfolio (electrodes, wire/rods, flux cored wire, brazing)
- » Emphasis on the energy industry with ~40-50% share (oil & gas sector, energy machines, wind energy)
- » Other core industry segments include automotive, plant engineering, yellow goods, and building & construction





# WELDING CONSUMABLES

## PRODUCT QUALITY & SERVICE ORIENTATION

- » The use of welding consumables in high temperatures and highly corrosive and abrasive environments makes stringent demands on product quality
- » In addition to high-end products, service orientation is the key factor for success in welding consumables
  - » Pre-sale support: attention to research & engineering departments
  - » Commitment of technical offers
  - » Assistance of industry application experts
  - » Product testing by customers in laboratories
  - » On-site support: training for customers and problem-solving directly at construction site
- » voestalpine Group combines excellent material expertise with highest quality welding materials for joining processes



# METAL FORMING DIVISION

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# METAL FORMING DIVISION PRODUCTION & SALES SITES

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# METAL FORMING DIVISION GROUP STRUCTURE

## Most significant group subsidiaries

- voestalpine Metal Forming GmbH
- voestalpine Krems
- voestalpine Sadef
- voestalpine Metsec
- voestalpine Meincol
- Roll Forming Corporation
- voestalpine Rotec
- voestalpine Automotive Components Dettingen
- voestalpine Automotive Components Schwäbisch Gmünd
- voestalpine Automotive Components Bunschoten
- voestalpine Automotive Components Linz
- voestalpine Precision Strip
- voestalpine Krems Finaltechnik
- Nedcon

## Metal Forming Division

Tubes & Sections  
BU

Automotive  
Components BU

Precision Strip BU

Warehouse & Rack  
Solutions BU

## Products

Highest-strength, corrosion resistant tubes and sections with complex geometries  
Precision tube components

Laser-welded blanks  
Hot formed structural parts  
Body shell parts and chassis components  
Complex spare part components  
Metal & plastic hybrid components

Cold-rolled precision strip steel

System solutions for high-bay warehouses and system racks

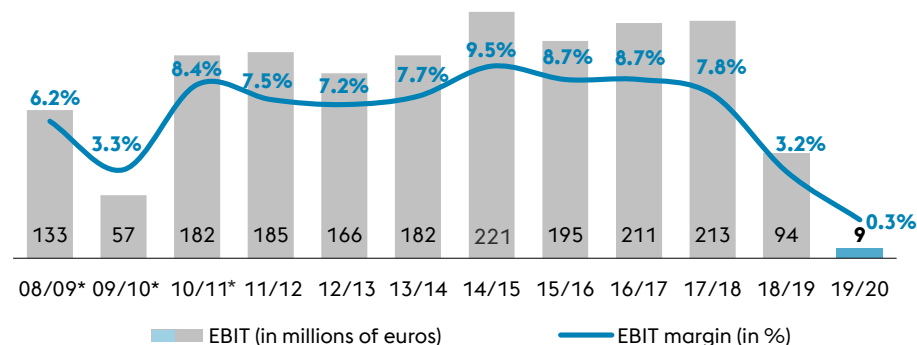
# METAL FORMING DIVISION

## KEY DATA

**Metal Forming Division** (revenue breakdown 2019/20 (EUR 2.8 billion)

### Global leadership

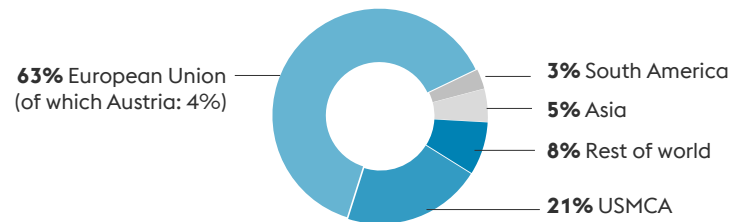
Global market leader in defined niches  
supplying high quality metal processing  
solutions with a global network and service.



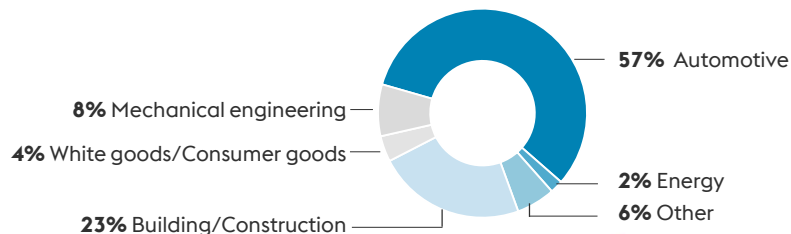
\* Aggregated figures

**voestalpine AG**

**By regions** (as percentage of divisional revenue)



**By industry sector** (as percentage of divisional revenue)



**voestalpine**

ONE STEP AHEAD.

# METAL FORMING DIVISION

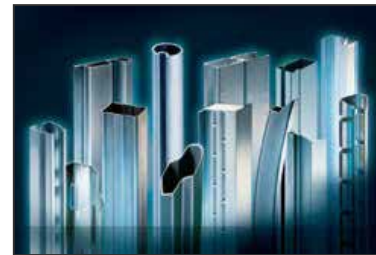
## OVERVIEW

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- » Within voestalpine the Metal Forming Division constitutes the center of competence for highly refined sections, tubes and precision strip steel products as well as for ready-to-install system components made of pressed, stamped and roll-formed parts
- » Its combination of material expertise and processing competence, which is unparalleled throughout the industry, and its global presence make the division the preferred partner to customers who are looking for innovation and quality



Automotive body parts



Special sections

# METAL FORMING DIVISION PRODUCTION SITES

## Tubes & Sections



- » 18 production locations worldwide in Austria, Germany, France, Belgium, Czech R., Spain, Poland, Great Britain, USA, Canada, China, Brazil, and Mexico
- » Highest-strength, corrosion resistant tubes and sections with complex geometries
- » Precision tube components

## Automotive Components



- » 15 production locations worldwide in Austria, Germany, Netherlands, France, Romania, South Africa, USA, China, and Mexico
- » Innovative automotive body parts for lightweight solutions (laser-welded blanks, structural parts, body shell parts)

## Precision Strip



- » 3 production locations in Austria, Sweden, and USA
- » Cold rolled precision strip steel products with exact dimensional stability, excellent surface quality, and customized edge profiles

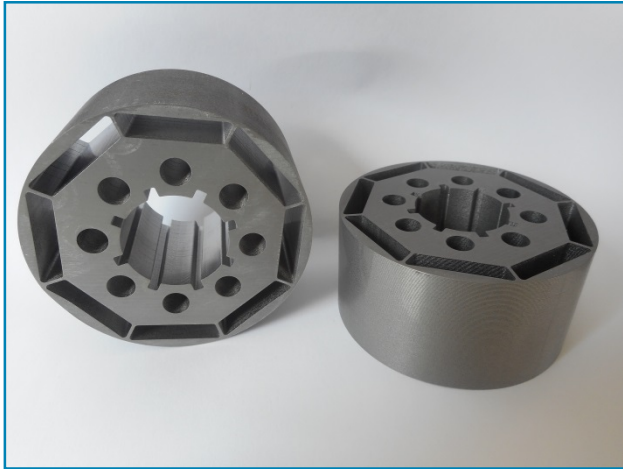
## Warehouse & Rack Solutions



- » 2 production locations in Austria and Czech Republic
- » Highly developed system solutions for high-bay warehouses and system racks

# METAL FORMING DIVISION INNOVATIONS

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## Compacore®

- » Combining material & production expertise (collaboration between Steel Division and Metal Forming Division)
- » Inline-bonded lamination stacks based on innovative electrical steel grades
- » Lamination stacks are inline bonded, instead of being punched out, resulting in improved electromagnetic properties
- » Compacore for electrical machines with the highest efficiency and improved vibration and acoustic behaviour
- » For e-motors used in cars, white goods & industrial applications



# METAL FORMING DIVISION

## MARKET POSITION

- » Competency center for highly refined sections, tubes, and precision strip steel products as well as ready-to-install system components made of pressed, stamped and roll-formed parts
- » Unique combination of know-how in steel processing and excellent skills in processing other materials, too, such as aluminum and titanium
- » Worldwide competency center for custom-designed solutions in the Tubes & Sections business
- » Leading global provider of innovative automotive parts for light-weight solutions in the Automotive Components business
- » Leading expert in the Precision Strip business for sophisticated applications (global market leader in most core segments)
- » Intelligent rack system solutions for complex logistics requirements in Warehouse & Rack Solutions business



# METAL FORMING DIVISION

## STRATEGIC APPROACH

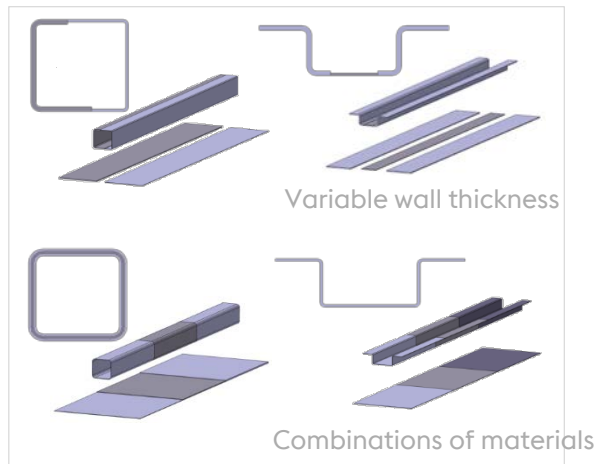
Growth strategy – expansion of international production capacities

North America	South America	Europe	China	South Africa
Hot forming, cold forming, welded blanks, assembly, roll forming, spare parts	Cold forming, assembly, roll forming, (hot forming)	All tasks and functions assigned to the division: hot forming, cold forming, welded blanks, assembly, roll forming, spare parts, body shell, rotational forming	Hot forming, cold forming, (welded blanks), assembly, roll forming, rotational forming	Cold forming, assembly

# METAL FORMING DIVISION

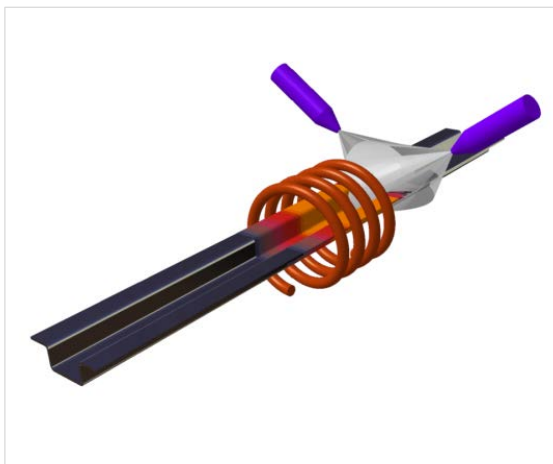
## FORMING LIGHT-WEIGHT SOLUTIONS

### Tailored tubes



- » Weight reduction by custom-tailored metal sheet thicknesses and strengths!

### Rollform-hardening



- » More options and greater precision with partial hardening

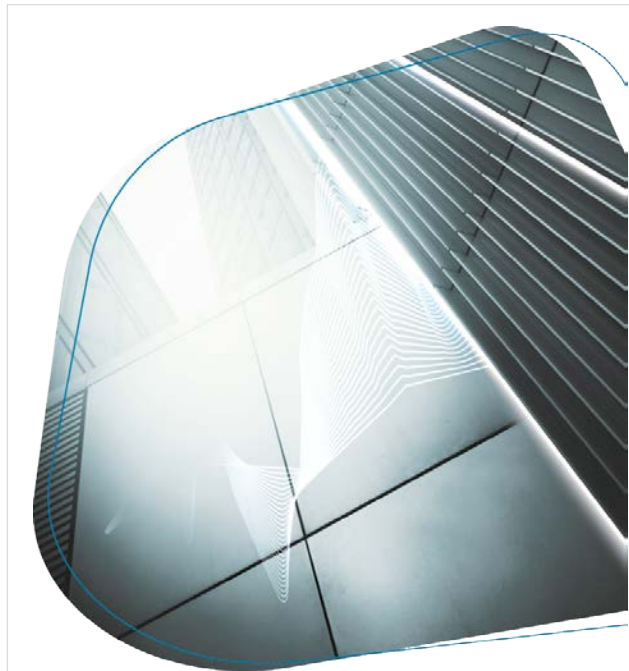
### Press-hardening



- » Material and process expertise for light-weight automotive design

# TUBES & SECTIONS BU

## ROLLFORMING EXPERTISE ...



...for the building and construction industry:

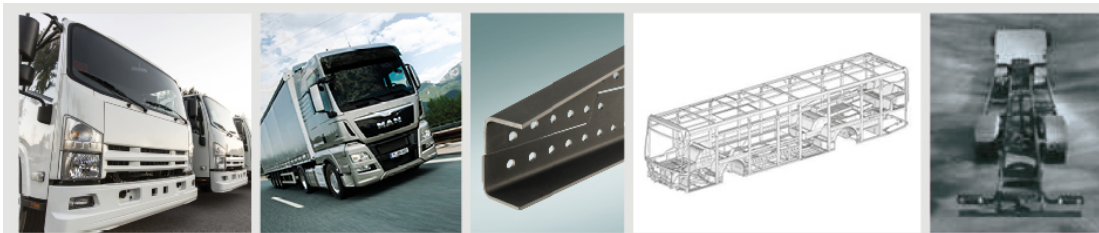
- Tubes for shuttering and container construction
- Systems for hall construction, structural frames, cable ducts
- Construction sections
- Sheet pilings



# TUBES & SECTIONS BU ROLLFORMING EXPERTISE ...

...for passenger cars, commercial vehicles & buses:

- » Tailor-made tube and section solutions for structural parts, mounted parts and chassis, such as side members, reinforcement sections for sun roofs, trunk cover tubes
- » Automotive components, such as door frames, cross members, roof structures, seat rails, etc.
- » Complex body assemblies



# TUBES & SECTIONS BU

## ROLLFORMING EXPERTISE ...



...for construction and agricultural machinery:

- » Components for safety cabins made from high strength steel grades
- » Customized tubes & sections for construction and agricultural machinery
- » Small-scale production for selected cross sections





# TUBES & SECTIONS BU

## ROLLFORMING EXPERTISE ...



### ...for storage technology

- » High-frequency welded tubes and open sections
- » For system racks and high-bay warehouses of all types
- » Galvanized products, especially for outdoor areas



### ...for renewable energies

- » Customized ready-to-install components for the photovoltaic industry, solarthermics, on-roof systems, wind & bioenergy
- » System solutions for photovoltaic elements on carports, rooftops, etc.



### ...for the aerospace industry

- » Finished rolled and extruded stringers
- » Laser-welded titanium seat tracks
- » Pre-fabricated and finished machined components (heat-treated, laser welded, etc.)

# TUBES & SECTIONS BU

## TUBE & ROTATIONAL FORMING EXPERTISE ...



...for passive safety automotive components:

- » Cold-drawn precision steel tubes
- » Air suspension and airbag components
- » Tubular parts for seat belt and buckle pretensioners





# AUTOMOTIVE COMPONENTS BU

## PRODUCT PORTFOLIO



### Innovative automotive body parts for light-weight solutions:

- » Laser-welded blanks
- » Hot formed structural parts
- » Development, production, and assembly of ready-to-install stamped and formed parts
- » Safety and collision-absorbing components
- » Body shell parts and chassis components
- » Complex spare parts and life-cycle logistics
- » Metal & plastic hybrid components (such as steel-aluminium hybrid blanks)

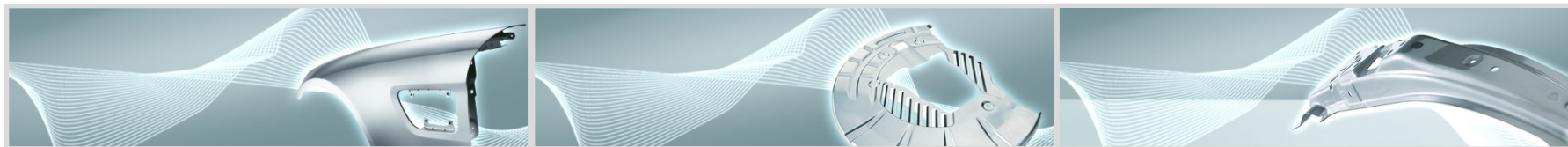
# AUTOMOTIVE COMPONENTS BU

## COMPETENCIES

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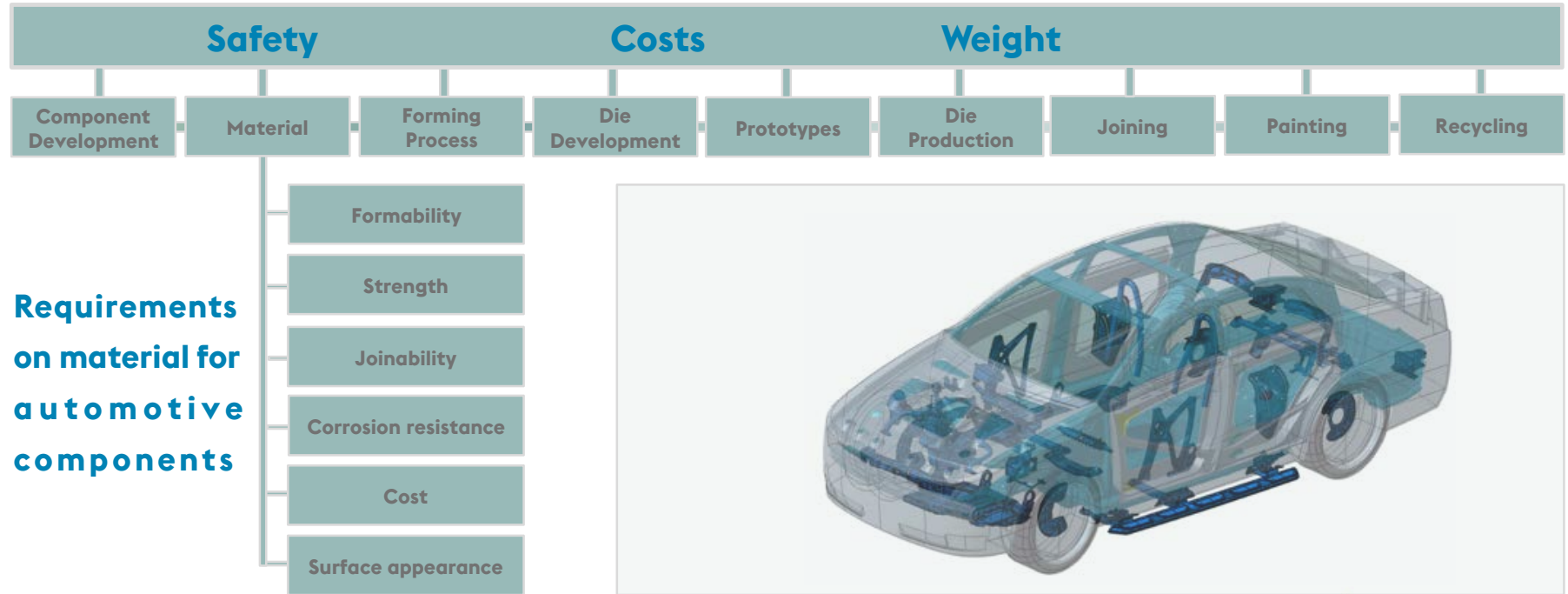
### Services for success:

- » Complete solutions from a single source from product development to prototyping to serial production & spare part services
- » Unique materials and processing expertise covering the entire process chain
- » Technological leadership with innovative light-weight solutions
- » Worldwide presence (Europe, North America, Asia, Africa)



# AUTOMOTIVE COMPONENTS BU

## PRODUCTION PROCESSES IN AUTOMOTIVE



# AUTOMOTIVE COMPONENTS BU

## FROM MATERIAL DESIGN TO PART DESIGN

### Past

- » Steel grade is ordered by the customer

### Present

- » Geometry of the part is given
- » Appropriate grade for the part is selected
- » Part-driven development or optimization

### Future

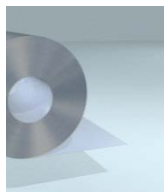
- » Design space and applied load are known
- » Shape of part and material selected within defined boundaries

**Knowledge of part and component processing gets more and more important**  
**Interaction between material design and part processing becomes a key factor**

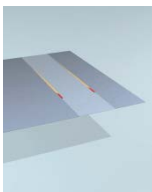
# AUTOMOTIVE COMPONENTS BU

## PHS-ULTRAFORM®

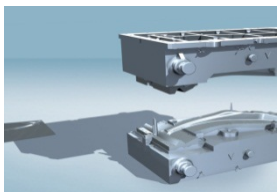
- » Classical cold forming and cutting to final geometry
- » Heating of components to ~900 degrees
- » Short cycle times from rapid cooling
- » Excellent cathodic corrosion protection, exceptional formability, best crash performance
- » Minimal tool wear, even with high unit numbers
- » Large components & complex geometries (undercutting) possible
- » High degree of dimensional accuracy



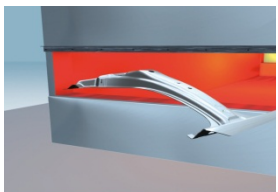
Blank



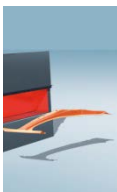
TWB



Shape cutting and cold forming



Austenitizing



Press hardening



Surface conditioning



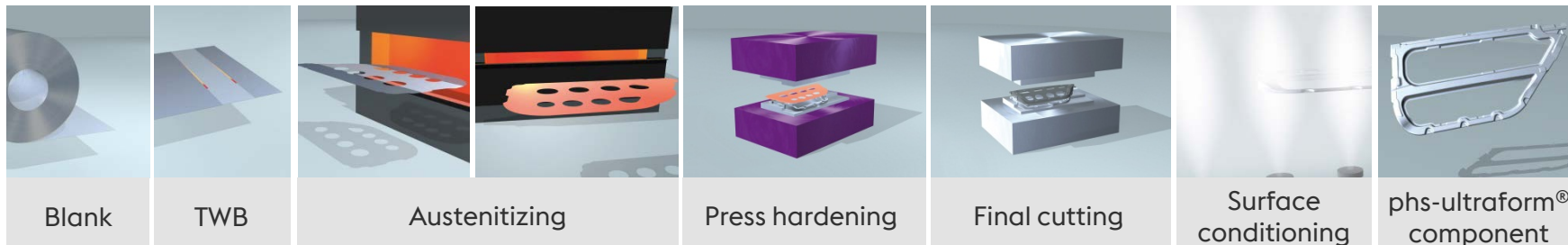
phs-ultraform® component

# AUTOMOTIVE COMPONENTS BU

## PHS-DIRECTFORM<sup>®</sup>

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- » Simplified process steps, cold forming not required
- » Blank heating up to 900 degrees
- » Best crash performance thanks to material and process optimization
- » Very good formability despite high strength levels of end product
- » Excellent cathodic corrosion protection
- » Economical to manufacture





# AUTOMOTIVE COMPONENTS BU

## CURRENT AVAILABILITY OF PHS-LINES

5 phs lines



voestalpine Automotive  
Components Schwäbisch-Gmünd  
(Germany)

2 phs lines



voestalpine Automotive  
Components Schmöln (Germany)

4 phs lines



voestalpine Automotive  
Components Cartersville (USA)

2 phs lines



voestalpine Automotive  
Components Shenyang (China)







# PRECISION STRIP BU

## FORMING PRECISION



Wood band saw blade

voestalpine Precision Strip - world market leader in bi-metal strips for sophisticated metal saw blade industry

- » State-of-the-art technology with production lines developed in-house
- » Manufacture of ultra-fine strip steel with extremely low tolerances and excellent surface grade using cold rolling process
- » Access to latest melting technology, such as vacuum & re-melting processes, in the voestalpine Group

Producing special strip steel for more than 150 years



# PRECISION STRIP BU

## PRODUCT PORTFOLIO & INDUSTRIES



Leading expert in precision strip steel for sophisticated applications

- » Cold rolled precision strip steel products with exact dimensional stability, excellent surface quality, and customized edge profiles meet the customer's highest requirements
- » Used in metal, stone, and wood saw industries
- » Used in print and packaging as well as pulp and paper industries
- » For the leather, shoe, and textile industries
- » Special applications for technical knives, scalpels, razor blades, flapper valves for air conditions, compressors and shock absorbers

# WAREHOUSE & RACK SOLUTIONS BU

## PRODUCT PORTFOLIO



### Intelligent rack system solutions for complex logistical tasks

- » Focus on highly developed system solutions for high-bay warehouses and system racks
- » Products and services from a single source (consulting, engineering, manufacturing, and installation)
- » Long value-chain within voestalpine Group (steel production, manufacturing of tubes & sections, engineering of storage solutions)
- » Specializing in warehouses with heights above 30 meters
- » System racks for DIY stores, wholesalers, and cash-and-carry stores tailored to the customer's individual needs

# FINANCIAL REVIEW

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# voestalpine GROUP

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Non-current assets	6,855.5	6,801.2	6,980.9	7,168.0	7,682.0	8,389.6	8,733.6	8,589.7	8,895.8	8,869.7
Current assets	6,220.9	5,810.9	6,098.4	5,466.8	5,522.7	5,617.0	5,973.9	6,865.3	6,755.8	6,098.4
Total assets	13,076.4	12,612.1	13,079.3	12,634.9	13,204.7	14,006.6	14,707.5	15,455.0	15,651.6	14,968.1
Equity	4,691.1	4,836.3	5,075.3	5,261.6	5,115.0	5,651.6	6,060.3	6,554.3	6,709.8	5,614.9
Pensions and other employee obligations	833.2	852.9	1,004.7	1,015.3	1,267.3	1,229.1	1,226.4	1,171.7	1,276.9	1,277.9
Non-current liabilities <small>Not including pensions and other employee obligations</small>	3,390.8	2,305.9	2,862.1	2,883.3	3,138.1	3,536.4	2,963.5	2,967.8	2,939.6	4,074.6
Current liabilities	4,161.3	4,617.0	4,137.3	3,898.7	3,684.3	3,589.5	4,457.3	4,761.2	4,725.3	4,000.7
Total equity and liabilities	13,076.4	12,612.1	13,079.3	12,634.9	13,204.7	14,006.6	14,707.5	15,455.0	15,651.6	14,968.1

In millions of euros

# voestalpine GROUP

## CONSOLIDATED INCOME STATEMENT

2010/11 2011/12 2012/13 2013/14 2014/15 2015/16 2016/17 2017/18 2018/19 2019/20

<b>Revenue</b>	<b>10,953.7</b>	<b>12,058.2</b>	<b>11,524.4</b>	<b>11,077.2</b>	<b>11,189.5</b>	<b>11,068.7</b>	<b>11,294.5</b>	<b>12,897.8</b>	<b>13,560.7</b>	<b>12,717.2</b>
Cost of sales	-8,519.7	-9,614.1	-9,221.0	-8,867.1	-8,917.5	-8,631.7	-8,777.1	-9,923.3	-10,777.6	-10,559.2
Other operating income	334.0	354.0	371.7	359.1	454.4	362.0	348.8	415.7	399.4	443.4
Distribution costs	-959.2	-985.4	-964.6	-953.2	-975.5	-1,028.1	-1,079.2	-1,149.6	-1,211.3	-1,174.5
Administrative expenses	-554.8	-594.6	-570.6	-586.2	-603.1	-610.6	-622.3	-662.2	-695.5	-674.0
Other operating expenses	-269.2	-514.0	-296.7	-293.6	-321.8	-424.5	-356.0	-413.6	-510.2	-852.8
Share of profit of associates				52.1	60.2	153.0	14.6	15.2	13.9	10.9
<b>EBIT</b>	<b>984.8</b>	<b>704.2</b>	<b>843.1</b>	<b>788.4</b>	<b>886.2</b>	<b>888.8</b>	<b>823.3</b>	<b>1,180.0</b>	<b>779.4</b>	<b>-89.0</b>
Share of profit of associates	30.1	20.1	15.4							
Finance income & costs	-234.0	-219.9	-203.8	-147.6	-147.2	-137.5	-123.4	-137.6	-133.7	-141.3
<b>Profit before tax</b>	<b>781.0</b>	<b>504.4</b>	<b>654.7</b>	<b>640.8</b>	<b>739.0</b>	<b>751.3</b>	<b>699.9</b>	<b>1,042.5</b>	<b>645.7</b>	<b>-230.3</b>
Tax expense	-186.4	-91.1	-132.7	-137.4	-144.0	-149.2	-173.0	-224.6	-187.1	13.8
<b>Profit after tax</b>	<b>594.6</b>	<b>413.3</b>	<b>521.9</b>	<b>503.4</b>	<b>595.0</b>	<b>602.1</b>	<b>527.0</b>	<b>825.4</b>	<b>458.6</b>	<b>-216.5</b>
Non-controlling interests	9.8	7.8	4.4	3.2	8.8	-5.7	7.7	20.2	20.1	-7.7
Share planned for hybrid capital owners	72.0	72.0	72.6	53.8	37.1	22.5	22.5	30.0	30.0	13.2

In millions of euros

voestalpine AG

voestalpine

ONE STEP AHEAD.

# voestalpine GROUP

## CONSOLIDATED STATEMENT OF CASH FLOWS

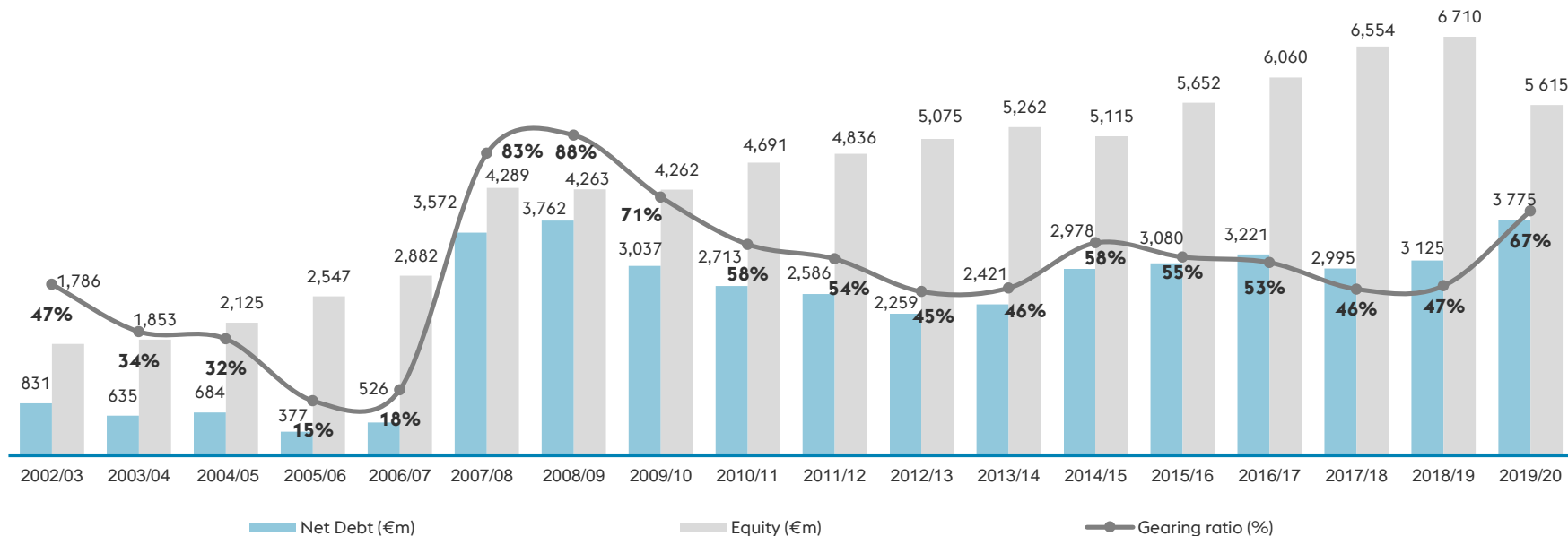
2010/11 2011/12 2012/13 2013/14 2014/15 2015/16 2016/17 2017/18 2018/19 2019/20

Cash flow from result	1,194.6	994.3	1,096.9	1,166.0	1,175.7	1,168.3	1,249.0	1,622.0	1,303.7	870.1
Net profit + depreciation + income from asset disposals + inc./dec. in long-term provisions										
Changes in working capital	-237.0	-137.8	225.0	-231.4	-55.8	113.9	-98.6	-426.9	-137.1	433.9
Cash flow from operating activities	957.6	856.5	1,321.9	934.6	1,119.9	1,282.2	1,150.4	1,195.1	1,166.6	1,304.0
Cash flow from investing activities	-450.0	-516.0	-814.2	-857.3	-955.1	-1,280.2	-1,078.5	-826.9	-1,020.1	-715.6
Not including investments in financial assets										
Free Cash Flow	507.6	340.5	507.7	77.3	164.8	2.0	71.9	368.2	146.5	588.4

In millions of euros

# voestalpine GROUP

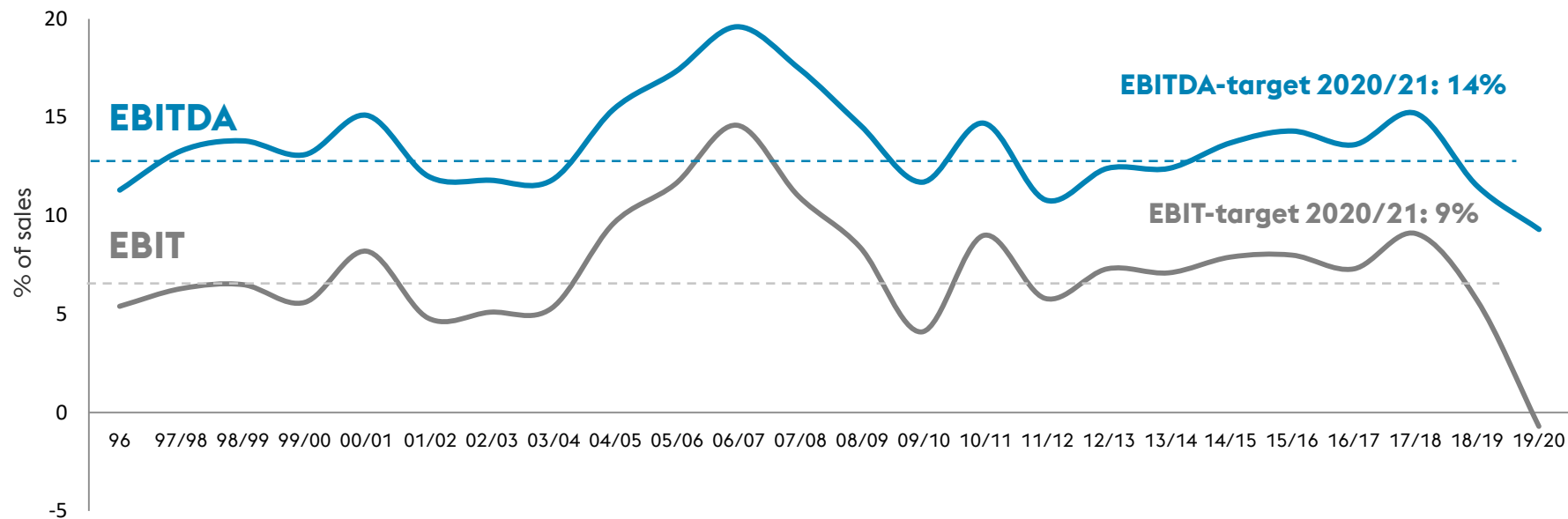
## DEVELOPEMENT GEARING RATIO





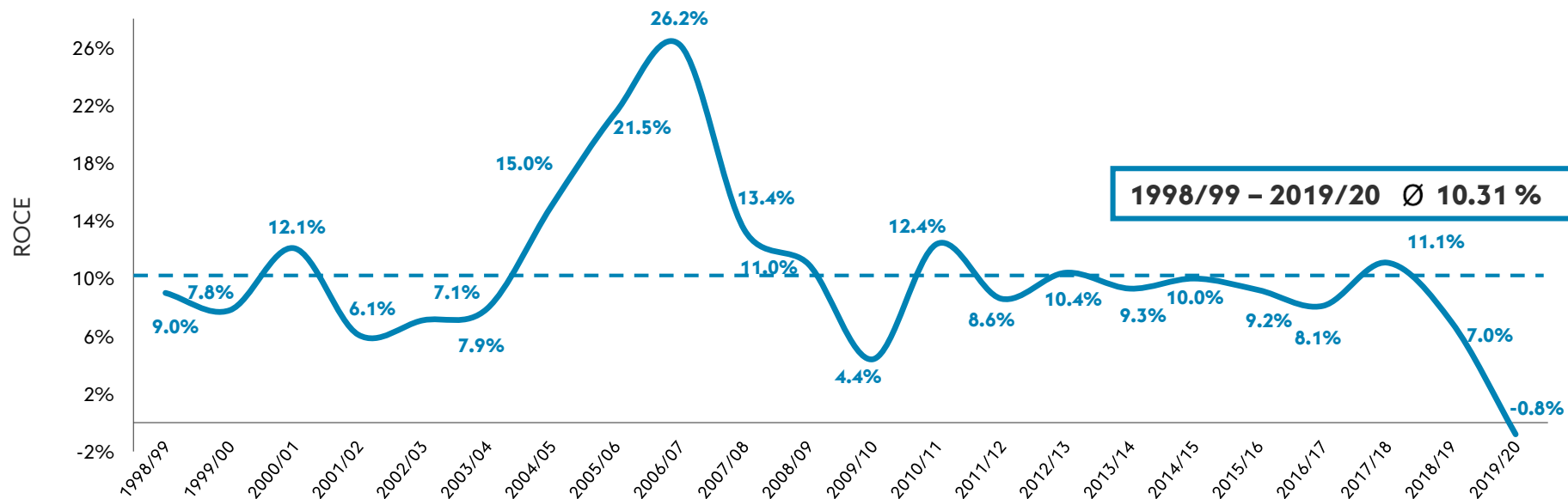
# voestalpine GROUP

## DEVELOPMENT CONSOLIDATED MARGINS (REPORTED)



# voestalpine GROUP

## DEVELOPMENT RETURN ON CAPITAL EMPLOYED (ROCE)



# voestalpine GROUP

## DEVELOPMENT PER SHARE ITEMS

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Number of outstanding shares as of March 31 (m shares)	168.6	168.7	172.4	172.4	172.4	174.9	176.3	176.3	178.5	178.5
Dividend (m€)	135.0	135.1	155.2	163.8	174.8	183.7	194.0	246.8	196.4	35.7*
Dividend per share (€)	0.80	0.80	0.90	0.95	1.00	1.05	1.10	1.40	1.10	0.2**
Profit for the period (m€)***	512.7	333.5	444.9	446.4	549.1	585.3	496.8	775.2	408.5	-222.0
Earnings per share (€)	3.04	1.98	2.61	2.59	3.18	3.35	2.84	4.40	2.31	-1.24****
Pay-out ratio (%)	26.3%	40.5%	34.9%	36.7%	31.8%	31.4%	39.0%	31.8%	48,1%	-16.1%
Share price high of financial year (€)	36.86	38.90	28.71	36.61	35.98	41.58	41.00	54.60	47.11	30.58
Share price low of financial year (€)	20.87	18.38	19.98	22.34	28.72	22.52	27.46	35.91	24.82	13.04
Share price, end of period (€)	33.13	25.22	23.96	31.91	34.10	29.41	36.90	42.57	27.07	18.54
Average share price of financial year (€)	28.80	27.78	23.99	31.21	32.86	32.76	33.62	44.46	35.59	23.38
Dividend yield (%)	2.8%	2.9%	3.8%	3.0%	3.0%	3.2%	3.3%	3.1%	3.1%	0.9%
Market capitalization, end of period (m€)	5,585.1	4,255.0	4,128.8	5,501.1	5,878.7	5,143.5	6,506.2	7,506.0	4,832.6	3,308.9

In millions of euros

\* Outstanding shares as of March 31 2020

\*\* As proposed to the AGM

\*\*\* From continuing operations excl. minorities and hybrid capital expenses

\*\*\*\* Undiluted EPS, based on average number of shares FY 2019/20

**voestalpine AG**

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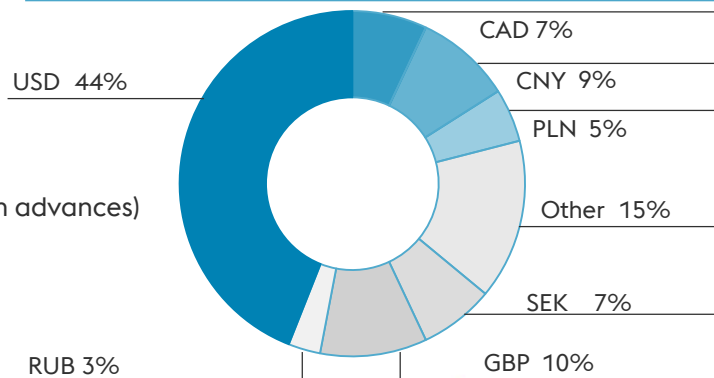
ONE STEP AHEAD.

# voestalpine GROUP

## CURRENCY MANAGEMENT

- » Largest currency position from raw material purchases in USD and to a lesser degree from exports to the “non-euro area”
  - » Net requirement for USD in voestalpine Group was USD 492.5m in 2019/20
- » Hedging of the net foreign exchange exposure of the Group
- » voestalpine AG hedging budgeted foreign currency payments over the next twelve months. Longer-term hedging only for contracted projects
  - » The hedging ratio is between 25% and 100%
  - » The further in the future the cash flow lies, the lower the hedging ratio
- » FX-instruments and policy
  - » Standards FX and money market instruments (spot deals, deposits and short term advances)
  - » Derivatives only for hedging purpose (forwards, swaps)
  - » Derivatives only to cover underlying business transactions
  - » No uncovered options writing
  - » Annual treasury review by an international external auditor

Foreign currency portfolio 2019/20 (net)



voestalpine

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# voestalpine GROUP

## PENSIONS & OTHER EMPLOYEE OBLIGATIONS

### » Pensions

- » **Defined contribution plans** involve no future obligations after payment of premiums. In Austria the predominant part of the defined benefit pensions obligations is transferred to a pension fund. In 2015/16 all significant obligations in Netherlands were converted to defined contribution pension plans
- » **Defined benefit plans** guarantee the employee a specified pension
- » In Germany a small part of the pension rights are financed by insurers

### » Severance obligations

- » Employees of Austrian entities who started their employment before January 1, 2003 are entitled to receive a severance payment if their employment is terminated by the employer or if they retire
- » Employees who started employment after December 31, 2002 contributions are paid to external employee pension funds

### » Obligations for long-service bonuses

- » In most of the Austrian Group companies employees get a one-time payment when the anniversary of service has been reached
- » Amount between one and three monthly salaries

Present value for pensions & other employee obligations as of March 31<sup>st</sup> 2020

**1,277.9m EUR**

