

OFFSHORE AND LINEPIPE

Your Partner for innovative solutions

voestalpine Grobblech GmbH
www.voestalpine.com/grobblech

voestalpine
ONE STEP AHEAD.

STEEL IS OUR WORLD

Steel supports

Steel moves

Steel inspires

Steel is future

OVERVIEW PRESENTATION OFFSHORE AND LINEPIPE

- » [voestalpine-GROUP](#)
- » [voestalpine-Steel Division](#)
- » [voestalpine-Grobbblech](#)
- » [Offshore and linepipe](#)
- » [Linepipe plates](#)
- » [Clad linepipe plates](#)
- » [Offshore plates for oil and gas](#)
- » [Offshore plates for wind energy](#)
- » [High-strength plates](#)
 - » [High-strength plates](#)
 - » [Shipbuilding steel plates](#)
 - » [Chords and racks](#)
- » [Services, Partners, Contact](#)
- » [Backup](#)

voestalpine-GROUP

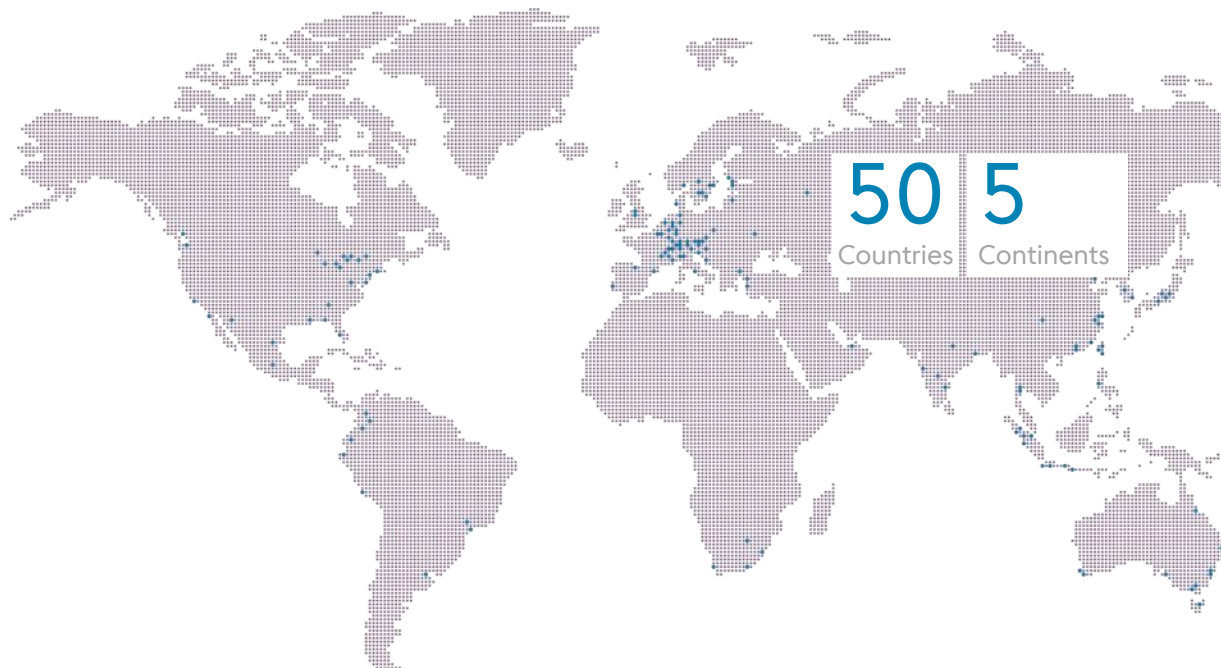
THE voestalpine GROUP



voestalpine is a **technology and industrial-goods enterprise** whose business units boast **worldwide leadership** in combined material and processing expertise.

With its **highest-quality products and systems** made of steel and other metals, voestalpine is one of Europe's **leading suppliers** to the automotive, household-appliance and oil/gas industries worldwide.

GROUP



500

Group companies and locations



51,907

employees worldwide



13.6 bn

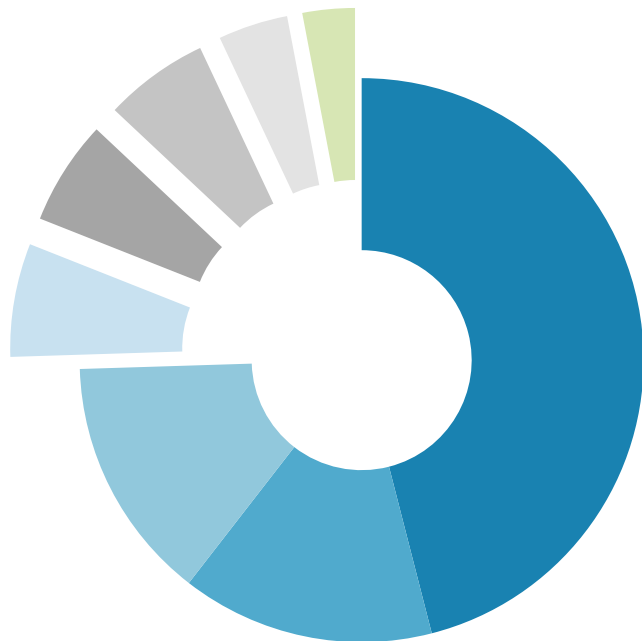
in revenue in 2018/19 FY



1.6 bn

EBITDA in 2018/19 FY

GROUP SHAREHOLDER STRUCTURE



44 %
Austria

14.8 %
Employee shareholding
scheme

15 %
North America

7.2 %
Rest of Europe

6 %
Scandinavia

7 %
UK, Ireland

4 %
Germany

2 %
Asia (as of 2018/19 FY)

GROUP DIVISIONS



Steel
4,887.3 million
Sales (in euros)
35 % share of business volume



High Performance Metals
3,136.3 million
Sales (in euros)
22 % share of business volume



Metal Forming
2,937.4 million
Sales (in euros)
21 % share of business volume



Metal Engineering
3,147.1 million
Sales (in euros)
22 % share of business volume

(as of 2018/19 FY)

voestalpine-STEEL DIVISION

STEEL DIVISION VALUES

Our

leadership in quality

is put to the test on a daily basis

Innovative power

Focus on service

High value

Flexibility

STEEL DIVISION DATA AND FACTS



43

locations worldwide



~11,000

employees (full-time equivalent)



4.8 million

tons of manufactured end products
in 2018/19 FY



Revenue

2017/18 FY

2018/19 FY

4,772.7

4,887.3

EBITDA

908.2

653.2

EBITDA margin (%)

19.0

13.4

EBIT

592.9

319.9

EBIT margin (%)

12.4

6.5

STEEL DIVISION LOCATIONS



voestalpine Grobblech GmbH

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voestalpine

ONE STEP AHEAD.

STEEL DIVISION COMPANIES

Companies along the value-added chain



STEEL DIVISION

CUSTOMER SEGMENTS



Automotive Industry



Electrical Industry



House Industry



Machinery Industry



Processing Industry



Energy

STEEL DIVISION

What makes us
unique?



R&D and innovation



Environment



Employees



Certifications



Awards

STEEL DIVISION INNOVATION HIGHLIGHTS



Energy



A heavy plate that maintains its strength and toughness even at extremely low temperatures, toughcore® takes our customers beyond previously insurmountable limits.



R&D at voestalpine makes it possible



voestalpine-GROBBLECH

OUR MESSAGE



- » We are a global supplier of high-quality niche products in the energy business.
- » We offer innovative solutions for structural steel work, bridges and cranes, based on the technological developments in the energy branch.

OUR OFFER



Our **products** find their applications in the extreme conditions:

Strength

Toughness

Wear resistance

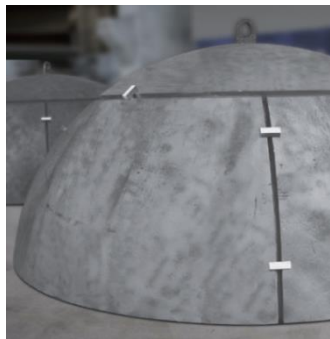
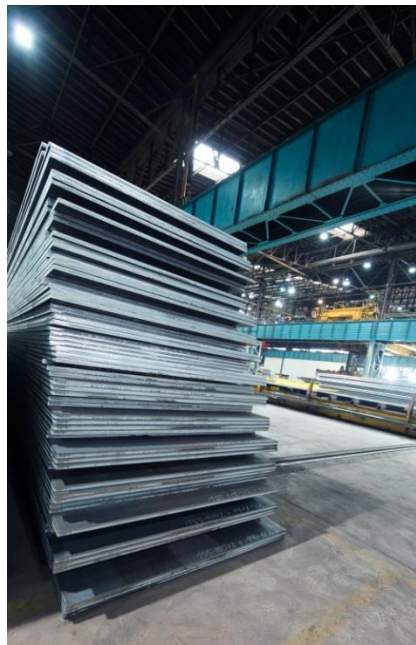
Corrosion resistance

WE DELIVER TO VARIOUS INDUSTRIES



- » Oil- and gas industry
- » Pressure vessel and apparatus sector
- » Chemical industry and refineries
- » Structural steel work and bridges
- » Vehicles and crane sector
- » Ship building
- » Steel service centers and traders

OUR PRODUCTS



- » Linepipe and Offshore plates
- » Pressure vessel plates and heads
- » Clad plates and heads
- » High-strength plates
- » Wear-resistant plates
- » Multi-layer plates
- » Special heavy plates
 - » Structural steels
 - » Fine-grain structural steels
 - » Shipbuilding steels
 - » Case hardening and Q+T steels
- » Chords

OUR BRANDS



toughcore[®]
excellent toughness even to the core



alform[®]
thermomechanically rolled

durostat[®]
wear-resistant



aldur[®]
quenched & tempered

altrix[®]
multi-layer plate



voestalpine

ONE STEP AHEAD.

OUR SALES BRANCHES



HVU Upstream

Wolfgang Leeb
wolfgang.leeب@voestalpine.com



HVD Downstream

Regina Leidinger
regina.leidinger@voestalpine.com



HVM Machinery
Industry

Jürgen Lechfellner
juergen.lechfellner@voestalpine.com



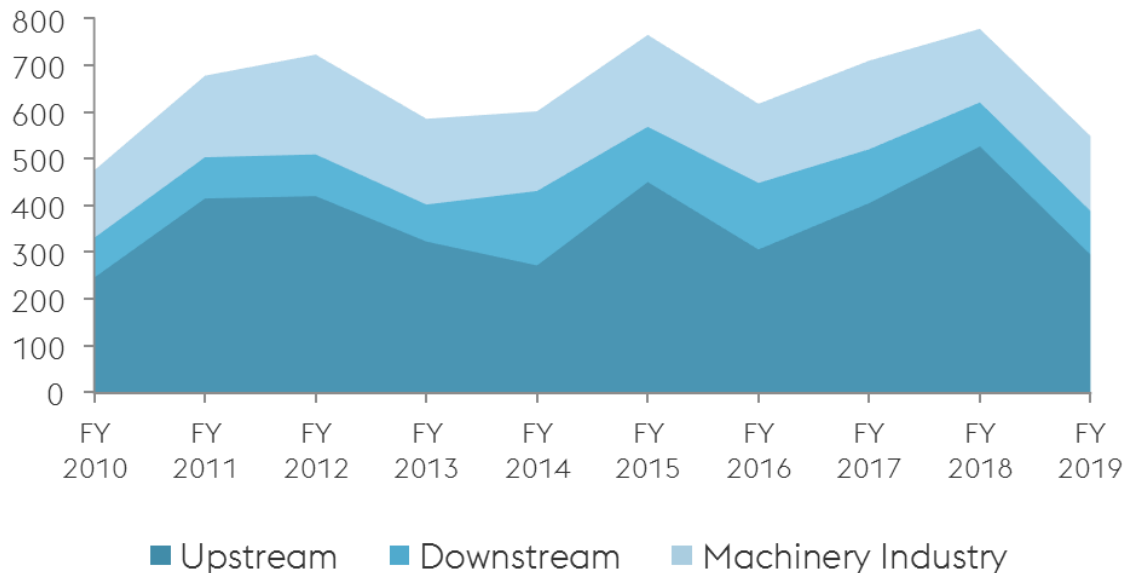
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voestalpine

ONE STEP AHEAD.

BRANCH MIX (in tons)



2019 FY
in 1,000 tons

Upstream	294
Downstream	93
Machinery Industry	160

INVESTMENT 2015

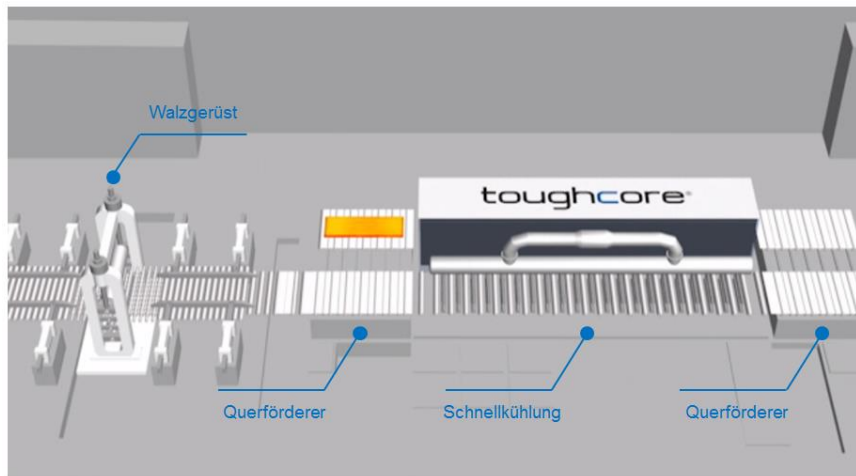


Video: [New Rolling mill](#)

New rolling mill:

- » Width 4,2 m (unchanged)
- » Increased rolling force up to 8,000 tons
- » Work roll shifting for improved flatness
- » Commissioning in Nov 2015

INVESTMENT 2016



Video: [The manufacturing process](#)

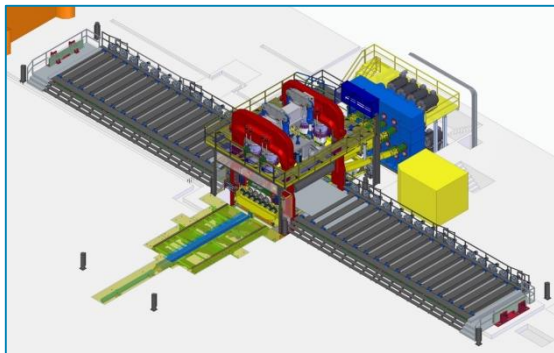
toughcore[®] facility:

- » Extraordinary fine micro-structure in mid-thickness is achieved by using the toughcore[®] process which is based on TMCP rolling and accelerated cooling with intermediate fast reheating
- » Commissioning in October 2016

INVESTMENTS UP TO 2020



- » New **chamber furnace** for optimized reheating of clad plate packages before rolling
 - » Commissioning: May 2019



- » New **levelling machine** to improve the flatness of clad plates
 - » Commissioning: May 2020



OFFSHORE AND LINEPIPE

QUALITY FROM voestalpine

As a provider of quality solutions, we have adapted the ambitious standard of supplying our customers with the **best steels** and **excellent material properties**.

Quality begins in our steelmaking plant

- » Fully integrated metallurgical facility
- » High-quality steel slabs
- » Short transport distances inside our dedicated metallurgical facility
- » Highest degree of purity
- » Best mechanical properties of our steel grades

EXTRAORDINARY REQUIREMENTS CALL FOR EXTRAORDINARY STEEL



- » High cleanliness of steel due to LD-process with subsegment metallurgical and vacuum treatment
- » High-quality slabs up to 355 mm in thickness
- » Minimized center segregation by soft reduction during continuous casting
- » Specialization in thermomechanical rolling with accelerated cooling.

Our strengths are our expertise and experience

PRODUCTION SYSTEM



Efficient
processing for
our customers

Our state-of-the-art production systems implement the most modern technologies and ensure **consistently high quality**. We ensure **homogeneous technological values** in our steels along the entire production chain.

Our production system offers optimal size tolerances, best flatness and perfect plate surface as well as reproducible mechanical-technological properties.

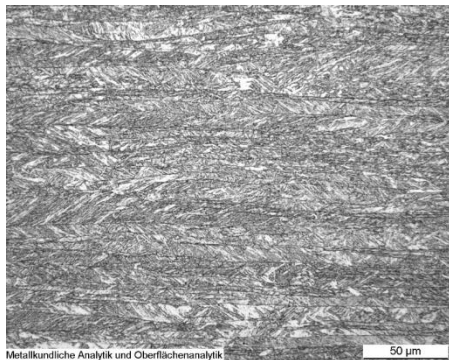
PRODUCTION SYSTEM



- » New rolling mill
 - » Width 4,2 m
 - » Rolling force up to 8,000 to
 - » Work roll shifting for improved flatness
- » Accelerated cooling line
 - » Basis for best TMCP-steels
- » World's strongest hot leveling machine
- » New second pusher-type furnace

THERMOMECHANICAL ROLLING

TMCP + ACC¹



QT



- » TMCP – (Thermo-Mechanical-Control-Process) steels
- » Thermomechanical rolling leads to a very fine-grained structure, which results in high strength combined with excellent toughness and best formability levels.

¹ ACC... accelerated cooled

TMCP – OUR STRENGTH

- » TMCP- (Thermo-Mechanical-Control-Process) steels are fine-grained steels with
 - » excellent weldability
 - » high strength combined with high toughness
 - » best formability
 - » high reliability in welded structures
- » TMCP-Steels are produced with
 - » very pure steel (low S-, P-, tramp element level)
 - » very low carbon content and low carbon equivalent (CE)
 - » micro-alloying
 - » high-quality processing during melting, casting, rolling and accelerated cooling



TMCP – CUSTOMER BENEFITS

- » Substantial reduction or eliminating of preheating
 - » Great savings in manufacturing costs
 - » Improved working environment for operators
- » Reliable weld joints
 - » Virtually no additional repair welding, even without preheating
- » High-heat-input welding
 - » Major reduction in the number of weld passes
 - » Significantly reduced welding costs
 - » Substantially shorter manufacturing time
- » Easier surface cleaning because scale is thin and homogeneous

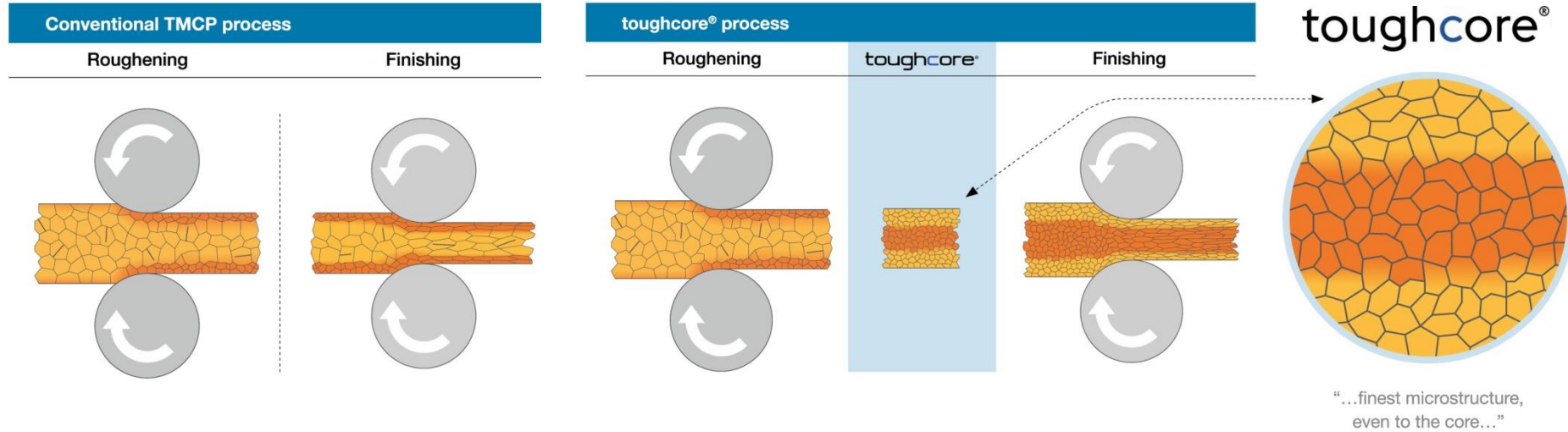


toughcore® - THE INNOVATION

Video: [toughcore®](#)

- » New generation of TMCP steel
- » Heavy plates with finest microstructure even to the core and thus extremely high toughness, made in a completely new and patented process, which cannot be produced on any other production route.
- » Unique combinations of thickness, strength and excellent toughness as well as best weldability
- » Higher safety while enhancing the potential for the use of heavy plate - e.g. at very low temperatures, in ultra-deep sea or for design optimization - for very challenging operating conditions.
- » Cost savings and increased productivity.

toughcore[®] PROCESS



MICROSTRUCTURE

running production



toughcore®

X80 – 50mm



QUALITY ASSURANCE

- » Products, processes and business systems of voestalpine Grobblech GmbH are certified according International Quality Management System Standards, ISO 9001, by Lloyds Register.
- » Quality approvals are held from ABS, DNV-GL, TÜV, API and also for a number of specific offshore contracts for operators including Saudi Aramco, Qatar Petroleum, Shell, Exxon Mobil, Total, Chevron and BP.
- » We can offer a wide variety of steel grades (including e.g. NORSOK ...) and hold qualifications even for high strength steel grades (e.g. AB FQ70, VL F690 ...)

HEALTH, SAFETY AND ENVIRONMENT (HSE)

- » voestalpine Grobblech has created a work environment that values ...
 - » diversity in thought and experience
 - » teamwork
 - » ethical behavior
 - » performance excellence

The HSE management is based on continuous improvement in accordance with international standards, OHSAS 18001, ISO 14001 as well as the EMAS – European Eco Management and Audit Scheme.

BENEFIT FOR OUR CUSTOMER



We are a global supplier of high-quality heavy plates for the energy market and the global leading producer of roll-bonded clad plates.

TAILORED SOLUTIONS IN voestalpine QUALITY



- toughcore®
- » Linepipe applications
 - » Linepipe plates
 - » Clad linepipe plates
 - » Offshore applications
 - » Offshore plates for oil & gas
 - » Offshore plates for wind energy
 - » High-strength plates
 - » Shipbuilding steel plates
 - » Chords & racks

LINEPIPE PLATES

LINEPIPE PLATES

Sour service in deep ocean



- » More than two million tons of sour-gas-resistant linepipe plates
- » Down to a depth of 3,000 meters below the sea
- » High-strength steels up to X120
- » Extremely low temperatures and strain-based design
- » Up to 20 tons per plate, suitable for pipes up to 48 inches

LINEPIPE PLATES

One of the world's leading producers



- » Very tough linepipe plates for thick-walled deep-sea lines
- » Specialize in modern thermomechanical rolling technology with accelerated cooling
- » Outstanding product quality, reliable service and flexibility
- » On-time shipment and delivery
- » Extreme conditions: arctic temperatures, extreme pressures in the deep ocean, sour service ...

LINEPIPE PLATES

Certifications

API 5L	DNV-GL	GOST	ISO 3183
BM(S)	SAWL 245 (S)		L 245M(S)
X42M(S)	SAWL 290 (S)		L 290M(S)
X46M(S)	SAWL 320 (S)		L 320M(S)
X52M(S)	SAWL 360 (S)		L 360M(S)
X56M(S)	SAWL 390 (S)		L 390M(S)
X60M(S)	SAWL 415 (S)		L 415M(S)
X65M(S)	SAWL 450 (S)	K56	L 450M(S)
X70M(S)	SAWL 485 (S)	K60	L 485M(S)
X80M(S)	SAWL 555 (S)	K65	L 555M(S)
X90M			L625M
X100M			L690M
X120M			L830M

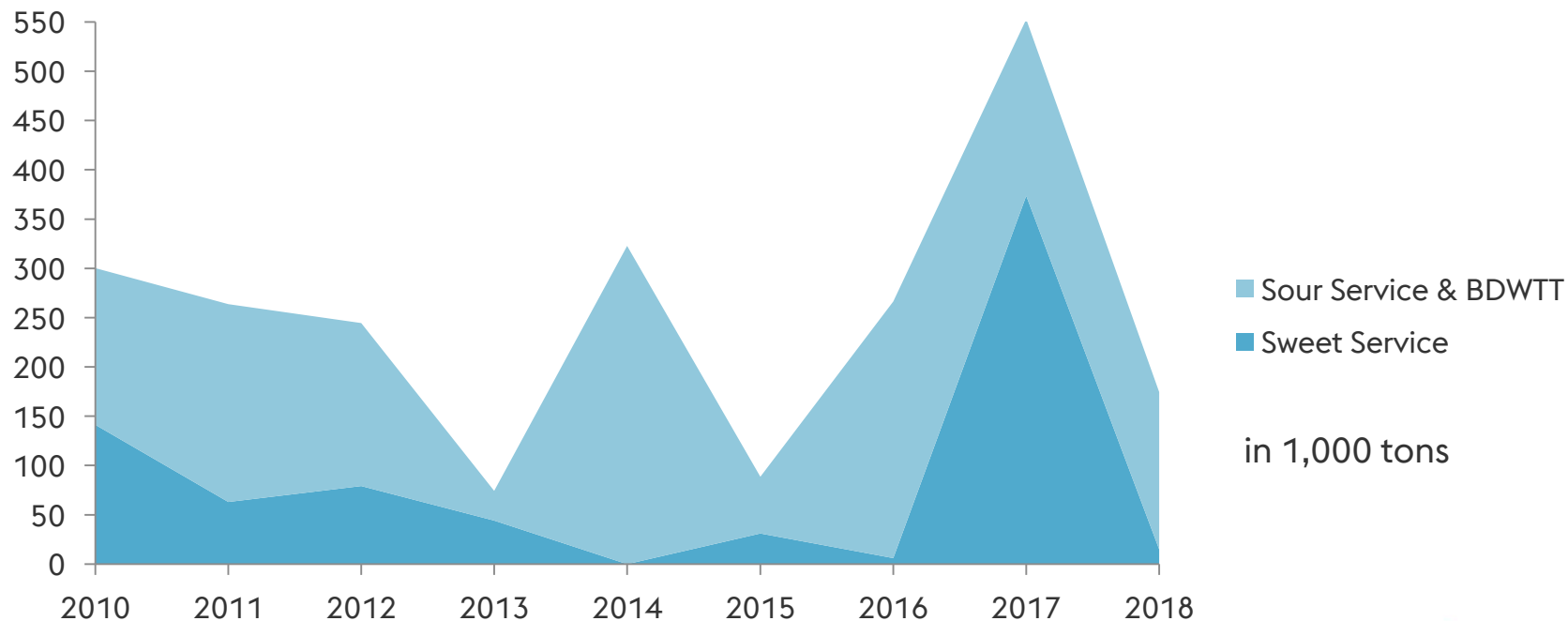
» We supply linepipe plates in accordance with **all applicable standards and specifications** such as API 5L, ISO 3183, DNV-GL and equivalent to Russian GOST.

LINEPIPE PLATES

Our strengths

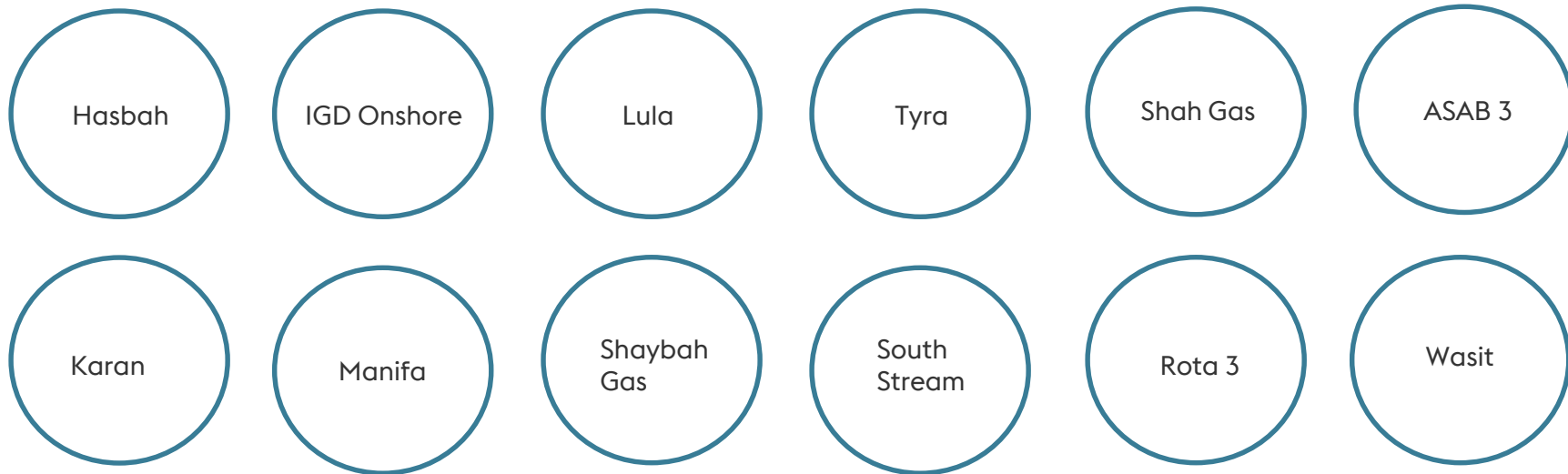
- » Sour service of pH3 up to X80
- » High strength up to X120
- » Excellent toughness at low temperatures and best weldability
- » High uniform elongation for strain-based design
- » Plate length up to 18.7 m and weight up to 20 tons per plate

LINEPIPE PLATES - DELIVERIES



LINEPIPE PLATES

References Sour Service



LINEPIPE PLATES

References Sweet Service

Kaombo
Angola

Stampede

Nord Stream
Phase 2

Lucius

Khurais

Laggan

Big Foot

Jack /
St. Malo

Arkutun
Tagi

Nord Stream
Phase 1

Perdido

Blind Faith

LINEPIPE PLATES

toughcore® for Linepipe applications



- » Higher levels of operational safety
- » Increased productivity and capacity of pipeline and auxiliary equipment
- » Optimized manufacturing processes
- » High strength for decreased weight and cost
- » Linepipe plates for extremely low temperatures and the ultra-deep sea

CLAD LINEPIPE PLATES

CLAD LINEPIPE PLATES

Market leader for extreme sour service and corrosion resistant environments



- » The world's leading producer of roll-bonded clad plates with a capacity of 60,000 mt per year
- » Our partners process these clad plates into pipes which withstands the highest mechanical stress and dynamic loads – suited to deep-sea applications under highly corrosive conditions
 - » 10 km/ month
 - » 120 km/ year

CLAD LINEPIPE PLATES

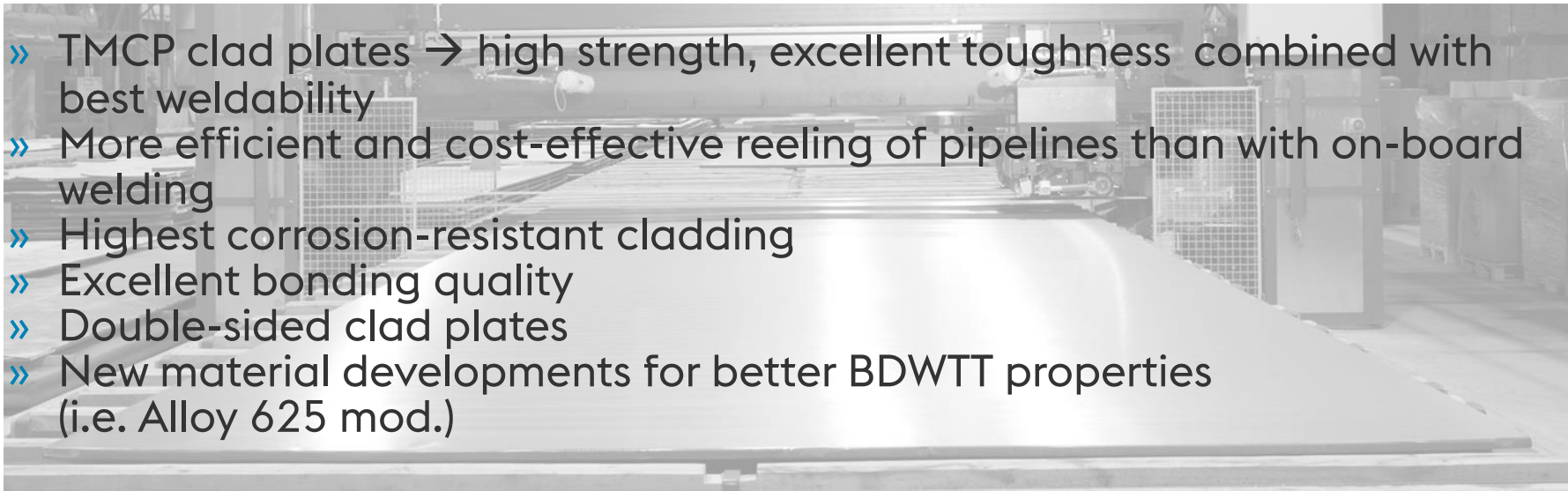
The world's leading producer



- » Material combination X60/65 with nickel-based (alloy 625, 625 mod., 825) or austenitic stainless alloy (316L, 317L ...)
- » Metallurgical bonding for cost-effective reeling
- » Applications: catenary risers, high-strength linepipes for deep sea applications, Bends and Fittings
- » Wide dimensions (pipe diameter, wall thickness) possible

CLAD LINEPIPE PLATES

Our strengths

- 
- » TMCP clad plates → high strength, excellent toughness combined with best weldability
 - » More efficient and cost-effective reeling of pipelines than with on-board welding
 - » Highest corrosion-resistant cladding
 - » Excellent bonding quality
 - » Double-sided clad plates
 - » New material developments for better BDWTT properties (i.e. Alloy 625 mod.)

CLAD LINEPIPE PLATES

References

Zohr

Cornegliano

Bahr Essalam

Arbi /
Karan

Maria

Kashagan

Egina

Kraken

Ichtyis

Wasit

Wheatstone

Julimar

LINEPIPE AND CLAD LINEPIPE PLATES

Our customers



voestalpine Grobblech GmbH

OFFSHORE PLATES FOR OIL & GAS

OFFSHORE PLATES FOR OIL & GAS

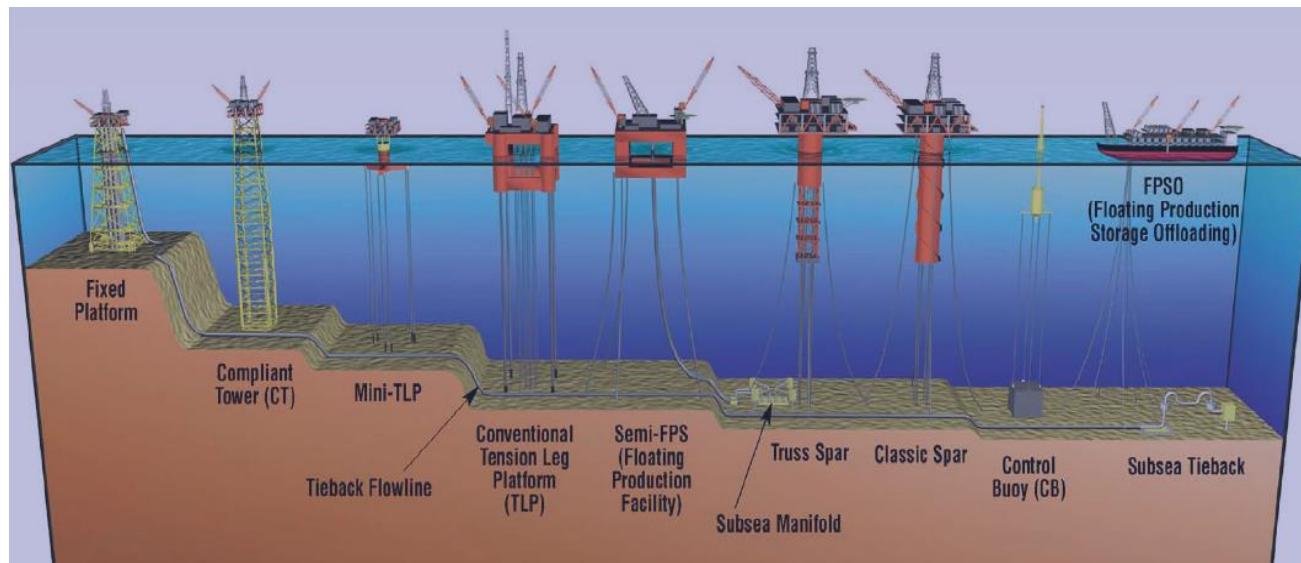
Prequalified in arctic regions



- » In worldwide use under the harshest conditions
- » Prequalified to ensure greater safety
- » Arctic steel for extremely low temperatures
- » Thick, wide and heavy
 - » TMCP plate thicknesses up to 130 mm
 - » Plate widths up to 3,850 mm
 - » Plate lengths up to 18,700 mm
 - » Weight up to 28 tons per plate

OFFSHORE PLATES FOR OIL & GAS

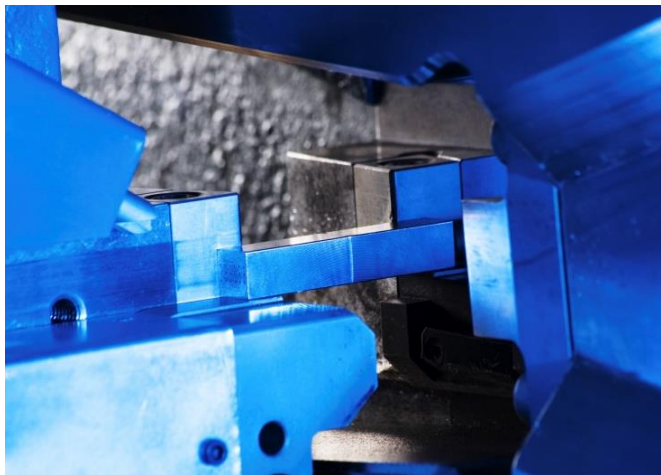
Types of platforms



We supply
high-quality
steel plates
for all
structures

OFFSHORE PLATES FOR OIL & GAS

Ensure greater safety



- » Prequalified material with plate thicknesses up to 101.6 mm and CTOD values down to -40°C for applications in arctic regions. (EN 10225 (including NORSOK) and API RP2Z)
- » Our TMCP offshore plates are characterized by a high degree of toughness and excellent weldability.

OFFSHORE PLATES FOR OIL & GAS

Certifications

Yield Strength Class (Mpa)	Standard	Thickness (mm)	CVN Test (°C)	CTOD Test (°C)
355	API 2W-50, API 2W50T	102	-40	-10
	S355G8/G9/G10+M	102	-40	-10
	NORSOK M-120 Y20, Y25	102	-40	-10
420	API 2W-60	102	-40	-10
	API 2W-60 Artic Steel	80,6	-80	-40
	S420G1/G2+M	102	-40	-10
	NORSOK M-120 Y30, Y35	102	-40	-10
460	S460G1/G2+M	102	-40	-10
	NORSOK M-120 Y40, Y45	86	-40	-10
500	NORSOK M-120 Y50, Y55	86	-40	-10

» Pre-qualified according to EN10225, Annex E / API RP2Z

OFFSHORE PLATES FOR OIL & GAS

References / Projects

Johan
Sverdrup

ZOHR

Maersk
Culzean

Total
Egina

Filanowsky

BP Shah
Deniz 2

Hess
Stampede
TLP
Topside

WOG –
South
Timbalier

Prelude
FLNG
Project

Shell Vito
Chickasaw

Total
Kaombo

Total Moho
Nord

OFFSHORE PLATES FOR OIL & GAS

toughcore® for offshore structures



- » Protect arctic offshore structures against ice loads and collisions
- » Optimize the design of components and structures
- » Light-weight design to reduce cost of manufacturing, transportation and installation
- » Explore harshest environments

OFFSHORE PLATES FOR OIL & GAS

Our customers



OFFSHORE PLATES FOR WIND ENERGY

OFFSHORE PLATES FOR WIND ENERGY

Extra heavy XL plates



- » High-quality plates for efficient power generation
- » Larger monopiles require higher unit weights
- » Up to 60 tons unit weights by innovative welding

OFFSHORE PLATES FOR WIND ENERGY

Plates for efficient electric power generation



- » Toughest materials for offshore wind energy systems
- » High-quality plates for the foundations of offshore wind turbine (monopiles, transition pieces, jackets)
- » Larger monopiles require higher unit weights in cylindrical and tapered pipe lengths.

OFFSHORE PLATES FOR WIND ENERGY

XL plates with higher unit weights



- » Higher unit weights by welding
- » Highly qualified welding personnel
- » Highly efficient and innovative welding technique
- » Plate edge preparation for circular seam welding
- » Plate cut to conical shape (ready to use)
- » Welded and extra-heavy XL plates
 - » TMCP plate thicknesses up to 130 mm
 - » Weights up to 60 tons per plate
 - » Plate widths up to 3,950 mm

OFFSHORE PLATES FOR WIND ENERGY

References / Project

East
Anglia

Beatrice

Arkona

Borkum
Riffgrund

Wikingen

Sandbank

Gemini

Baltic 2

Humber
Gateway

Butendiek
Substation

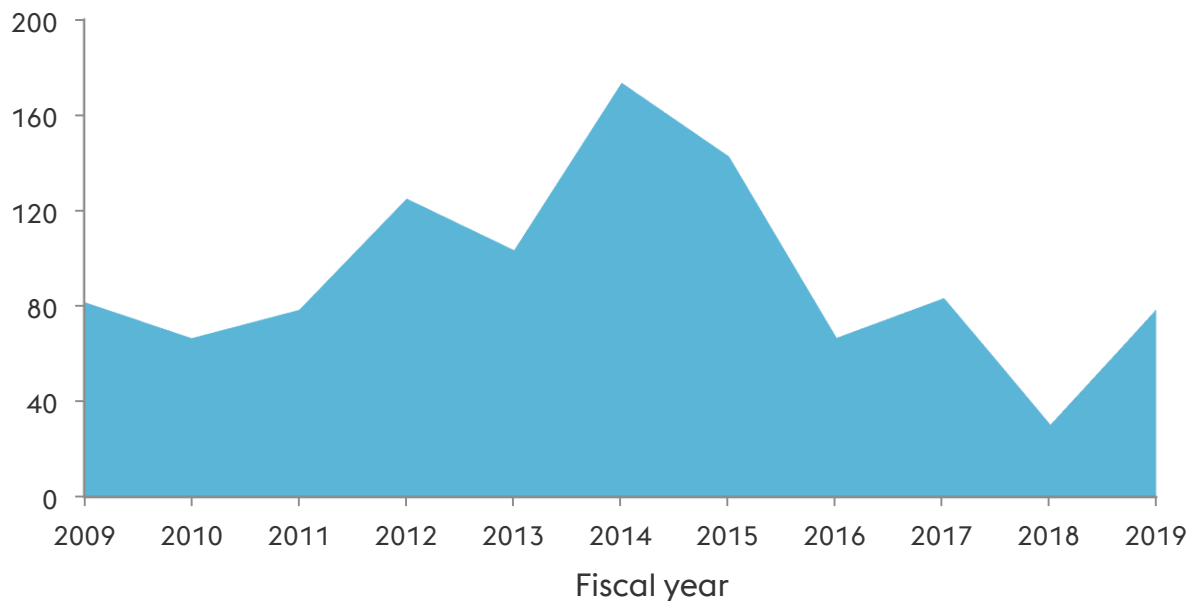
Global
Tech

Walney



OFFSHORE PLATES FOR OIL & GAS

Deliveries in 1,000 tons



HIGH-STRENGTH PLATES

HIGH-STRENGTH PLATES

Weight savings and optimized weldability



- » Minimum yield strengths of 700 MPa up to 1100 MPa
- » High-strength decreases weight
- » TMCP for excellent toughness and optimized weldability
- » Specific advantages:
 - » Higher stresses
 - » Further cost savings in transport, assembly and processing (excellent welding properties)

HIGH-STRENGTH PLATES

Specific advantages

alform[®]
[microsite: alform](#)[®]

- » alform[®]: low carbon fine-grained TMCP steels with excellent weldability, toughness and cold forming behavior

aldur[®]

- » aldur[®]: water-quenched, high-strength fine-grained steels with excellent toughness at low temperatures

SHIPBUILDING STEEL PLATES

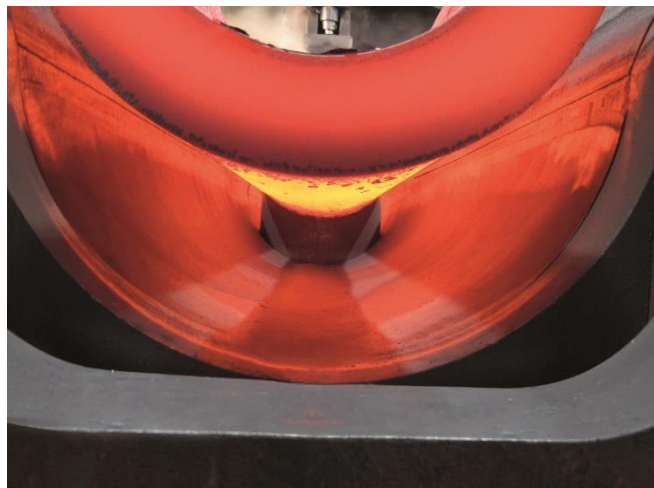
Certified for high-strength



- » Used in offshore applications, platform superstructures and special ships
- » High-strength shipbuilding steels
 - » FQ70 up to 101.6 mm (4")
- » Certified by all renowned certification companies (DNV-GL, ABS, ...)

CHORDS & RACKS

High-strength hot-formed special components



- » Structural components of jack-up rigs
(Chords and thick plates for gear racks)
- » High-strength hot-formed in our in-house press shop
- » High degree of accuracy to shape

CHORDS & RACKS

Steel grade & Dimensions

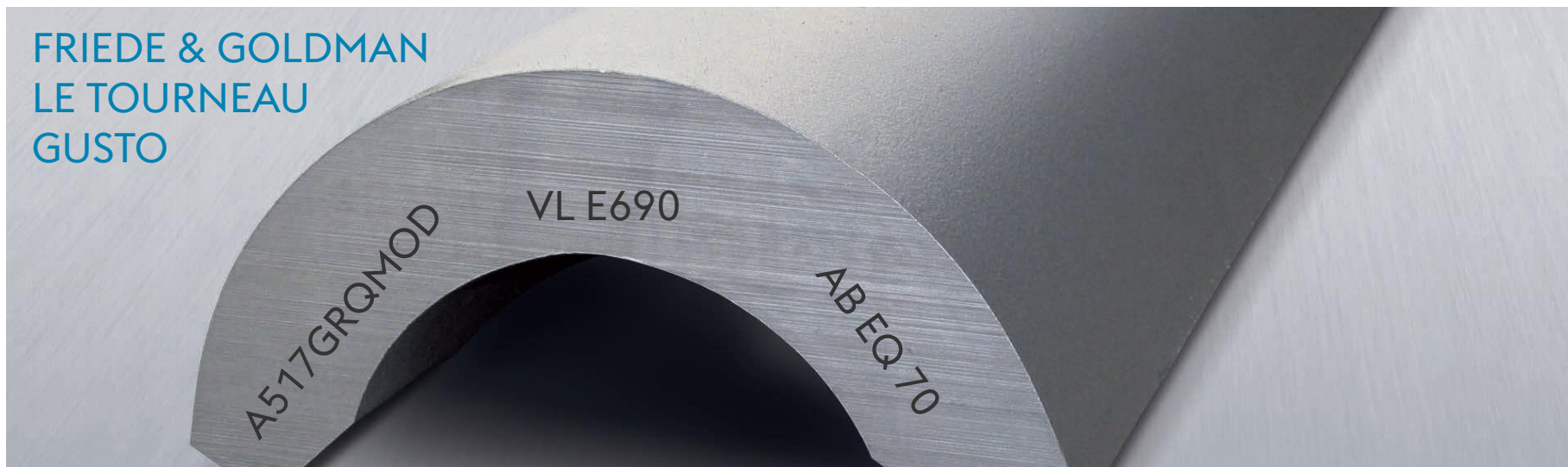


- » Steel grade:
 - » voestalpine special steel aldur 700QL1, S690 QL1, AB EQ/FQ70, VL E/F690
- » Dimensions:
 - » Chords: Length up to 4,200 mm, wall thickness up to 120 mm
 - » Rack steel plates up to 210 mm

CHORDS & RACKS

Capabilities

FRIEDE & GOLDMAN
LE TOURNEAU
GUSTO



HIGH-STRENGTH PLATES

Certifications

Yield Strength Class (MPa)	Grade	Delivery Condition	Thickness (mm)
500	NV A/D/E/F500	QT	102
500	NV A/D/E/F550	QT	102
500	NV A/D/E/F620	QT	86
500	NV A/D/E/F690	QT	86

» High-strength
steels according to
DNV

HIGH-STRENGTH PLATES

Certifications

Yield Strength Class (MPa)	Grade	Delivery Condition	Thickness (mm)
500	AB A/E/D/FQ51	QT	102
	AB A/E/D/FQ51	TMCP	50,8
550	AB A/E/D/FQ56	QT	102
	AB A/E/D/FQ56	TMCP	50,8
620	AB A/E/D/FQ63	QT	102
	AB A/E/D/FQ63	TMCP	50,8
690	AB A/E/D/FQ70	QT	102
	AB A/E/D/FQ70	TMCP	50,8

- » High-strength steels according to ABS
- » All shipbuilding steel plates according to ABS, BV, DNV-GL and LRS.

WE TALK SOLUTIONS

Progress through R&D

- » Continual product and process development
- » Innovative solutions for products and processes
- » Independent and fully accredited testing facility on site
- » Prequalification of offshore structural steels in our own labs
- » Simulations of material performance of weldability, deformation and edging behavior, fatigue tests and fracture mechanics
- » Consultation in the fields of welding and processing

WE TALK SOLUTIONS

A unique logistics package

- » Partnerships with our clients and customers
- » Reliable and flexible delivery performance
- » Professional project management ensuring successful delivery of complex orders
- » Dedicated mill-based project management team for order management
- » Complete project documentation package (inspection and testing plan, manufacturing specifications, ultrasonic testing procedures)
- » Prompt reaction to inquiries
- » Web-based customer service center with customer access to order confirmations, invoices, test certifications and order status

WE TALK SOLUTIONS

A strong partnership

- » Close collaboration with our Group companies in order to create unique expertise and the technological leadership of our products in the energy sector
- » For more information about energy-related products supplied by the voestalpine Group, please also visit:
 - » voestalpine Böhler Welding GmbH
www.boehlerweldinggroup.com
 - » voestalpine Tubulars GmbH und Co KG
www.voestalpine.com/tubulars
 - » voestalpine Austria Draht GmbH
www.voestalpine.com/austriadraht

OFFSHORE & LINEPIPE

Our partners



أرامكو السعودية
saudi aramco



ONE STEP AHEAD.

CONTACT

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BACK UP



**American
Petroleum
Institute**



2015-313

Certificate of Authority to use the Official API Monogram

License Number: **2H-0015**

ORIGINAL

The American Petroleum Institute hereby grants to

VOESTALPINE GROBBLECH GMBH
Voestalpine Strasse 3
Linz, Upper Austria
Austria

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-2H** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **2H-0015**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Grade 50 Steel Plate and Grade 42 Steel Plate

QMS Exclusions: Design and Development; Servicing; Customer Property

Effective Date: MAY 9, 2017

Expiration Date: MAY 9, 2020

To verify the authenticity of this license, go to www.api.org/compositelist.

Lisa Salley
Vice President, API Global Industry Services

voestalpine Grobblech GmbH

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CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

voestalpine Grobblech GmbH
voestalpine-Straße 3, 4020 Linz
Austria

has been approved by Lloyd's Register Quality Assurance
to the following Quality Management System Standards:

ISO 9001:2015

The Quality Management System is applicable to:

**Design and development, manufacturing and distribution and sale
of: heavy plates, clad plates, multi-layer plates, plate cuttings, plate
pressings.**

This certificate forms part of the approval identified by certificate number VNA0005063.

Approval

Certificate No: VNA0005063-10/ E

Original Approval: 08 October 1999

Current Certificate: 19 October 2017

Certificate Expiry: 18 October 2020


Issued by: Lloyd's Register EMEA Niederlassung Wien
For and on behalf of: Lloyd's Register Quality Assurance Limited



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Lloyd's Register EMEA Niederlassung Wien, Operating 1/R/741-744, 1010 Wien, Österreich, FN 239257 Z
For and on behalf of: Trinity Park, Bickenhill Lane, Birmingham, B37 7JS, United Kingdom

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CERTIFICATE OF APPROVAL

This is to certify that the Environmental Management System of:

voestalpine Grobblech GmbH
voestalpine-Straße 3, 4020 Linz
Austria

has been approved by Lloyd's Register Quality Assurance to the following Environmental Management System Standard:

ISO 14001:2015

The Environmental Management System is applicable to:

Development, manufacturing and distribution and sale of: heavy plates, clad plates, multi-layer plates, plate cuttings, plate pressings.

This certificate forms part of the approval identified by certificate number VNA0005063

Approval
Certificate No: VNA0005063-02/E

Original Approval: 15 October 1999

Current Certificate: 19 October 2017

Certificate Expiry: 18 October 2020

Issued by: Lloyd's Register EMEA Niederlassung Wien
For and on behalf of: Lloyd's Register Quality Assurance Limited



Lloyd's Register EMEA Niederlassung Wien, Opernring 1/8/741-744, 1010 Wien, Österreich, FN 239257 Z
For and on behalf of 1 Trinity Park, Bickenhill Lane, Birmingham, B37 7ES, United Kingdom

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Corporate principles

Striking the right balance between productivity, quality, safety and the environment is our key to remaining "one step ahead."

Revised 3/04/2018

The Steel Division strives toward leadership in quality, technology and profit in the European steelmaking industry and has taken the challenge to combine growth and competitiveness with ecological and social responsibility. The integrated management system for quality, safety, the environment and risk makes a valuable contribution to the achievement of these objectives, which is why the management board has adopted the following principles:

- **Customer orientation**
Our customers, not us, define what quality is, and that is what we deliver. We orient our processes to customer needs and thus lay the foundation for sustained customer satisfaction.
- **Innovation and continuous improvement**
We are not satisfied with a performance that is anything less than excellent. Innovation and continual improvement are the prerequisites to the success and added value of our company. Each employee has the task and the challenge to continually make improvements.
- **Employee development**
Competent and motivated employees are the most important force in our company. This is why we require the appropriate knowledge and a keen sense of responsibility from our staff members and cooperation with each other at all levels. We create a modern and attractive place to work, a place where each of our employees can flourish.
- **Objectives and figures (measurable success)**
Initial concrete objectives and effective communication of the same make implementation of our strategy possible. Figures show us whether we are on course or need to take corrective measures.
- **Risk management**
The recognition of opportunities and risks that can either promote or endanger the growth of corporate value is an important management task and thus an integral part of our activities on a corporate level.
- **Safety and health**
The company and the employees are mutually responsible for safety and health. This is why we create safe places to work for all our employees, promote self-responsibility and help employees conscientiously adopt safe and healthy practices both at work and in their leisure time.
- **Prevention**
Accidents at work, health hazards, adverse effects to the environment, quality losses and damage to production systems are avoided through preventive measures. Errors that occur in spite of our every effort are seen as an opportunity to learn. For this reason they are documented, analyzed and corrected.
- **Suppliers**
We foster partnerships based on mutual trust and understanding with our suppliers in order to ensure the highest levels of performance for our customers. Furthermore they are actively involved in our development work.
- **Environmental protection**
 thrift in our consumption of natural resources and various forms of energy and the minimization of harmful influences to the environment is important from an ecological perspective and saves costs as well. We are well aware of our social responsibility and are thus more than willing to set economically feasible standards in the field of environmental technology.
- **Company and partnerships**
The entire corporate group is responsible for our ultimate success. Open communications and long-term partnerships with every interest group are the basis for solutions based on sustainability. The consideration of all concerns from our customers and partners and compliance with legal regulations are an integral part of our strategy.





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