Arcelor Mittal Europe Long Products



#

Bars & Rods Overview

Trademarks: ArcelorMittal is the owner of the following registered trademarks: Freeform®, Solam®, Steligence, Usimax®, ImMAC®.

Photography: ArcelorMittal Photo Library, Shutterstock: ChayonS021, Chumah Maxim, ildogesto, imlane, Marc Studer, Monkey Business Images, Siwakorn1933, ssvaphotos

Although we have taken great care to ensure that information contained in this documentation is both comprehensive and accurate, we cannot accept any liability in respect of any incorrect information it may contain or any damages which may arise through the misinterpretation of its contents. The newest version of this brochure is available on-line, on the website barsandrods.arcelomittal.com

We welcome you to discover our Bars & Rods organisation, our values, and our ambition to serve you the Best Quality & the Best Service.

Your journey along our brochures is starting through a short overview of our ArcelorMittal company and our commitment in producing smarter steels for a better future.



Table of content

Welcome words from our CEO and CMO	06
Our company	10
Our commitment in sustainable development	12
Our Bars & Rods offer	20
• products in detail	28
product and process development	30
product range offer	31
mill capabilities	32
• global presence	36
Our sales network, your contact	40

Message of the Chief Executive Officer

Lutz Bandusch, Business Division Bars & Rods

Dear Partner,

As the **world's leading steel and mining company**, our goal is not only to meet your requirements but to anticipate and respond to the emerging trends like the carbon challenge, the digitalisation of our processes and organisation, the social expectations, integrity and transparency wishes, amongst many other trends, to ensure that steel remains the material of choice and **ArcelorMittal the world's preferred steel supplier**. This is especially valid for Bars & Rods.

Our number one priority remains the safety of our people. Our results over the past decade have made a positive difference in our operations. But we still must do better. The **safety-first culture** is driving our business.

We are showing robust financial results at **ArcelorMittal Group level**, especially in the current difficult and volatile market conditions. Our balance sheet and the key initiatives achieved over past years have fundamentally made us a resilient, stable and solid steel supplier. We continue to invest in our facilities, in our people, in our high added value products. Our focus is to ensure that ArcelorMittal is not just succeeding today, but steel has all the credentials to remain the **material of choice** for a sustainable future.

We are responsible in addressing the pressure and challenges to decarbonise our steelmaking footprint. We are **fully in line with the Paris Agreement** signed in 2015 and we published our strategy and commitment made to **reach carbon neutrality in 2050** in our **Climate Action report** (May 2019). We intend to fundamentally change how we are making steel: we launched breakthrough projects to capture, store or re-use carbon, investing €250 million. A key initiative within Bars & Rods is the project in Hamburg where hydrogen will be used as an agent to **reduce iron ore**.



We are the founding member of the **ResponsibleSteel™** certification standard which aims to develop a complete chain of assurance for social and environmental standards. Also, our commitment to integrity is embodied in our **Code of Business Conduct**.

Our unique and global Bars & Rods portfolio, our dedicated researchers and our production units' footprint over Europe and across European borders enable us to deliver the best quality, the best service, and the best understanding to meet your needs and your satisfaction.

We are living in transformative times. Together, we are inventing the future of steel products, and together we are well positioned for **sustainable long-term success to capture market opportunities**, and **address global and local challenges** (sustainability, environmental regulation, volatility, trades threats).

Yours faithfully,

Bankag

Message of the Chief Marketing Officer

Mike Haller, Business Division Bars & Rods

Dear Customer,

We are living in challenging times. I am convinced that the way we work together, we do business together and communicate will change drastically over the coming years. But I believe as well that **our relationship** and **the partnerships we intend to further intensify** will remain a key element for our common success.

Beside progressing in IT integration, coping with environmental and competition challenges, we are determined **to strengthen the relationship with our partners**. To be **closer to you**, have a clear understanding of **your needs**, develop the **products you/your end customer require** and align our service to cope with persisting high demand volatility. This is what we thrive for.

In line with this, it is also important to understand and adjust our actions to the needs and speed of different market segments such as automotive, construction, mechanical appliances. There can be no one-size-fits-all approach. We need to **be agile**.

The **environmental challenges** will as well be twofold. On one hand, production units might become uncompetitive facing additional cost burdens due to CO_2 emission amongst others. On the other hand, the end market shall as well step by step, ban the non-green production routes. As those challenges are for the time being only covering Europe, we have to ensure to get equitable conditions in order to protect the European steel supply chain.

We, as the commercial team, are **fully dedicated** to overcoming those significant challenges, and we count on you at our side in **transforming tomorrow**.

Sincerely yours,

Inventing smarter steels for a better world

Our company

ArcelorMittal, the world's leading steel & mining company

With annual achievable production capacity of approximately 89.8 million tonnes of crude steel in 2019, and some 209,000 employees across 60 countries, ArcelorMittal is the world's leading steel and mining company.

With an industrial presence in 18 countries, we are the leader in all major global steel markets including automotive, construction, household appliances and packaging, with leading research and development and technology, sizeable captive supplies of raw materials, and outstanding distribution networks.

Our core philosophy is to produce safe sustainable steel. In doing so, our

Our approach	top priority is safety and our goal is to be the world's safest steel and mining company. As a company, we are committed to our promise of 'transforming tomorrow'. Guiding us in this are our values of sustainability, quality and leadership.
Steel	Our steel shipments in 2019 totalled 84.5 million tonnes. We are the largest producer of steel in North and South America and Africa, a significant steel producer in the CIS region, and have a growing presence in Asia, including investments in China and India. We are also the largest steel producer in the EU, with significant operations in France, Germany, Belgium, Spain, Luxembourg and Poland.
Mining	A world-class mining business: ArcelorMittal has a global portfolio of 13 operating units with mines in operation and development and is one of the largest iron ore producers in the world. In 2019, our mines and strategic contracts produced 57.1 million tonnes of iron ore. We currently have iron ore mining activities in Brazil, Bosnia, Canada, Kazakhstan, Liberia, Mexico, Ukraine and the United States.

Research and development	We have 11 major research centres worldwide and our Research and Development (R&D) expense in 2019 was \$301 million. Investing in the future provides the technical foundation for the sustainability and commercial success of the company. We use our researchers' expertise in designing new products, improving and innovating in our processes, in proposing breakthrough concepts and in supporting our customers with dedicated technical assistance.
Our structure	ArcelorMittal has grown through the acquisition of numerous steelmaking and other assets, which constitute our major operating subsidiaries. The group is managed according to region, with a product specialisation within those regions. Every region is headed by a member of ArcelorMittal's executive officers.
Shared services	ArcelorMittal, with its significant global presence, can use its size and worldwide reach to optimise services across the company. Our shared services include purchasing, energy, shipping, IT, legal, real estate and by-products sales. The shared services teams work to make sure best practice is followed throughout the group, while also sharing local good practices with the entire organisation. We believe that a lean and effective organisation is essential to making sure the company is managed as efficiently as possible and provides you the best service.
A listed company	ArcelorMittal is listed on the stock exchanges of New York (under the trading symbol MT), Amsterdam (MT), Paris (MT), Luxembourg (MT), Barcelona (MTS), Bilbao (MTS), Madrid (MTS) and Valencia (MTS).

Our commitment in sustainable development

High standards of business ethics and governance have been fundamental at ArcelorMittal since the company was founded. We aim to treat our own people and our stakeholders with dignity and respect, and we want to listen thoughtfully, learn from our experience, and lead by example.

The Company launched in 2015 its sustainable development framework and sets up the 10 sustainable outcomes, to prepare and response to the most significant long-term environmental and social trends: safety, climate change, customers reassurance, environment, social.

Listening, learning, respect, transparency.

Our 10 outcomes

- 1 Safe, healthy, quality working lives for Arcelor Mittal's people
- 2 Products that accelerate more sustainable lifestyles
- 3 Products that create sustainable infrastructure
- 4 Efficient use of resources and high recycling rates
- 5 Trusted user of air, land and water
- 6 Responsible energy user that helps create a lower-carbon future
- 7 Supply chains that Arcelor Mittal's customer trust
- 8 Active and welcomed member of the community
- 9 A pipeline of talented scientists and engineers for tomorrow
- 10 ArcelorMittal's contribution to society measured, shared and valued

Listening, learning, respect and transparency are key to the integrity of our governance & leadership and to operate effectively and ethically in all parts of the world

Transparent Governance

Good governance is a guiding principle for us. It means ensuring that, as a company, we comply fully with the external regulations and reporting requirements that come with being a listed company, and commit to acting responsibly and with integrity, and that individual employees behave as good corporate citizens.

ArcelorMittal's commitment to integrity is enshrined in its Code of Business Conduct and is supported by comprehensive policy in such as Human Rights, Anti-Corruption, and Insider Dealing.



Want to know more about our Code of Business Conduct?

Developing trusted standards for protecting our environment

All of our European facilities adhere to the ISO 14001 standard, demonstrating our commitment to minimising the impact steelmaking has on the environment. Our facilities are audited each year for compliance with local and national environmental policies and regulations.

We are committed to driving standards on our own supply chain. Since 2011, our Code for Responsible Sourcing has set out minimum standards for our suppliers.

We have also taken leadership roles in the formation of IRMA (Initiative for Responsible Mining Assurance), which is working to establish multi-stakeholder standards for steel production and mines. We are committed to assessing our marketable mines against Towards Sustainable Mining (TSM), the Mining Association of Canada's responsible mining programme, and in 2018, we joined the Responsible Minerals Initiative.

At the same time, we have worked to encourage co-operation between standard-setters at IRMA, TSM and ResponsibleSteel™.

We are ResponsibleSteel™

ArcelorMittal has taken a leading role in forming and committing to ResponsibleSteel[™], the steel industry's first multi-stakeholder global certification initiative. ResponsibleSteel[™] was set up in 2015 as a non-profit organisation, comprising 40 members including steel producers, car manufacturers (BMW Group and Daimler), finance providers such as HSBC, industry organisations and NGOs.

This is the first global certification program and standard for the entire steel value chain from mining, to production processes, to final stage sales and distribution.

It includes a broad range of criteria in:

- Climate Change & Greenhouse Gas Emissions
- Water Responsibility & Biodiversity
- Human Rights & Labour Law
- Local Communities & Business Integrity

Objectives:

- Establish single standard for the entire mine to metal value chain
- Develop standards on greenhouse gas emissions for steel
- Improve responsible sourcing in raw material
- Answer to your expectation by providing certified products

"Responsible production techniques and high ethical and business standards are becoming increasingly important to our customers, and ultimately to their customers and consumers. We want to get to a point where **steel users and purchasers have total confidence** in their choices. **ResponsibleSteel™** provides us with a fantastic opportunity to do this and to create the world's first certification programme for the industry."

Alan Knight, Global Head of Sustainable Development



Our commitment in reducing carbon footprint

Our ambition is to significantly reduce our CO_2 emissions by 2050 and, in Europe, to achieve carbon neutrality by this date, in line with the objectives of the Paris Agreement and the science-based trajectory for our sector. Supportive policies will be central to achieving this ambition. We need policymakers, NGOs and other stakeholders to actively support the enablers that would accelerate the decarbonisation of steelmaking, in the same way they supported the transition to renewable energy.

Our 2050 carbon ambition

We are building a strategic roadmap based on potential improvements and our suite of breakthrough technologies to achieve carbon neutrality in 2050. In the first step, we intend to reduce our CO_2 emission by 30% by 2030.

The global challenge posed by the transition to lowemissions steelmaking is large and complex and will require multiple solutions. We have built a strategic roadmap based on potential improvements and our suite of breakthrough technologies. The strength of our ≤ 250 million research and demonstration programme is its breadth and flexibility.

While each of our technologies can be stand alone and scaled up individually, we can also integrate them to deliver significant advantages for the various low-emissions steelmaking pathways.

In addition, our innovative approach supports three key underlying principles of a low-emissions circular economy:



Smarter, circular, lower-emissions. This is how we are inventing the steels of the future.

Our 2030 ambition

We intend to reduce our CO_2 emission by 30% by 2030. Our CO_2 roadmap is based on three distinct pathways:

- Clean power steelmaking, using clean power as the energy source for hydrogen-based steelmaking, and longer term for direct electrolysis steelmaking;
- Circular carbon steelmaking, which uses circular carbon energy sources, such as waste biomass, to displace fossil fuels in steelmaking, thereby enabling low-emissions steelmaking;
- Fossil Fuels with Carbon Capture and Storage, where the current method of steel production is maintained but the carbon is then captured and stored or re-used rather than emitted into the atmosphere.



There is no 'one size fits all' solution to move away from emissions-intensive steelmaking. Our technology portfolio enables us to pursue the full range of possible technology pathways, depending on which becomes the most viable in the countries and regions where we operate.

Our 6 breakthrough technologies under development:

Carbon capture and storage – bring down the costs of capturing, purifying and liquifying CO₂ from waste gases. We are building a carbon capture and storage pilot project, 3D, at ArcelorMittal Dunkirk, France, aiming to capture 0.5 metric tons of CO₂ an hour from steelmaking gases by 2021.

We are also collaborating with 11 partners on a project called **Siderwin** to build a 3 metre industrial cell which will test iron ore reduction via electrolysis in our Research centre in Maizières-les-Metz, France. Carbalyst – capture waste gases from the blast furnace and biologically convert it into bioethanol. We launched a €120m project at ArcelorMittal Ghent, Belgium.

IGAR – captures waste CO₂ from the blast furnace and converts it into a synthetic gas that can be reinjected into the blast furnace in place of fossil fuels to reduce iron ore. An industrial pilot of this technology is being developed at ArcelorMittal Dunkirk, France. **Torero** – €40m investment to convert waste wood into biocoal to displace the fossil fuel coal currently injected into the blast furnace. We are building our first large scale demonstration plant in ArcelorMittal Ghent, Belgium.

Reducing iron ore with hydrogen – €65m invested at Hamburg site, Germany, to increase the use of hydrogen for the direct reduction of iron ore.

H2 Hamburg: reducing iron ore with hydrogen

Already today, our Hamburg plant has one of the most efficient production processes in the group due to the use of natural gas in a direct reduction plant (DRI).

A DRI furnace is fed with natural gas (CH_4) , from which approximately 50% of the reaction comes from hydrogen (H_2) , and the remainder from carbon monoxide (CO). The breakthrough technology we are developing should increase the proportion of hydrogen used, up to 100%.

Our vision for the future is to produce green hydrogen power in Hamburg, using windpower

from turbines on the sea, and electrolysis plants, used as reducing agents. The green hydrogen-based process should able us to produce steel with the lowest CO_2 emissions. We are closely collaborating with the university of Freiburg, Germany, to better master the H₂ reduction mechanism before building the adequate experimental installation aiming to produce 100 000 t/y.

We will need to defend our green steel at european level against imported steel not submitted to CO_2 tax.

Do you want to know more?

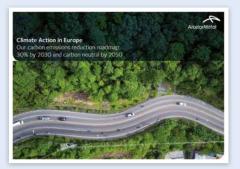
Our commitment in Climate Action in full transparency

We have chosen to publish a dedicated climate action report setting out **our aspirations and approach to reducing steelmaking's carbon emissions, as Arcelor Mittal Group**.

The report puts in black and white the company's commitment to significantly reduce our carbon emissions, as well as signalling our intention for 2030 carbon reduction ambitions. It also sets out the three pathways in details we believe could lead to a deep decarbonisation of steelmaking.









At Arcelor Mittal Europe level, we also describe our ambition and involvement in reducing our CO₂ emissions. Please have a detailed look at our roadmap here:

"As the world's leading steel company, we are committed to the objectives of the Paris Agreement and I want to reassure our stakeholders that we will do our best to contribute effectively to a low-carbon world and, in doing so, help them manage their own risks and ambitions."

Lakshmi N Mittal, Chairman and CEO

We are Bars & Rods

With our 7 locations in **Duisburg** and **Hamburg** in Germany, **Gandrange** in France, **Gijon** in Spain, **Sosnowiec** and **Warsaw** in Poland, **Zenica** in Bosnia–Herzegovina, and finally with our two **Sonasid** plants in Morocco, our Bars & Rods division has more than 5,200 employees **throughout Europe continent**. The Bars & Rods division regroups the steel production plants (steelmaking, rolling of bars, rebars, wire and wire products) as well as the Sales team. We integrated in 2019 the drawing and processing facilities.

We are specialised in the manufacture of **semi-finished products** such as **billets**, **blooms**, **ingots**, **bars and wire rod**, **wire products** or **rebars**, even **rebars in coils**, mostly dedicated to the construction sector, to the engineering and industry market and to automotive and trucks segments. Part of our products are also dedicated to the yellow and green goods industries.

Our **European footprint**, our presence over the world thanks to our internal network, and the wide spectrum of our **technical abilities** are covering the full range of your applications.

New Your Day

Our mission is to fulfil **your requirements and needs** through **safe and sustainable steel**, based on our values of **health and safety**, **quality**, **sustainability** and **leadership**.

You deserve

our premium service

21

We believe in a close partnership, in a **clear understanding** of your needs, in developing the right product you or your end customers are requiring. You deserve **all our attention** and our **premium service**.

Bars & Rods is answering your expectations based on our 4 core principles:

Safety always comes first

THE OWNER AND THE PARTY OF THE

- Quality in our products and service is our mindset
- Performance is our daily concern

1 1

• Communication and mutual understanding are the basics for our optimal collaboration

NATIONAL CONTRACTOR OF A CONTRACTOR OF A

We are steel, the fabric of life

From ships to skyscrapers, **steel**, **and especially Bars & Rods**, **is truly the fabric of life**. Its versatility and ease of use make it an essential part of our daily lives, whether for getting to work, spending family time at home, attending a sport event or skiing!

Our 7 Bars & Rods plants in Europe are producing over 7 million tons of steel every year from iron ore and recycled scrap metal. Bars & Rods steel is used in such major projects as the new Johan Castberg Norwegian oil drilling platforms or the Thames Tideway Tunnel in London or the tire cord used in the giant trucks, to name only a few examples.

We are also ...

- Market leader serving a diverse group of end users catering to the automotive, mechanical engineering & construction segments.
- Working on the **highest technological standards** backed by a unique R&D centre, dedicated for Bars & Rods.
- Staying ahead of the **product development** curve through continuous innovation.
- Continuously investing to maintain technological leadership.





the fabric of life

Your applications are multiple

End use of our steel

You further process our steel in an **extremely broad range of applications**. You are the fabric of life!

Some typical applications are:

- Steel cord and tire cord for rubber reinforcement
- Soft wires for typical application like fencing wires, cork wires
- Bolts and nuts made by **cold heading**, **cold extrusion** or **hot forming**
- Precision machined parts like small shafts made from our wide range of **Free cutting steels**
- **Cold drawn mechanical parts** for automotive or machinery and various industrial applications
- Alloyed spring grades for valves, transmission, clutch and engines
- Suspension springs for stabilisation bars, rail clips
- Bearings
- Ropes & cables
- \cdot Welding
- **Forged parts** for the automotive industry, e.g engines, electric motors, transmission, chassis and steering parts
- Cryogenic construction thanks to our special concrete reinforcing steel bar
- Mesh and Rebars for construction
- · Prestressed concrete wire/strands
- Bedding & seating wire

among many other applications

Boldness

0.000

0.0.0

Our steel, your future: product & process development

With 1,500 full-time researchers based in our 11 research sites around the world, our Global Research & Development (R&D) is highly business oriented, ensuring a shorter time to market and improved competitiveness in a variety of sectors. In 2019, Arcelor Mittal's R&D expense was \$301 million. Among the 6 pillars of our Global R&D strategy, we are fully focused on:

- higher added value products for construction, our holistic platform Steligence[®]
- developing breakthrough process innovation (cost efficient & sustainability benefits)
- continuing our transformation for being fully a **digital enterprise**
- seizing the potential of **additive manufacturing**.

We are aiming to be **the supplier of choice for innovative products**.



Our Research & Development centres around the world:

Belgium	Gent
	Liège
Brasil	Tubarão
Canada	Hamilton
France	Maizières-lès-Metz
	Montataire
Italy	Taranto
Luxembourg	Esch-sur-Alzette
Spain	Avilés, Bilbao
United States	
of America	East Chicago

"Innovation means change and adaptation... [It] is about bringing fresh thinking and a new perspective to everything we do. It is about challenging conventional wisdom and finding creative solutions"

Lakshmi N Mittal, Chairman and CEO

Your future Bars & Rods products

Our dedicated product development teams are supporting you in understanding your needs and expectations for your current requirements for your further innovation, and even for incremental progress.

Our approach is usually based on short-term / daily technical support but can be extended on medium-term co-development. To address the right product properties to your needs, we based our process on the five following steps:

- Clearly identify and express yours needs
- Design **solutions**
- Go through a validation process from lab to in-situ when needed
- Go for **industrialisation**
- Proceed to the final review and **continuous improvement**

Our experience to fit with your needs:

- Assist you with our experts, with an ad hoc **technical support indoor** or **in your facilities** (from your initial process parameters optimisation to your end-products characterisation)
- provide **products characterisation**: expertise, cleanliness, structural homogeneity, mechanical characteristics, corrosion resistance and surface characterisation like surface morphology, coating
- develop or co-develop new steel solutions to address future segment needs. Our latest developments
 are the high strength bainitic grades (Solam®) to reduce drastically energy consumption, the high plasticity
 and high strength grades for cold heading (FreeForm®), the high machinability grades (ImMAC®)
- develop collaborative partnerships, including academics, further R&D partners

Your benefit from our Global R&D network

- Make use of our **developed numerical models** to describe the steel production process, from liquid metallurgy to hot rolling and cold forming connecting microstructural behaviour, thermomechanical process
- Make use of our **specific scaled pilot facilities** for trials in semi-industrial conditions: fully equipped, digitalised and instrumentalised mini-continuous billet caster, wire rod rolling mill, drawing mill, ultrasonic tank pilots, heat treatment facilities

WAAM

Our dedicated Research and Development Bars & Wires centre, located in Maizières-lès-Metz, France is strongly supporting our Business Division in improving steel processing and engineering and in preparing technological innovation.

We dedicate a substantial budget to developing disruptive technologies. One example amongst many of them: **our 3D printing technology**, commonly called **WAAM**. This **Wire & Arc Additive Manufacturing**



development started in 2016. This initiative consists of studying the potential of standard welding grades already produced in our mills, to be used for WAAM and to develop specific new grades adapted to/for this technology.

We also investigate the feasibility of parts using different welding strategies thanks to our 3D printing pilot. We can design and print demonstrators to assess the interest of this new technology for Automotive, Construction or Industry sectors.

Our product offer in detail and our mill capabilities

1227

HI-H

B&R | Overview | Our Bars & Rods offer 29



Our product offer from our European mills

QUALITY RANGE ¹ Bars & Rods	Duisburg (DE)	Gandrange (FR)	Gijon (ES)	Hamburg (DE)	Sosnowiec (PL)	Warszawa (PL)	Zenica (BA)	Sonasid (MA)
Alloyed spring								
Alloyed spring	×	×	×	×	×	×		
Superclean	×							
Bearing	×	×		×		×		
Chains	×	×	×	×	×	×		
Cold heading	×	×	×	×	×	×		
Drawing and cold rolling								
Low carbon	×	×	×	×	×	×	×	×
Medium carbon	×	×	×	×	×	×	×	
High carbon	×	×	×	×	×		×	
Engineering steels ²								
Carbon steels	×	×				×		
Steels for quenching and tempering	×	×				×		
Case hardening steel	×	×				×		
Micro-alloyed steel	×	×				×		
Bainitic steel	×	×				×		
Free-cutting								
Leaded	×	×	×			×		
Unleaded	×	×	×	×	×	×		
Prestressed concrete	×		×	×	×			
Steel cord			×	×	×			
Welding								
Non-alloyed	×		×	×	×		×	×
Alloyed	×			×				

31

QUALITY RANGE ¹ concrete reinforcement and geotechnical bars	Duisburg (DE)	Gandrange (FR)	Gijon (ES)	Hamburg (DE)	Sosnowiec (PL)	Waszawa (PL)	Zenica (BA)	Sonasid (MA)
Rebar						×	×	×
Mesh	×	×	×	×	×		×	×
Krybar						×		

¹ This is a non exhaustive list, please contact your sales manager for additional requests (cf pages 42,43,44) ² Including qualities for forging/bright bars, requested in industry sectors

Our European mill capabilities

			Duisburg	g (DE)	Gandrang	ge (FR)	Gijon (ES)
Semis	5						
	Vacc	cum degassing	×				×
		tro-magnetic stirring	×		*		×
	Cast	ed semis (mm)		0 x 280	~		150 ²
			160 ²	²; 320²			
Wire							
	Finisł	hed products	Wire F	Rod	Wire F	Rod	Wire rod
			•				•
D		ensions (mm) (min.)	5.5		15	14.3	5.5
Ilin		ensions (mm) (max.)	25		52	42.5	23
d rc	il tatior	Coil forming	Loop cooling		Gare		Stelmor
e CO	Coil presentation	Coil weight (t) (max.)	1.5; 2; 2		2.4 ; 2		2.6
Wire rod rolling		Coil length (mm) (max.)	230		150		2200
-	Online inspection	Surface control	×		×		×
	or insp	Dimensions gauge	×		×		×
	Proc	essing wire rod	on req	uest	on request		on request
Bars							
	Finisł	hed products	Round corner square	Special bar quality	Special bar		
					•		
_		ensions (mm) (min.)	110²	115	15	14.3	
ling		ensions (mm) (max.)	180²	170	103	70.4	
Bar rolling	Conditioning	Bundle weight (t) (max.)	10		8		
ĕ	Cond	Bundle length (m) (max.)	16		16		
	line ection	Surface control			×		
	Online inspection	Dimension gauge			×		
~	fline	Surface control	×		×		
Inspection & Finishing	Heat Offline treatment inspection	US	×		×		
spection Finishing	at ment	Q+T	on request	on request			
Insp. Fir			on request	on request			
	Peeli	ing		on request	on request		

Hamburg (DE)	Sosnowiec (PL)	Warszawa (PL)	Zenica (BA)	Sonasid (MA)
×		×		
× ■ 125 ² ;130 ² ;140 ²	**		120 ² ; 130 ² ; 150 ²	130²;140²
125-,130-,140-		■ 140°, 160°, 220°	120-, 130-, 150-	130-,140-
Wire rod	Wire rod		Wire Rod	Wire Rod
Wile rod	- Whe rou			
5.5	5.5		5.5	5.5
17	21		12	16
Stelmor	Stelmor		Stelmor	Stelmor
1.5; 2	2.4		1.3	2
1600 for 2t; 1200 for 1.5 t	2015		1250	1200
×	×		· ·	
×	×			
on request	on request			
		Special bar quality		Hot rolled bars
				•
		20		10
		80		40
		10		2
		12		15
		×		
		×		
		×		
		×		
		×		
		on request		

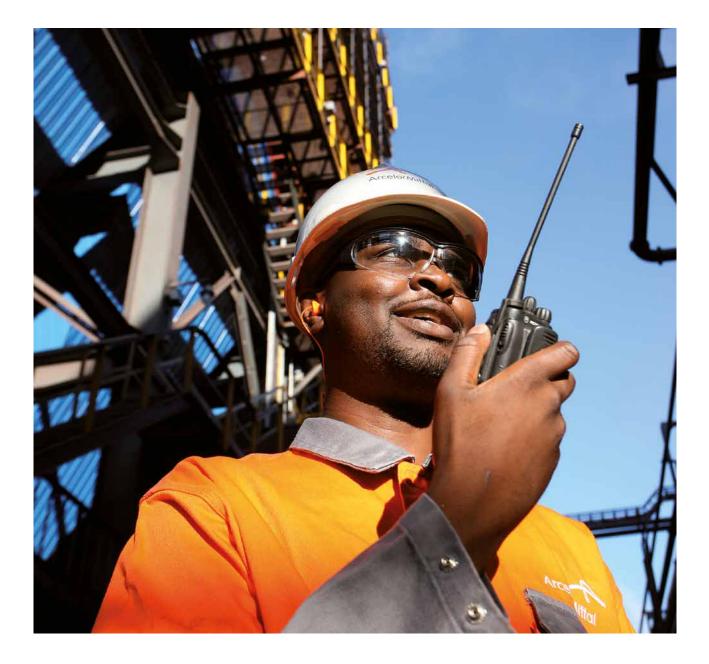
semis are supplied from ArcelorMittal Duisburg, Hamburg, Warszawa
 semis are supplied from ArcelorMittal Dabrowa

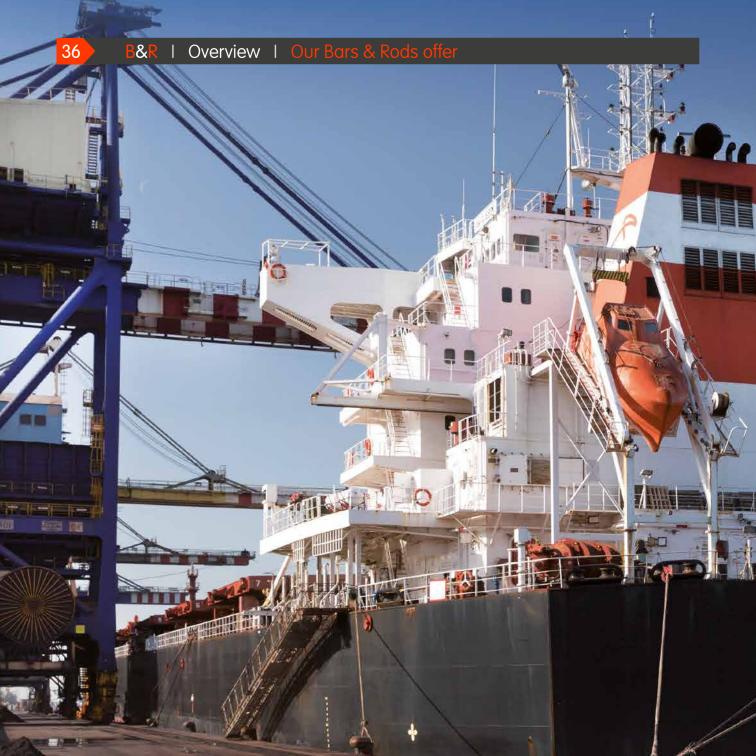
33

		Waszawa (PL)	Waszawa (PL) Zenica (BA)		Sonasid (MA)	
Rebar	5					
	Finished products	in bars	in coils	in bars	in wild coils	in bars
	Diameter (mm)	10-40	8-25	8-32	5.5-16	8-40
бı	Bundle weight (t) (max.)	2.5		2.5		2
ionir	Bundle length (m) (max.)	18		12		15
Conditioning	Coil weight (t) (max.)		2.1		2	
Co	Coil length (mm) (max.)		700		2050	

	Belval (LU)	Hunedoara (RO)	Dabrowa (PL)
Other Semis			
Vacuum degassing		×	×
Electro-magnetic stirring			×
Casted semis (mm)	270 x 155	270 x 240; 310 x 280	220 x 190; 300 x 280; 400 x 280
· · ·		• 120-180; 200; 250; 270; 310	130 ² ; 140 ² ; 160 ²

CERTIFICATIONS	Duisburg (DE)	Gandrange (FR)	Gijon (ES)	Hamburg (DE)	Sosnowiec (PL)	Waszawa (PL)	Zenica (BA)	Sonasid (MA)
IATF-16949	×	×			×	×		
ISO 9001	×	×	×	×	×	×	×	×
ISO 14001	×	×	×	×	×	×	×	×
OHSAS 18001	×	×	×	×	×	×	×	×
ISO 50001	×	×	×	×	×	×		×
BES 6001			×		×			





37

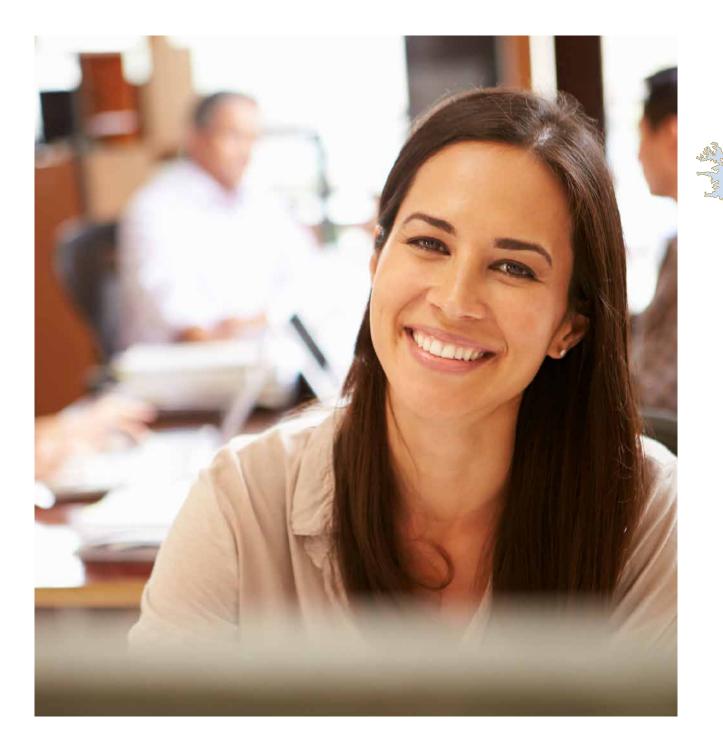
Our Bars & Rods are everywhere

Our unique combination of production plants offering different metallurgical routes and their specific locations in Europe and beyond, will provide you the required solutions to fulfil your needs.

AM QUEBEC MAJURO









41

European continent

1-Austria, Germany, the Netherlands, Switzerland
Vohwinkelstraße 107
47137 Duisburg
Germany
T +49 (0)203 606 69077
joachim.scheibe@arcelormittal.com

2-Belgium, France, Luxembourg

66, rue de Luxembourg 4221 Esch-sur-Alzette G.D. of Luxembourg **T** +352 5313 3432 xavier.monfort@arcelormittal.com

3-Bosnia and Herzegovina, Albania, Croatia, Kosovo,

Montenegro, North Macedonia, Slovenia, Serbia Bulevar Kralja Tvrtka I, 17 72 000 Zenica Bosnia & Herzegovina T +387 32 467 051 damir.husakovic@arcelormittal.com salesamz@arcelormittal.com

4-Bulgaria

26 Antim street, 1st floor, office 6 1303 Sofia Bulgaria **T** +359 2 87 09 028 georgi.genov@arcelormittal.com 5-The Czech Republic, Hungary, Slovakia Francouzská 6167/5 708 00 Ostrava-Poruba Czech Republic T +420 553 401 005 jan.abrahamcik@arcelormittal.com

6- Denmark, Finland, Iceland, Norway, Sweden

Västmannagatan 6 11124 Stockholm Sweden **T** +46 853 48 09 48 michael.wild@arcelormittal.com

7- Greece & Cyprus

9. Saki Karagiorga Str. 166 75 Glyfáda Greece **T** +30 697 435 2787 aleksandar.rankovic@arcelormittal.com

8-Italy

Viale Brenta, 27/29 20139 Milano Italy **T** +39 02 80650 234 angelo.agnelli@arcelormittal.com

9-Poland

Niwecka 1 41–200 Sosnowiec Poland **T** +48 32 736 1401 tomasz.laczkowski@arcelormittal.com

Kasprowicza 132 01–949 Warszawa Poland **T** +48 22 835 80 20 miroslaw.czub@arcelormittal.com

10-Romania

9 Intrarea Tudor Stefan 2nd floor, AP.4, Sector 1 Bucharest 11655 Romania **T** +40 722 226 127 daniela.voicuagache@arcelormittal.com

11-Spain and Portugal

Ctr. Toledo. Km. 9,200 E-28021 Madrid Spain T +34 91 797 23 00 juan-carlos.hurtado@arcelormittal.com 43

12-The UK and Ireland

Fore 2, Huskisson Way, Shirley, Solihull, West Midlands B90 4SS United Kingdom **T** +44(0)121 713 6600 andrew.dejong@arcelormittal.com

Main other countries

13-Morocco

Boulevard Moulay Ismaïl, Route de Rabat Aïn Sebâa, Casablanca Morocco **T** +212 529 060 303 m.hmeid@sonasid.ma

14-Export other than NAFTA

Akatlar Mah. Yildirim Oguz Goker Cad. Orkide Sok. No:3/23 Maya Plaza K:11-12 34335 Beşiktaş-Istanbul Turkey **T** +90 212 317 49 22 cansu.cobanoglu@arcelormittal.com

Further markets

CIS, Commonwealth of Independant States

Bolshaya Ordynka str., 44/4 119017 Moscow Russia **T** +7 495 660 7088 ivan.podolny@arcelormittal.com

NAFTA countries, North American Free Trade Agreement

1 S, Dearborne street, 18th floor Chicago, IL 60603 United States of America **T** +1 312 899 39 39 r.ravi@arcelormittal.com

Notes

46 E&R I Overview I Our sales network, your contact



Bars & Rods

Headquarters: 66, rue de Luxembourg L-4221 Esch-sur-Alzette G.D. of Luxembourg

barsandrods.arcelormittal.com

We welcome your feedback for improvements : barsandrods@arcelormittal.com



Our B&R Overview brochure



Our **Product Offer** brochure Our **Process Feasibility** brochure is on request. Please contact your sales office.