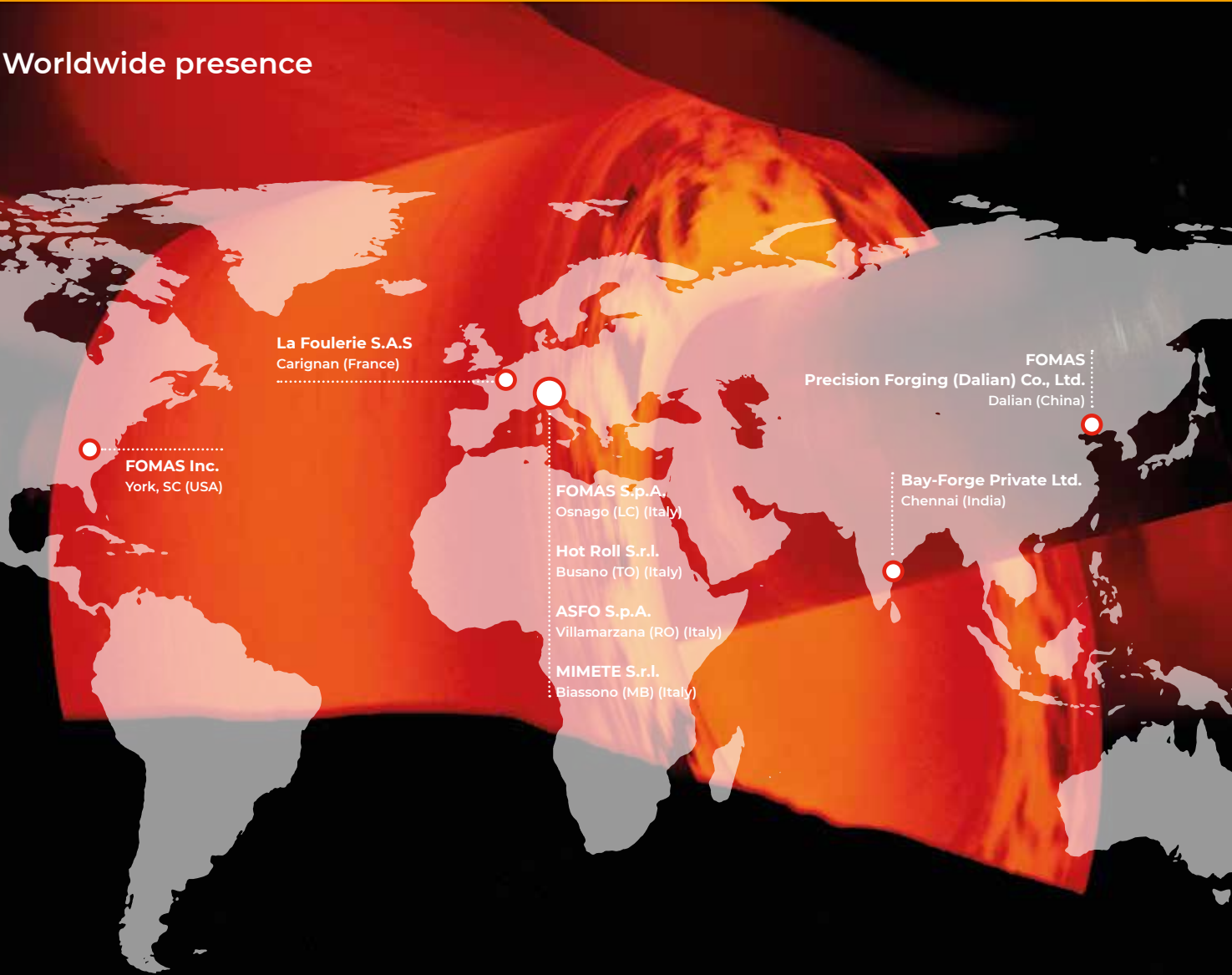


INDUSTRIAL

Since 1956 the reliable partner
of Industrial equipment manufacturers

Worldwide presence



| FORGINGS | | LARGE RINGS | | SMALL RINGS | | POWDERS | |
|----------|-----------|-------------|-----------|--------------|----------|-------------|--------|
| FOMAS | BAY-FORGE | ASFO | FOMAS USA | FOMAS DALIAN | HOT ROLL | LA FOULERIE | MIMETE |

Open die forgings, seamless rolled rings
and metal powders for Industrial applications

FOMAS Group is an established global partner for Industrial applications, with dedicated engineering and production of **open die forgings, seamless rolled rings and metal powders**.

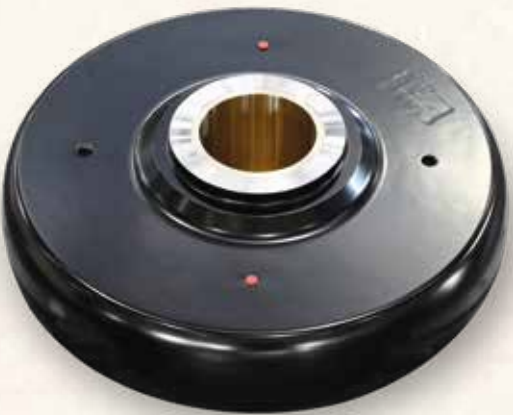
Our decades of experience have made us an essential partner to our clients. With our network of 8 production sites, we provide deliveries to all our customers with excellent lead times.

TURNKEY SOLUTIONS

We share know-how within the FOMAS Group, optimizing processes and materials, minimizing cost, and maximizing product quality.

Our added value is to provide turnkey solutions, from forging and ring rolling to the finished machined part; delivered according to customer specific logistic standards. Starting from a thorough analysis of the customer's design, then engineering the production of contour forgings close to net shape up to the finished or preassembled part.

All the required machining processes such as milling, lathe-machining, drilling, sawing, cladding and others can be carried out in our manufacturing units.



OUR
PURPOSE

We enable sustainable energy, reliable power and limitless motion by moving the needle in mastering the science of metals with a responsible approach.

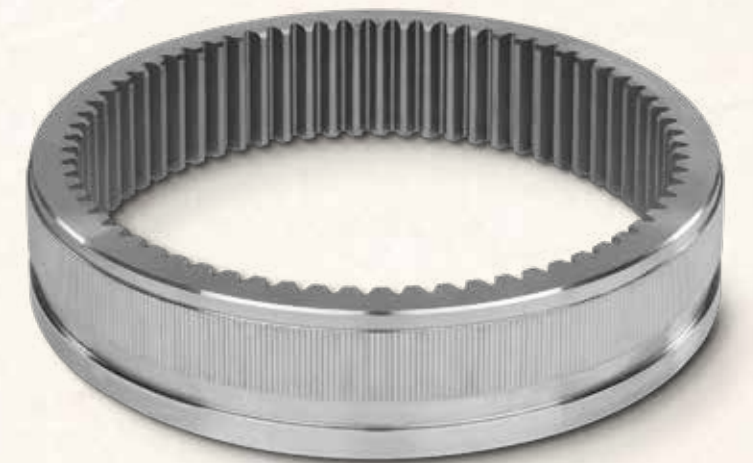


Transmission Systems

FOMAS Group has confirmed over the years its position as a leader in the supply of transmission components such as bearings, gears, and shafts from its production range of small rings, large rings & open die forgings.

Adapting its services and processes to address specific customers' end user needs, the Group has the capabilities to supply reliable components and efficient services for a wide range of requirements. Moreover the rings are produced to provide life time service & guarantee optimal performance. Following increasing variable needs in terms of volumes from the different markets we have been able to harness dedicated supply chain management solutions for each customer.

FOMAS Group has the ability to manage heat treatment and machining beyond its own capabilities through the cooperation with specialized & reliable partners.





Bearings

- Rings for Cylindrical Roller Bearings (CRB)
- Rings for Spherical Roller Bearings (SRB)
- Rings for Deep Groove Ball Bearings (DGBB)
- Rings for Angular Contact Ball Bearings (ACBB)
- Rings for Barrel Roller Bearings (BRB)
- Rings for Axial Spherical Roller Bearings (ASRB)
- Rings for Spherical Roller Thrust Bearings (SRTB)
- Rings for Self Aligning Ball Bearings (SABB)
- Rings for Spindle Bearings (SB)

MAIN APPLICATIONS

- Railway
- Industrial Equipment
- Automotive
- Wind
- Earth moving
- Naval
- Cranes



Gears

- Rings for gears
- Rings for planetary gears
- Hollow shafts
- Rings for sun gears
- Rings for intermediate gears
- Rings for output gears
- Discs
- Shafts
- Rings for bevel gears

MAIN APPLICATIONS

- Industrial Equipment
- Automotive
- Wind
- Naval
- Cranes





Wind Application

FOMAS Group contributes to the Wind Market growth through the supply of elements for cranes, hydraulic hammers, tower sections and other motion transmission elements for the installation of wind towers, both onshore and offshore.

An ever-growing Gearbox market for wind applications has gradually been generating a sector of its own. FOMAS Group is actively participating to the increasingly demanding requirements of this market, not only in terms of volume but also in terms of components characteristics with close attention to the environmental impact of its activities.

FOMAS Group is now an acknowledged leader in this market.



Automotive Application

E-MOBILITY

E-mobility is changing not only the source of energy which is used but also the way it is transmitted to the vehicle.

FOMAS Group has already been working together with its customers, developing the future of a more sustainable mobility. The sector requires a new approach in the production of components for the transmission elements, as the surge in the sales of greener vehicles, not only full EV but also hybrid cars, combines the use of both combustion and electric power.





Earth Moving and Mining

UNDERCARRIAGE

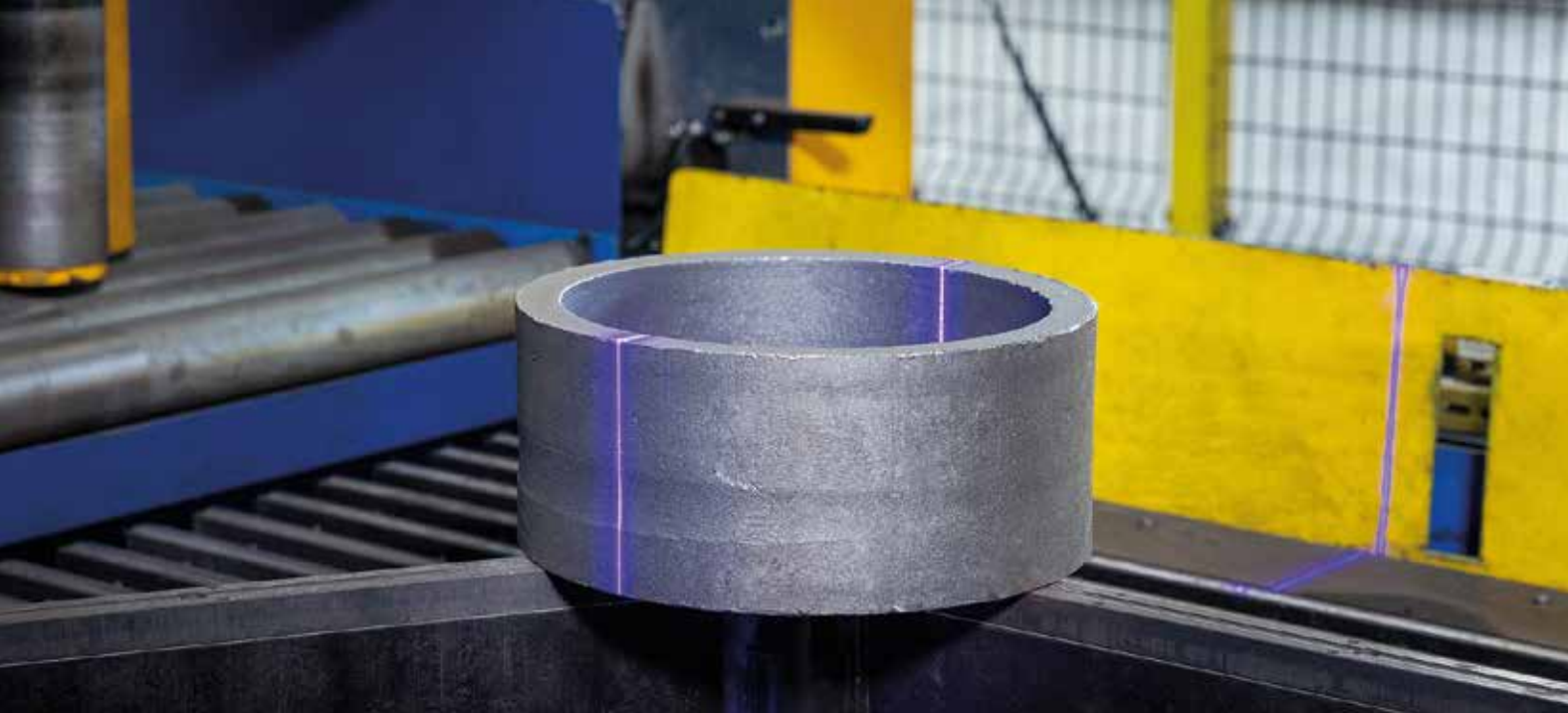
- Slewing Rings
- Bearings
- Hubs
- Semiclosed die
- Rollers
- Idlers
- Specially designed parts based on customer inputs



TUNNELLING

- Slewing Rings
- Bearings
- Hubs
- Cutters





Other applications

NAVAL

- Pre shaped elements for naval shafts
- Slewing bearing for orientable propellers
- Connecting elements
- Foils
- Rudders



METAL FORMING TOOLING

- Molds
- Dies



HVAC

Heating, Ventilation and Air Conditioning

- Nozzles
- Connecting elements
- Shafts
- Hubs

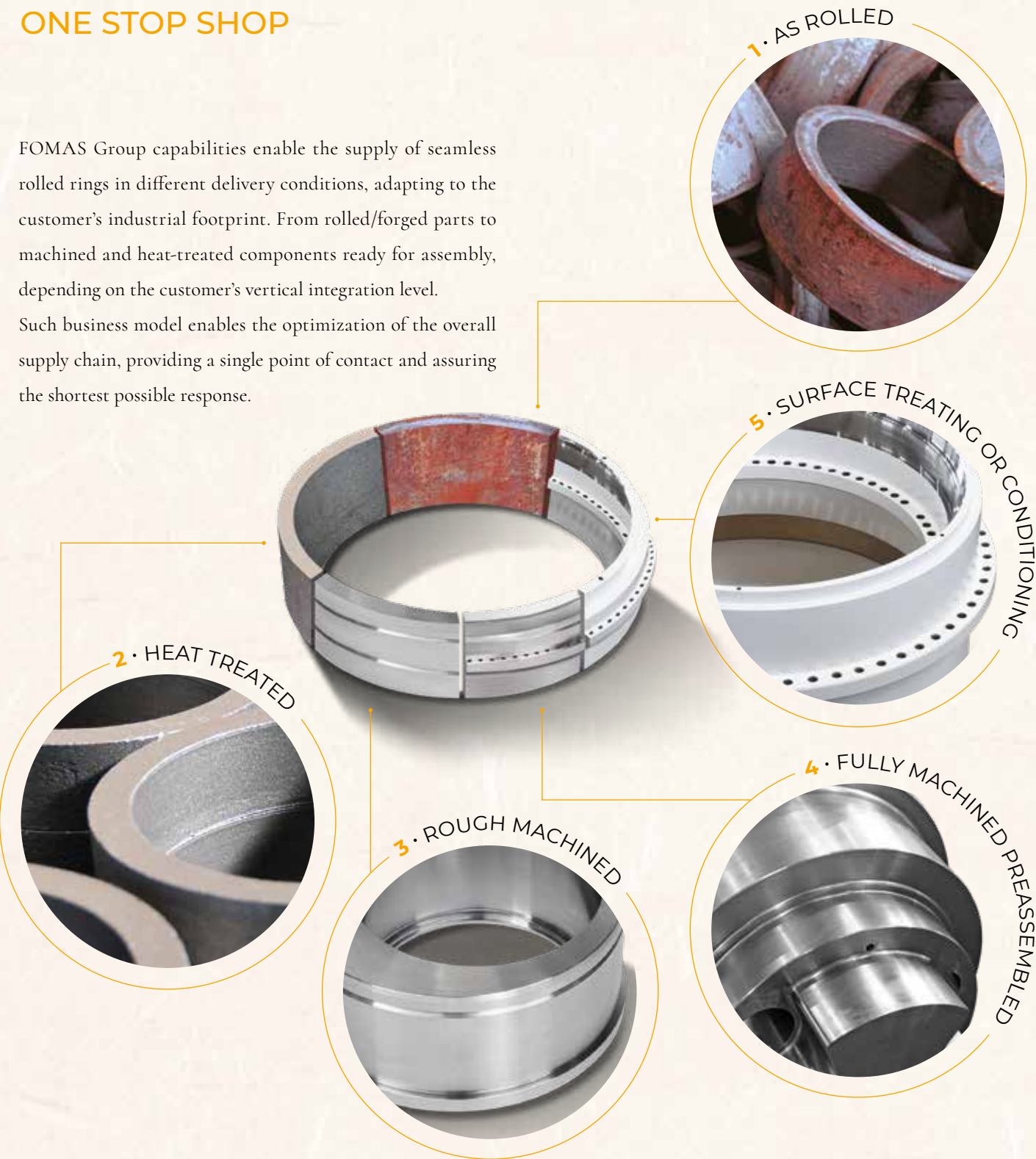
MACHINERY

- Hydraulic presses components
- Structural elements
- Discs
- Extrusion rings
- Rolls
- Tubes



ONE STOP SHOP

FOMAS Group capabilities enable the supply of seamless rolled rings in different delivery conditions, adapting to the customer's industrial footprint. From rolled/forged parts to machined and heat-treated components ready for assembly, depending on the customer's vertical integration level. Such business model enables the optimization of the overall supply chain, providing a single point of contact and assuring the shortest possible response.



FOMAS Group has 8 production facilities with a single Sales department for all the Group. Such arrangement means having a single sales interface capable of channelling production to the most suitable location, reflecting the specificity of the request received.

FOMAS Group supply chain is able to offer a customised demand management service in order to fulfil the highest standards of just in time delivery (JIT). Supply to forecasts are managed in the most efficient way reducing costly stocks

but also optimising communication with the customer through Electronic Data Interchange (EDI) which also contributes to the environment by working 100% paperless.

The latest investments in technologies done by the Group, aim to shorten the customer's supply chain.

With this approach the Group is committed to add to its components increasingly important added value in terms of cost efficiency and sustainability.



OUR MISSION

We play to win with innovation, responsiveness and a passionate commitment to long-term partnerships.



The Group

FOMAS Group is an established global partner for Industrial applications, with **dedicated engineering and production** of open die forgings, seamless rolled rings and metal powders with the highest levels of quality and delivery service.

Our purpose is to enable sustainable energy, reliable power and limitless motion by moving the needle in mastering the science of metals with a responsible approach.

The Group's Mission is to play to win with **innovation, responsiveness** and a **passionate commitment to long-term partnerships**.

Our vision for the future is to be a multicultural, people-centric organization leading our core businesses by leveraging cutting-edge competencies in the science of metals and embracing the digital transformation.

Everything we do is underpinned by our core values of: **proactivity, integrity, meritocracy, accountability, reliability, transparency & trust**.

The Group has over **1,400 employees** all around the world. Working with us signifies entering a team which is focused on continuous evolution, a company that measures its success in the achievement of excellence at each and every step of function and process.

The attention dedicated by our Group to **safeguard the health and safety** of its employees and to improve the environmental performance of its activities represents a key reference in continual improvement of business reliability. We believe this essential to ensure a long term health of our business.

FOMAS Group promotes safety and environmental protection in every aspect of its production cycle. This mindset is the foundation on which the company builds the continuous improvement of environmental, safety and health conditions in its sites worldwide.

An integrated group HSE management system, is the mean through which this goal is pursued.

In a continuous effort to reduce its impacts, FOMAS Group **sustainability** process adopts also energy management best practices. An example is the adoption of certified energy management systems and best practice sharing between the sites.

1,400
employees





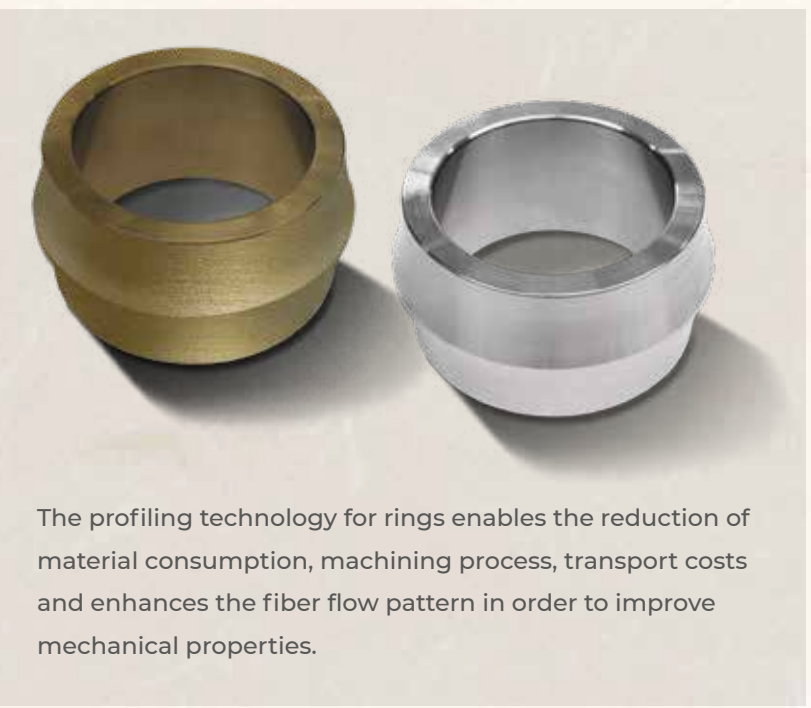
Rings

- max. ring diameter: 7,000 mm
- max ring height: 1,250 mm
- max ring weight: 20 ton¹
- max ingot weight: 40 ton

Rolling Mills
19 lines (axial/radial)

State of the art in-house heat treatment equipment, with an automated mobile conveyor for loading/unloading operations. This means quick, consistent, and optimized transfer time from furnace to tank.

Our production sites across the globe roll approximately 105,000 tons of rings per year.



The profiling technology for rings enables the reduction of material consumption, machining process, transport costs and enhances the fiber flow pattern in order to improve mechanical properties.

| | | WEIGHT | | D ext | | HEIGHT | |
|--------|------------------------|-----------|-------------|--------------------------|----------|----------|---------|
| | | kg | pounds (lb) | mm | inches | mm | inches |
| EUROPE | HOT ROLL | 1-82 | 2.2-180 | 100-1,000 | 3.9-39.4 | 25-220 | 0.9-8.6 |
| | LA FOULERIE | 1-50 | 2.2-110 | 100-500 | 3.9-19.6 | 25-200 | 0.9-7.8 |
| | ASFO | 80-15,000 | 176-33,000 | 2,500-7,000 ² | 98-275 | 60-1,250 | 2.4-49 |
| USA | FOMAS USA | 6-1,306 | 13-2,879 | 191-3,048 | 7.5-120 | 35-508 | 1.4-20 |
| CHINA | FOMAS DALIAN | 2-2,500 | 4.4-5,511.5 | 160-2,700 | 6-106 | 30-750 | 1-29.5 |
| INDIA | BAY-FORGE ³ | 20,000 | 44,100 | 5,500 | 216 | 1,000 | 39 |

¹ up to 5,500 diameter mm
² 2,500 max / 7,000 max depending on rolling mill
³ Only max values reported. Minimum values depending on material

Forgings

- Actual as forged weight and dimension limits**
- max. diameter: 5,500 mm
 - max. length: 18,000 mm
 - max. ingot: 125 ton ESR (equivalent to 170 tons conventional ingot)
 - max. shipped weight: 100 ton

Six state of the art automatic UT stand both vertical and horizontal, produced on FOMAS design and qualified by the major turbine manufacturers. Titanium and Aluminum heat treatment production line equipped with electric drop furnace.

- Presses**
- The forgings are processed in smaller or larger presses depending on the contours and size.
- Our presses for open die forgings (all with integrated manipulators):
- 12,500 ton
 - 6,000 ton
 - n° 2 - 3,500 ton
 - 2,000 ton

- Electro Slag Remelting plant**
- Three ESR stands
 - New 125 ton ESR ingot equivalent to a conventional ingot of 170 ton.
 - Pressurized ESR for top quality remelting of special steel & stainless steel under full inert gas atmosphere.

Horizontal spray-quench

- Differential heat treatment
- Fully control on drasticity
- Cooling zone control
- Time evolution of drasticity control
- Full rotor stability due to rotation
- Very uniform properties
- Plc controlled » fully reproducible process (no variance)
- Full control on position/distance of nozzles
- Green process



Boost your innovative projects with our customised metal powders



METAL POWDERS

MIMETE, part of FOMAS Group, produces gas atomized (Argon and Nitrogen) metal powders in Iron, Nickel and Cobalt base alloys thanks to a tailor made VIGA plant.

Powders are available for additive (PBF, DED, and Binder Jetting), HIP (Hot Isostatic Pressing) and MIM (Metal Injection Molding) applications.

WHY MIMETE

Alloy design, development, and production in deep partnership with customers.

Technical support on new applications and critical specifications.

Advanced laboratory testing on powders. Certified ISO 9001, EN 9100, ISO 45001 & ISO 14001.

PRODUCT RANGE

MARS (Iron base powders)

Standard grades (available in stock): Mars 17-4PH, Mars 316L, Mars F51, Mars F53, Mars M300

VENUS (Nickel base powders)

Standard grades (available in stock): Venus 625, Venus 718, Venus X

NEPTUNE (Cobalt base powders)

Standard grades (available in stock): Neptune 75

Customized grades: powders designed according to customer requirements

OUR VISION

To be a multicultural, people-centric organization leading our core businesses by leveraging cutting-edge competencies in the science of metals and embracing the digital transformation.

MATERIALS

Mastering the Science of Metals is FOMAS Group's core business. This is why it is able to work with **any type of steel and non-ferrous alloys**:

- Austenitic
- Superalloys
- Carbon and Low Alloys Steels
- Duplex and Super Duplex
- Martensitic
- Titanium
- Aluminum

Other materials and alloys are available on request.



mastering
the science
of metals



Certifications

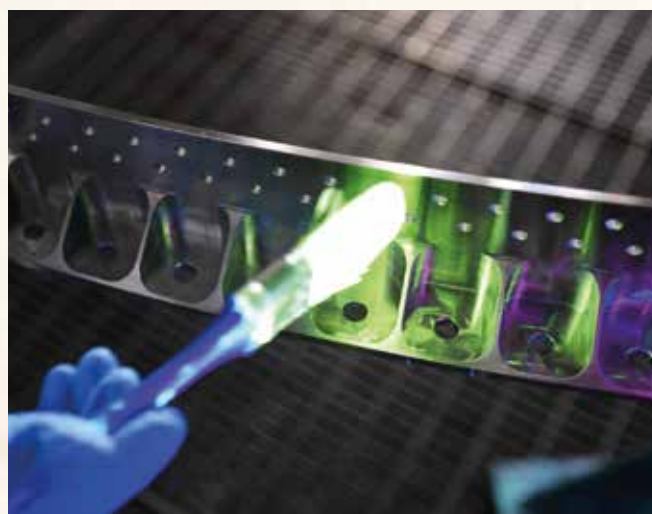
FOMAS Group Companies are certified by DNV in accordance the major ISO standard.

Moreover each company is certified by the most prestigious bodies in specific sectors.

FOMAS Group's central research and development department aims to respond to customer needs.

Our approach is to focus on safety, cost reduction, minimize end waste.

Moreover we provide the highest level of quality and safety throughout the entire manufacturing cycle and at the same time ensuring the least possible impact on the environment.



Scan the QR code to consult all our certifications and qualifications.





HOT ROLL ITALY

LA FOULERIE FRANCE

FOMAS USA

FOMAS DALIAN CHINA

ASFO ITALY

BAY-FORGE INDIA

FOMAS ITALY

MIMETE ITALY

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