

# AERONAUTICS, SPACE & DEFENSE

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MASTERING THE SCIENCE OF METALS



# THE GROUP

FOMAS Group is a trusted global partner and industry leader in open die forgings, seamless rolled rings, and metal powders. Since 1956, the Group has combined advanced metallurgy, innovation, and precision engineering to deliver high-performance, sustainable solutions – supported by a strong global footprint.

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

**Our core values: proactivity, integrity, meritocracy, accountability, reliability, transparency & trust.**

**1,400**  
EMPLOYEES



The Group has around 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 step of function and process. The attention dedicated by our Group to safeguarding the **health and safety** of its employees and to improving the environmental performance of its activities represents a key reference to the continual improvement of business reliability. We believe this is essential to ensure the 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 means 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.

	EUROPE		ASIA		NORTH AMERICA	MARKETS
COUNTRY	ITALY*	FRANCE	INDIA*	CHINA	USA*	
PRODUCTION	<ul style="list-style-type: none"> <li>• FORGINGS</li> <li>• RINGS</li> <li>• METAL POWDERS</li> </ul>	<ul style="list-style-type: none"> <li>• RINGS</li> </ul>	<ul style="list-style-type: none"> <li>• FORGINGS</li> <li>• RINGS</li> </ul>	<ul style="list-style-type: none"> <li>• RINGS</li> </ul>	<ul style="list-style-type: none"> <li>• RINGS</li> </ul>	<b>POWER GENERATION</b> powergen@fomasgroup.com <b>AERONAUTICS, SPACE &amp; DEFENSE</b> aerospace@fomasgroup.com <b>OIL &amp; GAS</b> oilandgas@fomasgroup.com
PLANT	<ul style="list-style-type: none"> <li>• FOMAS</li> <li>• ASFO</li> <li>• HOT ROLL</li> <li>• MIMETE</li> </ul>	<ul style="list-style-type: none"> <li>• LA FOULERIE</li> </ul>	<ul style="list-style-type: none"> <li>• BAY-FORGE</li> </ul>	<ul style="list-style-type: none"> <li>• FOMAS DALIAN</li> </ul>	<ul style="list-style-type: none"> <li>• FOMAS USA</li> </ul>	<b>INDUSTRIAL</b> industrial@fomasgroup.com <b>METAL POWDERS</b> metalpolders@fomasgroup.com

\*Manufacturing sites for aerospace and defense components are located in Italy, India and USA.

# AERONAUTICS, SPACE & DEFENSE SOLUTIONS



## FORGINGS AND ROLLED RINGS VERTICALLY INTEGRATED SUPPLY

FOMAS Group manufactures open die forgings and rolled rings for the following Aeronautics, Space & Defense applications:

**Space**

- Structural interfaces
- Engine parts
- Tanks parts

**Aeronautics**

- Structural parts
- Engine parts

**Defense Equipment**

With decades of experience manufacturing industrial components, we support customers worldwide through a **global manufacturing network** that ensures short lead times. We provide **turnkey solutions** from forging and ring rolling to fully machined parts, backed by dedicated machining and testing hubs. After a thorough analysis of the customer’s design, we engineer near-net-shape forgings and perform all machining in-house (milling, turning, drilling, threading, and more) through to the finished component.

**Nadcap-accredited in-house processes:**

- Metallic materials manufacturing
- Heat treatment
- Non-Destructive Testing (including penetrant and ultrasonic testing)

**Machining hub:**

- Advanced machining for finished parts
- Integrated inspection and testing: destructive, non-destructive, and dimensional (CMM)

**MATERIALS**

- Stainless steels
- Precipitation-hardening alloys
- Superalloys (nickel-, cobalt- and tungsten-based)
- Titanium alloys
- Aluminium alloys
- Copper alloys



Scan the QR code to access a more detailed list of our solutions for Aeronautics, Space & Defense.

## CUSTOMER REFERENCES

- Avio
- ArianeGroup
- OHB
- Vikram Sarabhai Space Centre (VSSC)
- Thales Group
- Airbus Defence & Space
- Avio Aereo (GE Aviation)
- Leonardo
- Safran



Scan the QR code for a complete and up-to-date list of references and customer qualifications.

## METAL POWDERS

FOMAS Group produces **nickel-, iron- and cobalt-based** alloy atomized metal powders through a **VIGA** plant. Our powders are available for Additive Manufacturing (Powder Bed Fusion, Directed Energy Deposition and Binder Jetting), Thermal Spray and HIP (Hot Isostatic Pressing) manufacturing applications. Our metal powders stand out with their **sphericity and flowability**, giving a competitive edge in your applications. To ensure the highest standards, each cast undergoes a rigorous testing process, involving over 20 tests.

### EQUIPMENT

- **Vacuum induction melting and inert gas atomization** ensures the highest purity and sphericity of the powder.
- **Complete inert post processing** comprehensive of handling, packaging, air classification, and sieving facilities.

All machines are controlled by PLC panels for powder process route integration and maximum control for traceability.

### METAL POWDERS FOR AERONAUTICS, SPACE & DEFENSE

#### Iron-based alloys

- MIMETE® 17-4PH

#### Cobalt-based alloys

- MIMETE® N 75

#### Nickel-based alloys

- MIMETE® V 718
- MIMETE® V X
- MIMETE® V 625



### PARTICLE SIZE DISTRIBUTION

<b>Small</b> 0-20 µm	<b>Medium</b> 15-45 µm or 20-60 µm
<b>Large</b> 50-150 µm or 50-100 µm	<b>One size</b> 0 - 150 µm or 0-300 µm

### APPLICATIONS

3D printing (PBF)	Cladding
DED	Thermal Spray

### TECHNICAL SUPPORT

Thanks to our experience and expertise in metallurgy, as well as to our deep knowledge of the relevant processes, we can offer our complete **support to our customers**, during every phase of the purchasing process.

### A TAILOR-MADE APPROACH

Our approach focuses on providing our customers with customized services, ensuring **swift and flexible responses to their needs**.

# MASTERING THE SCIENCE OF METALS

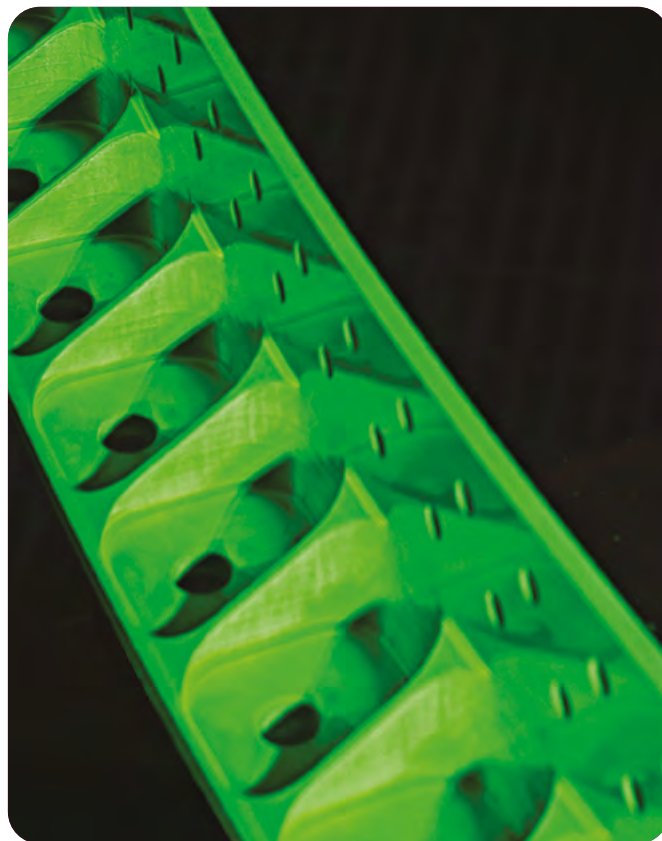
## METALLURGY

At FOMAS Group, our deep understanding of metallurgy is rooted in our history and continues to guide our future. For generations, we have cultivated and transmitted extensive knowledge of steels and non-ferrous. This heritage is embodied in our slogan, “**Mastering the Science of Metals,**” which reflects our advanced **metallurgical expertise** and our **full-process mastery**. This comprehensive capability allows us to maintain precise control over metal behaviour at every stage of transformation.

Our know-how also enables us to support customers in identifying alternative solutions when needed, leveraging our ability to **predict material response** during deformation and machining processes.

We apply **advanced profiling technologies** to manufacture rolled rings, shaping metal with exceptional precision to achieve geometries that closely match the final product. This approach reduces material waste, machining time, and transportation costs—enhancing overall yield while delivering components with outstanding mechanical performance.

In addition, upon request, we can provide **preassembled solutions**, delivered after final machining, to further streamline our customers’ production processes and reduce integration time.



## MATERIALS PRODUCTION

### Electro Slag Remelting (ESR) plant

*Production of defect-free metal ingots*

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

### Vacuum Induction Gas Atomization (VIGA) plant

*Production of metal powders*

- Able to operate at higher temperatures thanks to standard gas atomizers (argon or nitrogen), suitable for high melting point and refractory alloys.
- High-vacuum pumps for minimum content of oxygen and residuals.
- Special nozzles dedicated to specific alloys and particle size.
- Develop for maximum flexibility.



## INNOVATION: DRIVING EFFICIENCY AND SUSTAINABILITY

At FOMAS Group, innovation is at the heart of our operations. We leverage automation and digitization to stay ahead of the curve, utilizing cutting-edge software and tools such as Business Intelligence, Digital Twin, Big Data management and analysis, cloud solutions, and Artificial Intelligence.

### LEAN APPROACH FOR OPTIMAL EFFICIENCY

Our approach is centered around lean principles, aimed at minimizing waste and optimizing manufacturing processes. By streamlining our operations, **we reduce inefficiencies and promote sustainability**. The effective management and analysis of large datasets (mega-data) enable us to identify areas for improvement and implement targeted enhancements.

### STATE-OF-THE-ART TECHNOLOGY FOR SUPERIOR QUALITY

As a global leader in the production of forgings, seamless rolled rings, and metal powders, FOMAS Group is committed to driving growth and innovation.

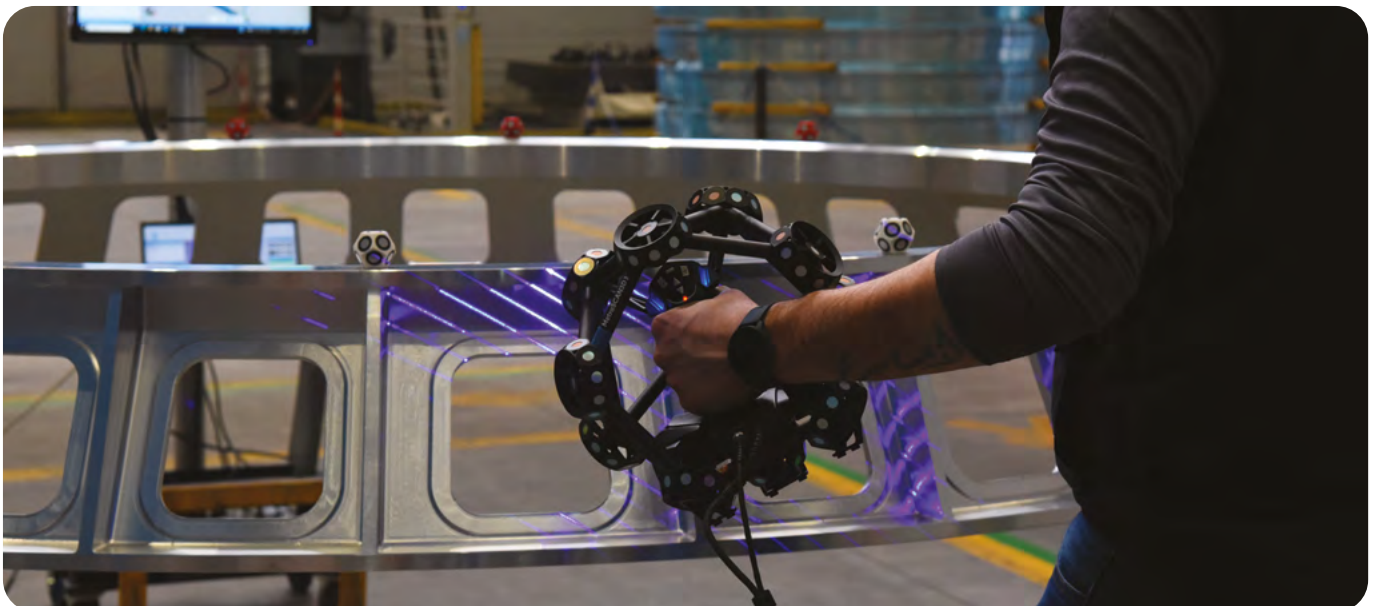
In 2025, FOMAS Group launched the implementation of a **5-ton controlled-atmosphere furnace with vacuum induction melting (VIM) capabilities**, dedicated to processing superalloys. The system is expected to be fully operational in 2027. This cutting-edge technology will enable us to achieve unparalleled control over metal quality, develop tailored melting practices for specific alloy compositions, and further support our circular economy goals.

## QUALITY

The Group places quality at the core of all its operations, ensuring compliance with all the required standards and customer expectations in terms of performance, reliability and safety.

This commitment translates into a set of practices and standards encompassing:

- **Strict material control**
- **Advanced manufacturing processes**
- **Testing and continuous verification**
- **International certifications and standards**
- **Continuous employee training**
- **Customer feedback and continuous improvement**



**LABORATORIES**



# IN-HOUSE LABORATORIES

FOMAS Group is equipped with two testing laboratories accredited by ACCREDIA, the Italian national accreditation body, in accordance with ISO/IEC 17025 requirements. One of them is located in our metal powders production facility.

The laboratories are equipped with cutting-edge technology and precision instruments, enabling comprehensive testing, examination, and analysis of materials and final products.

**OUR CERTIFICATION**

FOMAS Group’s plants hold various certifications that demonstrate compliance with international and aerospace standards for quality, safety, and environmental responsibility. These include:

- ISO 9100
- ISO 9120
- ISO 14001
- ISO 15001
- ISO 50001
- NADCAP MMM
- NADCAP NDT
- NADCAP HT



Certifications may vary by production site. For a complete list of certifications and accreditations, scan the QR code to access our dedicated webpage.

# SUSTAINABILITY

Our sustainability strategy is anchored on well-defined pillars that set the framework for short, medium, and long-term targets across departments. This strategic approach enables us to integrate sustainability into every facet of our operations.

**THE PILLARS OF OUR ESG STRATEGY:**

**1**

Mastering the science of metals

**2**

Awareness and commitment for the planet

**3**

People-centric

**4**

Creating shared value for the community

**5**

Embracing the change with our partners

Discover more:





## Contact Us

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