

HIGH-PERFORMANCE ALUMINIUM TUBES















Aviatube, Indraero, Structural Aerospace Morocco and Secan have joined forces within Aviagroup Industries to form an aviation group dedicated to design, production and support of aluminium tubes, simple and complex aerostructures, and customized thermal management solutions, for aircraft safety and performance.

This strategic consolidation enables the businesses to have better industrial and commercial synergies in order to offer more effective solutions to customers and strengthen the Group's presence in all its markets.

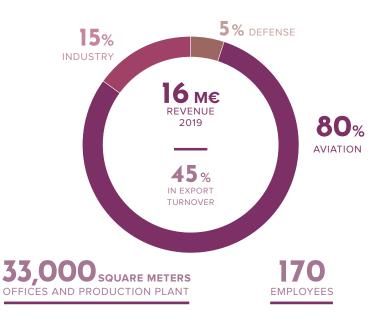
AVIATION

DEFENSE

SPACE

Aviatube, a company of Aviagroup Industries, designs and manufactures high-performance aluminium tubes for aviation, defense, and space markets and many other varied industries.

The company masters the entire tubes development and manufacturing process, from the processing of foundry billets to just in time delivery. Aviatube employees master a unique knowhow: the greased extrusion process. This expertise makes it possible to satisfy the greatest number of customers around the world by offering them a wide range of combinations of diameters and thicknesses of tubes. The company aims for industrial excellence in its manufacturing process (quality, cost, lead-time) to serve its customers with products that are always lighter and stronger.



# OUR AVIATION AND DEFENSE PRODUCTS

Aviatube's expertise allows the company to position itself in various products applications.

Aviatube offers a wide range of alloys and/or geometric shapes for its aluminium tubes. Their dimensional characteristics can range from 0.2mm thick and 2mm in diameter to 0.89mm thick and 120mm in diameter, with a length of up to 12m. Its aluminium tubes for hydraulic systems guarantee performance and safety for all aircraft. They also are synonymous with lightness and reliability with excellent mechanical properties when they are designed for passenger seats, crew seats or pilot seats. Reliability as well as high and uniform mechanical characteristics are the safety assets for all the cockpit control tubes.

## COMMERCIAL AIRCRAFT | BUSINESS AIRCRAFT | HELICOPTERS

Aviatube designs and manufactures products with high mechanical properties and is therefore able to equip all military aircraft. Conscious of the severe environmental constraints in which the armed forces operate, Aviatube strives over the years to develop aluminium tubes always more suited to their just needs. Cutting-edge technology, lightness, longevity, and impact resistance are the main requirements that customers demand.

## MILITARY AIRCRAFT | AMMUNITION | SPACE LAUNCHERS

# OUR INDUSTRY PRODUCTS

Aviatube designs and manufactures highperformance aluminium tubes in the sports sector. Its know-how enables it to supply tubes for extremely stressed products such as motorcycles handlebars and competition bicycles frames, forks, flying wings structures, mountaineering equipment and many other applications. Recently, Aviatube has developed a competition bicycle frame, for which a patent on the assembly system has been filed.

Other industries also make extensive use of Aviatube's tubes such as the railway industry, shipbuilding, medical and paramedical where lightness, longevity, and ease of implementation and maintenance are advantages.

## MECHANICAL SPORTS | EXTREME SPORTS | TRANSPORTS | HEALTHCARE

## OUR EXPERTISES

#### **GREASED EXTRUSION PROCESS**

Aviatube has developed an extrusion process that is unique in the world. It's a greased extrusion process during which no friction is found between the surface of the foundry billet and the container. Extrusion consists in transforming aluminium billets into tubes. The extruded tubes are then processed further in order to obtain the dimensional and mechanical characteristics required by customers. Thanks to its unique process, Aviatube is in position to manufacture high-performance products.

### DRAWING

High-performance industrial products require aluminium tubes with specific properties that can only be obtained via drawing process. Cold drawing implemented at Aviatube is a technology that improves tolerances and surface condition of future aluminium tubes produced. Thanks to its experts knowhow, associated with its cold drawing process and all its industrial means, Aviatube can meet its customers' quality requirements and guarantee high dimensional precision, high quality of internal and external surface finish, smallest thickness possible, and perfectly controlled metallurgical surface finish.

#### HEAT TREATMENT AND FINISH

All the highly qualified team is trained and certified to carry out heat treatment processes in order to suit customers' quality requirements. These special processes are **NADCAP certified**. Aviatube has and perfectly masters all the heat treatment processes making it possible to freeze the mechanical characteristics of its aluminium tubes and/or to increase their transformability according to customers' needs: annealing, quenching, ageing treatment tempering, stretching, straightening, processing and completion.

# OUR CERTIFICATIONS AND OUR COMMITMENTS

### **QUALITY CONTROL**

Aviatube's quality system is applied throughout the development and manufacturing process in order to guarantee excellence in management and ensure that all products comply with customers' quality requirements. Aviatube is certified **ISO 9001** and **EN 9100**. In order to strengthen its focus on quality performance, Aviatube responds to the demanding requirements of **the Airbus IPCA+ (Industrial Process Control Assessment plus) certification.** 

Aviatube has also been granted merit the **NADCAP certification** covering all its heat treatment processes.

### INNOVATION

Aviatube is committed in a continuous process of innovation and R&D projects in order to work on the constant improvement of its means of production and on the quality excellence of its products.

#### **ENVIRONMENT PROTECTION**

As a responsible company that cares about our planet, Aviatube ensures sound and sustainable business management within the framework of **ISO 14001**, without prejudice to the environment or its employees.

### **HEALTH AND SAFETY AT WORK**

**Certified OHSAS 18001**, Aviatube makes every effort to maintain a secure working environment for its employees.



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# CHOOSE PERFORMANCE



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