SIDERVAL
SPECIAL PROFILES IN STEEL

Extruded Hollow Sections for Aerospace Industry

Profile:
Hollow sections with fins
Material grade:
PH stainless steel (UNS S66286)
Execution:
Hot Extruded
Destination:
United States

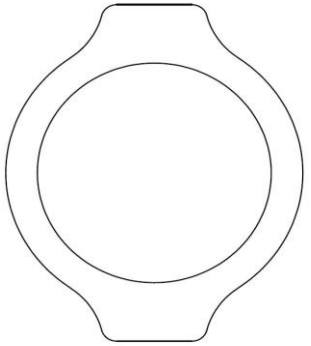
BACKGROUND

The **aerospace industry** is a high-tech sector essential for global transportation, defense, and space exploration. It requires materials and components that meet rigorous standards for performance, reliability, and safety.

Steel profiles play a crucial role in aerospace applications due to their strength, durability, and precision. These profiles are used in structural components, fasteners, and specialized shapes like hollow sections with fins, ensuring the integrity and functionality of aircraft and spacecraft.

The demand for certified materials is high, with an emphasis on traceability to ensure compliance with international standards and avoid sources from restricted regions. This commitment to quality and precision is vital for the safety and efficiency of aerospace operations.

CHALLENGE



The profile requested by the customer is a circular hollow section used with metal gaskets and machined joints in high-pressure and high-temperature aeronautical piping. The customer requires a solution that will save time and thus reduce machining costs:

- Need for small quantities of 2-3 m long bars, to be cut into 2 cm sections
- Minimize material waste.
- Mechanical testing to ensure strength and mechanical properties for this type of application.
- Certified raw materials with full traceability.

SOLUTION

Siderval provided a customized solution to meet the customer's needs. Together, we selected PH stainless steel **UNS S66286** due to its high strength, hardness, and corrosion resistance, ensuring both durability and reliability. We then conducted various tests to ensure the properties according to the **AMS 5732J standard**.

To minimize machining and material waste, we proposed **near net shape** profiles, saving time and material. Using **hot extrusion**, we have produced profiles of various sizes, guaranteeing even small batches as required by the customer. All raw materials were certified and traceable from Europe, complying with the client's strict standards.

This tailored approach delivered **high-quality profiles**, reducing production time and costs while ensuring full compliance with industry standards.