SIDERVAL
SPECIAL PROFILES IN STEEL

Architecture

Hot Extruded Special Profiles for ORLY Airport

Profile:
Special Geometry
Material grade:
Carbon steel S355K2+N
Execution:
Hot Extrusion
Destination:
Paris ORLY Airport

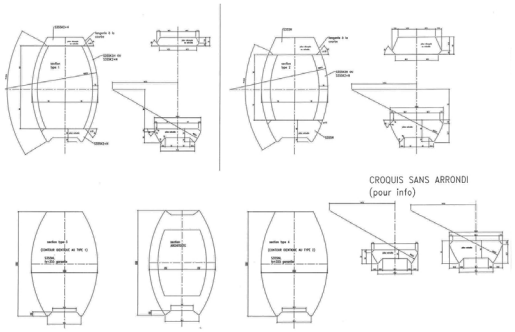
BACKGROUND

At Paris ORLY Airport, a pedestrian walkway was constructed in 2017. This bridge, glazed and oval-shaped, stretches 180 meters over the airport roads. Its steel supporting structure, comprised of inclined rings, is upheld by several concrete pillars, resembling a spine.

Despite lacking air conditioning, the bridge is equipped with natural ventilation allowing for autonomous air renewal.

The bridge's curved glass is treated with a coating for solar and thermal protection, plus partial internal solar shielding, contributing to a comfortable indoor climate.

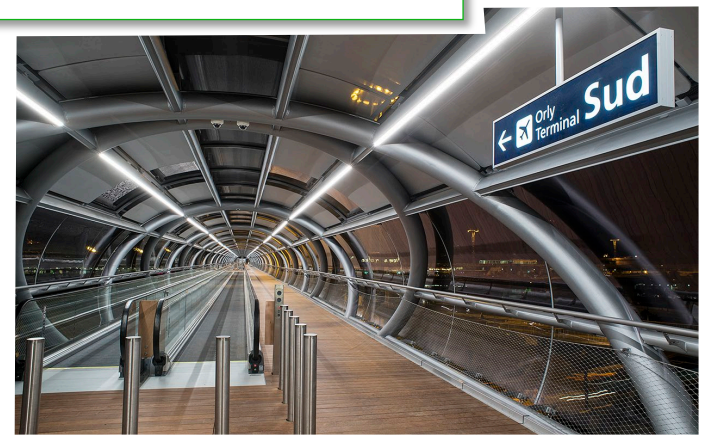
CHALLENGE



The customer was in search of a solid tubular to be calendered, yet the complexity of this process for the specific project led to the following challenges:

- The solid tubular proved to be excessively heavy
- The creation of two highly complex and **special geometries**
- The use of raw material subjected to quality checks, including ultrasound and dimensional verification of the bars
- Six different profile lengths

SOLUTION



To meet the requirement of reducing the final weight of the product, a hollow tubular made of S355K2+N carbon steel was conceived. In response to this specification, **two distinct geometries** were designed through hot extrusion, which were then welded together with two plates. This welding operation was carried out on-site by the customer.

To ensure maximum quality and precision, Siderval conducted a thorough series of checks, both dimensional and ultrasonic, on all components.

Finally, by utilizing the advanced technology of the Schwerte press, we were able to successfully produce both of the required geometries in all **six specified lengths** as requested by the customer.