SIDERVAL
SPECIAL PROFILES IN STEEL

Special Profiles for Highway Safety Barriers

Profile:
Special Profiles
Material grade:
Carbon steel S355J2 category B
Execution:
Hot Extruded
Destination:
Italy

BACKGROUND

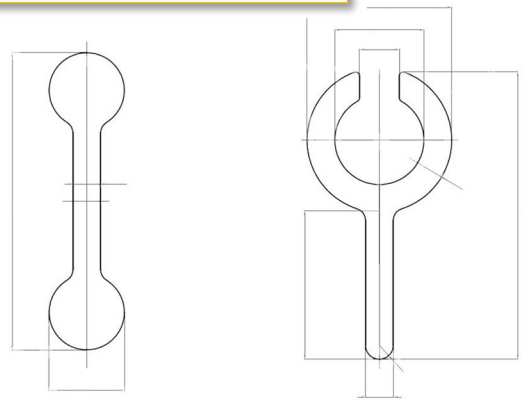
Highway safety barriers are essential elements for vehicle protection, reducing the risk of serious accidents.

Steel profiles, with their strength and impact absorption capacity, are the preferred materials for constructing these life-saving structures, ensuring durability and compliance with the highest safety standards.

The upcoming integration of **two steel profiles** into the end sections of concrete road safety barriers is an example of innovation.

This method is intended to replace the previous sleeve system, which is vulnerable to oxidation and presents significant maintenance challenges.

CHALLENGE



The two manufactured profiles will be integrated into the end of the concrete road safety barriers, thus overcoming the outdated sleeve system by increasing the safety and durability of the entire structure.

The challenges for this significant project have been:

- Feasibility study on the special **hot extruded** geometries proposed by the customer and implementation of the alternatives suggested
- We sent **samples** to the client to enable the patenting of their road safety barriers
- Following the initial production, we have modified the material to facilitate the end customer in subsequent processing.

SOLUTION

We meticulously honed the design required by the customer to ensure the optimal solution for this type of profile's geometry.

Samples were dispatched for crash testing, and upon receiving the order, we extruded a **stock** kept on hand for any customer emergencies.

The samples were produced with S355JR carbon steel; however, to streamline the customer's final machining process, we switched to using **S355J2 category B** carbon steel. In fact, the chemical composition of this material allows for more precise and efficient machining.

The entire highway barrier system, including our profiles, has been patented by our customer **A.B.E.S.C.A.**