University: Instituto Superior Técnico

RA2

Vehicles & Vessels - Design, Development and Production

Intelligent Traffic warning triangle

Previous road contexts have identified problems such as lack of safety and efficiency in the signalisation of a car incident (car crash or car breakdown, among others).

The project aims at developing a car-size, inflatable and pop-up Intelligent Traffic Warning Triangle composed by three elements:

- Inflator disposable, responsible for filling the balloon / parachute of air;
- Balloon/parachute-reusable, reflector, structure of the triangle which will be filled with air;
- Rotating light reusable, placed in the top of the triangle.

This triangle is stored below the car in the back the vehicle rather than part, near the gas tube and can be activated and because incident both manually and automatically. In the case of a crash, the inflatable triangle is automatically take several minutes •

activated; on the other hand, if there is a flat tire, the triangle can be activated by pushing a button. The dimensions of the triangle are $1.5m \times 1.5m$. The rotating light is incorporated to allow the other drivers to understand there is an incident in the road in low visibility locations such as curves and intersections.

The biggest qualities of this product consist in the driver not getting out of the car and the automation of the process of signalizing a road incident.

These two topics lead to increased safety of all road users, because the driver is safer inside the vehicle rather than in the middle of the road and because incident is highlighted in less than 10 seconds, while in previous solutions it could take several minutes •

