



# Frangible Fence

How to ensure that an airport fence can break upon impact.

A fence that stops humans and animals and that is resistant against extreme winds, but in case of emergency will also break and prevent unnecessary damage to the plane.

The Runway End Safety Area (RESA) is the safe environment of a landing strip and must be mostly level and obstacle free. A fence in a RESA must be able to break in order to minimize damage to the plane, for example when the plane skids after a landing. And when it touches the fence, the plane must retain the intended flight direction as much as possible.

Heras Frangible Fence is a breakthrough in this regard. The first airport specific solution that is not made of composite. Intrinsically stable (aluminium), yet breakable, affordable and aesthetic.

Notified TNO body: "After evaluation of the two experiments done on the test material delivered by Heras B.V. and the type of fail mechanism occurring during the experiments, TNO declares that the permanent fencing meets the ICAO requirements of the Aerodrome Design Manual part 6 – Frangibility."

- **Base: existing fence line Heras (Heracles)**
- **Panel assembly through blind connections**
- **Section elements between already separated stands**
- **After impact the fence line will break off fragmented**

## Example



**Client:** Maastricht Aachen Airport. **Guidelines:** Ministry of Infrastructure and Environment (Inspection Environment and Transport), International Civil Aviation Organization and EASA (European Aviation Safety Agency). **Development:** Heras in cooperation with TNO and Consultancy and Engineering Bureau Van de Laar.

## Technical specifications

### Aerodrome Design Manual Part 6, Frangibility

After impact minimum damage to plane

Break away construction and separates easily

Stops non authorized people, animals

Resistant against wind speeds of up to 140 km/h

Maximum energy intake 949 Joule (Nm)

Impact time of 8 m/sec.

Impact force  $F = 22750N$  (light air plane type)

Speed 140 km per hour flying; 50 km per hour taxiing

## Test results notified TNO body

- Less than 50% energy intake
- Work sections and stands fall over 'correctly' in one piece
- Stand breaks off 'correctly' above the foot plate
- The support stays in the ground

## Ordering information

Contact Heras for precise ordering details.