

# TIS Seals

## Background

A TIS seal is a small, tube shaped part used throughout the rail industry. It sometimes has to be broken by the train driver in certain circumstances and maintenance engineers during routine checks. The seal was originally made from glass and staff had reported injury when breaking it.

## The Brief

To redesign the part so that it was easier and safer to break than the original glass part. The part consists of 2 sections – a tube and a collar that is glued to one end of the tube.

## The Solution

Several train companies were involved in the project and we discussed the options with them to find out how the original design could be improved and any other requirements. A consensus was reached as to the best design incorporating as many of the elements as possible. We worked with ScotRail engineers to carry out the trials. Once the design was agreed, we carried out the processes necessary to change a material in order to conform to Railway Group Standards.

## The Results

The basic shape of the seal is similar to the original. To assist breaking, there is a groove cut into the tube section which weakens it only when force is applied to break it. Both sections are supplied in an individual bag to keep them together and prevent damage during storage. There is a slight pigment in the material so that staff can easily recognise whether the seal is made from glass or Safeglass. Most train companies are using the new seal and have seen improvements in safety.

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