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Press-stud Popper Pull-off Test

Specification

The customer was a supplier to major clothing retailer, who stipulate that all fasteners and attachments must be tested to failure.

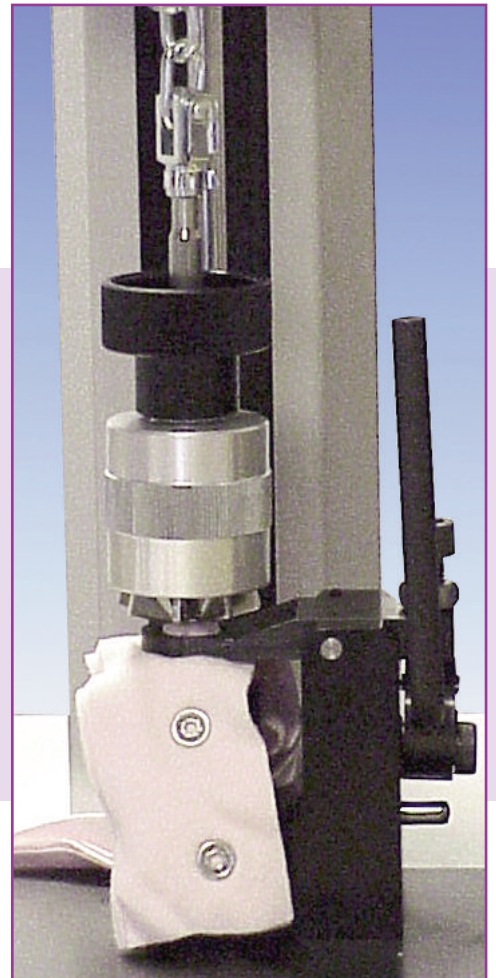
The strength of the press-stud joint was critical to ensure that it met design tolerance and safety levels, particularly in baby clothing. A motorised unit with a test speed was defined as 200mm/min as the system needed to be simple to use in a production environment and provide consistent results.

Solution

The female part of the press-stud or 'popper' was placed under the retaining ring of the lower half of the Pull-off Fixture. The retaining ring was then locked in place by turning the lever of a cam mechanism.

The upper half of the fixture had an adjustable collet to fit over the male part of the press-stud. The collet was then tightened to secure it in place. For ease of loading the male press-stud and to ensure a straight pull, the upper half of the fixture was connected to the force gauge via a flexible chain link.

The peak tension load to separate the press stud (or break the material joint) was captured on the force gauge display at the fast data-acquisition speed of 1200Hz.



System

- 1000N UltraTest motorised test stand
- 500N AFG
- Press-stud pull-off fixture

Supplied to

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