

## Solutions@ Mecmesin

### Button Pull-Off Test

#### Specification

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

The strength of the joint/button 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 at 200mm/min as the system needed to be simple to use in a production environment and provide consistent results.

#### Solution

The cloth material was clamped in a 'Double Action Vice Grip' with 50mm wide faces coated with non-slip rubber to enhance gripping strength.

The button fixture was supplied with interchangeable plates having slots of 3,5 or 7mm wide to suit the various sizes. Since it is normal for the button to shatter during the test, a perspex guard was incorporated in the fixture to protect the operator.

For ease of loading the button into the fixture and to help maintain a straight-pull, the 'Button Pull Fixture' was connected to the force gauge via a flexible chain link. The peak tension load to remove/break the button was then recorded at the fast data-acquisition speed of 1200Hz.

#### System

- 1000N UltraTest motorised test stand
- 500N AFG
- Double action vice grip
- Button pull fixture

#### Supplied to

Coats Viyella  
S.R. Gent  
Dewhirst Childrenswear

