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Rotating Vacuum Peel System

Specification

Testing was required of range of flexible plastic trays of the same dimension but with differing forms, containing biscuits and confectionery. The adhesive bond on the clear foil sealing the trays needed to be tested for peeling strength.

The system needed a constant peel speed at a constant angle of 90°. A reading of the peak force to break the adhesive bond, together with the average force to maintain the peel was required. With a number of plastic trays to be tested, the test speed needed to be as high as possible (500mm/min).

Solution

The plastic trays were too flexible to be held by a mechanical grip so a 'rotating' vacuum fixture was developed. This held the tray firmly in place during the test. A compressor providing 6 bar pressure was required with the vacuum being controlled by a lever-valve. To accept the different forms of plastic trays, a range of dedicated inserts were supplied with the vacuum fixture.

Both the vacuum and force gauge were mounted at 45° to provide the constant angle of 90°. In order to maintain the constant peel speed. The vacuum fixture was able to freely rotate on a bearing allowing the rectangular shaped plastic tray to self-centre during the test. DataPlot software enabled the customer to analyse peak and average forces in a graphical format.



System

- Motorised Test Stand
- Advanced Force Gauge 250N
- 'Rotating' Vacuum Fixture & Dedicated Inserts
- Dataplot Software

Supplied to

McVities

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