

Solutions@Mecmesin

Packaging Tension Test

Specification

Graphic Packaging International is a leading designer and manufacturer of food and beverage packaging. The company needed to perform integrity checks on beverage basket carriers and cardboard box packaging to optimise production line efficiency and maintain consistent standards of packaging quality.

Constructed from multiple pieces of card, which are glued together, the packaging is initially manufactured flat and opened out to accommodate the end product whilst moving along the production line. A tensile test could ascertain whether processes were optimised to enable the glue to set in time for the next stage of production to begin. It could also ensure the correct application of glue on the tabs, to minimise the risk of packages sticking together, preventing them from opening out when required.

Solution

This application required a bespoke solution to be designed and manufactured. Together with Graphic Packaging International, Mecmesin created a vacuum fixture, which mimicked the actions of the end-users application. The vacuum fixture uses suction to hold onto the flat packed basket carrier, which is clamped into position on the specially manufactured base plate. Using a MultiTest-x (semi-automatic) test system, the top of the basket carrier is raised at a speed of 500mm/min, opening out the packaging to a maximum load of 11N in order to determine its integrity. Prior to purchasing a Mecmesin test system, Graphic Packaging had performed this test by hand assessment only. Since the introduction of the system, the company has been able to reduce recall costs by 40%.

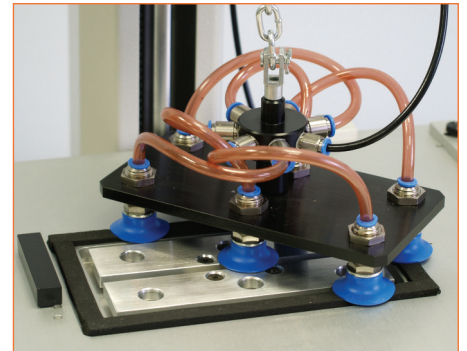
System

- MultiTest 1-x Test Stand with special base plate fixturing
- XLC Loadcell 100N
- Bespoke vacuum fixture

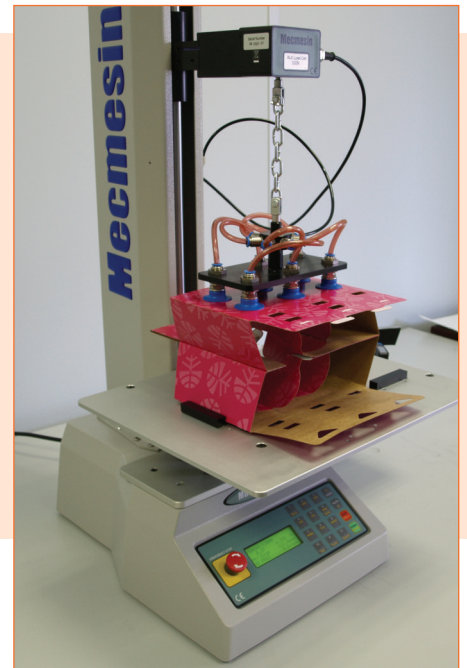
Testimonial

“Companies show their worth when presented with a unique problem to solve. Be assured, I will have no hesitation in recommending Mecmesin to friends and business colleagues.”

Dale Baker, CI Manager
Graphic Packaging International



Vacuum fixture



MultiTest 1-x shown performing tension test on basket carrier packaging