

How Materials Testing Developed Advanced Stunt Glass

► *“With the EZ20, Breakaway Effects can quickly determine the optimum properties for stiffness and flexibility. On stunt glass samples, we conduct standard pre-defined three point bend tests with careful machine speed control and fast data access through NEXYGENPlus software. We find the EZ20 in great demand for projects at Exeter Advanced Technologies. The Plug-and-Play operation makes it easy to use and the grip changeover process is a very quick operation”, says Gary Foster, Characterisation Consultant, at Exeter Advanced*



For many years, stunt glass has been used to convey dramatic realism on stage and screen. The foundation to any new product launch is accurate testing in carefully controlled conditions.

Based at Shepperton Film Studios in Middlesex, Breakaway Effects is a leading stunt glass manufacturer that offers direct support and advice on film sets.

Challenge

Historically, the company used wax based materials in their designs, which can be difficult to handle in hot terrains. To help source a suitable alternative, Breakaway Effects approached polymer specialists at Exeter Advanced Technologies, based at the University of Exeter.

Polymers and glass have a conventional association in applications where strength and safety are paramount. In the case of stunt glass, the material needs to be firm enough to handle, but brittle enough to shatter into tiny harmless fragments following a forceful impact. Specialists found that different polymers could be blended together to create this optimum break threshold. Tests on polymer blends was the next stage.

Solution

Exeter is fully equipped with testing equipment such as the EZ20 material tester from Lloyd Instruments. This powerful 20kN machine is also controlled by the renowned NEXYGENPlus material testing software. The EZ20 was used to perform tests on the new polymer blends.

Result

As a result of these tests on the EZ20, Breakaway Effects are now looking at ways to improve their manufacturing processes and expand into global markets.

