



Accelerated Life Testing of Plastics

**A RELIABLE, FAST AND COST-EFFECTIVE METHOD
FOR MATERIALS SELECTION**

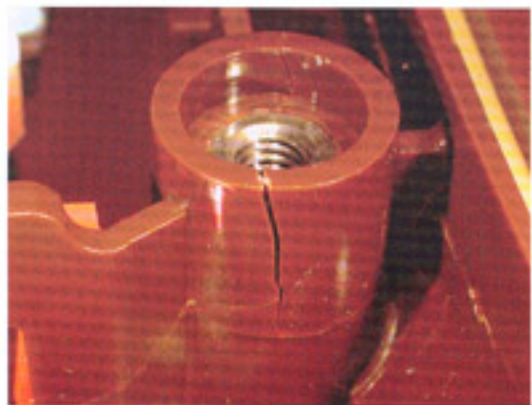
CONFIDENCE
THROUGH
TESTING &
ANALYSIS

Delayed cracking in plastic products and components presents a major source of post-introduction product problems.

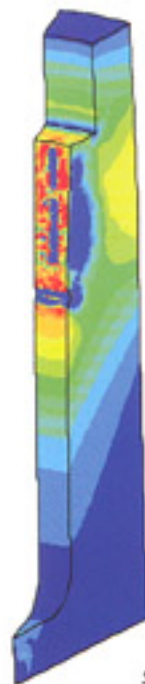
At best, cracks send a message of poor quality to the customer. At worst, they can endanger the lives of users and result in product recalls and litigation. SES can support your product and device programs by quickly and cost effectively executing our Accelerated Life Testing (ALT) material screening and selection protocol.



SES Materials Aging Laboratory



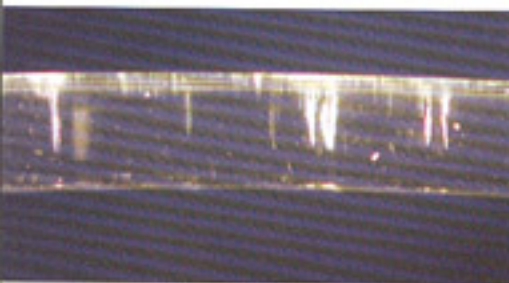
Cracks in PC/ABS housing



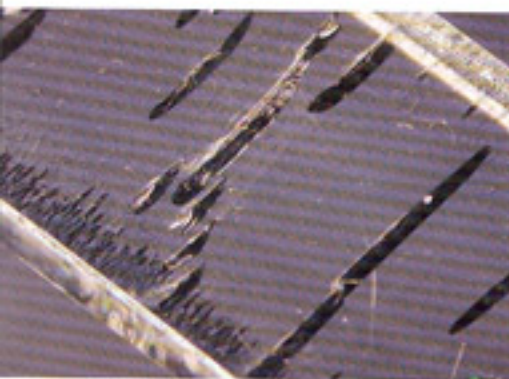
Structural analysis data used to design ALT test matrix

SES'S APPROACH TO ACCELERATED LIFE TESTING REDUCES RISK

SES has developed an approach to Accelerated Life Testing that dramatically reduces the risk of delayed cracking. Key to our approach is determining the as-assembled or as-used stress state in the plastic component using predictive analysis. This information is then used to define materials-level environmental tests to determine whether cracking is likely to occur.



Environmental cracks in polystyrene



COMPUTE RELIABILITY STATISTICS... LAUNCH WITH CONFIDENCE

By analyzing the design to determine the as-assembled stress states in critical regions of the product, then translating these stress states into relevant material tests for a range of expected environmental conditions, SES is able to accelerate the aging of the product to determine if a crack will develop. Our techniques have been refined to the point where we can use failure rate statistics to analytically estimate reliability



Crack morphology in a failed HDPE valve

of the product, device or component. This enables you to develop solutions to cracking problems before they occur, and launch your product with greater confidence... like a practical insurance policy.



Time-dependent cracks in pharmaceutical syringe components

Call SES Today to Avoid Plastics Cracking Problems While in the Design Phase

VISIT SES ON THE WEB AT WWW.STRESS.COM

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