

ANNOUNCEMENT

Chemical Engineering Seminar

When: *Friday, October 30 at 3:00 PM*

Where: *Livermore Center 101*

UNDERSTANDING BLOWN POLYETHYLENE FILM DART STRENGTH VARIABILITY

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The impact resistance of film is a critical property for many applications. The Falling Dart (or Dart Drop Impact, DDI) test is an industry standard for gauging the strength of films subjected to a relatively high speed impact event. The test is based on a 'staircase' methodology and requires a minimum of 20 drops to obtain a single strength value. An alternative test, the Spencer Dart Impact test, uses a pendulum mounted impactor and measures the energy required to break a stationary film. This has an advantage over the Falling Dart test in that each impact will give a strength allowing for better statistics. We examine here the variability of the dart strength within a blown film and how 'robust' the dart test is in determining the true strength of the film using experimental and modeling data.

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