The **Signature Technologies SA-2000 "SAM"** module, and **Signature Technologies "SAMview™"** software package can be used to monitor the position or displacement of specific features on manufactured parts. This application, Slug-go™ works with very small slugs typical of those found in leadframe applications, battery components or connectors. Works well at very high speeds.

Slugging is a common problem in dies where cutting operations are performed. Separated pieces can "pull back" into the die space, and cause marking or malformations in the finished part. Several different methods have been attempted to detect slugging. The following method has been proven effective in 3-part dies EVEN WHEN the slug embeds into the work piece.
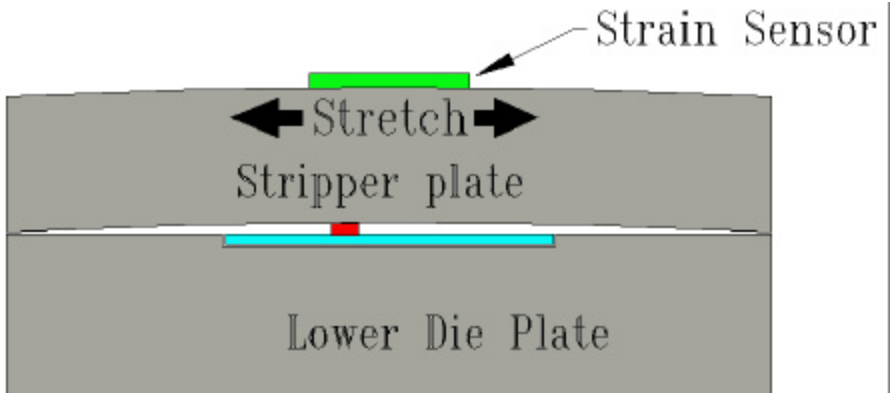
The system works by measuring the strain in the movable stripper plate. When a slug is present, the stripper plate will contact EARLY in the stroke, and "wrap itself" around the slug as shown in the exaggerated view below. This will cause an anomalous strain indication at a point in the stroke where normally nothing is occurring. Even if the slug embeds, the initial force signature will still be present, and signal the existence of the slug.

This method will NOT work on two-part dies with fixed strippers, but is very effective in 3-part dies that either control the stripper to have slight clearance on material thickness, or actually contact the material. The system is self - adjusting unlike proximity type stripper position sensors.

Multiple sensors can be used if multiple assembly operations are performed simultaneously. The **SAM™** module can handle inputs in groups of 8 up to 56 total

points. If desired, **Signature Technologies** can provide controls to adjust the forming station(s) dynamically based on the dimensional measurements.
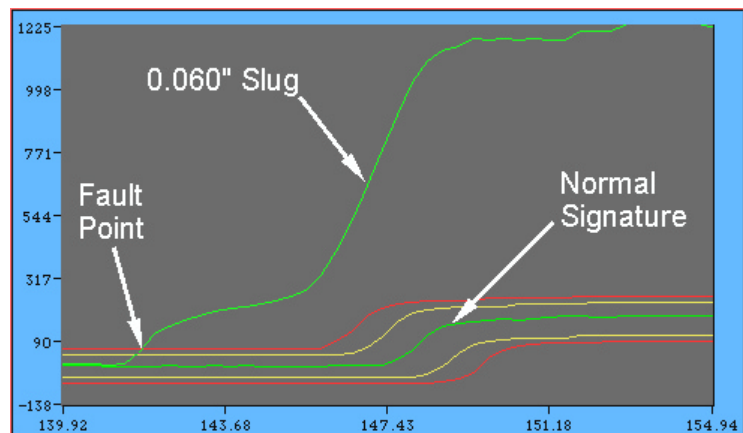
Signature Technologies can supply a wide variety of solutions to various manufacturing process problems dealing with measurement, verification of properties, tool condition, and machine health. We can also "close the loop" by performing process adjustments in response to specific variations in force, location, or shape of the work piece, as well as more simple controls which can track and reject specific parts which don't meet specific quality criteria.

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