



REVERSE ENGINEERING DOCUMENTATION INCREASES PACKAGING PRODUCTION

SITUATION:

A 24/7 packaging industry client was experiencing excessive and unscheduled down time with a machine on one of their main production lines.

- This machine glued, formed and cut to length a product referred to as “edge protectors” that are widely used in packaging.
- The original documentation (engineering drawings, bills of materials etc.) was lost. Without knowing what parts and components were used in the machine, it was difficult to inventory parts or know if the client was obtaining correct parts which was proving costly.
- The client was also planning a second line and wanted to clone the first machine with some design enhancements.

STERLING SOLUTION:

Sterling provided the machine as it existed and showed the connections to components upstream and downstream of the forming station.

- Sterling also executed fieldwork after hours and on weekends to obtain measurements to accurately depict the Line 2 machine design and integration.
- Sterling created CAD drawings to document this machine that consisted of ballooned assembly drawing, Bill of Materials, and details sufficient to fabricate the machine.
- Reasonable engineering assumptions were made as to any unknown materials used in fabricating the machine. Purchase parts were identified and when necessary, modified and detailed.
- As a separate project, Sterling quoted a design package to incorporate this unit into the client’s other manufacturing line.

RESULTS:

The client was able to implement preventive maintenance procedures, which improved uptime.

- With the complete documentation, the client was able to better plan design improvements to enhance the overall performance of the machine.

PROJECT SNAPSHOT

- ❖ *A machine was not running as needed and the original documentation had been lost.*
- ❖ *Reverse engineering helped identify parts that needed to be replaced and recreated missing documentation.*
- ❖ *The performance of the machine improved and the complete documentation helped optimize production of existing equipment.*