



Case Study: Setup Reduction in Offset Printing

Client: Envelope manufacturing and printing company

A number of issues hampered the company's productivity. Observations of the old process determined that:

- the "specials" stock area was disorganized which caused extra time to be spent locating the right customer order
- tools for the setup weren't easily found
- excessive waste of motion from and to the work area
- the area had opportunities to improve 5s
- clutter in the work benches (spray cans, boxes, etc.)
- long setup times as the result of operators having to leave the production area to get ink and stock

To turn things around, a kaizen event was held that turned out to be one of the most successful events ever executed at the envelope company. One of the event's most notable accomplishments was the creation and implementation of a "WaterSpider." The "WaterSpider" allowed for the completion of external processes for setup while the machine was still running on the previous job. One person was taken off one of the company's eight machines to instead focus on pre-staging all the materials needed to accomplish the changeover (printing plates, inks, blankets, job tickets and raw stock).

The event also led to better organization in the "special" rack area; effective placement of tools so the press operator doesn't have to leave the work area; the use of a tray for deliver the blanket, ink, job ticket and plates; a reduction in setup time; increased workplace safety; ergonomic improvements; and the implementation of 5s in an area.

As a result, the changeover time decreased by 47 percent and one machine was freed up allowing an increase in growth capacity. 4,680 hours of capacity on machines currently running was realized and if another machine is brought online, the company will gain another 4,160 hours of machine time without having to add any additional equipment (an additional machine operator would need to be added). An average changeover time of 24 to 25 minutes, including machine wash-up and make-ready, is currently being sustained. The change realized allows the envelope company to process up to 61,000,000 more envelopes annually.