

# Get yourself AUDITED!

An anilox audit is a key to improved pressroom productivity.

**H**eaded any good stories lately? It may sound cliché, but many stories revolve around similar themes (i.e. good vs. evil, or slow and steady wins the race). The same holds true when visiting printers. Ask what the business climate is like, and you're likely to hear "the same old story". "Competition is intense. Lower margins are eating up our profits. Customers wait until the last minute to order and then want it right away. On top of that, they expect higher quality."

Faced with these challenges, some printers struggle to stay afloat, while others scramble to keep up with the workload. What separates those who are successful from those who wish they were? Success comes from action! It comes from methodically identifying areas for improvement, developing corrective actions, implementing those actions and monitoring the results. It comes from partnering with suppliers and more often than not, it starts with an anilox roll audit.

What on earth does an anilox audit have to do with making a print shop successful? An audit is more than simply a snap-shot of the condition of your roll inventory on a given day. The audit is a diagnostic tool for troubleshooting your process, practices and procedures.

## Diagnostic tool for improvement

While you may consider it a stretch to give audits that much credit, the fact is that a thorough audit should give far more information than simply a list of damaged rolls. When conducted properly, the audit provides a wealth of information about the condition of your rolls, how your processes and procedures contribute to reoccurring forms of damage, and ways you can reduce the likelihood of future damage. A comprehensive audit includes an evaluation of how rolls are used, stored, maintained, and cleaned. It looks at wear and damage to press components as symptoms of issues that need attention. In other words, it "methodically

identifies areas for improvement." Recommendations included with the audit provide a list of "corrective actions" that can provide the roadmap to process improvements ... process improvements that make your process more predictable, resulting in faster makereadies, reduced raw material consumption, and increased productivity and profitability.

Very often an audit will reveal patterns of similar types of damage occurring on several rolls. Damage patterns provide valuable clues about causes of damage. By identifying sources of damage, the auditor can develop specific recommendations to prevent or reduce future incidences of particular types of damage.

In addition to types of damage, the audit also identifies the location of the damage on the roll. This can save valuable setup time if the operator knows the damage falls within the print area and can move on to the next available roll, without actually installing a roll they can't use.

## Going from bad to worse

Let's use a hypothetical situation as an illustration. Press operator, Ralph, is working on a makeready. He installs the anilox rolls and doctor blade holders, inks up the press and adjusts impression...only to find a defect in the print. Tracing the defect back, he finds it's coming from a metal scrape on a 600 LPI anilox roll. He now has to clean up that print station, remove the blade holder, back off the impression, and remove the anilox. This anilox gets put back on the storage cart, and Ralph looks for another 600 LPI roll. He goes through the setup routine again, but this time, a score line shows up in a critical area of the print. After installing a third roll, ink density is weak because the roll is worn. Instead of changing out the anilox again, he tries to compensate by



*By taking a photo of the engraving of an anilox sleeve through a microscope allows the printer to see the condition of the cell walls and the extent of the damage.*

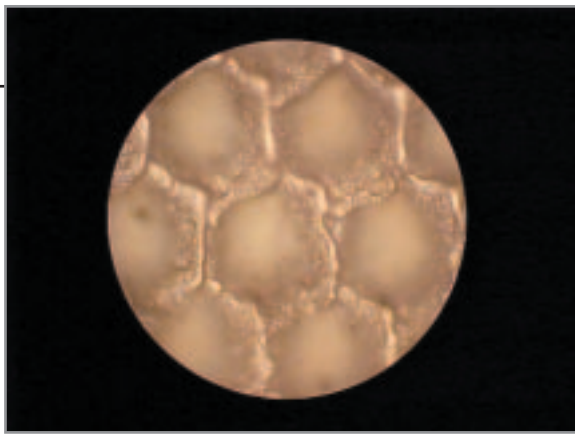
messing with the ink and cranks in the impression. Now he is damaging plates and getting haloing on his highlights.

With a new set of plates, Ralph calls for a stronger ink formulation. When that doesn't work and he changes out the anilox again, he doesn't have another 600, so grabs the next closest engraving, (a 500 LPI). Now there is too much volume,

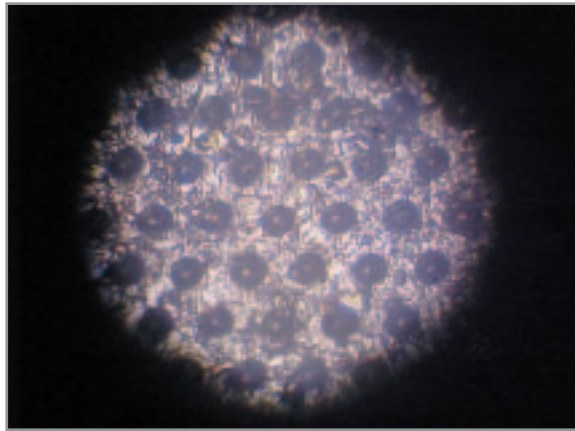
and he dumps a bunch of extender into the bucket. The colour is watered down, but has lost the crispness and sharpness to the edges and highlights.

Over and over, Ralph makes adjustments to the system, and each adjustment leads to another set of problems. While Ralph has been fighting to get the density and quality needed, another operator, Julie, grabbed the first roll placed back on the shelf only to get the same results Ralph got with it. Julie then proceeds to go through a whole series of adjustments to her machine as well.

How much farther ahead would both operators have been if they had known ahead of time about damage areas on each of the rolls? How much time could they have saved if they had avoided installing rolls with known defects residing within the print areas or if they had known that certain rolls were heavily worn and would not bring up adequate colour? Would they have had an easier time getting colour if they knew which of their 600 LPI rolls were engraved to a 2.5 BCM and which 600s were engraved to 1.5 BCM cell volume?



These anilox cells are in good shape.



Cell openings are getting constricted, and the walls are becoming wider due to wear.

- Worn rolls are removed from the inventory or designated for use on applications requiring less delivered volume. Operators needing a strong background colour can avoid installing rolls that have been identified in the audit as worn.
- Variations in cell specifications and ordering practices are identified. Order practices can then be standardized so new rolls are purchased at consistent specifications, which greatly reduces anilox cell variations between rolls.
- Rolls of the same LPI, but different volumes, can be marked or designated on an inventory sheet. If the operator needs a high BCM 800, they can look at the inventory list and determine which rolls are suitable for the job and which will likely cause problems with colour matching.

**A starting point**

It is often said that you can't get where you are going if you don't know where you are. An anilox audit gives you a starting point. More than that, it provides a roadmap to where you want to be. It helps you take a more direct and predictable path to colour match and job approval. It helps identify obstacles in your path that

**Acting on the audit**

Here are some examples of time-consuming, makeready-extending issues that can be averted by acting on the recommendations developed from the audit.

- Heavily eroded cell walls often result from excessive exposure to mechanical cleaning methods. Ink is not contained in the cells and quickly muddies the plates.
- Surface damage often points to storage or handling issues. Dents and dings allow large volumes of ink to pool in the localized areas. These transfer to the print as dark spots. In the audit, damaged rolls are identified. They can then be resurfaced or

tagged for use on non-critical metering tasks.

- Score lines are rotational scratches in the roll surface. If they are shallow, they will show up in the print as lighter lines since the cells will not carry as much ink. If they are very deep, they will show up as dark bands in the print because they will act as troughs.
- Worn or damaged gears, which often result in horizontal gear marks in the print, are avoided by preemptively replacing the gears with new, especially on critical line counts and print stations.
- Impression and registration issues can be resolved ahead of time by replacing bearings found to be worn or damaged.

can make the journey more difficult and time consuming. By using the audit as an integral component to a process improvement program, many printers are becoming more successful and more profitable. In the process, they have found the happy ending to their stories. Perhaps an audit would help you find your "happily ever after".

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