

Turn Your Pressroom from Unpredictable to Profitable

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The flexible packaging market is plagued with higher cost materials and shorter runs. Any little thing that will save you time on press is valuable and, believe me, the time does add up in a hurry. The bottom line is that when the press is down, you are not making money. So what resources are available to turn your pressroom from unpredictable to predictable?

Graphics Team Meetings

Graphics Team Meetings (GTMs) are a communication forum to aid in clearly understanding your quality needs. In most cases, GTMs are held for special project improvements within a converter's plant. We recommend involving your plate, anilox, ink, and prepress supplier along with essential personnel responsible for print quality and productivity, including press operators. The agendas can include, but are not limited to, improving print quality, higher productivity, and training of staff.

In all cases, the objective is for everyone to have an understanding of your goals and to improve your competitive edge. In most first time GTMs, one or two of your current suppliers will be surprised when they see the best ways their processes work together for your specific situation. For instance, your plate supplier should know if you are switching to a higher line screen anilox roll. You may be giving him the opportunity to introduce new types of plate material or imaging technology. The ways to accomplish the task may include running a banded roll, a press fingerprint, determining your anilox inventory, and/or training of press operators and support staff.

Banded roll trials

A banded roll is an anilox with varied engravings across the roll. The various line screens and volumes appear as bands on the anilox roll. The roll is designed to meet the needs of the customer; that's you! For example, the goal of the GTM is to increase market share through improved graphics, and one way to do this is a banded roll trial.

Improved graphics can be achieved by running a thinner ink film, which requires a higher line anilox with a lower BCM. Let's say the current plate screen you are running is 110, and the anilox used for the process work is 500 line screen at a 3.6 BCM. You may also be able to switch to a higher plate screen, for example, a 120 or 133 lpi. But will the ink be strong enough?

You can see why it is so important to invite technical reps from the anilox, ink, plate, separations, etc. to brainstorm. Technical people spend their time in many different production facilities and have a broad pool of experience to draw from.

The fastest, most scientific way to identify areas where graphics can be improved is to run a banded roll trial. One important factor is to design the roll to go beyond what the team believes is the high limit. For example, the group believes a 700 line screen engraved to a 2.2 BCM is the limit to achieve the required solid ink density. For this trial, you would want a band on the banded roll at a 800 line screen engraved to a 1.8 BCM. Don't forget that we want to determine at what point the solid ink density is too low. Depending upon the web width, you may want to use more bands on the anilox roll. The next step is to define the test and the remaining variables:

Plate material: Define the material that will be used, plate thickness, capped or uncapped. The plate supplier may have new processes for this application or you may want to use the plate material that you have been using for consistency purposes.

Mounting tape: Compare medium and soft cushion mount. Test for dot gain, contrast, and solid ink density printed scales.

Inks: Verify and qualify that the systems are adequate for your end-use application. Test different systems for drying, color strength, dot gain, and runability.

Remember that the more variables that are run, the longer the test will take to run and interpret results. Stick to the plan and test what is needed; as time permits continue further testing. As far as interpreting results, get a commitment from the suppliers in the GTM as to who will follow up with the reports needed for interpretation.

For the testing to be a success, it is imperative to document, document, and then document some more! In the trials I have been involved with, when the work was done up front before the trial, the trial was a success. On the other hand, trials that are set up beyond production capabilities have not been of value. The reason is simple: when setting up a trial, everyone must understand production capabilities.

Before the day of the trial, we documented anilox BCM/line screen, ink supplied, plate thickness, mounting, etc. On the day of the trial we document press speed, viscosity, pH, impression, etc. The trial goes well and all involved are on the same page and ready to take the next step, which is to interpret the results.

Making it work on the floor

A few weeks later, "John" from second shift, who is now on first shift, sets up the new job the way he always does. When it comes time to run, he notices at job approval time that the press proof doesn't match the customer-signed proof. John flags down the shift supervisor who was involved with the entire process improvement project. John explains in detail the setup steps taken to the shift supervisor (Tim) and a light goes on in Tim's head. Questions start rolling:

Tim: What is the viscosity?

John: I don't know, I grabbed the ink off the shelf as I always do.

Tim: Whose ink did you use?

John: Brand X.

(Brand Y is what we ran during the banded roll trial.)

Tim: What mounting tape was used, medium or soft?

John: Medium. Whenever I use soft mounting tape, the solid areas print poor.

And so the story goes.

A few lessons to learn

When a process improvement trial is organized and run, make sure you can duplicate the process on a production run. It doesn't pay to set up a perfect banded roll, fingerprint, or other trials if you can't duplicate the process under normal press conditions. When the changes are substantial; it becomes easy to overlook a change here or there. It becomes very important to communicate the changes to responsible parties, internal and external, to avoid press downtime.

The other lesson in this example is, depending upon the circumstances, retraining of pressroom staff and support department staff may be essential before the changes are implemented. Utilize the experts in the industry. The suppliers involved from day one of the process improvement project are more than likely familiar with the teams of employees in your production facility, and therefore would best fit the training task.

Continuing education is imperative for a company to grow and succeed in today's marketplace. Most suppliers realize the importance and are committed to helping you become a better printer. Lets face it, the better you become as a printer, the happier your customers are.