

CASE STUDY

Partnering for Quality

Challenges Faced

- To reduce colour variations and stabilize colour density during print runs.
- To maintain highest quality throughout every job.
- To achieve precise viscosity control.
- To increase press speeds.
- To shorten press set-up times.

The Results Achieved

- Achieved excellent print quality, comparable to rotogravure.
- Maintained colour and colour density stability on every print job, with less manpower.
- Considerably shortened press set up times.
- Significantly increased average press speeds, shortening press run times.
- Precise flat-line viscosity control within
- 5 CPS (about 0.5 seconds Zahn #2).

Can you run the same colours in the same decks all week without washing up?

Just ask Genpak in Aurora, (Ontario) Canada. They believed they could! Ink viscosity control would be paramount.

GENPAK - a flexographic printing facility, utilizes specialised solvent-based inks to compete in the high-end printing market segments, normally dominated by rotogravure printing facilities. They have been the leader in flexible packaging printing and manufacturing of single-use food service items since 1969. "Quality to go" is much more than their company slogan; it's their way of doing business!

The Whole Story

Genpak had just recently installed their newest 10-colour German state-of-the-art CI press. This press was designated to print process-colour print jobs, only. It was essential to become the BEST in all facets of the printing process to compete successfully with their rotogravure competitors!

Their plan was to run seven base process colours continuously in the same decks complemented by one or two-line colours or a metallic ink from time to time in the other decks.

They recognised at the outset that, among the challenges they would encounter, they would require exceptionally tight control of the ink viscosity and that this could occupy one man full-time just to perform the necessary ink viscosity checks. Based on their past experience, they understood the inherent shortfalls of manual viscosity control, the problems of often missed viscosity checks, or the haphazard manual solvent additions. Manual viscosity control was deemed to be only satisfactory. They were not convinced that any of the mechanical viscosity systems were the answer to their requirements. They wanted precise, reliable, real-time viscosity measurement and control: nothing less would be acceptable.

After diligent research Genpak discovered an in-line system being used in other industries that seemed to meet the requirement of the 'Dream' system. Genpak purchased a single deck system and installed it on their 8-colour German CI press. It soon became evident that this system would turn out to be more expensive than anticipated. The system never performed as well as expected; it was not very user-friendly and the technical support was poor. It was not maintenance free and the final results were mitigated. Genpak was not impressed!

A new type of viscosity control had recently been introduced by an equipment manufacturer dedicated to the printing industry, It was an innovative Color Management system that measured the ink viscosity; continuously! Its selling points were ease of operation, no moving parts, maintenance-free, accurate, real-time viscosity measurements and control.

The Solution

An In-line Color Management system, including:

- Real time, continual control of viscosities.
- Precise viscosity measurement interface to manage frequent and minute solvent additions.
- A user-friendly software program with a solvent resistant glass touch screen.
- Maintenance free, in-line viscosity sensor without any moving parts.
- CSA/UL CE approved and a pneumatic fluid injection system.

A Case Study: Partnering for Quality

The IIS ink management system continuously and precisely measures the dynamic ink viscosity in the ink supply circuit. The precision of control is essential but just as important is the "in-line" measurement in proximity to the ink metering system. The adjuster fluid injection system is extremely precise, making calculated adjustments relative to the difference between the actual viscosity measurement and the desired set point.

Key Challenges solved

Inaccurate or missed manual viscosity measurement errors.
....eliminated!

Inaccurate adjuster fluid or solvent additions
....eliminated!

Maintenance of viscosity control systems
....eliminated!

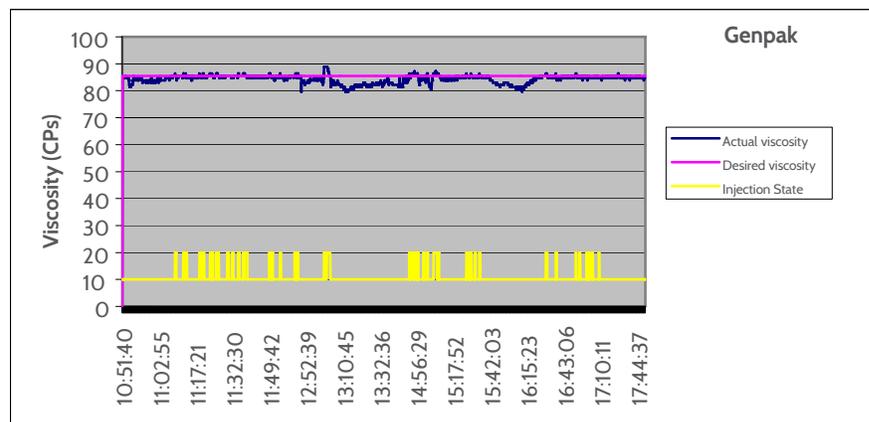
After finger-printing of press excellent dot-gain stability
....achieved!

Temperature related ink viscosity variation causing colour deviation
....stabilized!

Focus on colour standard instead of habitual Zahn cup reading as control parameter
....achieved!

After an in-depth evaluation of that Color Management system, Genpak chose them to equip their new Fischer & Kreike 10-colour press.

The Color Management system was installed, and immediately began to live up to its grand reputation. Not only was the operation simple and easy to understand and use, the results were absolutely outstanding. This following chart demonstrates the tightness of control. The system while in automatic control maintained the viscosity to within 5 CPS or half a second with a Zahn # 2 cup.



Soon afterwards, Genpak noticed that they did not have to stop the press as often for periodic cleaning of the print plates. They also realised that they were able to run 5 to 7 days consecutively without having to do a wash up of the press; to clean the anilox rolls, doctor blade chambers or ink return and supply hoses. Set up times were reduced to a minimum, freeing up a lot more press time for printing instead of time consuming maintenance. The necessity to have an operator's helper constantly on hand to make viscosity measurements and adjustments was no longer required. The Color Management system was paying for itself in savings. In fact, Genpak was so impressed that they purchased a second system 6 months later to install on their 8-colour press.

All the while Genpak was realising important savings in manpower; they never lost their focus on the extremely high quality printing results they needed to achieve. The over-riding factor behind installing the Color Management system was always to achieve the absolute maximum high quality in printing and execution. With the precision of control, constantly available to them during each print run, they easily achieved the coveted high quality standards.

The Genpak management would not have been totally satisfied without the confidence that there was a competent customer service team that they could rely on.