

**For
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Benefits	Competitors in this area
Return on investment Users	Guide for identifying viscosity measurement needs

Results

The implementation of Sofraser inline MIVI sensors on each printing unit of a press netted an overall ink consumption savings of 5%.

Ink costs	Savings of 5%
Rejected jobs	0
Downtime	Reduction of 50%

Benefits

The installation of the Sofraser MIVI inline viscometer:

- Provides ink printing quality and consistency through homogeneity and uniformity
- Ensures color continuity
- Maximizes printing speeds
- Minimizes waste
- Increases customer satisfaction

Return on Investment

The installation of Sofraser MIVI sensors on each printing unit of a high speed coating machine produced the following returns on investment:

Printing unit ink consumption / year	From 10 000 € to 30 000 €
Number of printing units / press	4 to 10
Ink budget / year	From 40 000 € to 120 000 € for 4 printing heads From 100 000 € to 300 000 € for 10 printing heads
Ink consumption savings	5%
Productivity	From 2000 € to 6000 € for 4 printing heads/ year From 5000 € to 15 000 € for 10 printing heads/year
Maintenance costs	+20% Savings ± 30%

Taking all these parameters into account, ROI is achieved in about 1 year with this typical inline viscosity solution.

Printing users:

Imprimeries Quebecor, Armor, Grafikontrol, Daily Mail, Raymond Morin Emballage, Lawson Mardon Morin packaging, INDUSTRIERGLER, LEONHARD KURZ, CEISA, AlphaChem, SMURFIT, Strathcona Paper, PAD, François, ...

Guide for identifying viscosity measurement needs

Topics and Key Points

How do you obtain consistent printing results?

Quality and consistent printing results are possible only with stable viscosity measurement. Inks and coatings delivered to the machine are often unsuitable for use. Solvent evaporation during the printing process will alter viscosity. Water-based inks and coatings are subject to much less evaporation.

How do you optimize production costs?

Adjusted viscosity saves money. If viscosity is too low, quality will suffer (too thin). Keeping a low viscosity may save ink, yet incurs the expense of additional solvents. If viscosity is too high, quality will suffer (too thick). Disproportionate ink consumption cannot be offset by saving money on solvents.

How is coating uniformity controlled in the process?

Only inline control with no downtime can assure 100% production quality.

How frequently is ink viscosity measured in the coating process?

Ink changes between viscosity checks and is not likely to maintain the correct viscosity or quality. Hand-held or laboratory controls are repeated delays that are costly to perform.

What is the laboratory response time?

Even when regularly performed, laboratory viscosity measurements do not prevent bad coating uniformity between two controls.

Does the existing viscosity control system provide real-time measurement?

Only the vibrating viscometer at resonance frequency can provide real-time measurement with no drift in time and no downtime for cleaning.

How often are ingredients adjusted in the process?

Each manual intervention increases production time and reduces process efficiency.

How many final products are produced between two manual controls?

Inline viscosity measurement guarantees homogeneity and quality. With manual control, there is the potential that one or several production batches will be rejected.

Is there excessive scrap material and uneven quality? What is the cost of rejected production?

Only inline viscosity control can bring 100% quality and avoid batch rejects. Material, labor, and utility costs add up, and overhead becomes unaffordable if production is poor.

Sofraser recommended solution

MIVI 9510 Viscosity and temperature measurement

MIVI 9100 Includes regulation

OEM For large quantity markets

Contact Sofraser for detailed sensor configuration

Main competitors in this application

Worldwide:

- Brookfield
- Cambridge
- Inkspec PAD

USA:

- Norcross

This system is also efficient in:

- Flexographic, heliographic, offset printing
- Paint or lacquers spraying / dipping in the automotive industry
- Mechanical parts coating, film coating (ink / lacquer), paper and paperboard coating

