Ink fly

Emulsified ink moves to the end of the ink and dampening rollers. When a large volume builds up it crosses the gap between the nip of the rollers and is thrown off. If it lands on the web it may cause an instant web break; or it can be carried by the web to detach on to the chill rolls where it builds up to cause a web break. Uncoated papers usually carry more ink which increases the level of water to the plate; if the wrong ink is used this will cause emulsification.

Ink drips

Ink seeps through the duct landing on the web causing it to attach to the blanket where the web will break. (Ink fly may also build up on the press frames and guards and then drip on to the web.)

- Choose the ink with the right tack for the paper.
- Keep guards and rollers ends clean.
- Use duct dividers on part webs to reduce ink build up on roller ends.
- Check roller pressures and alignment regularly to avoid heat build up and uneven delivery.

Optimum ink performance

Research demonstrates that overall ink performance on the press is determined by the temperatures of the ink roller train, dampening solution pans and rollers, blankets and plates. They determine ink transfer and dampening efficiency, run length between blanket washes, press speed, quality and web break probability.

Best practice is to systematically monitor temperatures with an infrared heat gun whilst the press is running. If press performance deteriorates then re-measure all temperatures to isolates the problem source. Hundreds of heatset press audits have established recommended temperatures for consistent high production with low web breaks. Presses running outside these guidelines will suffer predictable problems causing poor performance. See also the press manufacturer's recommendations.

Weekly maintenance

For optimum water receptivity of dampening solution tanks and pans:

- Drain system pans, lines and tanks. Refill with hot water.
- Add prepared dampening solution system cleaner, and pump into pans to circulate.
- Maintain flow of cleaning solution through system until only discoloration of the solution is visible, and no large particles are left.
- After system is clean, drain, flush with clean water, drain, wipe out pans and tanks.
- Change all filters before refilling with dampening solution.
- Before dampening solution is pumped into pans, clean all damper rollers and etched chrome rollers.
- Desensitise roller surfaces by cleaning and etching them (rubber, chrome and ceramic rollers).

Recommended temperatures for heatset printing

Dampening solution pans		
	12-16°C	54-61°F
Inkers		
	26-34°C	79-93°F
Plates		
	28-35°C	82-95°F
Blankets		
	28-35°C	82-95°F

Water-cooled ink vibrators

26°C (79°F) ± 12% recommended surface temperature.

> 30°C (86°F) = increased ink tack caused by faster solvent evaporation, risk of ink mist or fly.

< 26°C (79°F) = increased ink viscosity and reduced ink transfer. May also cause emulsification in high humidity conditions.

Dampening solution pan

12-16°C (54-61°F) set the recirculating tank to low temperatures to achieve these readings.

> 16°C (61°F) Higher temperatures increase evaporation (also contributes to Tone Value Increase (TVI) dot gain).

> 12°C (54°F) Lower temperatures reduce ink transfer from the plate.