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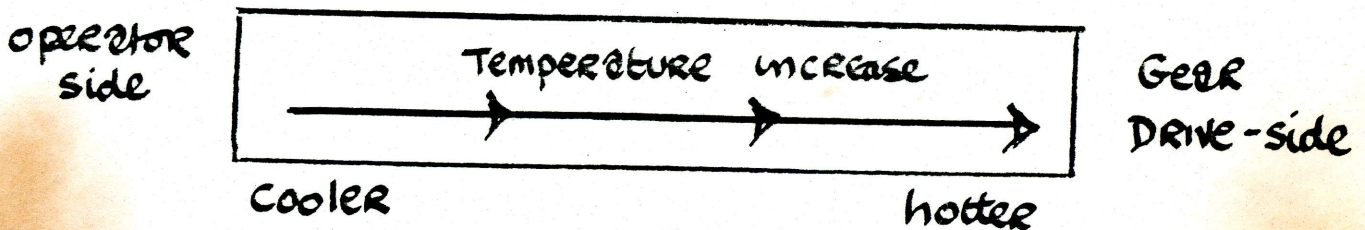
Temperature affects on fountain svstems (Contd)

Where the dampening system is fed through a "metering-nip", as for example the nip between a chrome pan-roller and resilient meter roller, (e.g. Dahlgren, Harris Duotrol systems), the conventional dampening control becomes inadequate as temperatures rise.

The fall in water-feed rate due to temperature during the run causes ink-surge and continual ink/water balance problems.

VARIATIONS ACROSS THE WEB

Fount-Pan



The increase in temperature on the drive-side of the press, causes the water in this proximity to lose viscosity and surface tension.

To compensate for the fall in water flow rate in this area, the press man needs to increase the water in this side of the plate. In doing so, he also brings up the water on the cooler side, flooding the plate in this sector.

This is the press man's nightmare - continual water/ink adjustments to maintain ink solid densities of "secondary scarlets", while the medium tones start to fill in.

Not only is the physical nature of the water affected by temperature, but also its electro-chemical nature and chemical composition.

The conductivity of water will increase by 300 mhos in the temperature band of 5°C - 21°C, and by 100 mhos in the band from 21° - 38°C.

Thus, the press minder controlling his fount solution concentration by conductivity can be reading misguided figures and use more fount solution than necessary if his conductivity is falling.

At the temperature of 26.5° - 32.5°C there is a dramatic increase in the growth of algae and bacteriological fungae. This temperature band is the ideal environment for bacterial growth, which has been traced as a source of "piling" and "plate blinding".