MARKETING NEWSLETTER

HEATSET WEB-EUROPE

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The affect of temperature in Heatset Printing

For many years the Heatset printing industry has been developing an understanding of the affect of temperatures on their printing process. Primarily their concern has been the temperature of the oven. Adequate heat is required to drive off the heatset ink solvents after printing, and ovens have become more heat effective, and indeed longer in length to enable them to cope with higher press speeds.

The faster the press, the less time the web takes to pass through the oven. However, heatset ink is thermosetting in character and the hot ink needs to be shock cooled by the chill-rolls to convert it to a solid dry state, before going into the folders. The higher the oven temperature, the heavier the work load for the chill-rolls.

In newsletter No. 36, November 29 1989, we discussed the area of "chill-roll" efficiency and the problems caused by high oven temperatures.

1. Paper fibre lift
2. Paper shrinkage
3. Loss of gloss
4. Paper brittleness due to moisture loss
5. Chill-roll marking
6. Paper fluting
7. Folder nose-cone marking
8. Blocking in signature stacks
9. Slower press speeds

However, in this newsletter we shall be looking at other temperature related problems and more specifically, at fountain solution temperatures.

The temperature of the fount-solution should ideally be 14.5°C - 15.0°C for optimum lithographic printing.

or 10°-13°C - See GATF Informati

This temperature band can only be achieved with mechanical cooling equipment and without this refrigeration, a circulatory fount system will continually reheat and stabilise at about 26.5°C - 28°C. This causes the whole spectrum of background scumming, poor water/ink balance and ink-surging.