Fount transfer to paper

Do you have problems with the dimensional stability of your paper?
Do you know how much fountain solution is transferred to your paper during the printing process?
With this method at FPC, the transfer of fountain solution to paper can be determined for unprinted, 1-color and 4-color printed areas.

Description

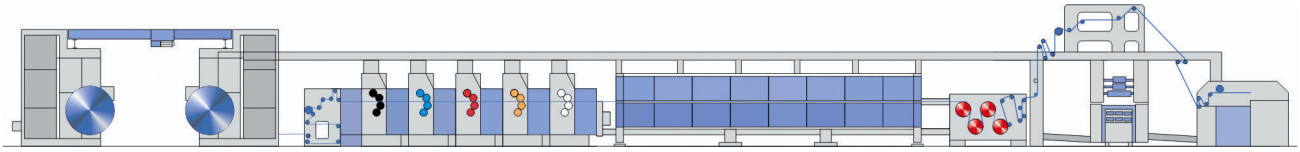
The transfer of fountain solution to paper causes various unwanted phenomena in printing, such as dimensional changes in the paper (e.g. misregister) and decreased surface strength of the paper. There may also be interference in the transfer of ink to paper. It has been pointed out in several studies, that more fount is transferred to the paper in printed than in unprinted areas. This is due to the water emulsified in the ink in the inking units.

Parameters affecting how much fount is transferred to the paper are the properties and amount of fountain solution, how much fountain solution is emulsified in the ink, the porosity and chemistry of the surface of the paper and the printing layout.

When measuring the fount transfer to paper, the printing is done with constant density. A tracer (usually BaCl or Ba SO_4) is added to the fountain solution at a known concentration.

After printing, the amount of barium in the paper is analyzed and the relative amount of fount transferred to the paper is obtained. The amount and distribution of barium, in x-, y- and z-directions, is determined with TOF-SIMS. In this way the relative amount and distribution of fount transferred to the paper are obtained for different printing areas.

In order to determine the fount transfer to paper, some 2000 meters per trial point is required.

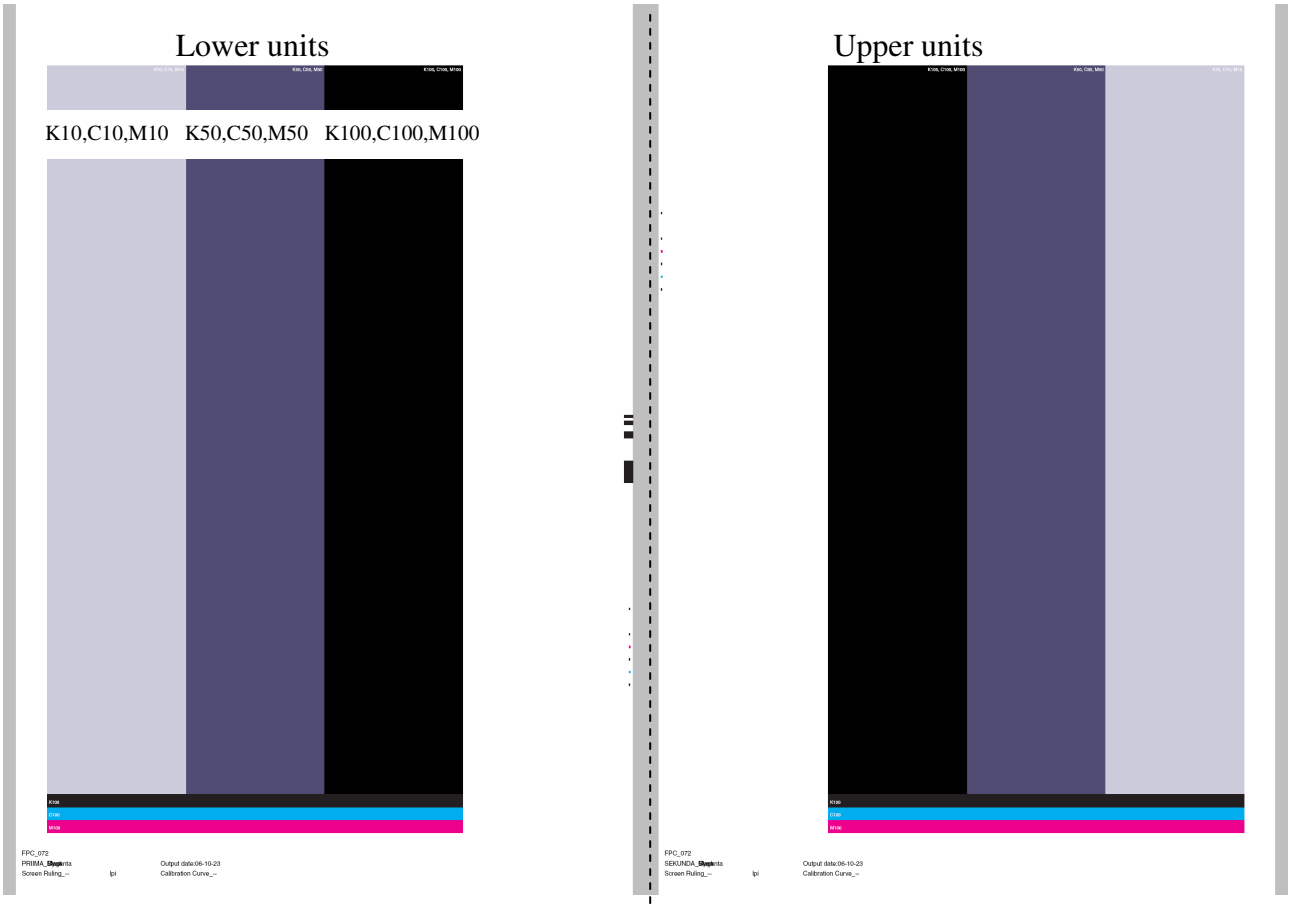


Forest Pilot Center Oy
Kerrolankatu 2
21200 RAISIO
FINLAND

Internet
www.fpc.fi

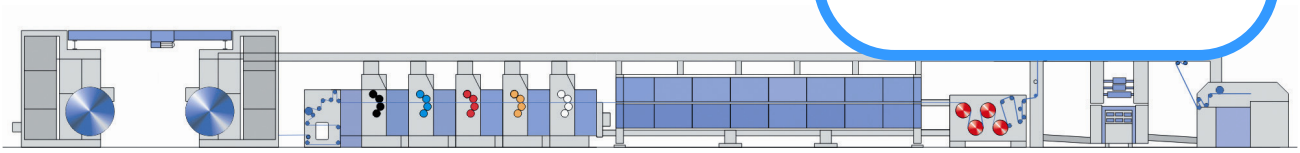
Telefax
+ 358 2 436 9307

Layout



Amount of paper needed:
2000 m/trial point

Measurements:
- TOF-SIMS:
  - Relative amount of fount transferred
  - Distribution (x-, y- & z-directions) of fount transferred



Forest Pilot Center Oy
Kerrolankatu 2
21200 RAISIO
FINLAND

Internet
www.fpc.fi

Telefax
+ 358 2 436 9307