

Heatset web offset method

Mechanical ghosting

Description

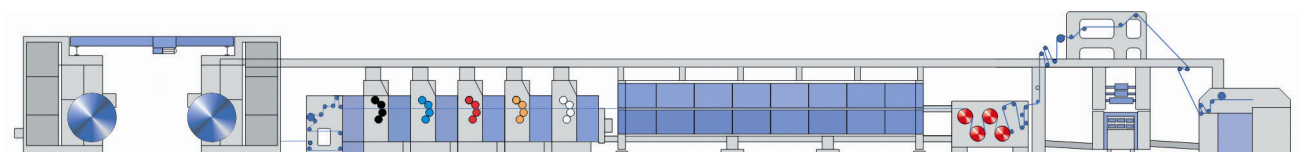
Mechanical ghosting is a phenomenon mainly associated with coated papers and related to the construction of the printing unit. In HSWO printing the upper and lower printing units are placed diagonally against each other, in order to minimize the fluttering of the web. In the HSWO machine at FPC the paper is first released from the upper unit and then from the lower unit. The ghosting phenomenon can be seen on the lower printing units.

Ghosting appears when there is a dark halftone or solid area on the upper unit side and a light halftone area on the lower unit side. The dark image on the upper unit side can be seen as a light ghost image on the lower unit side. This occurs when the paper tries to follow the dark image area on the upper unit side and then returns to the lower unit. Because of this phenomenon a so called “double release” takes place in the light halftone area on the lower unit side, thus straining the surface of the coated paper.

Studies have shown that piling can be found on the ghost image area. This piling causes a decrease of the dot size, thus causing lightening of the shade.

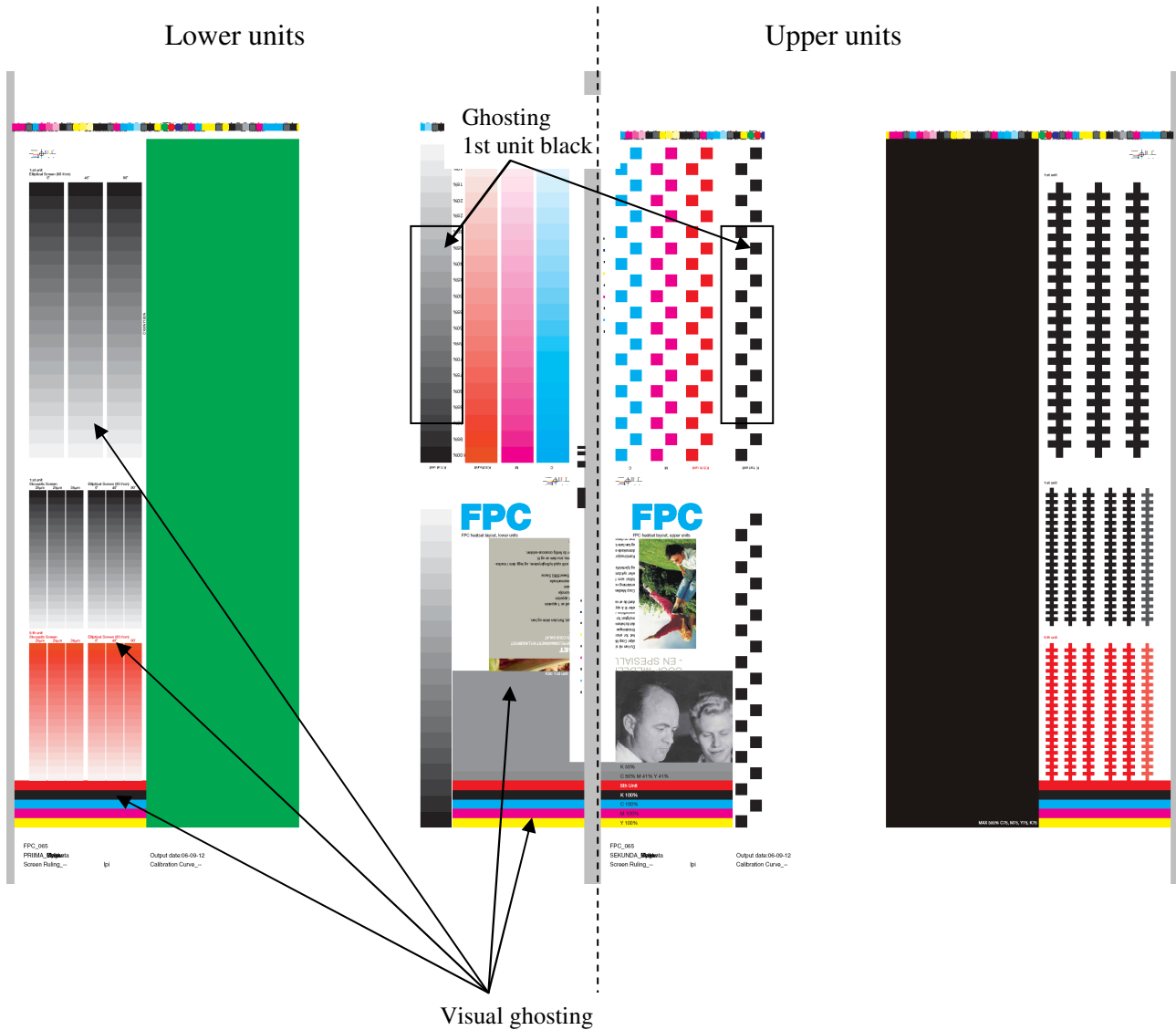
Ghosting tendency is usually studied as a constant print density trial. First 500 copies are printed using the automatic register system. After this the automatic registration is switched off and samples are taken after every 2000 copies up to 15 000 copies. The rubber blankets are cleaned very carefully between every trial point.

The paper amount requirement for a ghosting trial is 10 000 meters per trial point. The development of ghosting is measured from the samples, taken after every 2000 copies, either using a densitometer or a scanner-based evaluation (VTT/Jyväskylä).



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Layout



Amount of paper needed:
10000 m/trial point

Measurements:

- ghosting development:
 - densitometrically
 - scanner → image evaluation

