Improving newsprint sheet pressroom performance through total approach to lint control

What is lint?

Lint, as it relates to printing issues, can be defined as the deposition of the poorly bonded material from the surface of the sheet on the printing presses. Linting became a problem with the increased importance of offset printing technology. Linting problems are almost exclusively limited to mechanical grades of paper. Related terminology include:

• Dust – describes fine dust particles not attached to the surface, either organic or inorganic

• Pick – larger particles that are removed from the paper surface, including shives or fragments of coating.

Generally, lint consists of ray cells, small shives, fiber bundles, or poorly developed fiber fragments with a length of 1 millimeter or less.

Efficient pressrooms must be able to produce a large number of high quality impressions in a short period of time without having to stop for wash-ups. The accumulation of lint on the press blankets, or lint which transfers from the blanket into the fountain solution, causes the image to deteriorate forcing wash-ups.

Basics of Offset Printing:

In offset printing, ink is transferred from the plate to the rubber blanket that, in turn, transfers ink to the paper (Figure 1). The image area of the plate displays hydrophobic characteristics and accepts oil-based ink. The non-image area, which is hydrophilic, accepts water-based fountain solution, preventing it from accepting ink. Color images are formed using three different ink colors – yellow, cyan and magenta.

If all these colors coincide in a certain area, the resulting image is black. Yellow, cyan and magenta can also produce different shades of gray. To save money as a result of lower ink consumption, reduced set-off and improved print contrast, black and gray components are printed with black ink. Therefore, typical offset color printing presses use four-color stations – cyan, magenta, yellow and black (CMYK).
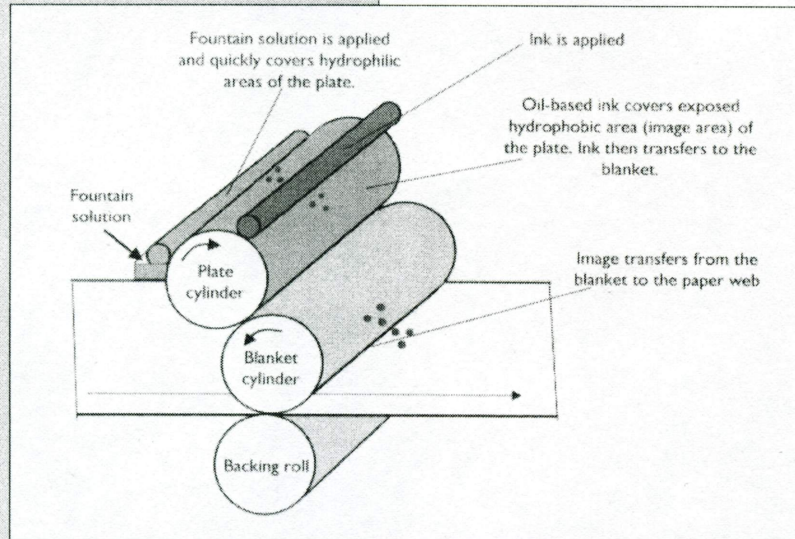

Fountain solution is applied and quickly covers hydrophilic areas of the plate.

Ink is applied

Oil-based ink covers exposed hydrophobic area (image area) of the plate. Ink then transfers to the blanket.

Image transfers from the blanket to the paper web

Fountain solution

Plate cylinder

Blanket cylinder

Backing roll

Figure 1 – *Principle of web offset printing*