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White Paper

Kodak's Press Ready Technology in SONORA Process Free Plates

It is Kodak's press ready technology that enables KODAK SONORA Process Free Plates to bypass processing and have the un-imaged plate coating removed as part of the press startup sequence. Press ready technology uses the basic principles, mechanics, and components of lithographic printing to prepare the image on the plate for printing.

With SONORA Plates, in almost all cases, a printer's current press setups, sequences, inks, fountain solutions, and blankets can be used successfully. Press ready technology also works with integrated and non-integrated, conventional and continuous dampening systems and for printers with automatic startup sequences. It all happens seamlessly as part of the regular press startup.

The Basic Principle:

During the startup of the press, the fountain solution swells the un-imaged coating, preparing it to be physically removed by the tack and shear of the ink. This enables a successful transfer of the coating from the plate to the blanket, and the coating is then carried out of the press by the substrate.
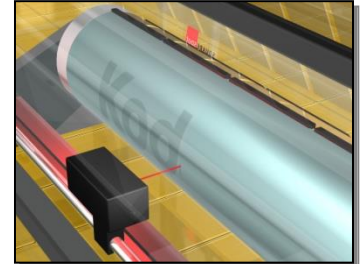
Here's how it works step by step:

SONORA Plates are negative (write the image) plates. They are non-ablative and do not require a debris removal system, offering a clean, safe environment for imaging plates. Certain "chemistry free" plates do require a debris removal system.
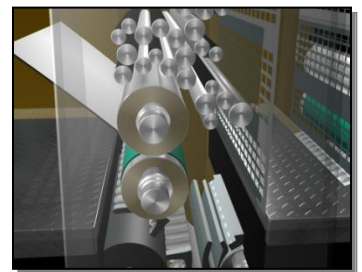
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Step 1: Imaging *KODAK SONORA* Plates

- During the imaging of the plate, the thermal laser writes the image, cross-linking the polymer resin to create a hardened, robust image area.
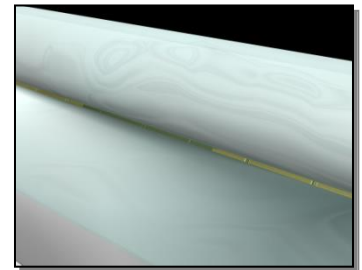
Step 2: Mounting *KODAK SONORA* Plates

- The plate is then mounted on the press cylinder like any other offset plate.

- SONORA Plates can work with either manual or auto load systems. No special physical handling is required, but exposure to white and yellow light must be limited.

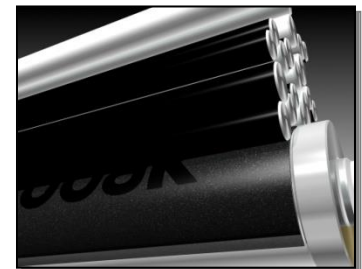- Image contrast is distinct enough to read 10 pt. type for cylinder identification.

Step 3 - 4: Engaging the Dampening Rollers and Ink Rollers

- The fountain rollers are engaged, covering the entire plate with fountain solution, which prepares the coating of the non-image area to be physically removed by the tack and shear of the ink.

- The fountain solution does not develop the plate, so it is important to keep pre-dampening to a minimum.

Step 5: Coating Migration to the Blanket and the Substrate

- Through a purely physical interaction, the un-imaged coating is removed from the plate and transferred to the blanket then to the substrate.

- The coating is carried away on the substrate with no contamination to the ink and fountain trains.

- This is a physical, rather than a chemical process, ensuring a very wide latitude for press chemistry and press setup conditions, and eliminating the variability associated with traditional wet processing systems.

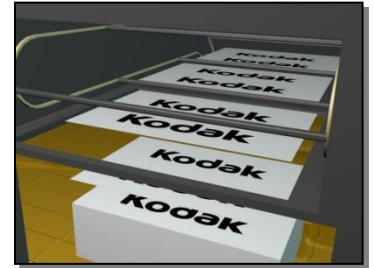- The background on the plate is usually clean almost immediately.

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Step 6: Printing starts

At this point, the plate behaves like any other thermal plate.

- As with any plate, run lengths can be dependent on the press type and printing conditions, but typical run lengths for SONORA Plates can match those of many mainstream unbaked process plates in most applications, including sheetfed, heatset and coldset web, and even UV and low-energy UV applications.

- SONORA Plates offer strong screening capabilities of 1 to 99% at 200 lpi and 20-micron stochastic screening for commercial applications, and 3 to 97% at 150 lpi and 36-micron stochastic screening for newspapers (dependent on capability of imaging device).

More information on SONORA Plates can be found at www.kodak.com/go/sonora.

About Kodak

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