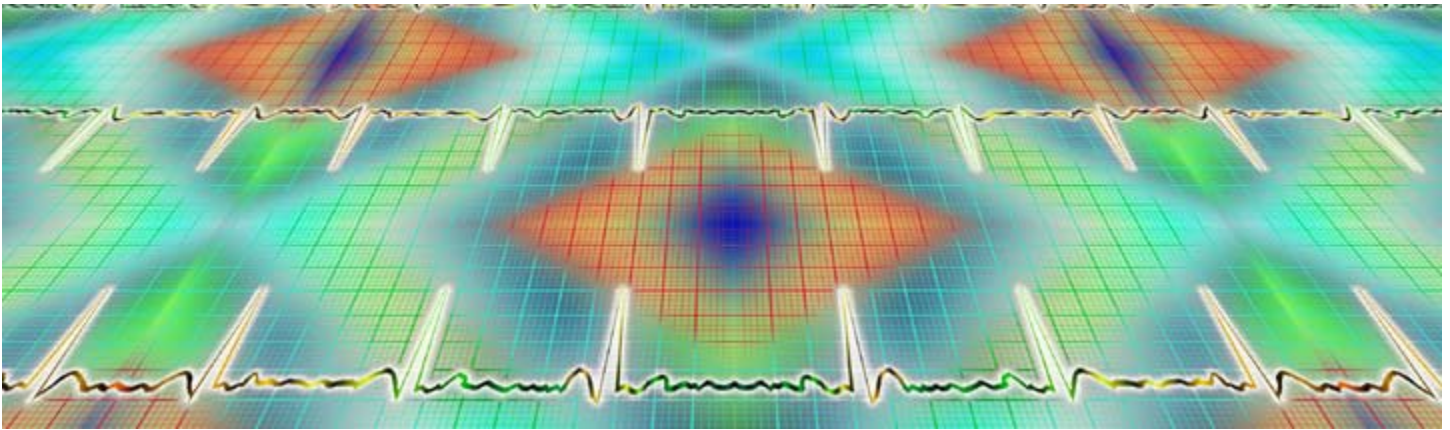


Xtreme Digital Imaging

By Tony Donato & Alexander James, Harper Corporation



Once in a while a product comes around that forces a paradigm shift in thought and approach. XDI—Xtreme Digital Imaging is such a product.

Providing over thirty-five years of ceramic anilox cylinders to the flexographic industry, Harper Corporation is now introducing the family of XDI cylinders to the Gravure and Flexographic industries with its proven ceramic cylinder surface and advanced Laser engraving digital technology.

Yes, that is right—a laser engraved ceramic Gravure cylinder. Harper's 35 plus years of knowledge and experience with ceramic

laser engraving has allowed the company to prepare the ceramic coating so it can be used as a gravure cylinder.

The packaging industry experiences continued pressure to differentiate their products coming to market with coatings, inks, and various specialized applications. The XDI family of digitally laser-engraved cylinders offers a durable, long-lasting surface that will withstand the rigors of phosphorescent inks, mixed metal oxide inks, and titanium inks. Additionally, due to the durability of this proven ceramic cylinder, the XDI engravings are ideal for cold seal adhesive applications. The consistency and durability of Harper's Laser-

Kote cylinders have a proven track record, and now the same quality and durability is available in the XDI family; cold seal patterns, logos, and graphics.

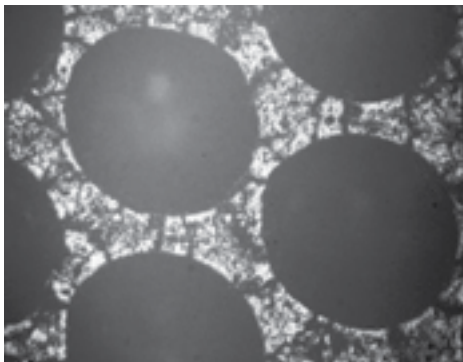
Benefits of using the XDI cylinders are numerous. Xtreme Digital Imaging cylinders can last well over ten times longer than current chrome cylinders. Looking at the cold seal adhesive patterned cylinders, the XDI ceramic coating provides a wear-resistant surface that allows adhesives to be laid down in a consistent coat weight, resulting in significant adhesive cost savings per year. No more need for having spare cylinders in the pipeline for "stripping and rechroming."



Another other important aspect of the XDI cylinder is its cell shape. Round dots print cleanly from 95 percent through 5 percent, and testing is being done on 2 percent. Tonal scales print without lines and stay clean. Laser-engraved cells have straighter walls and flatter bottoms than conventionally engraved, mechanically created cells. This affects ink release and opens up screen counts to go into lpi ranges that challenge the ink's rheology. Clean edges are now possible.



220 lpi/100%



95 lpi/5%

Harper Corporation is excited at the opportunity to offer this specialized product to the printers who have direct and offset gravure applications. The company feels its timing is perfect for the introduction of XDI as more combination printing process presses are being utilized. The XDI cylinders are targeted to printers who are using an in-line gravure station



on a flexo press or the application where a standalone gravure station runs for millions of feet.

Tonal images are now available is the same wear-resistant ceramic that has allowed anilox rollers to last for years.

About the Authors:

Tony Donato is a Process and Product Development Engineer with Harper Corporation of America in Charlotte, North Carolina.

The last ten years has put him in pressrooms as a student and a teacher. During this time he has performed countless numbers of operator training seminars in both gravure and flexographic converters.

He is a board member of the Phoenix Challenge Foundation, a group dedicated to the promotion of printing education and is on several different school advisory committees. Degreed in Manufacturing and Mechanical Technologies, Foundry Technology, and Management, Tony also has received training in TQM, ISO, and environment compliance.

Alexander James is the Technical Graphics Manager (Eastern Division) for Harper Graphic Solutions, a Division of Harper Corporations. He has



a Masters of Science in Graphic Communications from Clemson University and over 15 years of experience in the graphics industry, specializing in design and prepress. He travels on a global basis helping companies resolve their flexographic workflow challenges.