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Holography shines to keep packaging in the public eye

Packaging benefits from the latest in holographic techniques, says Dr Mark Deakes, general secretary of the International Hologram Manufacturers Association, who considers the latest eye-catching, and award winning, developments.

Advanced film coating and manufacturing technologies are expanding the boundaries when it comes to the use of holographic materials in packaging, while a wide variety of specialist origination techniques offer an almost endless variety of colourful 3D visual effects, ranging from the iridescent and visually striking to more subtle, muted tones and graphic features.

In particular, holographic films are ideal for a wide variety of flexible eye-catching applications, further increasing the creative visual opportunities for packaging and print designers to reinforce brand identities, catch the customer's eye and reinvigorate mature or aging pack designs. Indeed, holography's ability to refresh and reinvigorate brands continues unabashed, reinforcing the important role the technology plays in both tackling product anti-counterfeiting and catching the consumers' eye at the point of sale.

Holographic film packaging with its striking design increases the attractiveness of a product on a retailer's shelf, enabling it to stand-out and dominate its competitors. The films can be used for flexible packaging or paper-carton laminations in the cosmetic, food, cleaning supplies, automotive, or CD/DVD industries.

API's Holofoil™, for example, is one of the latest generation of decorative holographic foils used for packaging where maximum shelf appeal is an important element of the marketing mix, particularly among premium products but increasingly for mass market consumer items. In addition to more than 20 standard patterns with differing visual effects and colour variants, (API own copyrights on several hundred holographic designs) unique custom designs are also possible with the Holonique foil range.

Great effect

Holographic foils can be used to great effect to differentiate product at the point-of-sale - something Colgate Palmolive recognised when they launched its new Total brand of toothpastes into an already crowded market place.

Aimed at the premium market, Colgate needed its high-quality brand to stand out from the volume market so the consumer goods' giant opted for holographic foil to reinforce the high quality values of the Total brand while simultaneously ensuring the packaging

was visually attractive enough to catch the eye of consumers rapidly scanning supermarket shelves. The visual effects holography brings were identified as a powerful tool in building a powerful message and instant recognition. API's foil was specified to offer a bespoke, reliable and flexible design solution that could also withstand fast production speeds. The value the foil added to the overall branding is difficult to pin down but has certainly helped contribute to the brand becoming a market leader and instantly recognizable on the shelf.

Other examples of packaging enhancing holography include the award winning anniversary pack for Unilever Turkey for its 25th Anniversary Magnum ice cream. The over-printing by BEP Hologram features a reversed-out 'M' to enable the hologram to capture the essence of the product.

Holograms such as these can be customised to feature product names, emblems or company logos - and used for flexible packaging or paper-carton laminations across cosmetic, food, cleaning supplies, automotive, or CD/DVD industries to name but a few. Hazen Paper's *Nike™ Gift Card*, is another example of hologram innovation at its award winning best. A multi-ply paper produces a card that feels like a plastic one but with the advantage that it can be recycled.

Another new development with strong potential for applications in the packaging sector was unveiled at the recent Holography Conference in Shanghai by Wood & Associates International whose new company, Fresnels Inc, will be promoting brand identity, product recognition and security using Fresnel lens effects on rigid and flexible packaging. The move reflects the growing interest in the eye-catching appeal of circular or non-circular fresnel effects, either alone or in combination with holographic effects. Fresnels Inc will offer a new range of recyclable metalised and transparent laminates and transfer foils that have the potential to impart fascination, beauty and additional security to branded goods.

Holography is also pushing the boundaries in other areas of packaging, specifically in expanding the range of anti-counterfeiting and brand protection applications. The technology's ability to incorporate other data forms and product tracking information is becoming increasingly important, and commercially acceptable, with the added bonus of being able to link on-pack product identification with supply chain management, market enforcement and forensic support services.

For example, OKI Data Corporation's Lippmann photopolymer holograms when combined with a tracking code provide a high degree of packaging authenticity, and can be used as a measure against counterfeit ink ribbons and toner cartridges (millions of fake toners and inks are seized annually in a sector where losses to counterfeiters run into billions of dollars annually. Authenticity is improved because of the inclusion of the security device on a self-adhesive label, which also acts as the carton seal, while the PCAS number can be entered on to a new web-based service.

Enhanced resistance

New imaging techniques and combinations of other overt authentication technologies with holograms are producing advanced optical security devices which combine ease of recognition benefits with significantly enhanced resistance to counterfeits, enabling products to be controlled through security authentication features, tracking mechanisms and investigative services.

This approach was reflected by two commendations in the Best Applied Decorative/Packaging Product Award at the recent Holography Awards 2015. A three-way alliance between NovaVision Inc, Royal Canadian Mint and Pacific Holographs produced the 2015 Fine Silver Hologram Coin featuring 'Lustrous Maple Leafs' embedded into one of the coin faces.

Another application also caught the eye of the judges to win the Innovation in Holographic Technology award - China's Zhongchao Special Security Technology Co Ltd, a division of China Banknote Printing & Minting Corporation, with its ColorDance™ product, designed for banknote security threads. This new type of optical anti-counterfeiting technology differs greatly from traditional holography by containing special optical micro-nanostructures showing novel optical effects such as dynamic image with full parallax and steady colour.

It's clear that holograms remain to the fore not only as the single most used overt authentication device but also as multi-function devices which deliver real added value in the competitive packaging arena. There they continue to reinforce their role as an effective security feature while designers continue to see the benefits unfold before their eyes and comfortable with a technology that has a lot to offer.

The International Hologram Manufacturers Association (IHMA) - www.ihma.org - is made up of more than 90 of the world's leading hologram companies. IHMA members are the leading producers and converters of holograms for banknote security, anti-counterfeiting, brand protection, packaging, graphics and other commercial applications around the world. IHMA member companies actively cooperate to maintain the highest professional, security and quality standards.

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