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Hologram Industries Unveils DID Wave



An example of DID Wave Stripe.

Hologram Industries (HI) announced the launch of its latest holographic innovation – called *DID Wave™* – at the *High Security Printing™* Conference in Lima in June.

This latest innovation by HI builds on the *DID®* (Diffractive Identification Device) product family comprising zero order diffraction devices. Since 2003, the product family has evolved to include: *DID® Optoseal™* to protect data on paper documents, *DID Note™* and *DID Contour™* for banknote authentication, *DID Inlay™* for polycarbonate cards and recent concepts, *DID Full*, *DID Shape* and *DID Twin* that increase the diffractive optical variable image device's role in personal data protection of polycarbonate documents.

HI have developed a new novel path in the DID innovation road map that combines DID nanostructures with ultra-thin reflective Fresnel micro-optics.

Using zero order nano-gratings technology and 'mapping' them onto the ultra-thin Fresnel type lenses allows HI to add animation / motion and / or virtual surface relief 3D effects with the DID colour permutation.



DID Wave patch and windowed thread.

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Idvac Develops 2-Colour Copper Metallisation

Idvac, the UK-based specialist vacuum metallising developer and consultancy, has developed a new innovative process that deposits two distinct colours of copper metallisation onto embossed and unembossed films.

Idvac specialises in the development of advanced metallising processes for holographic, packaging and other niche markets. Over the past 11 years, it has been successful in developing and introducing new vacuum processes and technologies, including high refractive index materials (HRI), copper, chrome alloy, dry gold colour finish, colour shift and other processes to the security and packaging markets. In May 2015, *Holography News®* reported on the development of the new generation of advanced narrow web vacuum coaters (*MiniMet 300*).

Typically, holograms are metallised fully or partially with aluminium or copper, as a reflection-enhancing layer, or coated with HRI materials such as zinc sulphide to provide a semi-transparent effect.

In this new innovation, copper can have two distinct colours (standard and rosy) on a film without the use of any inks, dyes or wet coatings. The copper deposition process is dry and carried out in vacuum. When combined with partial demetallisation, it provides two distinct copper colours for images, logos, text and alphanumerics.

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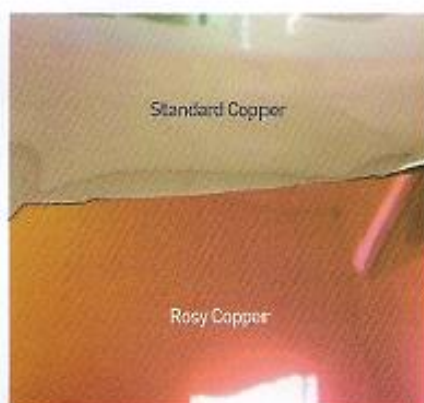
Idvac Develops *(Continued)*

The new process can be used for both laminated and hot stamping holograms.

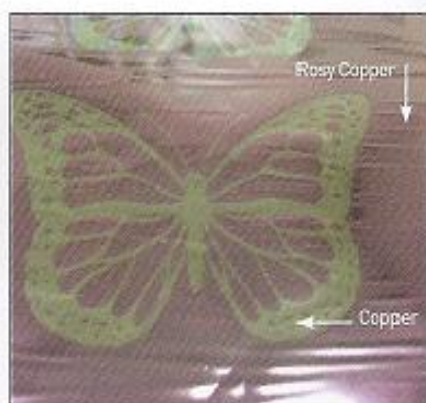
The process provides a different approach to bi-metallic coatings since – instead of using combinations of aluminium, copper or zinc sulphide to achieve a bi-metallic effect – only copper is used to produce two colours.

The other interesting feature of this new development is that the two colour metallised copper layers can have different electrical and thermal conductivities, which may be developed for future authentication and new electro-thermal element applications.

www.idvac.co.uk



Separate copper metallised films exhibiting the standard copper colour and rosy copper colour.



Single copper metallised films exhibiting both standard copper colour and rosy copper colour.