Ecological light scattering film for brand protection, packages and consumer products

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Applications of the technology include the ability to label genuine brand products with a technical solution that is difficult to counterfeit. Printers can reduce the use of inks with this method, and advertising agencies can create striking packages that are environmentally friendly. Applications further include transparent films and gift wrappings, which can be made more decorative without compromising transparency. The technology is also suitable for injection-moulded plastic products such as mobile phone shells, CD jewel cases and laptops, and for laminate solutions such as interior design elements and sports equipment.

Commercial holograms in the printing industry are almost without exception printed on narrow-web lines. Iscent is investing in the capacity to produce end product up to 1,200 mm wide, which will open up a completely new range of business opportunities, enabling large-volume product lines thanks to minimised raw material costs.

Commercial holographic technologies are based on metal foiling or coatings, laminated structures and UV curable varnishes. With the new light scattering method, none of these will be needed, nor will any other extra materials: the rainbow colours are generated simply by altering the topography of the plastic or paper surface being treated.

The new method is based on a hot embossing technology where a pair of rollers similar to a calender exerts nip pressure on the plastic or paper web run through them. The lattice design on the main roller is copied to the web by the heat and pressure.

Iscent Oy, based in Tampere, Finland, is commercialising a new, high-quality optical effect film material. Iscent supplies film materials to Finnish and foreign companies and licenses its technology to converting industry of film materials. The new method enables cost-effective production and has a potential worldwide market. The technology can be licensed internationally for a scalable business opportunity.

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