INKJET VARNISH CURED BY UV LED TECHNOLOGY

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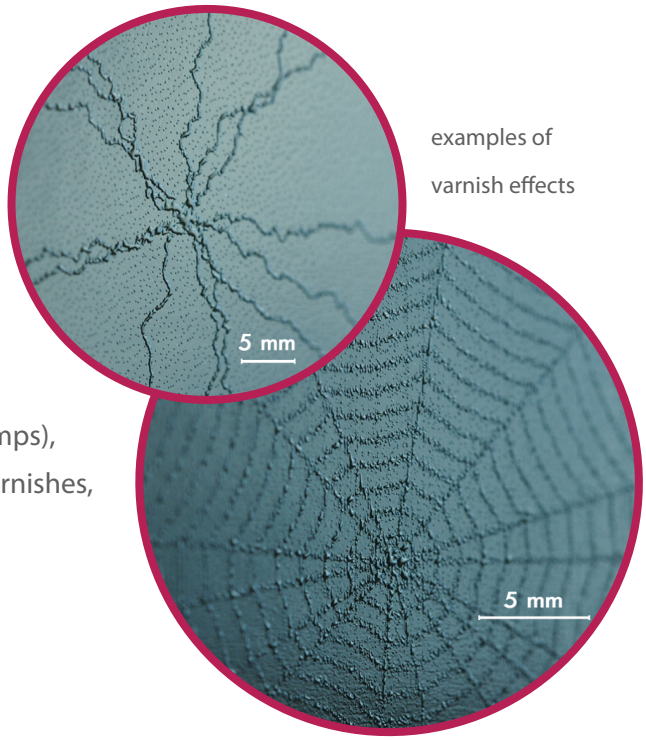
TECHNOLOGY:

The developed varnish is especially suitable for use in digital inkjet varnishing machines for printing of various materials (e.g. papers, cardboards, polymer foils). Varnishing is used not only to increase the protection of the prints, but nowadays also to increase the attractiveness of the product's appearance (especially the packaging of various products, book covers, etc.).
The development optimized the varnish composition in terms of mechanical, optical and printing properties. For example, the elasticity and adhesion of the varnish layer, speed of curing/printing, printing properties, yellowness, long-term stability, viscosity and surface tension were evaluated.

APPLICATIONS:

- outdoor advertising,
- label printing,
- printing on book covers,
- textile printing,
- 3D printing, etc.



examples of varnish effects

BENEFITS:

- new trend of curing using UV LED technology,
- electricity savings up to 75 % (against curing by mercury lamps),
- higher adhesion and elasticity than with commonly used varnishes,
- creation of special varnish effects (3D structures, etc.).

CURRENT TECHNOLOGIES ON THE MARKET:

The problem with printing with conventional varnishes is their generally poorer adhesion to polymeric materials and lower elasticity, which can lead during subsequent finishing of prints (bending, cutting, grooving, etc.) to defect formation (cracking and peeling of the varnish layer).
There are a limited number of varnishes on the market that are curable by UV LED technology.
Varnishes cured by mercury lamps predominate (higher electricity consumption, ozone formation, shorter lifetime, mercury content, etc.).

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Commercialization opportunities:
licensing

Patent situation:
utility modejl r.n. 35783

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