

New IMD PUR dual-technology process for plastics decoration

Leonhard Kurz will be demonstrating at K 2019 a process for in-mold decoration and PUR coating in a single machine pass

Fürth/Germany, 24 June 2019: The coating manufacturer Leonhard Kurz has developed a process for combining IMD (In-Mold Decoration) with PUR technology. In this process called IMD PUR, plastic parts are decorated during injection molding by means of in-mold decorating and then overflowed with PUR (polyurethane) within the same clamping unit. This produces sophisticated designs under a crystal clear, high-gloss surface. PUR layer thicknesses of between 0.3 and 15 millimeters can be created that exhibit a marked depth effect. Besides a glossy glass appearance, the PUR coating also provides a high level of surface protection. The decoration remains intact when subjected to scratches or stone impact, and the PUR topcoat is self-healing when scratched.

Technological advances in IMD coating and mold technology

The production and PUR flooding of injection molded parts in a single machine pass is a known process. The novelty, however, is in combining this with the IMD process. Kurz has developed IMD coatings that adhere perfectly to the PUR topcoat. The mold manufacturer Schöfer, a member of the Kurz Group, has also precisely tailored the mold technology to the process. Schöfer, with its specialist experience in mold-making, complements Kurz's comprehensive know-how in thin-layer and process technology. Thanks to the intensive development work undertaken by both parties, it is now possible to perform injection molding, IMD coating, and PUR coating in a single clamping unit. Furthermore, the tailored formulations of the IMD and PUR layers, as well as process-optimized molds, ensure significantly reduced cycle times.

The IMD PUR process combines the advantages of the IMD and PUR technologies. Plastic parts decorated by means of IMD PUR exhibit the high

surface quality, depth effect, and glassy appearance of PUR coatings. At the same time, IMD PUR offers the great design freedom that is characteristic of IMD technology, with the ability to perform design changeovers both quickly and efficiently.

Kurz will be presenting the new IMD PUR process at K 2019. At the Kurz booth A19 in Hall 5, an Engel duo 2460/900 injection molding machine will be producing plastic parts decorated by means of IMD PUR. The production and decoration of components with complex geometries will be demonstrated by way of an automotive front panel.



Injection mold in which injection molded parts are provided with an in-mold decorative design and PUR topcoat by means of Kurz's IMD PUR technology.

(Photo: Kurz)

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About KURZ: The KURZ Group is a global leader in thin film technology. KURZ develops and manufactures decorative and functional layers applied to carrier foil for a wide range of industries, from the packaging and printing industry through to the automotive, electronics, card and textile sectors. KURZ offers a comprehensive portfolio of products for surface finishing, decoration, labeling, and counterfeit protection, rounded off by an extensive range of stamping machines and stamping tools. The company is also continuously investing in new technologies and developing innovative solutions for integrating functionality into surfaces. The KURZ Group has more than 5,000 employees at over 30 sites worldwide and produces under standardized quality and environmental standards in

Europe, Asia, and the USA. A global network of subsidiaries, representatives, and sales offices ensures short paths and individual, on-site consulting.

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