

Surface technology for cost cutting and improved surface properties

13 February 2015 by Deutsche Messe

Functional surfaces a key focus at SurfaceTechnology 2015

Functional surfaces are becoming increasingly important for components, implements and utensils of every description. Targeted surface modifications and coatings on base materials can have a profound effect on a product's overall properties such as wear resistance and frictional behavior, thus rendering it more effective for its intended use. Thanks to micro- and nanostructures, even more options are available. Functional surfaces are therefore going to be a special focus at the SurfaceTechnology show to be held this April under the umbrella of HANNOVER MESSE 2015, where the new Micro, Nano & Materials Pavilion will serve as a central point of reference for micro- and nanotechnology users.

In today's material development efforts, cost is another reason why major emphasis is being placed on surface treatments, with many process innovations being driven by new environmental protection requirements. AHC Oberflächentechnik, for example, has developed a process for chrome-plating surfaces and sections thereof in highly selective way. Components to be electroplated are placed in holders that mask out the areas that are not to be plated. "The selective plating process, dubbed SELGA-COAT® CHROM, is significantly more efficient and environmentally friendly than conventional chrome electroplating," explains Jürgen Diesing, Marketing Director at AHC Oberflächentechnik. Plating is performed in a closed system that protects operators and the environment from contact with hexavalent chrome. It also produces no wastewater and operates with almost complete reuse of the process chemicals, so only a very small portion requires disposal. Under the provisions of the EU REACH chemical regulation, there is a general ban on the use of hexavalent chrome after 2017, but SELGA-COAT CHROM is exempt from this.

Source: Deutsche Messe AG, Hannover Fairs International GmbH.