GESAMTVERBAND DER ALUMINIUMINDUSTRIE e.V.

Fraunhofer IPA lowers energy consumption required for anodising

A new anodising method should save around 40 per cent of the energy costs of surface treating for light metals. The new technique was developed by the Electroplating Department of the Fraunhofer Institute for Production Engineering and Automation (IPA) in Stuttgart. In the framework of a public research project the IPA scientists succeeded in lowering energy consumption for the anodising process of their partner companies by 40 per cent.

Here the electroplating experts have developed conventional technology further. In order to apply the principle of “less heat input, less cooling”, instead of working with a conventional direct current, the scientists worked with pulse anodising. This means the energy input is considerably less than it is using conventional methods.

The method also makes it possible to utilise energy-efficient cooling technologies. Schmid is pleased: This way even more energy can be saved, especially in the hard-anodising process, which requires particularly strong cooling of the electrolytes.

Klaus Schmid, group head in the Electroplating Department at Fraunhofer IPA, is confident, “The development potential of the anodising method is far from being exhausted.” His interdisciplinary team, consisting of material scientists, engineers and chemists, is ideally prepared for future challenges. The scientists are currently working on a method of monitoring anodising processes in real time. The information obtained from this can be used to optimise the methods even more.

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