

Press Release

New Opportunities in Medical Technology: STÜKEN introduces Multistage Titanium Deep-Drawing



Advanced method of multi-stage cold forming of titanium opens up new perspectives

Rinteln, April 19th, 2018 – Until now the deep-drawing of titanium only worked in a single-stage cold forming process resulting in low drawing depths. STÜKEN has developed a new process that can be used to cold-form titanium in deep-drawing technology, even in multiple stages. This opens up new horizons, especially for medical technology.

Titanium is virtually indispensable in medical technology because it offers a high degree of biocompatibility and is resistant to corrosion when in contact with organic acids and chloride solutions. Deep-drawn parts made of titanium could previously only be produced by single-stage forming - this resulted in low drawing depths and thus a very limited range of parts. Furthermore, often only low precision was possible. Multi-stage cold forming was uneconomical due to the extreme stress of the tools.

STÜKEN has developed an optimized method to produce titanium parts in several stages in a cold forming process. This generates numerous advantages - especially for medical technology:

- The multi-stage deep-drawing process allows for high-precision components.
- The process opens up opportunities to meet new challenges and form complex geometries.
- STÜKEN has already deep-drawn long, slim titanium components.
- Lower wall thicknesses enable lightweight products and significant cost savings.

Not only the advanced deep-drawing technology for the multi-stage forming of titanium yields benefits. STÜKEN has comprehensive processes for refining components. The anodizing of titanium components also allows a variety of colors. STÜKEN has two class 7 cleanrooms in accordance with DIN EN ISO 14644 and EU Guide to GMP Class C. This ensures that no undesirable residue is left on the components and biocompatibility is guaranteed.

Thanks to the optimized deep-drawing method, STÜKEN opens up unprecedented solutions, especially for medical technology. For example, new possibilities are being created for the development of particularly compatible and high-quality housings for pacemakers.

STÜKEN offers astonishingly efficient solutions for medical technology with other materials - for example products for the administration of medicines and pharmaceutical primary packaging, including insulin pumps and cartridges for liquid and gaseous agents. The innovative company is currently preparing the certification according to DIN EN ISO 13485.

About STÜKEN

Founded in 1931, STÜKEN today is considered the world's leading supplier of precision deep-drawn parts made of metal. Stampings and injection-molded parts as well as complex assemblies complete the range and guarantee customers finished products of highest quality. The products can be found in countless applications from domestic appliances and fittings to computers, mobile phones, insulin pens and automobiles. The family-owned company is headquartered in the German city of Rinteln on the river Weser and employs around 1.250 staff. Subsidiaries are located in the United States, the Czech Republic and the People's Republic of China. In 2017, the STÜKEN group achieved sales of 187 million euros.

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