

Nägeli Swiss AG - Company Profile



Nägeli Swiss AG

Innovative Solutions in Metal and Composites Technology

- Many years of experience
- State-of-the-art component manufacturing
- Innovative solutions
- Highest standard of quality and precision
- Technical consulting
- Collaboration with various universities



Metal Forming

Nägeli Swiss AG is specialized in stamping and deep-drawing of high precision parts out of steel, stainless steel and non-ferrous metals.

The metal forming technology allows an efficient serial production and opens up interesting and cost-effective alternatives to the machining technology. It is our goal to define smart manufacturing processes and to find innovative approaches for the optimization of your products.



Introduction

Nägeli Swiss AG is a family owned enterprise founded in 1941. Situated in Güttingen on the shores of Lake Constance, it is run by the 2nd and 3rd generation. Our company is developing and manufacturing high-precision parts out of metal and advanced composites for different market segments, e.g. Defence, Textile Industry, Mechanical Engineering, Automotive, Optics or Space.



Advanced Composites

Parts in advanced composite technology (glass and carbon fibre reinforced plastics) offer various essential advantages. The low weight combined with a high stiffness allows a significant increase in the performance of mechanical systems.

Nägeli Swiss AG has a wide experience in the design and manufacturing of fibre reinforced parts for more than 20 years. Our solutions are tailor-made based on your specific requirements.

Metal Forming Technology



Our Competences in Metal Forming

- Forming step definition
- Tool design and manufacturing
- Deep-drawing, stamping, bending, rolling, embossing
- Heat treatments
- Machining operations
- Assembling (riveting, welding)



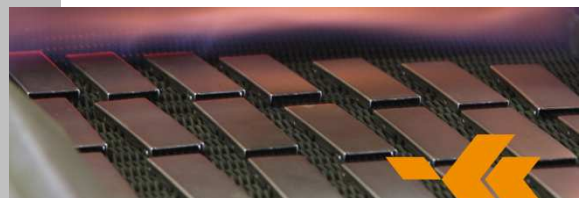
Whatever metal forming competence is needed for your components, Nägeli Swiss AG succeeds thanks to more than 70 years of experience. Your parts are precisely manufactured out of various strip materials, such as steel, stainless steel, aluminum, brass alloys, or titanium. The typical material thickness ranges from 0.04 mm to 5 mm. We are specialized not only in mass production, but also in limited-lot production.



Heat Treatment

Components with high demands on mechanical properties can be formed in a soft condition and optimised by an adequate hardening and annealing process.

Carbo-Nitriding – a hardening operation in a nitrogen atmosphere – leads to a highly wear resistant surface and a ductile core, protecting machine components against corrosion.



Machining and Assembling

Whenever needed, any subsequent machining operation such as counter-sinking, milling or threading can be carried out in house.

Our assembly department is equipped with a wide variety of machines allowing for connecting individual components to assemblies by means of soldering, spot welding, riveting, adhesion bonding, or screwing carried out in the careful and qualified manner that Nägeli Swiss AG is famous for.

Advanced Composites



Our Competences in Advanced Composites

- Part design and computation
- Tool design and manufacturing
- Process engineering
- Prepreg processing, RTM (Resin injection), Thermoforming
- Prototype manufacturing and efficient serial productions
- Finishing operations (machining, bonding, varnishing)



Since the 1980s, Nägeli Swiss AG has gained a wide experience in developing parts and processes in advanced composites. The close collaboration with our customers on one side and universities on the other side leads to tailor-made solutions based on cutting-edge technologies.

To ensure a most efficient serial production, different autoclave-free curing methods have been implemented and thermoset as well as thermoplast resin systems are being processed.

Some Highlights in Our Project Portfolio

Wing Tip for Dornier 328



Our first serial part in advanced composites: prepreg processing according to aircraft standards using state-of-the-art tooling concepts.

Arm System for a Pick-and-Place Robot



This robot arm out of a high modulus carbon fiber prepreg in an autoclave-free curing cycle increases the system performance by 40% due to the systematic implementation of a light-weight design.

Bed Spring BicoFlex



Mass production as never seen before for endless fiber reinforced parts: up to 1.5 million parts per year using an efficient thermoforming and stamping process. A very high fatigue strength is reached due to the application of glass fibers and polypropylene.

Trumpet daCarbo



This is the sound of the future! The trumpet bell out of carbon fibers, impregnated in a resin injection process (RTM), leads to an ultimate responsiveness of the instrument as a consequence of the damping properties and high stiffness of advanced composites.

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