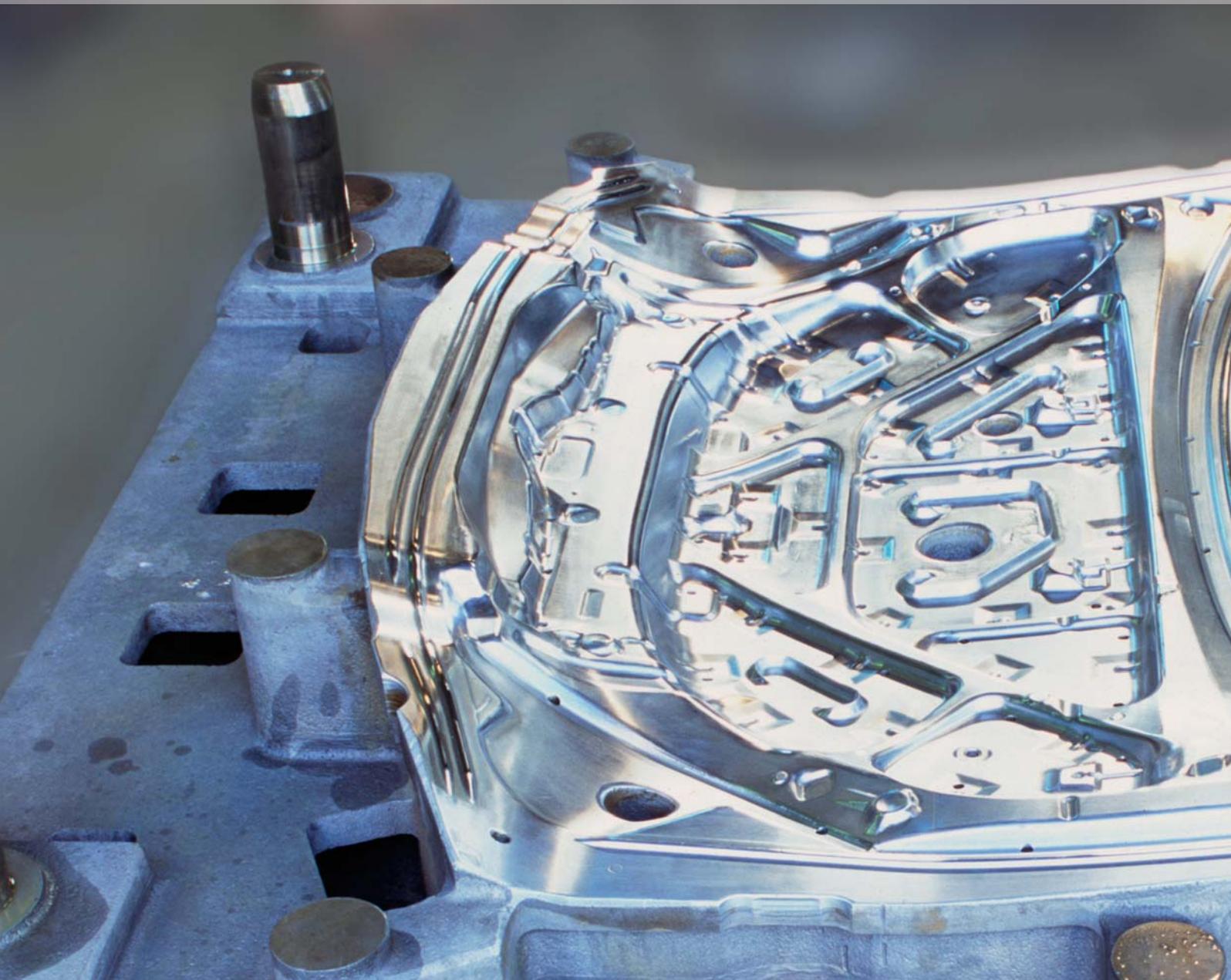




Automotive Factors of Success

English

Surface solutions by STI Group



Unique Chrome Plating Technology



Many renowned car manufacturers also owe their attractive designs to the STI surface technology. The Hartchrom Teikuro procedure is one of the world's recognised and best surface treatment technologies for forming tools in the automotive industry.

High surface functionality

The car manufacturers' tools need to be able to withstand strong forming forces and excessive wear. Hard chrome plating not only significantly improves wear resistance, but also the surface quality. The very fine and lubricious surface results in fewer scratches, cracks and deformations on the pressed and body parts. This high surface quality plays a crucial role in a more virtuous design of the body panels.



Full service around the clock

The use of chrome plated deep-drawing and cutting tools significantly reduces your yield loss rate, lowers the maintenance costs and increases productivity many times over thanks to the shorter downtimes of the presses.

In order to reduce your production losses to a minimum, you can reach our customer service team around the clock seven days a week. On request, our experts will also train your employees and production teams on site in handling coated components and tools.

Success Stories by STI | Hartchrom

International customers*: Allgaier, Audi, Benteler, BMW, Daewoo, Daimler, Ford, GM, Honda, Hyundai, Karmann, KIA, L pple, Magnetto, Magna, Mazda, Mitsubishi, Nissan, Opel, Porsche, PSA, Renault, Saab, Subaru, Suzuki, ThyssenKrupp, Toyota, Volkswagen, Volvo.

** Teikuro: pioneer and world leader in chrome plating of deep-drawing and cutting tools for the automotive industry since 1965*

The Hartchrom Teikuro procedure

At the STI Surface Centre in Sternenfels-Diefenbach, Germany, Hartchrom Teikuro Automotive GmbH offers a unique hard chrome plating technology. The Hartchrom Teikuro process involves applying a gauzy, low-friction hard chrome layer to the work surfaces of the deep-drawing and cutting tools. This protects the actual shape of the tools, while any friction effects are absorbed by the drawing process of the extremely smooth chrome surface. The shape of the tools, with filigree contours and numerous deep draws, therefore remains intact, even after the exposure to hundreds of thousands of press strokes. This results in higher quality components, increased productivity, improved process safety and lower costs throughout the whole manufacturing process.



Properties of the chrome plated cutting / pressing tools

Hardness HV 850 - 1100 (grey cast iron HV 200 – 300)

Coating thickness - surfaces: approximately 15 – 25 µm

Coating thickness - radiuses: approximately 35 – 55 µm

Low friction

Your benefits

- Processing of your deep-drawing and cutting tools within 12 to 18 hours
- Coating of components with dimensions of up to 5,000 x 2700 x 1,500 mm (LxWxH) and weighing up to 20 tons
- Ensuring that form and geometry remain intact, even in case of multiple chrome plating and repairs (heat distortion is ruled out)
- Additional wear protection through thicker coatings on exposed sections
- Reduction of lubricant use by up to 90% due to the improved lubricity
- Reduction of scratching, cold welding, wave forms or tearing of the pressed parts due to the fine surface coating
- Comprehensive quality inspection including certificate
- Logistics service (on request)



The coated deep-drawing tools result in a significant increase in productivity.

STI Group Surface solutions worldwide.



Individual Solutions	STI Group offers you individual overall solutions – from comprehensive analyses and consulting, development and innovation to the actual treatment process, mechanical processing, the final quality check and transport.
Industrial Areas	Automotive, Aviation, Defense Technology, Film, Foil, Food, General Industries, Hydraulics, Marine & Powertrain, Paper, Power Generation, Print, Textile, Tools etc.
Range of technologies	Hard chrome (including Triplex, structural chrome and Nanochrom), electroless nickel, galvanic nickel, hybrid layers, dispersion layers, thermal spraying (HVOF, plasma, wire flame spraying), Dry Coating (plasma nitriding, PVD, PACVD), painting, grinding, polishing, milling, turning, boring. Various special processes are available on request.
Quality and Precision	STI Group surface treatments stand for precision, functionality and quality. STI Group guarantees the required process safety to achieve the narrowest tolerance ranges and create tailor-made, reproducible surfaces.
S to XXL Components	STI Group develops innovative, tailor-made surface solutions for components up to 6,000 mm in diameter, 27,000 mm in length and 64 tons weight.
Complex Geometries	One of the core competencies of STI Group is the coating of components with complex geometries. STI freeform surfaces are renowned for their optimized characteristics, the highest level of quality and reproducibility.
Single Parts and Series	STI Group is your specialist for custom-designed surfaces, both for individual parts and series. Know-how, experience and modern infrastructure guarantee optimum results.
Research & Development	STI Group carries out systematic application-oriented and pure research and development. Our focus is on high-performance, individually optimized surface solutions for you and your success.

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