



Power Generation

English

Surface solutions by STI Group



High-quality surface solutions



For many years, the name STI Group has been synonymous with high-quality and functional surface technology. Successful industrial companies from a wide range of industries all over the world rely on STI Group's leading technological competence and experience.

Largest infrastructure worldwide



The infrastructure of our coating plants is designed for components measuring up to 5,000 mm diameter, 12,000 mm length and 64,000 kg weight. The precision grinding facility can handle components up to 6,000 mm diameter, 27,000 mm length and 64,000 kg weight.

Quality and precision



STI Group controls each individual process parameter and can thus achieve optimum quality and precision, even for components with complex shapes. Continuous control, state-of-the-art coordinate measuring technology and traceable recorded process steps are your guarantee for consistently high and reproducible quality of coatings produced to your individual specification.

All processes from one supplier



STI Group offers a comprehensive service from one port of call, ranging from initial advice through our Technical Sales, to professional mechanical processing, the surface treatment of your components and final quality control, through to support for your transport and customs requirements.

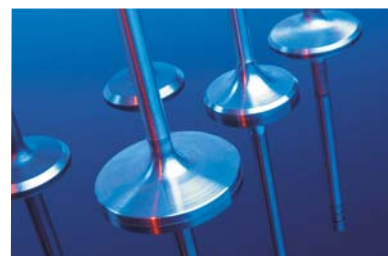
Research & Development



New applications, more exacting specifications and the search for environmentally compatible processes require innovation. STI Group's Research & Development Department is always one step ahead and today is already working on the technology of tomorrow.

Expert knowledge and experience

STI Group's process competence has been demonstrated in many audits carried out by customers. You too can benefit from the experience we have gained in cooperating with sophisticated industries, such as defense, aviation, and energy and environmental technology, which have been relying on STI Group's expertise and flexibility, and the high-quality surfaces we produce, for many years.



Environmental management to ISO 14001

STI Group considers the protection of the environment a key issue. Complying with environmental criteria is a prerequisite for all our processes. Our production facilities are not only equipped with waste air and waste water treatment plants but are also designed for efficient re-use of process media in the production chain. As a pioneer in environmental protection, STI Group significantly improves on the minimum legally required limits in some areas.



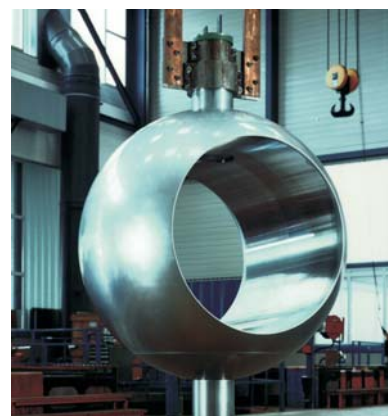
Customized surfaces for the power supply industry

Choosing from a wide range of processes we offer you the appropriate solution for your individual surface requirement, specifically designed for the respective functions of the components of your power supply or special applications. Our experts are available to give you comprehensive and competent advice.



Energizing Partnership

- Wide range of surface technologies
- In-house Research & Development department
- Largest infrastructure worldwide
- Consistent high quality and reproducibility of processes
- Recorded process steps ensure transparency and traceability of the production process
- Environmental certification to ISO 14001
- Quality management to ISO 9001
- Logistics service (on request)



STI Group Surface solutions worldwide.

Surface technologies for power generation components

Treatments	Wear protection	Corrosion protection	Other advantages	Application examples
Hard chrome	++ to +++	+ to +++	very economical, thickness up to 1 mm, free from pores	bearing journals, seal seat, ball valves, cooling pump shafts
Galvanic nickel	+	++++	excellent mechanical wear characteristics, layers up to 1 mm	spare and replacement parts, plant construction, chemical industry
Electroless nickel	++	+++	true to size coating with defined contours	drill rods
Dispersion layers				
Chrome ceramic dispersion	++++	+++	high thermal resistance	drill rods, heavy duty bearings
Combined layers				
Galvanic nickel / hard chrome	+++	++++	galvanic nickel layers up to 1 mm	re-coating and repair of cast iron rolls, seawater environments
Thermal spray coatings (selection)				
WC-Co-Cr HVOF process	++++	+	erosion and abrasion protection, especially in aqueous solutions, good adhesive strength	piston rods for gas compressors, components for water turbines, drill rods, ball valves
ZrO ₂ (Zirconium oxide) APS process	++	0	ideal heat insulation coating, high thermal shock resistance, good run-in properties	turbine blades, combustion-chamber components
Molybdenum, wire flame spray process	++	+	high adhesive strength, excellent sliding friction properties	spare and replacement parts, bearing seats, sliding surfaces
Capacity				
<p>Plating up to Ø 4,500 mm, length up to 12,000 mm, weight up to 64,000 kg. Thermal Spraying up to Ø 5,000 mm, length up to 8,000 mm, weight up to 30,000 kg. Grinding up to Ø 6,000 mm, length up to 27,000 mm, weight up to 64,000 kg. Further treatments and component dimensions on request or www.sti-surface.com.</p>				

0 = adequate + = satisfactory ++ = good +++ = very good ++++ excellent

STI Group Factors of Success

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.

www.sti-surface.com



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