



Aeronautics

English

Surface solutions by STI Group



Highest Functionality and Safety



High-end surface treatment technologies for hydraulic systems, undercarriages components and other aircraft parts.

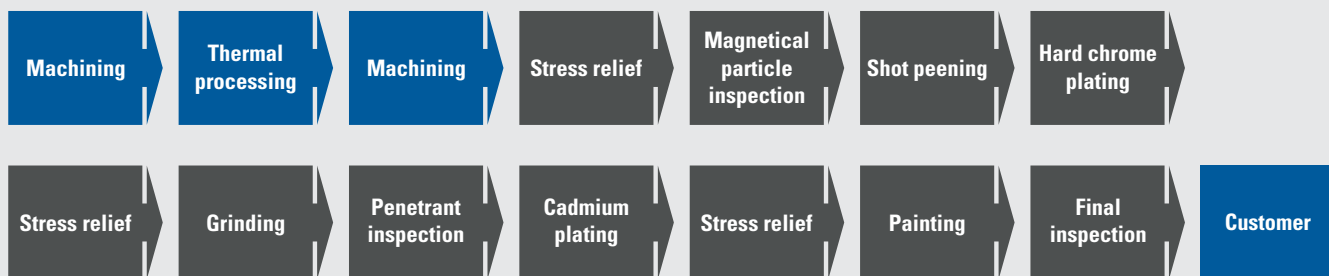
Surfaced by STI Group» is recognised world-wide as synonymous with high-end surface solutions, a wide range of technologies and comprehensive service. STI France SAS is a total supplier to the aviation industry and provides reliable and competent processing and surface coating of complex components. The company's many years of experience, its specifically developed technologies and comprehensive range of materials and processes enable it to deliver individually optimised and functional surface solutions to the highest quality and safety standards.

Leading competence in the entire process chain

Successful components need to be functional, reliable and cost-effective. Therefore, the entire STI Group package is designed for your success – from development and preparation via coating and machining through to control, installation and decontamination of the undercarriage, hydraulics and other aviation industry components.

The range of technologies used by STI France SAS enables the company to make use of the potential of different materials. Processes include hard chrome surface treatment, cadmium plating, galvanising, nickel plating (sulphamate), poli-shing and passivating of stainless steel, as well as burnishing, Rilsan coating, manganese phosphate coating, silver coating, chromating (alodine 1200) and tin coating. STI France SAS provides a wide range of supporting services such as stress relief and

Full end of range provision - Steel components for the aeronautic industry

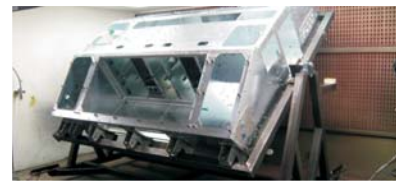


■ Provision of STI France SAS

degassing, grinding, paint coating, S2-S4/P3-W2 nital, magnetic powder and penetration testing as well as salt spray testing. The company guarantees top quality, reliability and on-time delivery for these additional services.

Exact specifications tailored to suit individual requirements

As specialist for bespoke solutions, STI Group analyses your requirements and accurately specifies the necessary properties such as corrosion and wear resistance, friction coefficients, chemical resistance or adhesion, and carries them out within extremely tight tolerances. The table below shows a selection of coating systems specially designed for the aviation industry.



Application for the aeronautic industry

Applications	Treatment	Properties Benefits	Problems solved
Axle protectors	hard chrome	hardness, increased life cycle	wear
Valve body	hard chrome	hardness	wear
Axe	cadmium plating	anti-corrosion	corrosion
Piston	rilsan	anti-corrosion	oxidation
Piston	rilsan	friction	wear
Body	polishing	decontamination	elimination of impurities
Swivel	silvering	resistance to corrosion, high temperature	corrosion
Aircraft nose Falcon	antistatic painting	conductivity	flow of the electrostatic loads
Engine components	high temperature painting	resistance	corrosion
Diverse components	polyurethane, epoxy, aviox	protection	corrosion



STI Group – Pioneers in Surface Technology

Wide range of technologies and comprehensive service

STI Group specialises in a wide range of processes which means that components are surface-treated to top quality standards, are reproducible and feature a long service life. Aircraft component surfaces are treated in compliance with the strict standards of the aviation industry and government authorities. STI France SAS provides numerous special processes and complete surface solutions including preparation and finishing treatments.



Surface technologies

Treatment	Capacity	Qualifications
Hard chrome plating	2,200 x 1,200 x 2,500	Liebherr Aerospace, Messier-Bugatti, Messier-Dowty, Ratier Figeac, SNECMA, Sogerma, Turbomeca
Cadmium plating	550 x 700 x 800	Airbus, Casa, Messier-Bugatti, Messier-Dowty, Ratier Figeac, Turbomeca
Silvering	600 x 400 x 300	Casa, Turbomeca
Tinning	600 x 400 x 300	Casa, Turbomeca
Sulfamate nickel plating	600 x 400 x 300	Turbomeca
Resurfacing and passivation of stainless steel	550 x 500 x 300	Airbus, Liebherr Aerospace, Messier-Bugatti, Messier-Dowty, Ratier Figeac, Turbomeca
Rilsan	450 x 450 x 450	Messier-Dowty, Messier-Bugatti
Manganese phosphatation	1,000 x 450 x 400	Airbus, Casa, Messier-Bugatti, Messier-Dowty, Ratier Figeac, Turbomeca
Chemical burnishing	1,000 x Ø 370	Hispano-Suiza, Messier-Dowty, Messier-Bugatti, Turbomeca
Alodine 1200	600 x 400 x 800	Messier-Bugatti, Messier-Dowty, Ratier Figeac, Turbomeca
Magnetic particle inspection	800 x Ø 150	Airbus, Messier-Bugatti, Messier-Dowty, Nadcap, Ratier Figeac, Turbomeca
Penetrant inspection	800 x 800 x 600	Airbus, Messier-Bugatti, Messier-Dowty, Nadcap, Ratier Figeac, Turbomeca
Zinc plating	4,000 x 370 x 1,000	Alstom, Messier-Dowty
Nital etching	1,300 x 400 x 400	Messier-Bugatti, Messier-Dowty
Stress and vapour relief	1,000 x 1,000 x 1,000	
Sandblasting	600 x 600 x 500 + 12m ²	
Grinding	on request	
Hardness measuring	on request	
Means of inspection	on request	
Antistatic painting	4,000 x 4,000 x 2,500	Dassault, Airbus
High temperature painting	1,000 x 1,000 x 1,500	Turbomeca, Messier, Cesa
Diverse paintings	6,000 x 6,000 x 1,500	Alstom, Safran, EADS, Thales
Further informations on request or www.sti-surface.com		

STI Group Surface solutions worldwide.

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



Hartchrom AG

Schulstrasse 70
CH – 9323 Steinach
T +41 71 447 97 97
F +41 71 447 97 92
sti@sti-surface.com

Hartchrom Defense Technology AG

Schulstrasse 70
CH – 9323 Steinach
T +41 71 447 97 97
F +41 71 447 97 92
sti@sti-surface.com

Hartchrom Inc.

25 Gibson Street
Watervliet NY 12189-3342 USA
T +1 518 880 04 00
F +1 518 880 04 50
sti.us@sti-surface.com

Hartchrom Schoch GmbH

Mühlackerstrasse 10
DE – 75447 Sternenfels-Diefenbach
T +49 7043 95 32 0
F +49 7043 95 32 299
sti.germany@sti-surface.com

Hartchrom Teikuro Automotive GmbH

Mühlackerstrasse 10
DE – 75447 Sternenfels-Diefenbach
T +49 7043 95 32 500
F +49 7043 95 32 599
sti.germany@sti-surface.com

STI France SAS

BP 17, ZI Le Touya
FR – 64260 Arudy
T +33 559 05 60 34
F +33 559 05 64 96
sti.france@sti-surface.com

STI France SAS

Route de Pau, ZA du Gabarn
FR – 64870 Oloron-Escout
T +33 559 39 71 01
F +33 559 39 22 33
sti.france@sti-surface.com

STI France SAS

ZA Ambroise
FR – 40390 Saint Martin de Seignanx
T +33 559 56 57 58
F +33 559 56 10 43
sti.france@sti-surface.com

STI Precision Machining (Changshu) Co., Ltd.

Xiang Yuan Rd. 16
South-east Economic Development Zone
CN – 215500 Changshu (Jiangsu Province)
T +86 512 5290 6200
F +86 512 5290 6299
sti.china@sti-surface.com

**STI Surface Technologies
International Holding AG**

Schulstrasse 70
CH – 9323 Steinach
T +41 71 447 97 97
F +41 71 447 97 92
sti@sti-surface.com

Contact

STI France SAS

BP 17, ZI Le Touya
FR – 64260 Arudy
T +33 559 05 60 34
F +33 559 05 64 96
sti.france@sti-surface.com