

Problems We Solve

- Material Fatigue
- Galling
- Fretting
- Wear
- Stress Corrosion Cracking
- Corrosion
- Intergranular Corrosion
- Materials Evaluation Testing Under Extreme Environments



Surface Technologies is a Division of Curtiss-Wright (NYSE:CW) a global innovative company that delivers highly engineered, critical function products and services to the commercial, industrial, defense and energy markets. Building on the heritage of Glenn Curtiss and the Wright brothers, Curtiss-Wright has a long tradition of providing reliable solutions through trusted customer relationships.

Company Profile

Curtiss-Wright Surface Technologies (CWST) offers a single source solution and point of contact for all your surface treatments.

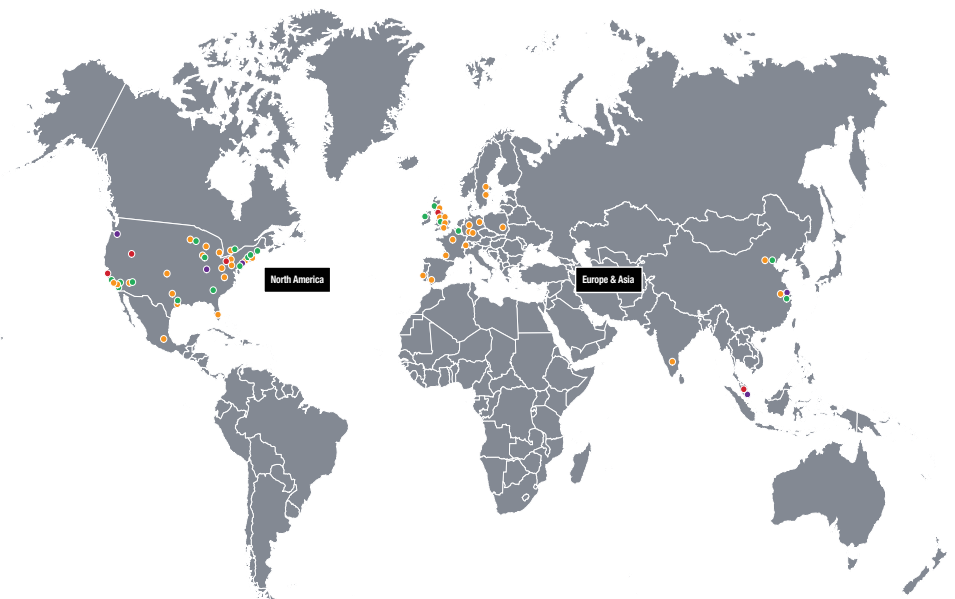
Our services include laser peening, shot peening, super finishing, engineered coatings and analytical testing. Through our network of 65 facilities worldwide, Curtiss-Wright Surface Technologies can not only reduce your turnaround times and cost but also has the experience, reliability and capability to provide a single source solution to surface treatments. We have a global presence with local representation.

Our proven surface treatments meet industry demands for lighter materials, improved performance and life extension in key markets such as Aerospace, Defense, Automotive, Energy and Medical. We can prevent premature failures due to fatigue, corrosion, galling, fretting and other material surface related risks for your critical components.

The introduction of robotic engineering has allowed our processes to be strictly controlled, repeatable and highly accurate. Furthermore, with portable Shot Peening equipment we are able to perform onsite work to the same high standards for projects where components are too large or impractical to move.

All our services have undergone rigorous laboratory and field testing to ensure the highest reliability in extreme conditions. CWST has dedicated R&D facilities to support your surface science development needs. Within our network of facilities, services align with Quality Standards such as ISO9001, AS9100, IATF16949, ISO13485 and IEC17025. We have 47 Nadcap-accredited facilities, maintain major customer approvals in competing industries and also operate numerous certificated FAA Repair Stations.

65+ Facilities | 16+ Countries



SHOT/ LASER PEENING & SUPER FINISHING

● Shot Peening

Controlled shot peening is a mature process that enhances metal fatigue properties on all part geometries. This occurs by imparting a beneficial residual compressive stress on notch sensitive areas prone to failure.

● Laser Peening

By means of a laser beam pulse this highly controlled process induces a far deeper layer of beneficial compressive stress than controlled shot peening, giving resistance to low cycle, high stress situations (LCF) and high cycle, low stress situations (HCF).

● Peen Forming - Correction of Distortion

Peen forming uses the compressive stresses induced by shot and laser peening to alter the stress pattern, magnitude and depth within a structure to deliberately create a change in the component shape.

● Cavitation Peening

Cavitation peening produces shallow depths of peening ideal for components of thin section. This shallow depth is ideal for improving the fatigue life of components with a thin cross-section.

● C.A.S.E™ Super Finishing

In circumstances where both sliding and rolling of materials in contact occurs the C.A.S.E.™ super finishing technique will reduce operating temperatures, noise and friction and improve resistance to macro and micro pitting, but still retain critical lubrication.



ENGINEERED COATINGS

● Dry Film Lubricants

Used to provide both corrosion protection and lubrication.

- MoS₂, PTFE, Graphite and WS₂
- Impingement coatings – WS₂, MoS₂ and Graphite
- Coatings products, including: Everlube®, Microseal®, Flurene®, Lube-Lok®, LubriBond®, Ecoalube®, Ever-Slik®, Esnalube®, Perma-Slik®, Kal-Gard®, Electrobond® and Formkote®

● EMI/RFI Shielding

● Aluminium Barrier Coatings

● Parylene Conformal Coatings

These ultra-thin, bio-compatible coatings are pinhole free and completely conformal, regardless of the size or shape of the component. Widely used in the medical market, parylene coatings are also to shield electronics from electromagnetic interference, as well as corrosive chemicals and solvents.

● Thermal Spray Coatings

Thermal spray coatings provide abrasion and wear resistance, thermal management for high temperature oxidation/corrosion protection, corrosion control at low temperature and solid particle erosion control. Processes include HVOF (High Velocity Oxy Fuel), Plasma, Arc Wire, Flame Spray, Fused Coatings, Cold Spray, Solution Plasma Spray.

● Diffusion Coatings

Diffusion coatings are typically used for substrate materials such as cobalt and nickel based super alloys and steels used for gas turbine engine components, pump impellers and gate valves.

● Keronite PEO

Keronite's Plasma Electrolytic Oxidation (PEO) is an advanced surface treatment process that uniquely improves the performance characteristics of aluminium, magnesium and titanium. It exhibits excellent corrosion protection, wear resistance and many other qualities.

MATERIALS TESTING & REPAIR

● Materials Testing and Analytical Services

Materials testing to include metallurgical/failure/chemical analysis, mechanical and fatigue testing, all of which are essential to ensure design and manufacturing integrity to secure optimum performance.

● Repair and Overhaul

We also offer component repair and refurbishment of gas and steam turbine components, ranging from "tip repair" of compressor blades and vanes, repair of combustion/flame tubes, replacement of honeycomb seals, specialized welding, fabrication and strip, inspection (including laboratory reports), braze/welds repair and re-coating of turbine blades, vanes and NTGs.

