

Experts in Life Extension of Materials & Critical Components

Curtiss-Wright have a commendable history behind them, having been founded by three of the world's most celebrated aviation pioneers, Orville and Wilbur Wright and Mr. Glenn Curtiss, one of the forerunners of naval aviation. Their companies, the 'Curtiss Aeroplane and Motor Company' and 'Wright Aeronautical Corporation' merged in 1929 in order to create Curtiss-Wright. Today Curtiss-Wright is one of the world's leading advanced engineering companies, having diversified and branched out into numerous different technologies across multiple sectors, including commercial and industrial, defence, power, metals, aerospace and much more.

At the turn of the 21st century, Curtiss-Wright had grown into a multi-national company, with global sales of over \$2 billion and having acquired almost 60 businesses. Many of these companies still operate under their original name, such as Metal Improvement Company, Bolt's Metallizing, IMR Test Labs, Component Coating and Repair Services and more who now are part of Curtiss-Wright Surface Technologies. These various divisions offer a wide variety of different specialised surface treatments such as thermal spray coatings, solid film lubricants, shot peening technology and much more.

Curtiss Wright Surface Technology, one of their most well-known and international subsidiaries, specialises in providing material surface treatment solutions, focuses on enhancing the performance of critical materials and components. As many of their clients are in heavy engineering based industries, critical components are often of vital importance. Not only do they need to be specially designed to precision specifications, but they need to be long lasting and properly maintained too. Curtiss Wright Surface Technology can offer clients a comprehensive material treatments service that covers silicone, plastic and electronic components, coatings, shot and laser peening, material analysis, testing, repair and maintenance.

Curtiss Wright Surface Technology can provide mechanical and metallurgical testing services for a range of different materials and components through IMR Test Labs. Curtiss-Wright Surface Technologies uses only the most advanced technology and methods in order to conduct fatigue testing, thermal spray coating analyses, metallurgical and failure analyses, accelerated weathering and corrosion testing, weld testing and much more.

When it comes to engineered coatings, Curtiss Wright Surface Technologies have a wide scope of services, including providing thermal management, corrosion and erosion, and protection and repair of turbine components. Curtiss-Wright Surface Technology can provide protective engineered coatings or metal coatings to protect components from the environment, corrosion, heat, and wear. As they can ensure protection for components of any size or complexity, they have a vast client base made up of those seeking their protective coating services, including the aerospace, oil, gas, automotive and medical industries.

Their range of coating solutions includes thermal spray/HVOF coatings, solid film lubricants, liquid coatings, and parylene conformal coatings. Not only that, but Curtiss Wright Surface Technology also offer repair and overhaul for gas and steam turbine components, as well as laboratory testing and process verification for: salt spray corrosion testing, U.V testing and development of their own

bespoke coating systems such as Everlube®, Microseal, and Flurene Lube-Lok®, sacrificial aluminium coatings, diffusion coatings and pre-treatments.

Metal and material surface solutions are a huge part of why Curtiss Wright Surface Technology has become such an internationally recognised name. In addition to their famous controlled shot peening process, the company can provide highly effective and controlled Laser Peening for components in turbine engines, aircraft structures, wing skins and more. This specialist process puts exceptionally deep residual compressive stress in certain parts of a component to prevent crack initiation and fatigue. Not only does this allow the component to resist damage from erosion, strike damage, fretting, and corrosion, but it can also better withstand pressure from both low cycle/high stress and high cycle/low stress situations. Better yet, their laser peening ensures quality control, precise application and poses no risk of process contamination.

Preventing the failure of critical components is a huge concern for clients, and is one of the most highly sought after services from Curtiss Wright Surface Technologies. Problems can be caused due to any number of reasons throughout the component design process, whether it's the choice of materials used, incorrect assembly, or damage to the parts caused by bending, rolling or forging. Components of any type can be damaged, such as blade roots, rotating rings and tie wire holes used in Aero-Engines, fasteners and stringers used in Airframes, and torsion bars, gears and keyways, which are used to make Crankshafts and more. Thankfully Curtiss Wright Surface Technology have a large array of solutions, including but not limited to: C.A.S.E. isotropic superfinishing, Parylene coating, Thermal barrier coatings, Cathodic protection and much more.

If you would like to find out more about Curtiss Wright Surface Technologies and their many specialised, services and solutions, then be sure to get in contact with the company today. Alternatively, you can find out more about the company by visiting the website below, where information, animations case studies and links to their many services can also be found.

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