Nadcap Accredited Chemical Processing

Chemical processing services include citric-acid passivation, copper-sulphate testing, nitric-acid passivation and pre-penetrant etching. Nitric-acid passivation is a crucial process made post-fabrication to improve the corrosion resistance of a material such as stainless steel. The process itself consists of two steps, the first being to use acid to remove iron from the surface of the material and the second being to use an oxidiser to convert surface metal to an oxide form. This creates a layer that provides protection against outside corrosion. Pre-penetrant etching, also known as 'material smearing', refers to a non-destructive inspection process that lightly removes a very fine layer of the material in question to allow for inspection. The process includes adding either a caustic solution or an acid to a material to remove around 0.0025mm (0.0001”) to 0.005 mm (0.0002”) of the surface layer. The inspector then evaluates the grain structure of the material for any problems that may have previously been masked.

THE Applus+ SOLUTION

Applus+ offers a wide variety of acid-etch inspection, cleaning and chemical processes that are controlled under our AS9100 and Nadcap certifications. Services provided include ultrasonic cleaning, vapour degreasing, nitric-acid passivation, citric-acid passivation, pre-penetrant etching, humidity testing and copper-sulphate testing. Our clean, efficient facility is designed specifically for the processing of aerospace components.

Target customers

Nadcap accreditation is required to perform certified chemical-processing services, including citric-acid passivation, copper-sulphate testing, nitric-acid passivation and pre-penetrant etching on aerospace components.

Key customer benefits
Applus+ has the capability and qualifications to perform certified chemical-processing services along with its Nadcap-accredited non-destructive-testing services. This saves our customers time and money by preventing them having to transport their materials to a variety of different service providers.

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