Fabrication & Services

Anodic Cleaning

Anodic cleaning also known as electro cleaning is the pretreatment process used before any type of plating.

This method of cleaning utilizes a DC current which creates a foaming action around the part thereby removing dirt and other contaminants that would not have otherwise been removed through a normal soak cleaning.

An example of these contaminants are polishing rouges, oil, fingerprints, smut, and drawing compounds.

Request for quote :

Email: quickhelp@alytainternational.com

Fabrication & Services

Anodizing

Alyta offers offers finished anodized parts for commercial, government and MIL Specs.

We our strategic partnerships we can offer:

Sulfuric Acid Anodizing
Hard Coat Anodizing
Conventional
Clear
Colors - Black, Gold, Green, Blue, Red, Bronze (Special colors available upon request)
Chromic Acid
Chromate conversion - Alodine and Iridite
Sulfuric Acid Anodizing

Sulfuric acid anodizing, also known as Type II Anodizing, is the most widely used anodized coating solution because of its environmentally friendly composition and less expensive pricing. This particular coating can be dyed in any color.

Hard Coating Anodizing

Hard coating anodizing, known as Type III Anodizing, is a great metal finish for aluminum. This outer coating allows the part to be protected from corrosion and deterioration. Hard coat anodizing enhances many desirable properties of aluminum. It improves electrical resistance, thermal conductivity, and provides the part with the hardness of steel.

Request for quote :

Email: quickhelp@alytainternational.com

Fabrication & Services

Black Oxide Coating

Black Oxide is a process which provides a conversion coating on iron which changes the surface of the material to a naturally occurring black iron oxide.

The black iron oxide coating provides a pleasing aesthetic finish as well as a minimal change in surface dimensions , .0005" (5 millionths of an inch).

Though the black oxide does provide some corrosion protection by itself it is necessary to put a protective oil on this finish to keep it from rusting.

MIL-C-13924

Class 1: Alkaline oxidizing. For wrought iron, cast and malleable irons, common carbon and low alloy steels.

Class 4: Alkaline oxidizing. For other corrosion resistant steel alloys.
Base Materials that black oxide can be applied to include Carbon Steels, Stainless Steel, Copper and Brass.

Request for quote :

Email: quickhelp@alytainternational.com

Fabrication & Services

Bright Dipping Aluminum

Bright Dipping is a chemical or electro-brightening treatment which produces an extremely high luster on aluminum. The bright dip process is performed on raw aluminum.

The harder tempered the alloy is, the brighter the end product will be. The way that bright dip achieves this high luster is by smoothening the surface of the aluminum at the microscopic level.

Bright dipping aluminum does not remove scratches or lines on the alloy.

Bright Dip Anodizing

The bright dip procedure is often used as a pretreatment for anodizing to enhance the aesthetic qualities of a part. Referred to bright dip anodizing, the bright dipped aluminum goes through the anodizing process to prevent corrosion, scratching or fading on the alloy. The anodizing steps are where you can have your aluminum alloy dyed in different colors.

Ideal Aluminum Alloys

Aluminum Alloys that are most suitable for bright dipping:

5357
5457
6063
7016
7029

In general 5XXX and 6XXX series aluminums will produce higher lusters than 2XXX and 7XXX series because they are harder tempered.

IMPORTANT: Bright dipping will not be able to remove scratches or gouges in material.

Request for quote :

Email: quickhelp@alytainternational.com

Fabrication & Services

Chemical Agent Resistant Coatings (CARC)

Chemical Agent Resistant Coatings, also known as CARC painting, is a matte finish, automotive grade polyurethane.

The near-indestructible coating is an engineered product that comes from the reaction of a combination of pretreatments, primers and topcoats.

The chemical agent resistant coatings provide not only an aesthetically pleasing finish but is extremely durable, corrosion resistant, fade resistant, and weather resistant.

Used heavily in the military industry, CARC paint is especially unique due to the fact that it resists the absorption of chemical warfare agents.

This particular coating makes decontamination of military equipment easier and safer. CARC coatings are typically used to coat land defense vehicles and equipment along with the occasional military aircraft because of its chemical composition that deters biological and toxic agents from permeating the surface of military vehicles and equipment.

By utilizing chemical agent resistant coatings, industries such as the military are able to reach higher levels of performance, durability and survivability.

CARC Coating Colors:

Black
Green
Tan

Request for quote :

Email: quickhelp@alytainternational.com

Fabrication & Services

Electropolishing

Electropolish is a type of finish that smoothens, polishes, deburrs, and cleans stainless steels.

The first advantage to this finish that you will notice is that unlike regular polishing methods you will not have any grain lines or left over materials such as polishing rouge.

An added benefit of the electropolishing process is that it is able to remove many types of surface contaminants. Unlike mechanical polishing methods, which actually embed contaminants into your part material thereby weakening the surface, electropolishing will actually remove most surface particles.

Often during the fabrication of a part, surface contaminants such as dirt, iron, and grease become embedded into the surface.

These contaminants are usually where the first signs of corrosion will occur, so removal of them is extremely important in extending the life of a stainless steel part.

Electropolishing is ideal for medical, pharmaceutical, semiconductor, and food processing equipment.

Other Unique Benefits of Electropolishing:

* Stress relief of the surface due to removal of hydrogen
* Removal of dirt and embedded iron from manufacturing processes
* Passivation of Stainless Steels
* Superior Corrosion resistance and Hygienically clean surfaces
* No "Grain Lines" such as those caused by mechanical polishing
* Easily deburrs delicate parts without use of a tumbler

Request for quote :

Email: quickhelp@alytainternational.com

Fabrication & Services

Passivation

The passivate process is designed to remove foreign metals and oils (usually from machining) from the surface of stainless steel.

The end finish will not change the dimension of the part nor the overall appearance of the base metal.

Passivation purifies the surface of a machined part and therefore improves corrosion resistance.

QQ-P-35C is the Federal standard for passivation.

Type I - Low temperature.
Type II - Medium temperature.
Type III - High temperature.
Type IV - For steels containing large amounts (0.15%) or sulfur or selenium.
Type V - Anodic - For high carbon martensitic (440) steels.
Type VI - Low temperature (optional)
ASTM A967 is the standard specification for chemical passivation treatments for stainless steel parts.

Request for quote :

Email: quickhelp@alytainternational.com