

Treatment and coating of stainless steel

Galol, s.a. is a group of specialised companies in the metal and plastic sector that provide a series of surface treatments to specific elements manufactured by their customers. They do not manufacture but collect and apply the coating and return these parts to the owner with improved corrosion resistance and better functioning.

More information at:

www.galol.com

COATINGS INORGANIC ZINC FLAKES

Geomet® is a water based coating. It is formed by zinc and aluminium flakes and passivated in an inorganic matrix. It has no chromium (no Cr6 neither Cr3) and fulfils the requirements of EU Directives 2000/53/CE and 2002/95/CE relative to recycling. It is used as coating with no fragilization by hydrogen and its coefficient of friction is adapted to current demands in fixing parts or any other kind of metallic piece in any sector of industry.

Geoblack® is a black corrosion protective coating for threaded parts and other metallic parts for the automotive industry. There are two families of black coatings.

ORGANIC ZINC FLAKE COATINGS

Zintek® is a sacrificial coating. This treatment is applied directly in line or in combination with previous and subsequent applications.

Delta-Protekt®KL100, is a treatment coating free of hydrogen embrittlement risk and maximum corrosion protection. Its thickness can vary from 8 to 20 microns, as required.

Magni (560, 565,575), is a standard protection process for fixing elements with no chromium. It is a 2 layers system with integrated lubricant.

Line of treatment

The application of organic and inorganic Zinc flakes is developed in the treatment line TO._.C. It is a completely automated TO.05 painting line.

TECHNICAL APPLICATIONS (ESLOK, PRECOTE, 3M)

Eslok®, is a partially pre-applied nylon coating on the thread of the bolts to avoid self-loosening of the part in use. The nylon element partially fills a portion of the bolt thread. The blocking effect is produced by making a resistance to the engagement caused by deformation of the plastic that fills up the external thread, since the plastic pushes the mating element against the bolt, allowing a fastening effect.

1. Scotch Grip, It is an application of a micro-encapsulated coating over the surface of a male thread; the adhesive coating is inert and dry. The micro-capsules burst during the assembly of the tightened component, producing a safe locking effect between both components with high resistance and good adhesive union once dry.

2. Precote (non-reactive). Water based products that obtain their optimal physical characteristics and tightness after drying and mating the parts.

3. Precote (reactive) contains adhesives which produce the blocking effect in extreme braking situations through a chemical reaction or polymerization during a fixed time (recommended 24 hours).

Masking and lubrication.

Masking of internal and external fastener thread offers an industrial solution to issues of protection of threaded fasteners installed close to welded elements. Thread is protected from welding spatter without the need of use of plastic plugs. It is a process approved by the automotive industry.

Line of treatment

These treatments are developed in line PA._.D. Patch is a plastic/polymer element that applied to the thread of the bolt gives tightness and resistance to vibration loosening. Todos estos tratamientos se llevan a cabo en la línea.



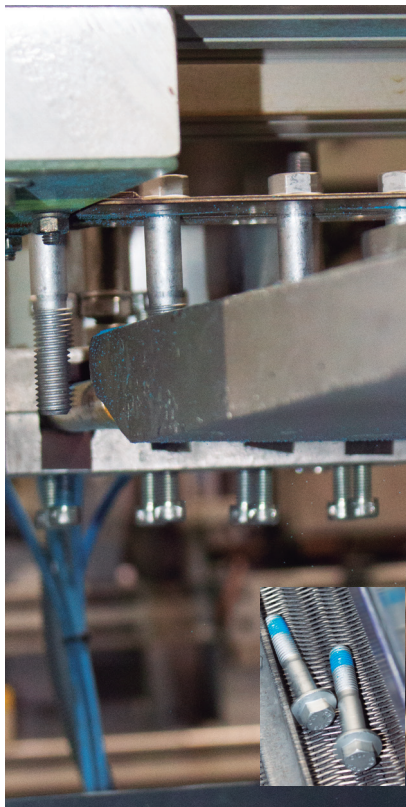
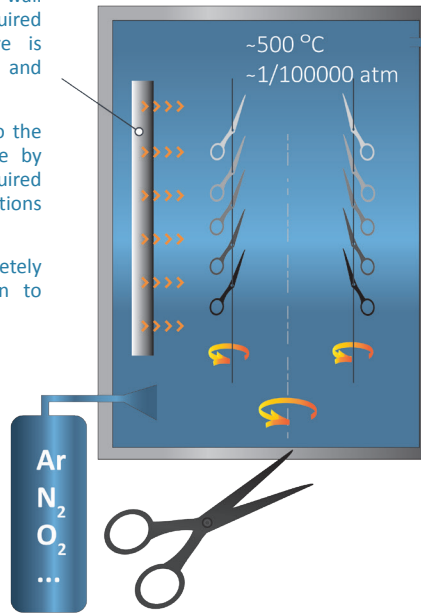
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Metal cathodes will be on the wall chamber depending on the required colour. Near the metal there is an electrode which bursts and sublimates the metal.

The vaporized metal blends into the gas and deposits on the piece by electromagnetism at the required pressure and temperature conditions for each process.

When the piece is completely covered, conditions turn down to extract the piece.

PVD



PVD COATINGS

PVD coatings are thin layer coatings of ceramic nature applied by medium or very low vacuum conditions. PVD coating technology is characterized for not producing pollution to the environment and offers a wide range of compositions (TiN, ZrN, ZrCN, Cr, CrN, etc), and layers that can provide colour, hardness, wear resistance and other properties.

Line of treatment

It is line PVD.03.B. Physical Vapour Deposition is applied in high vacuum chambers. It can be applied both to ceramic and metallic pieces (brass, zamac, aluminium, stainless steel, etc). There are two separate lines depending on the material.

TOP COATS AND LUBRICANTS

Galol is also specialised in the lubrication of stainless steel parts such as rivets, thread cutting screws, thread rolling screws and other parts that need high speed in the assembly. G21 is an anti-seize lubricant for stainless steel fasteners.

It is a product especially suitable for the prevention of galling during the tightening of fasteners. It is versatile and environmentally friendly. It consists of a water-based colloidal suspension of solid lubricants. It forms a dry, non-sticky, resistant to abrasion film.

