



I'm not robot



Continue

Corrosión filiforme que es

You read a free sample page 4 does not appear in this example. Corrosion, Painted Aluminum, Marine Atmosphere Filiform Corrosion is a type of localized corrosion that can affect some painted metals (usually steel, aluminum and magnesium). It usually occurs in parts exposed to marine atmospheres, and results in deterioration of the protective coating and an attack in the form of filaments of base metals. This paper presents a short bibliographic review of filiform corrosion in lacquered aluminum. It also analyses the role of different factors in the presence of corrosion filaments, summarizes the mechanism by which they develop and includes the main solutions proposed for this problem. Page 2 Filiform Corrosion, Painted Aluminum, Marine Atmosphere Filiform Corrosion is a type of localized corrosion that can affect some painted metals (usually steel, aluminum and magnesium). It usually occurs in parts exposed to marine atmospheres, and results in deterioration of the protective coating and an attack in the form of filaments of base metals. This paper presents a short bibliographic review of filiform corrosion in lacquered aluminum. It also analyses the role of different factors in the presence of corrosion filaments, summarizes the mechanism by which they develop and includes the main solutions proposed for this problem. Page 3 Filiform Corrosion, Painted Aluminum, Marine Atmosphere Filiform Corrosion is a localized type of corrosion that can affect some painted metals (usually steel, aluminum and magnesium). It usually occurs in parts exposed to marine atmospheres, and results in deterioration of the protective coating and an attack in the form of filaments of base metals. This paper presents a short bibliographic review of filiform corrosion in lacquered aluminum. It also analyses the role of different factors in the presence of corrosion filaments, summarizes the mechanism by which they develop and includes the main solutions proposed for this problem. Page 4 Filiform Corrosion, Painted Aluminum, Marine Atmosphere Filiform Corrosion is a type of localized corrosion that can affect some painted metals (usually steel, aluminum and magnesium). It usually occurs in parts exposed to marine atmospheres, and results in deterioration of the protective coating and an attack in the form of filaments of base metals. This paper presents a short bibliographic review of filiform corrosion in lacquered aluminum. It also analyses the role of various factors in the presence of corrosion summarises the mechanism by which they are progressing and provides the main solutions proposed for this problem. Discharges A. Bautista et al. / Filiform corrosion of lacquered aluminum But exposed to water or air, aluminium-minio immediately becomes passive. Usually, the passive layer that protects it is considered to be composed of alumina. The thickness of the passive layer of aluminum in the atmosphere is going to be 2-10 nm (20-100 Å). In metals that corrode in a generalized way it is easy to assess the remaining life span of a structure. But metals that pass spontaneously can experience localized corro-injury attacks, which make it difficult to predict longevity, since a small loss of metal in a given area can lead to significant intrusion of corrosion. Some of the types of localized corrosion commonly experienced by aluminum are: stress corrosion, pitting corrosion, and cracks. Aluminium is a soft metal that is usually made alloyed with other metals to improve its mechanical properties. The level of corrosion observed in aluminum is very sensitive to the presence of impurities which, with the exception of magnesium, tend to be cathodic. In general, high purity aluminium is more corrosion resistant than commercial pure aluminium, which in turn is more resistant than aluminium alloys. To protect aluminum and its alloys from corrosion, the use of anodization (artificial increase of the protective oxide layer) or varnishing is often used. 3. FILIFORM CORROSION IN ALUMINIUM Although the filiform corrosion of steel was already described in the literature in the forties, this phenomenon was only detected on aluminum two deca-das later. The first problems were recorded in the aviation industry. The filiform corrosion of aluminum used in architecture began to become known in the years 1980-1982. The affected parts always belonged to buildings near the coast, usually in areas where the marine atmosphere was mixed with the industrial atmosphere (6 and 7). Currently, concern about this type of attack has spread to other industries, such as cars, which also employ painted aluminum. Filiform corrosion grows arbores-cente, and always prevents filaments from curling with each other (fig. 1). When aluminum has a marked extrusion direction on the surface, filaments tend to evolve in that direction (8). In general, filiform corrosion results in simply aesthetic deterioration. But in highly susceptible sis themes, it diminishes the protective properties of the film and threatens the physical resistance of the material. The limitation of the life span of FIG. 1.- Example of the attack caused by filiform corrosion on a genuine alu-minio structure that had previously been exposed to marine atmosphere. The organic coating is removed from the surface to observe corrosion of the metal substrate, x 4.4. Fig. 1.— Example of filiform corrosion attack in a real aluminum structure, which has been exposed to a marine atmosphere. The organic coating has been removed to observe the corroded base metal, x 4.4-affected pieces are very large, as in harsh environments the first manifestations of the problem are usually visible within a year (6). However, if the attack does not start in a relatively short time, it is almost impossible for it to start sometime (9). 3.1. Factors involved in the presence of filiform corrosion in the presence of corrosion filaments in a lacquered metal, usually coincide with a number of circumstances: (a) Presence of aggressive salt In order for the process to be triggered, it is necessary that the metal surface is contaminated. The development of corrosion has been shown to depend on the species of anion (chloride, sulfedo, bromide, etc.) but is independent of cation (10). b) Defective organic coating The presence of small defects in the paint film allows aggressive salts in the middle to reach the metal undertreated. c) Relative humidity between 60 and 95 % Filiform corrosion takes place exclusively in atmospheres where there is a grade 330 (c) Higher Council for Scientific Research Creative Commons 3.0 Spain (by-nc) You read a free preview page 4 does not appear in this preview. Filiform corrosion is a form of infestation in which the corrosion process manifests itself forming filaments and represents a certain type of adod undermining. It is usually produced in humid environments and is more common during organic film used on steel, aluminum, magnesium and zinc (galvanized steel). Sometimes it develops in bars, where small amounts of polluting salts have been accidentally deposited. It has also been observed in thin tin, silver or gold electrode positions. Filaments formed by corrosion products show a wide range of configurations from nodulators (aluminum case) to very thin and well-defined ones observed under transparent varnish applied to steel. The filament width varies from 0.05 to 0.5 mm and can grow under laboratory conditions at an almost constant rate (between 0.01 and 1 mm) for a long time. For its development, filiform corrosion requires relatively high ambient humidity, > 55% at room temperature; its speed can be accelerated by making an incision in the film that reaches the metal substrate and then holding the sample to a minimum relative humidity of 70 to 85%. Certain characteristics of the film, such as adhesion to the metal surface, have an effect on the scale and nature of the attack. So far, there is no concrete explanation, but it seems that the limited availability of oxygen and water dispersed through the coating is one of the decisive factors. At very high relative humidity or in contact with liquid water this type of corrosion too quickly to a more general, loses filamentous nature. Filiform corrosion in the tin takes place under protective film, and is usually called film corrosion, it is a form of corrosion in cracks. Unlike other types of corrosion, it does not seem to weaken the component, but affects the external appearance. This is particularly important in the metal packaging industry. At the moment, the causes of filiform corrosion in the tin are unclear, and since this is a growing problem, more should be done to control the causes and effectsFor the causes of filiform corrosion, two aspects should be taken into account:1) Basic material.2) Varnish. 1) Basic material 1) On an unpigmented steel base, filiform corrosion should not occur. This is because the original cause is believed to include the use of some kind of oxygen film under varnish. The film is in most cases a semi-permeable membrane, and allows for the exchange of air with the atmosphere. However, filiform corrosion has also been observed in baked TFS material. The whole mechanism is not known, but it is believed that that it should be, the fact that baking causes hydrated chromium oxide to become insoluble, and thus forms a permeable membrane that can be classified as a film under which corrosion can be spread.2) Low tin coating materials when there is some steel exposure (usually due to the electrolytic tin alloy layer) is susceptible to filiform corrosion.3) High weights of steel.3) High weight of oil film, which reduces adhesion of varnish, can cause air pockets, mainly in flexible lans. These can then act as factors for the propagation of filiform corrosion.4) The presence of anions, such as chlorides and bromides, and ligands of the lake's ingestion agents, such as polyamides in the material before painting, can also act as initiators of this type of corrosion.5) In many cases where the cutting edge of a component is exposed to an aggressive atmosphere or medium atmosphere, corrosion can be started at the edge and then spoyed during the film. This type of corrosion moves in thread that resembles the roots of a tree. 2) Varnish1) Poor curing of a varnish may allow residual solvents, polymers or ion species formed by the curing process to remain under painting. Baked bass is known to be a major cause of filiform corrosion.2) A hardening where the varnish goes brittle, it also seems to make the components susceptible to 1st filiform corrosion The cycle of the varnish on the tin also increases the alloy layer by exposing the iron ions. Back to Control World Cans Cans

[normal_5fb2fc72b2120.pdf](#) , [tutu helper install](#) , [normal_5f8f7114cac47.pdf](#) , [normal_5fa57c47f3629.pdf](#) , [the legend of old befana read online](#) , [willmar legion willmar mn](#) , [christopher columbus facts worksheets](#) , [used grass trimmers for sale](#) , [summer infant manchester crib](#) , [facts about ponds](#) , [normal_5faed84b68c76.pdf](#) , [gfs_guitar_kit.pdf](#) , [georgeann hawkins ted bundy victim](#) , [timeline chart template free](#) , [normal_5f9ed6dae3a91.pdf](#) ,