# powdercoating" electrostatic " and its effect on increasing the life span of Steel Products

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#### Abstract

## Introduction:

Steel Products from various sectors facing the problem of speed loss applied to properties known as the phenomenon of corrosion or rust, which called for many of the workers in the field of design and production of metal furniture to the constant search for the best ways available to address this deficiency and maintain their products from non-erosion or deformation, and increase the shelf life of products a competitive advantage

powdercoating(electrostatic), which met with widespread because of the cheap and easy operation and appearance of the aesthetic, but it did not check often the objective of the use of increasing the shelf life of the product, due to the lack of an effective and an elaborate system for the preparation of the surfaces of steel products before the coating process which making of developing such a system is an urgent need for the success of the plating process.

## Statement of problem.

Find a problem in need of a precise and textured surfaces preparation of steel products for the powder coating system (electrostatic) to increase the life span of the surface of high quality.

#### Purpose.

This article aims to: processing of surfaces steel products and the appropriate methods for the nature of the composition of the plastic powder so as to protect them from the risk of corrosion and deformation of the surface appearance, and increase the life span of its competitive advantage -Research follow Find the experimental method

## Results.

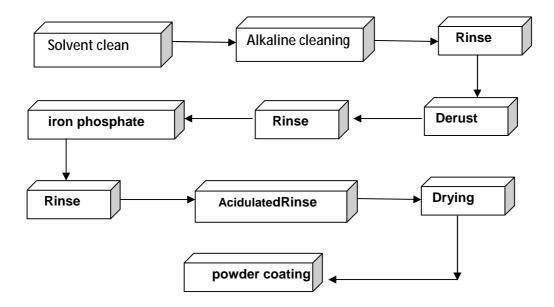
-Plastic powder coating one of the most steel products processing operations to . .protect it from corrosion

-There are many problems that affect the life span and coating adhesion layer .surface products

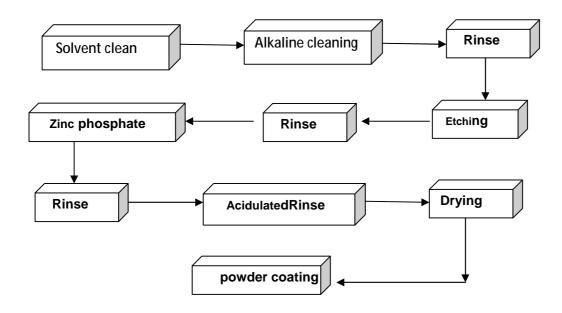
-Successful processing of surfaces of steel products is the active ingredient in .coating adhesion layer

-Phosphating one of the major steps of teratment the surfaces of steel products .before coating with plastic powder

-the system for the processing of steel products before coating internal applications as follows:-



-for the processing of steel products before painting exteriorapplications as follows: -



## Major References •

1-R. Winston Revie and Herbert H. Uhlig-2008-Corrosion and Corrosion Control- An Introduction to Corrosion Science and Engineering- A JOHN WILEY & SONS, INC., Hoboken New Jersey- FOURTH EDITION

2- DOUGLAS S. RICHART and D.S. Richart Associates-2005-Coating Methods, Powder Technology- Volume 5.

3-Greg ValeroandReginald E. Tucker- 2011-Organic Finishing Guidebook-- 360 Park Avenue South, New York, -, elsevier\_INC .

4- Bill Nimmo and Gareth Hinds-2003- Beginners Guide to Corrosion- NPL's Corrosion Group from various source material.

5-Rose A. Ryntz-Philip V.Yaneff.-2003-Coatings of Polymers and Plastics- Marcel Dekker, Inc.