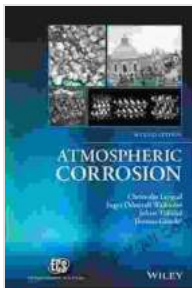


Atmospheric Corrosion: The ECS of Texts and Monographs

Atmospheric corrosion is a major problem that affects a wide range of materials, including metals, polymers, and composites. The cost of atmospheric corrosion is estimated to be in the billions of dollars each year.

The ECS of Texts and Monographs is a comprehensive guide to the study of atmospheric corrosion. It provides a detailed overview of the latest research and developments in the field, and it is an essential resource for anyone who is interested in learning more about this important topic.

Atmospheric corrosion is caused by a number of factors, including:



Atmospheric Corrosion (The ECS Series of Texts and Monographs) by Dave Doroghy

★★★★☆ 4.9 out of 5

Language : English
File size : 44045 KB
Text-to-Speech : Enabled
Enhanced typesetting : Enabled
Word Wise : Enabled
Print length : 378 pages
Lending : Enabled
Screen Reader : Supported



- **Oxygen:** Oxygen is the most important factor in atmospheric corrosion. It is the oxidizer that reacts with metals to form oxides.

- **Water:** Water is also an important factor in atmospheric corrosion. It can dissolve oxygen and transport it to the surface of metals.
- **Acids:** Acids can also cause atmospheric corrosion. They can dissolve the protective oxide layer that forms on metals.
- **Salts:** Salts can also cause atmospheric corrosion. They can form conductive pathways that allow electricity to flow between metals and the atmosphere.

Atmospheric corrosion can have a number of negative effects on materials, including:

- **Loss of strength:** Atmospheric corrosion can cause metals to lose strength. This can make them more susceptible to failure.
- **Loss of appearance:** Atmospheric corrosion can also cause metals to lose their appearance. This can make them less desirable for use in products.
- **Increased maintenance costs:** Atmospheric corrosion can increase the maintenance costs of materials. This is because corroded materials need to be repaired or replaced more often.

There are a number of ways to prevent atmospheric corrosion, including:

- **Using corrosion-resistant materials:** Corrosion-resistant materials are less likely to corrode in the atmosphere. These materials include stainless steel, aluminum, and titanium.
- **Applying protective coatings:** Protective coatings can help to protect metals from the atmosphere. These coatings can be made of a variety

of materials, such as paints, polymers, and ceramics.

- **Using cathodic protection:** Cathodic protection is a technique that can be used to prevent atmospheric corrosion. This technique involves connecting the metal to a sacrificial anode. The anode corrodes instead of the metal.

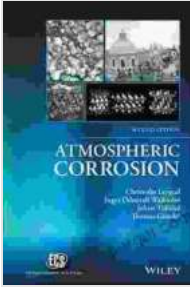
The ECS of Texts and Monographs is a comprehensive guide to the study of atmospheric corrosion. It provides a detailed overview of the latest research and developments in the field. The book is divided into four parts:

- **Part 1: Fundamentals of Atmospheric Corrosion**
- **Part 2: Atmospheric Corrosion of Metals**
- **Part 3: Atmospheric Corrosion of Polymers and Composites**
- **Part 4: The Prevention of Atmospheric Corrosion**

Each part of the book is written by a team of experts in the field of atmospheric corrosion. The book is a valuable resource for anyone who is interested in learning more about this important topic.

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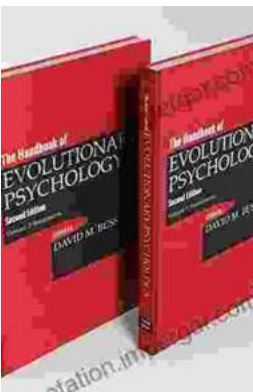


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