Valuable information on corrosion fundamentals and applications of aluminum and magnesium

Aluminum and magnesium alloys are receiving increased attention due to their light weight, abundance, and resistance to corrosion. In particular, when used in automobile manufacturing, these alloys promise reduced car weights, lower fuel consumption, and resulting environmental benefits.

Meeting the need for a single source on this subject, Corrosion Resistance of Aluminum and Magnesium Alloys gives scientists, engineers, and students a one-stop reference for understanding both the corrosion fundamentals and applications relevant to these important light metals. Written by a world leader in the field, the text considers corrosion phenomena for the two metals in a systematic and parallel fashion. The coverage includes:

* The essentials of corrosion for aqueous, high temperature corrosion, and active-passive behavior of aluminum and magnesium alloys

* The performance and corrosion forms of aluminum alloys
The performance and corrosion forms of magnesium alloys

• Corrosion prevention methods such as coatings for aluminum and magnesium

• Electrochemical methods of corrosion investigation and their application to aluminum and magnesium alloys

Offering case studies and detailed references, Corrosion Resistance of Aluminum and Magnesium Alloys provides an essential, up-to-date resource for graduate-level study, as well as a working reference for professionals using aluminum, magnesium, and their alloys.

ABOUT THE AUTHOR

Edward Ghali is a Professor in the Department of Mining, Metallurgy, and Materials Engineering at Université Laval. He has been a university professor in corrosion and applied electrochemistry for the past thirty-five years. His research group exploits new electrochemical technologies for testing new aluminum and magnesium alloys. In addition, he has published many papers and book chapters in the field.

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