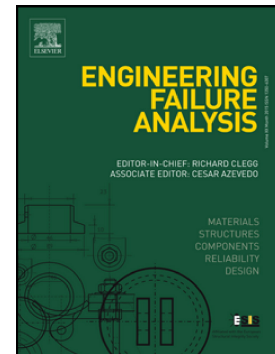


Accepted Manuscript

Novel zinc-based alloys used to improve the corrosion protection of metallic substrates

Sabrina Vantadori, Andrea Carpinteri, Vittorio Di Cocco, Giovanni Fortese, Francesco Iacoviello, Stefano Natali, Camilla Ronchei, Daniela Scorza, Andrea Zanichelli



PII: S1350-6307(17)30476-4
DOI: doi: [10.1016/j.engfailanal.2017.05.043](https://doi.org/10.1016/j.engfailanal.2017.05.043)
Reference: EFA 3163

To appear in: *Engineering Failure Analysis*

Received date: 12 April 2017
Revised date: 23 May 2017
Accepted date: 26 May 2017

Please cite this article as: Sabrina Vantadori, Andrea Carpinteri, Vittorio Di Cocco, Giovanni Fortese, Francesco Iacoviello, Stefano Natali, Camilla Ronchei, Daniela Scorza, Andrea Zanichelli, Novel zinc-based alloys used to improve the corrosion protection of metallic substrates, *Engineering Failure Analysis* (2017), doi: [10.1016/j.engfailanal.2017.05.043](https://doi.org/10.1016/j.engfailanal.2017.05.043)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Submitted to **ENGINEERING FAILURE ANALYSIS** - April 2017

REVISED VERSION - May 2017

NOVEL ZINC-BASED ALLOYS USED TO IMPROVE THE CORROSION PROTECTION OF METALLIC SUBSTRATES

Sabrina Vantadori¹, Andrea Carpinteri¹, Vittorio Di Cocco²,
Giovanni Fortese¹, Francesco Iacoviello², Stefano Natali³,
Camilla Ronchei¹, Daniela Scorza¹, Andrea Zanichelli¹

¹*Department of Engineering & Architecture, University of Parma,
Parco Area delle Scienze 181/A, 43124 Parma, Italy*

²*DICeM - Università di Cassino e del Lazio Meridionale,
Via G. Di Biasio, 43, 03043 Cassino (FR), Italy*

³*DICMA - Università di Roma "Sapienza",
via Eudossiana, 18, 00184 Rome, Italy*

Corresponding author: Sabrina Vantadori
e-mail: sabrina.vantadori@unipr.it, tel: +39 0521 905962.

ABSTRACT

The protection of metallic structural components against corrosion is fundamental to preserve their mechanical properties in aggressive environments. Zn-based coating represents one of the most used techniques to make protective coatings for metallic substrates. In the present paper, two types of novel zinc-based coating are proposed, by employing either a tin addition or an aluminium-tin-copper addition to the traditional zinc bath. The behaviour of steel-coated specimens under bending is experimentally and numerically investigated by considering different bath dipping times. A quite satisfactory agreement

Download English Version:

<https://daneshyari.com/en/article/7167804>

Download Persian Version:

<https://daneshyari.com/article/7167804>

[Daneshyari.com](https://daneshyari.com)