

Accepted Manuscript

Corrosive delamination and ion transport along stretch-formed thin conversion films on galvanised steel

R. Posner, N. Fink, G. Giza, G. Grundmeier

PII: S0257-8972(14)00447-2
DOI: doi: [10.1016/j.surfcoat.2014.05.041](https://doi.org/10.1016/j.surfcoat.2014.05.041)
Reference: SCT 19428

To appear in: *Surface & Coatings Technology*

Received date: 7 February 2014
Revised date: 3 May 2014
Accepted date: 7 May 2014



Please cite this article as: R. Posner, N. Fink, G. Giza, G. Grundmeier, Corrosive delamination and ion transport along stretch-formed thin conversion films on galvanised steel, *Surface & Coatings Technology* (2014), doi: [10.1016/j.surfcoat.2014.05.041](https://doi.org/10.1016/j.surfcoat.2014.05.041)

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.

**Corrosive delamination and ion transport along
stretch-formed thin conversion films on galvanised steel**

R. Posner^{1*}, N. Fink¹, G. Giza¹, G. Grundmeier²

*¹Max-Planck-Institut für Eisenforschung GmbH, Department of Interface Chemistry
and Surface Engineering, Max-Planck-Str. 1, 40237 Düsseldorf, Germany*

*²University of Paderborn, Department of Technical and Macromolecular Chemistry,
Warburger Str. 100, 33098 Paderborn, Germany*

Abstract

Micro defects on thin conversion film coated Zn hot-dip galvanized steel (HDG) sheets were generated by stretch-forming and verified by cyclic voltammetry, which revealed higher anodic and cathodic current density levels on the pre-damaged samples. The data were compared to the kinetics of electrochemically determined ion transport processes

* Corresponding author. E-mail: ralf.posner@web.de

Present address: Henkel AG & Co. KGaA, Henkelstrasse 67, 40589 Düsseldorf, Germany

Phone.: +49-211-797-2374; Fax: +49-2133-537379

Download English Version:

<https://daneshyari.com/en/article/8027837>

Download Persian Version:

<https://daneshyari.com/article/8027837>

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