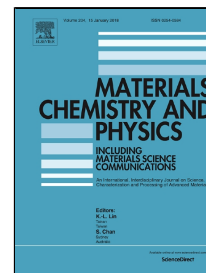


# Accepted Manuscript

Oxidation Behavior of Ferritic Stainless Steels in Simulated Automotive Exhaust Gas Containing 5 vol.% Water Vapor



L.L. Wei, L.Q. Chen, M.Y. Ma, H.L. Liu, R.D.K. Misra

PII: S0254-0584(17)30931-8

DOI: 10.1016/j.matchemphys.2017.11.051

Reference: MAC 20171

To appear in: *Materials Chemistry and Physics*

Received Date: 27 June 2017

Revised Date: 25 October 2017

Accepted Date: 25 November 2017

Please cite this article as: L.L. Wei, L.Q. Chen, M.Y. Ma, H.L. Liu, R.D.K. Misra, Oxidation Behavior of Ferritic Stainless Steels in Simulated Automotive Exhaust Gas Containing 5 vol.% Water Vapor, *Materials Chemistry and Physics* (2017), doi: 10.1016/j.matchemphys.2017.11.051

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.

## Highlights

- Ce and W were added in Fe-Cr alloy to improve its high temperature performance.
- Oxidation kinetics displayed significantly different with adding Ce and W at 950–1100 °C.
- The property of oxide film was obvious improved with adding ~0.05 wt% Ce in steel.
- Laves phase and porous SiO<sub>2</sub> caused the oxide film spalling when adding ~1.0 wt% W.

Download English Version:

<https://daneshyari.com/en/article/7922468>

Download Persian Version:

<https://daneshyari.com/article/7922468>

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