The Minerals, Metals & Materials Society

General Abstracts: Extraction and Processing 2007

February 25 – March 1, 2007 Orlando, Florida, USA

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 www.proceedings.com

ISBN: 978-0-87339-684-4

Some format issues inherent in the e-media version may also appear in this print version.

A Publication of The Minerals, Metals & Materials Society (TMS)

184 Thorn Hill Road Warrendale, Pennsylvania 15086-7528 (724) 776-9000

Visit the TMS Web site at

http://www.tms.org

Statements of fact and opinion are the responsibility of the authors alone and do not imply an opinion on the part of the officers, staff, or members of TMS. TMS assumes no responsibility for the statements and opinions advanced by the contributors to its publications or by the speakers at its programs. Registered names and trademarks, etc., used in this publication, even without specific indication thereof, are not to be considered unprotected by the law.

No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording, or otherwise, without written permission from the publisher.

Printed in the United States of America

ISBN Number 978-0-87339-684-4

ISSN Number 109-9586

Authorization to photocopy for internal or personal use beyond the limits of Sections 107 and 108 of the U.S. Copyright Law is granted by TMS, provided that the base fee of \$7.00 per copy is paid directly to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923 USA, www.copyright.com. Prior to photocopying items for educational classroom use, please contact the Copyright Clearance Center, Inc.

For those organizations that have been granted a photocopy license by the Copyright Clearance Center, a separate system of payment has been arranged.

This consent does not extend to copying items for general distribution or for advertising or promotional purposes or to republishing items whole or in part in any work in any format.

Please direct republication or special copying permission requests to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923 USA; (978) 750-8400; www.copyright.com.



Copyright 2007, The Minerals, Metals & Materials Society. All rights reserved.

If you are interested in purchasing a copy of this book, or if you would like to receive the latest TMS publications catalog, please telephone (724) 776-9000, ext. 270, or (800) 759-4TMS.

COLLECTED PROCEEDINGS: STRUCTURE, EXTRACTION, PROESSING, AND PROPERTIES TABLE OF CONTENTS

General Abstracts: Extraction and Processing

Hydrometallurgy, Wastewater Treatment

Separation of Ni/Fe from Industrial Waste Acid by Solvent Extraction Technique Using D2EHPA	1
Jae-chun Lee, Manis Kumar Jha, Jinki Jeong, Min Seuk Kim, and Kyoungkeun Yoo	
Hydrometallurgical Synthesis, Characterization and Stability of Ca-Fe-AsO4 Compounds	11
Immobilization Mechanism of Chromium in Aqueous Solution with Ettringite	19
Electrochemical Reactions for Electrocoagulation Using Aluminum Electrodes	23
Pyrometallurgy, Base Metals	
Effect of MgO and Al2O3 on the Environmental Behavior of Chromium Based Slags	37
Effect of Slag Composition on the Manufacture of Iron Nuggets from Carbon Composite Pellets	49
Alberto Eloy Anduze Nogueira, Marcelo Mourao, and Cyro Takano	
The Investigation of Sponge Iron Production Parameters by Using Iron Oxide Pellets with Domestic Lignite Coals	57
Remote Cooled Element Trial in Flash Furnace Gas Space	67

Hydrometallurgy, Metal Recovery

Processing of Electroplating Effluent for the Recovery of Zinc and Chromium Using Ion	77
Exchange Technique Manis Kumar Jha, Vinay Kumar, and Jae-chun Lee	//
Precipitation of Aluminum from Concentrated Chloride Solutions	87
Chlorine Leaching Technology of Precious Metals in Copper Anode Slimes	95
Selective Extraction of Precious Metals with Amide Compounds	101
High Temperature Processing	
Heavy Metals Behavior of Municipal Solid Waste Incineration Bottom Ash with Magnetic Separation	107
Emission Yields on Pyrolysis Followed by Combustion of Polyethylene in Steady Flow	111
Utilization of Waste Glass in Alumina-Glass Composite	121
Author Index	

Subject Index