

Contents

Point of View

Let's Do What We Love	187
Yuzou KAWATSU	

Review

Spinel Formation Reaction from MgO and Al at 1000 °C — Let's Review Thermodynamics —	188
Yutaka OHYA	

Report

Influence of Binder Type on Taphole Mix Property	195
Yuga YAMAMOTO and Takashi IIDA	
Comparison of Castables Containing Different Binders, for the Purpose of Optimizing the Explosive Spalling Resistance	202
Shiho TAKEUCHI, Shun KAWAGUCHI and Yasutaka YOSHIMI	
Development of Gunning Material with No Necessity of Drying Process and its Practical Application with merit of Contribution to Achievement of SDGs and Carbon Neutrality	210
Masanori KOGA, Atsushi TOKUTOMI, Takashi MATSUNAGA, Takashi NISHI and Koji IDE	
Wettability Evaluation of Mg-Al Spinel to Molten Aluminum	218
Hiroki KONDO, Hiroki SHOJI, Daimu MUTO, Seiichiro KONO and Takahiko NAKAMURA	
Influence of Adding Hollow Alumina on Sintering Shrinkage of Porous Alumina Ceramics	223
Tomohiro NAKANE, Yosuke TANAKA, Kiyoto SEKINE, Ayumi MATSUOKA, Mikako FUJII, Pengfei JIA, Mayuko WATANABE, Shun KAWAGUCHI and Yasutaka YOSHIMI	
Effect of Magnesia Clinker Addition on Suppression of Agglomeration of Silicate Sand in Biomass Power Generation Boiler	228
Atsushi KONDO and Yukiko MIURA	

Coffee Break

Let's Have Fun Puzzle-Solving	234
Kento FUKUDA	

Statistics	235
------------------	-----

TAIKABUTSU OVERSEAS INDEX (Volume 45).....	236
--	-----

Subject Index

Authors Index

Instruction for Authors	239
-------------------------------	-----

Guide for the Preparation of Manuscripts	240
--	-----

Cover: Designed by Yuko KATO

Four whirlpools in the center of this design are imaging the sun, being always warm, giving off bright light itself and shining light on the earth, and/or the flame strongly burning up.

Publishing and Subscription Office

The Technical Association of Refractories, Japan
New Ginza Bldg., 7-3-13, Ginza, Chuo-ku,
Tokyo 104-0061, Japan
Tel: +81-3-3572-0705 Fax: +81-3-3572-0175
URL: www.tarj.org/

Officers :

President
Naoki FURUTA
Vice-Presidents
Youichi AMANO
Wataru NAKAO
Hisaki KATO
Yasutaka YOSHIMI
Managing Director
Tsuneo ISOO
Editorial Director
Wataru NAKAO

Editorial Committee :

Chairperson : Hideki KAKISAWA
Vice Chairperson : Akitaka IKEBUCHI

(Editors)

Takaya AKASHI
Rie ENDO
Hiroyuki FUKUYAMA
Daisuke HARA
Shinobu HASHIMOTO
Koki HORIBA
Yutaka HOSODA
Mikinori HOTTA
Makoto IYAMA
Yasuro IKUMA
Ryo INOUE
Hidetoshi KAMIO
Yuichi KATO
Yen-Ling KUO
Tomoyuki MAEDA
Daisuke MARUOKA
Wataru NAKAO
Kazuki NISHIDA
Naoto NISHIDA
Yasuhiro OBA

Minehiko OTA
Yoshinori SATO
Kiyoto SEKINE
Kai TANIGUCHI
Hidehiro YOSHIDA
Katsumi YOSHIDA
Michiyuki YOSHIDA

International Adviser

Charles E. SEMLER

Copyright ©

2025 by The Technical Association of Refractories, Japan
All Rights Reserved. No part of publication may be reproduced, stored in a retrieval system, transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publishers.

Printed by Nihon Printing Co., Ltd. 4-41-24, Higashi-ikebukuro, Toshima-ku Tokyo 170-0013, JAPAN

Published on 25, December, 2025