

Aluminum Melting Conference 2022

St. Louis, Missouri, USA
14 – 16 October 2022

ISBN: 978-1-7138-6804-0

Printed from e-media with permission by:

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



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

Copyright© (2022) by American Foundry Society
All rights reserved.

Printed with permission by Curran Associates, Inc. (2023)

For permission requests, please contact American Foundry Society
at the address below.

American Foundry Society
1695 North Penny Lane
Schaumburg, Illinois 60173
USA

Phone: 800-537-4237 or 847-824-0181
Fax: 847-824-7848

www.afsinc.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Aluminum Industry Megatrends.....	1
<i>D. Apeilian</i>	
Beyond Sand Control to Qualification and Predictive Analytics of Aluminum Castings.....	31
<i>S. Ramrattan</i>	
Concote Mold Coating Training.....	47
<i>M. Lawry</i>	
Conformal Cooling of Permanent Molds: Opportunities and Challenges	62
<i>C. Soderhjelm, D. Apelian</i>	
How the Global Supply Chain is Transforming.....	72
<i>D. Unkovic</i>	
Novel Rapid Molding and Counter Gravity Filling of Aluminum Castings.....	91
<i>S. Ramrattan</i>	
Application of Foundry 4.0 Tools in Secondary Aluminum Processing.....	114
<i>R. Hendershot, M. Lawrence</i>	
Casting and Use of Non-Conventional Aluminum Alloys.....	124
<i>D. Weiss</i>	
Presentation for AFS Aluminum Conference: An Introduction to Cqi-27.....	138
<i>T. Boone</i>	
Characterizing Porosity in Aluminum Castings Using Ct Scanning.....	153
<i>S. Midson</i>	
Data and Machine Learning: The Emerging and Powerful Tool for Aluminum Alloy Development and Optimization	174
<i>N. Vo, H. Bui</i>	
Selecting an Iron Free and Environmentally Friendly Blast Media.....	183
<i>B. Mull</i>	
Metal Casting Standards-Suggestions for Development and Use	187
<i>D. Weiss</i>	
What is Thermal Analysis for Quality Casting?	192
<i>Y. Tremblay</i>	
Additively Manufactured Tooling Inserts.....	207
<i>A. Lausic</i>	
Printed Sand Will Expand the Sand-Casting Market.....	225
<i>T. Mueller</i>	
Thermal Management for Solidification	244
<i>C. Ahn, C. Soderhjelm, S. Roorda, D. Apelian</i>	

Author Index