

International Conference on High-Power Electron Beam Technology 2008

(EBEAM 2008)

**Reno, Nevada, USA
26-28 October 2008**

ISBN: 978-1-61567-807-5

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© (2008) by Von Ardenne
All rights reserved.

Printed by Curran Associates, Inc. (2010)

For permission requests, please contact Von Ardenne
at the address below.

Von Ardenne
Plattleite 19/29
01324 Dresden Germany

Phone: +49 351 263 7300
Fax: +49 351 263 7308

office@vonardenne.biz

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

EB MELTING AND RELATED TOPICS

Session Moderators: Robert Bakish, Howard Harker

50 Years VON ARDENNE Electron Beam Technology	1
<i>Matthias Neumann</i>	
Design and Construction of TIMET's Newest Electron Beam Furnace.....	45
<i>Len Korzon</i>	
Thermal Behavior of a Ti64 Electrode in the Electron Beam Remelting Process	67
<i>Parham Zabeti, Julien Jourdan, J. Pierre Bellot</i>	
The Production of Ti-6Al-4V Bar From 4V Bar From Electron Beam Single Melt Ingot	97
<i>David W. Tripp, Louise Ramsden-Hare, Roy Vaughan</i>	
Tantalum Productionat ULBA Kazakhstan.....	118
<i>Sergey Dobrussin, Matthias Neumann</i>	
Analysis of Inclusions Removal and Behavior for the Quality Control at EBMR of Ti and Cu	152
<i>E. Koleva, V. Vassileva, K. Vutova, G. Mladenov, K. Velev</i>	

EB MELTING AND RELATED TOPICS (CONTINUED)

Session Moderators: Robert Dorvel, Matthias Neumann

Ebeam 2008 Open Safety Forum.....	187
<i>D.C. Hughes, M. Dagle, R. Dorval, L. Hainz</i>	
Experience of Titanium Intermetallic Compounds Melting in Electron Beam Skull Installation	194
<i>S. Ladokhin, N. Levitsky</i>	
Engineering Support System for Modeling and Control of the Process EBMR of Metals.....	230
<i>E. Koleva, I. Batchkova, K. Velev</i>	
Analysis of the Process of Fabrication of Hafnium Ingots By Means of Different Equipment and Different Raw Material	254
<i>A.K. Shikov, A.A. Kabanov, V.M. Arzhakova, N.K. Filatova, M.G. Shtoutska, A.G. Ziganshin, A.V. Andreev, A.V. Aleksandrov, O.G. Morenko</i>	
Electron Beam Preheating of Metal Strips Application Tests for Vacuum Processing	266
<i>Ulf Seyfert, Carsten Deus, Martin Sens</i>	

EB MELTING AND RELATED TOPICS (CONTINUED)

Session Moderators: Mark Pellman, Len Hainz

The Utilization of Dry Compression Screw Vacuum Pumps on an EBCHR Furnace	286
<i>Ingo Grosse</i>	
Development of Reduced Pressure Electron Beam Technology for Melting and Surface Modification with Active Gas	293
<i>Chris Punshon</i>	
The Relative Contribution of Factors Influencing the Flow Field in Electron Beam Melting of Ti-6Al-4V	337
<i>Tao Meng, Daan M. Maijer, Riley Shuster, Steve L. Cockcroft, David W. Tripp</i>	

EB DEPOSITION AND RELATED TOPICS

Session Moderators: Doug Hughes, Reading Alloys

Developments in Electron Beam Physical Vapor Deposition of Thermal Barrier Coatings (EB/PVD Coatings).....	355
<i>Juergen Hotz</i>	
Electron Beam Technology for Photo Voltaic	418
<i>Christoph Metzner, Henry Morgner</i>	
Development of a Cold Cathode Glow Discharge Electron Gun with High Power	446
<i>V.I. Melnyk, I.V. Melnyk, B.A. Tugay, M.P. Kondratiy</i>	
Plasma Activated High-Rate Electron Beam Deposition with Axial Guns	469
<i>Christoph Metzner</i>	
Author Index	