

19th Machining Innovations Conference for Aerospace Industry (MIC 2019)

Procedia Manufacturing Volume 40

Garbsen, Germany
27 – 28 November 2019

Editor:

Berend Denkena

ISBN: 978-1-7138-0762-9

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© (2019) The Authors. Published by Elsevier Ltd.
Creative Commons Attribution 4.0 International License.
License details: <http://creativecommons.org/licenses/by/4.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination, and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2021)

For permission requests, please contact the publisher:

Elsevier B.V.
Radarweg 29
Amsterdam 1043 NX
The Netherlands

Phone: +31 20 485 3911
Fax: +31 20 485 2457

<http://www.elsevierpublishingsolutions.com/contact.asp>

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

INFLUENCE OF TOOL VARIABLES ON WEAR WHEN MILLING IRON ALUMINIDE ALLOY FE25AL1.5TA [AT.-%]..... <i>M. Wagner, H. Michels, C. Hamm, M. Appelt, M. Weigold</i>	1
FEM BASED EVALUATION OF TI6AL4V CUTTING WITH PLAIN AND TEXTURED WC/CO TOOLS UNDER CRYOGENIC COOLING ENVIRONMENT <i>Sarvesh Kumar Mishra, Sudarsan Ghosh, Sivanandam Aravindan</i>	8
INCREASING PRODUCTIVITY IN HEAVY MACHINING USING A SIMULATION BASED OPTIMIZATION METHOD FOR PORCUPINE MILLING CUTTERS WITH A MODIFIED GEOMETRY <i>B. Denkena, A. Krödel, O. Pape</i>	14
ECM ROUGHING OF PROFILED GROOVES IN NICKEL-BASED ALLOYS FOR TURBOMACHINERY APPLICATIONS <i>T. Bergs, B. Rommes, G. Smeets, T. Gmelin, A. Klink</i>	22
ARC-BASED POWDER PRODUCTION OF ALSI7MG0.6..... <i>S. Dietrich, M. F. Zaeh</i>	27
VIBRATION SUPPRESSION IN TURNING TIAL6V4 USING ADDITIVELY MANUFACTURED TOOL HOLDERS WITH SPECIALLY STRUCTURED, PARTICLE FILLED HOLLOW ELEMENTS <i>Florian A. M. Vogel, Sebastian Berger, Ekrem Özkaya, Dirk Biermann</i>	32
STABILIZATION OF METAL STRUCTURE FORMATION IN DIRECTED ENERGY DEPOSITION BY APPLYING A COOLANT SYSTEM..... <i>Ryo Koike, Luca Pagano, Yasuhiro Kakinuma, Yohei Oda, Masaki Kondo</i>	38
AUTOMATIC RE-CONTOURING OF REPAIR-WELDED TOOL MOULDS..... <i>Berend Denkena, Marc-Andre Dittrich, Klaas Maximilian Heide</i>	45
A NOVEL HYBRID CLAMPING SYSTEM FOR SHEET METALS AND THIN WALLED STRUCTURES <i>Uwe Teicher, Sebastian Pirl, Andreas Nestler, Arvid Hellmich, Steffen Ihlenfeldt</i>	51
ULTRASONIC ASSISTED PERIPHERAL MILLING OF FIBER REINFORCED PLASTICS IN CONSIDERATION OF CLAMPING AND CUTTING EDGE GEOMETRY <i>E. Uhlmann, F. Protz</i>	56
ANALYSIS OF BURR FORMATION MECHANISMS WHEN DRILLING CFRP-ALUMINIUM STACKS USING ACOUSTIC EMISSION..... <i>M. Kimmelman, J. Duntschew, I. Schluchter, H.-C. Möhring</i>	64
VISION-ASSISTED ROBOTIC FINISHING OF FRICTION STIR-WELDED CORNER JOINTS <i>Ozan Gurdal, Benjamin Rae, Arman Zonuzi, Erdem Ozturk</i>	70
TOWARDS AN AUTONOMOUS MAINTENANCE, REPAIR AND OVERHAUL PROCESS: EXEMPLARY HOLISTIC DATA MANAGEMENT APPROACH FOR THE REGENERATION OF AERO-ENGINE BLADES <i>Berend Denkena, Peter Nyhuis, Benjamin Bergmann, Nicolas Nübel, Torben Lucht</i>	77

Author Index