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ADVANCES IN MANUFACTURING, DESIGN AND COMPUTATIONAL
INTELLIGENCE TECHNIQUES

ADDITIVE MANUFACTURING IN INDUSTRY 4.0

Methods, Techniques, Modeling, and Nano Aspects



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CRC Press
Taylor & Francis Group

First edition published 2023

by CRC Press

6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL
33487-2742

and by CRC Press

4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

CRC Press is an imprint of Taylor & Francis Group, LLC

© 2023 selection and editorial matter, Vipin Kumar Sharma,
Ashwani Kumar, Manoj Gupta, Vinod Kumar, Dinesh Kumar
Sharma, and Subodh Kumar Sharma; individual chapters, the
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ISBN: 9781032392844 (hbk)

ISBN: 9781032418414 (pbk)

ISBN: 9781003360001 (ebk)

DOI: 10.1201/9781003360001

Typeset in Sabon

by Newgen Publishing UK

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Systematic study of electrochemical machining processes for micromachining

Manpreet Singh and Sunil Kumar Paswan

DOI: 10.1201/9781003360001-10

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10.1 INTRODUCTION

The classification of the microdrilling processes, as investigated in the electrochemical micromachining (ECMM) process, is a suitable ECMM arrangement is primarily comprised of a microtooling scheme: electrically powered system, mechanical machining rig, regulating system, and governed electrolytic flow structure to regulate electrochemical machining. As per the analysis, the most effective process parameters, such as machining voltage and electrolyte concentration, cause a higher material removal rate (MRR) with reduced overcut. The ECMM testing results and analysis will expand its application possibilities.

10.2 ELECTROCHEMICAL DRILLING (ECD)

Electrochemical drilling (ECD) is a regulated rapid electrolytic dissolution mechanism in which the workpiece functions as an