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Advanced Materials Research

Volume 845, 2014, Pages 857-861

1st International Materials, Industrial, and Manufacturing Engineering Conference, MIMEC 2013; Johor Bahru; Malaysia; 4 December 2013 through 6 December 2013; Code 101778

## Investigation of recast layer of non-conductive ceramic due to micro-EDM

(Conference Paper)

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## Abstract

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This paper presents the investigation of minimum recast layer of zirconium oxide (ZrO<sub>2</sub>) due to micro-EDM using EDM-3 synthetic oil as dielectric fluid and tungsten as the tool electrode with control parameters of rotational speed and gap voltage. The investigation was performed using multi-process micro machine tools DT 110. The recast layer thickness was observed using scanning electron microscope and its hardness was measured using micro-Vickers hardness tester. The hardness data were analyzed and an empirical model was developed. The optimum value for minimum recast layer hardness was 873.46 Hv with rotational speed of 395 rpm and gap voltage of 110 V. © (2014) Trans Tech Publications, Switzerland.

## Author keywords

Assisting electrode method (AEM) Electro discharge machining (EDM) Non-conductive ceramic Recast layer

## Indexed keywords

Assisting electrode  
Control parameters  
Dielectric fluid  
Electro discharge machining  
Micro machine tool  
Micro Vickers hardness  
Non-conductive ceramic  
Recast layer

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Moudood, M.A. , Sabur, A. , Ali, M.Y.

ISSN: 10226680

DOI: 10.4028/www.scientific.net/AMR.845.857

ISBN: 978-303785936-0  
Source Type: Book series  
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