Feasibility of wear compensation in micro EDM milling based on discharge counting and discharge population characterization - DTU Orbit (30/12/2018)

Feasibility of wear compensation in micro EDM milling based on discharge counting and discharge population characterization

This paper investigates the applicability of real time wear compensation in micro EDM milling based on discharge counting and discharge population characterization. Experiments were performed involving discharge counting and tool electrode wear measurement in a wide range of process parameters settings involving different current pulse shapes. A strong correlation is found between average discharge energy of the populations and wear and material removal per discharge. A validation was carried out showing the feasibility of the proposed approach.

General information
State: Published
Organisations: Manufacturing Engineering, Department of Mechanical Engineering, University of Padova, University of Ljubljana
Contributors: Bissacco, G., Hansen, H. N., Tristo, G., Valentincic, J.
Pages: 231-234
Publication date: 2011
Peer-reviewed: Yes

Publication information
Journal: C I R P Annals
Volume: 60
Issue number: 1
ISSN (Print): 0007-8506
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 4.09 SJR 2.034 SNIP 2.811
Web of Science (2017): Impact factor 3.333
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 3.93 SJR 2.055 SNIP 3.158
Web of Science (2016): Impact factor 2.893
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 3.83 SJR 2.088 SNIP 3.294
Web of Science (2015): Impact factor 2.492
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 4.39 SJR 3.123 SNIP 3.992
Web of Science (2014): Impact factor 2.542
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 3.87 SJR 2.598 SNIP 3.818
Web of Science (2013): Impact factor 2.541
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 3.04 SJR 2.086 SNIP 4.156
Web of Science (2012): Impact factor 2.251
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 2.81 SJR 2.117 SNIP 3.46
Web of Science (2011): Impact factor 1.708
ISI indexed (2011): ISI indexed yes