RESEARCH Vol. 6, 2018

ISSN 2320–6675 EISSN 2320–6853

DISCOVERY Engineering

Experimental investigation and modelling of PMEDM process with aluminium powder suspended dielectric on AISI-H11

Sheikh Shahid Saleem[1]☼, Mohammad Junaid Mir[2], Wani MF[3], Shuhaib Mushtaq[4]

1.Tribology Laboratory, National Institute of Technology, Srinagar, Hazratbal, J&K, 190006, India; Email: shahid@nitsri.net
2.Tribology Laboratory, National Institute of Technology, Srinagar, Hazratbal, J&K, 190006, India; Email: junaidmir109@gmail.com
3.Tribology Laboratory, National Institute of Technology, Srinagar, Hazratbal, J&K, 190006, India; Email: mfwani@nitsri.net
4.Tribology Laboratory, National Institute of Technology, Srinagar, Hazratbal, J&K, 190006, India; Email: shuhaibmushtaq@gmail.com

☼**Corresponding author:**
Tribology Laboratory,
National Institute of Technology,
Srinagar, Hazratbal, J&K, 190006,
India;
Email: shahid@nitsri.net

Article History
Received: 03 March 2018
Accepted: 17 April 2018
Published: April 2018

Citation
Sheikh Shahid Saleem, Mohammad Junaid Mir, Wani MF, Shuhaib Mushtaq. Experimental investigation and modelling of PMEDM process with aluminium powder suspended dielectric on AISI-H11. *Discovery Engineering*, 2018, 6, 1-8

ABSTRACT

H11 is widely used in die and mould making industries. However these materials are difficult to process owing to the large cutting forces and high cost incurred on tool consumption. H11 is a hard material and is difficult to machine by traditional machining methods because of its high abrasion resistance, high compressive strength and excellent wear resistance. In the present work a study has been made to analyze the process parameters of powder mixed electric discharge machining of AISI H11 with copper electrode. Response surface methodology is used to plan and analyze the experiment. Pulse on time, current and powder concentration are chosen as input variables and are used to study the process performance in terms of MRR. Experiments were