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Investigation on the Use of Mask in Waterjet Surface Texturing of Stainless Steel

[Husin, Hafiz^{a, b}](#) ; [Nawi, Mohd Nazir Mat^{a, b}](#); [Gebremariam M.A.^a](#); [Azhari, Azmir^a](#)[Save all to author list](#)^a Faculty of Manufacturing Engineering, Universiti Malaysia Pahang, Pekan, 26600, Malaysia^b Centre for Foundation Studies, International Islamic University Malaysia, Gambang, 26300, Malaysia179th percentile
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Views count [View all metrics >](#)[Full text options](#) [Export](#) [Abstract](#)[Author keywords](#)[Indexed keywords](#)[SciVal Topics](#)[Metrics](#)[Funding details](#)**Abstract**

Surface texturing has been applied to diverse mechanical mechanisms to improve performances in various fields related to friction, lubrication and resistance to wear. The present study investigates the application of mask in producing circular craters during the abrasive waterjet surface texturing

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of stainless steel. In the experiment, the mask with parallel slots was placed above the surface of the specimen and the waterjet nozzle moved along the mask. The effect of feedrate was studied in terms of crater characteristics produced. The results showed that with increasing traverse rate a shallower crater depth was produced. Increasing the traverse rate also produced a narrower circular crater with improved inner surface roughness. It can be concluded that a proper selection of parameters can produce a shallow and small circular crater during the waterjet surface texturing process. © 2021, The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd.


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🔍 Husin, H.; Faculty of Manufacturing Engineering, Universiti Malaysia Pahang, Pekan, Malaysia; email:hafidzuka@yahoo.com

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