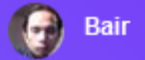


Sent x Search in sent...

Advanced v



Ho

← Back



MIMEC2015AbstractID...

Page 1 of 1



• Abstract ID130 and ID131

Yahoo/Sent ☆



• **Bair Sultan** <bair_sultan@yahoo.co.nz>

To: info@mimec.me



Tue, 6 Jan 2015 at 9:38 am ☆

Dear MIMEC2015

Abstract ID130 and ID131 are attached

Thank you and best wishes

[Sent from Yahoo Mail on Android](#)

[Download all attachments as a zip file](#)



MIMEC2015... .doc

29kB



MIMEC2015... .doc

29.5kB

Chip Formation When Drilling 316L using Uncoated Carbide Twist Drill

Ahmad Zubair Sultan¹, Safian Sharif², D. Kurniawan³
¹Department of Mechanical Engineering, Politeknik Negeri Ujung Pandang, Makassar, Indonesia
²Department of Manufacturing and Industrial Engineering, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia

*bair_sultan@yahoo.co.nz

Abstract

Knowledge on the chip formation mechanism during drilling is very important to deliver the chips with size and shape expected. Long chips cannot move smoothly over a drill flutes hence should be avoided. Long chips tend to rotate along the drill body and lead to chip removal problems while small chips can be removed easily from the machined hole. In this study, performance of uncoated solid carbide twist drills through conventional flood drilling of AISI 316L stainless steels was evaluated in terms of chip formation. The purpose of this study aims to better define and further characterize the different chips shape and dimensions as function of tool wear and cutting conditions in drilling stainless steel. Experiments conducted on various combinations of cutting speed (18 and 30 m min⁻¹) and feed rate (0.03, 0.045 and 0.06 mm rev⁻¹) to present the differences in chip formation. Optical observation and comparative analysis of flank wear of the twist drill are used. As the results of the performed experiments, the lowest cutting speed-lowest feed rate reveals better performance due to chips desired on austenitic stainless steels drilling.

Keywords: Chip formation; Drilling austenitic stainless steel; Uncoated Carbide Twist Drill.

Acknowledgements

Financial supports from the Ministry of Higher Education (MOHE) Malaysia and Research Management Center (RMC) Universiti Teknologi Malaysia through Research University Grants (R/UG/O.1120000.2510.06H89) are gratefully acknowledged.

On Thursday, 23 April 2015 4:22 PM, Denni Kurniawan <denni@utm.my> wrote:

Dear student researchers,

Please reformat your papers for MIMEC2015 to Procedia Manufacturing format.
Email me the MS word file by this Saturday 25 April.

Thank you and best wishes,
Denni

2 Attachments • Scanned by Gmail [Info Icon]

