

**EFFECT OF ADMIXING CU AND SINTERING
PARAMETERS ON THE DENSIFICATION AND
MECHANICAL PROPERTIES OF MICROWAVE
SINTERED 316L STAINLESS STEEL**

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SINTERED 316L STAINLESS STEEL

by

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Report submitted in partial fulfillment
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APPROVAL AND DECLARATION SHEET

This project report titled EFFECT OF ADMIXING CU AND SINTERING PARAMETERS ON THE DENSIFICATION AND MECHANICAL PROPERTIES OF MICROWAVE SINTERED 316L STAINLESS STEEL was prepared and submitted by Ching Chin Ho (Matrix Number: 061050113) and has been found satisfactory in terms of scope, quality and presentation as partial fulfillment of the requirement for the Bachelor of Engineering (Manufacturing Engineering) in Universiti Malaysia Perlis (UniMAP).

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**KESAN PENAMBAHAN GRAPHITE DAN PARAMETER PERSINTERAN
TERHADAP PENUMPATAN DAN CIRI-CIRI MEKANIKAL 316L SERBUK
KELULI TAHAN KARAT YANG DISINTER OLEH GELOMBANG MIKRO**

ABSTRAK

Kajian ini tentang kesan selepas menambah copper terhadap parameter persinteran dan penumpatan dan ciri-ciri mekanikal 316L serbuk keluli tahan karat yang disinter oleh gelombang mikro. Parameter yang dikaji adalah suhu pensinteran, kadar pemanasan, suasana pensinteran. Suasana pensinteran yang dikaji adalah dengan menggunakan gas nitrogen atau argon. Sample akan dipanaskan dalam 2.45 GHz gelombang satu mod mikro relau pensinteran untuk mencapai penumpatan, kekerasan, dan tegasan mampatan yang optima untuk kesan factor pensinteran. Dalam laporan ini, kaedah pemilihan secara rawak untuk menentukan parameter yang paling baik untuk sample tersebut.

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ABSTRACT

In this research, researching the effect of Cu to the sintering parameter on the densification and mechanical properties of using microwave sintered the 316L stainless steel. The variable parameter in this research are the sintering temperature, heating rate and the environment when sintering. The environment of sintering either is gas nitrogen or gases argon. The sample will sintering in the 2.45GHz microwave sintering furnace. The randomized block is use to analysis the best parameter to the sintering process on same material.

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