Viability of the Novel Process of Indirect Laser Brazing

M.Y. Yuserny[1],, M.H. Aiman[1] , M.M. Quazi[1] , M Ishak[1] and J. Shamini[2]*

[1]Faculty of Mechanical and Automotive Engineering Technology, Universiti Malaysia Pahang, 26600 Pekan, Pahang, Malaysia

[2]Centre for Advanced Materials and Intelligent Manufacturing, Faculty of Engineering and the Built Environment, SEGi University, Jalan Teknologi, Kota Damansara 47810, Petaling Jaya, Selangor,

ABSTRACT

Malaysia Brazing is a 5000-year-old joining process which faced still with the advanced joining challenges that exist today [1]. In laser brazing components are joined together by heating above the melting point of a filler metal placed between them. It provides unique advantages over other joining methods, including the ability to joint dissimilar material. Indirect laser brazing is a novel process which able to joint dissimilar metals with minimal formation of a brittle intermetallic compound (IMC) layer than conventional furnace brazing. In this study the viability of indirect laser brazing process was investigated between Ti6Al4V and 316L stainless steel.

KEYWORDS: Fibre laser, Ti-6Al-4V, titanium alloy, 316L stainless steel, filler metal, laser brazing, intermetallic compound (IMC)

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