

Pulsed Gas Tungsten Arc Welding of Dissimilar (CP-Ti/Ti-6Al-4V) Titanium Alloys



Thesis submitted in partial fulfillment for the

Award of Degree

Doctor of Philosophy

By

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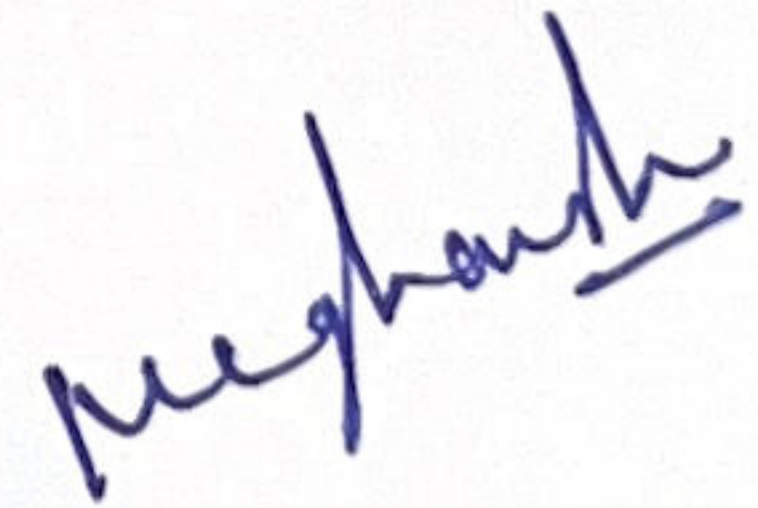
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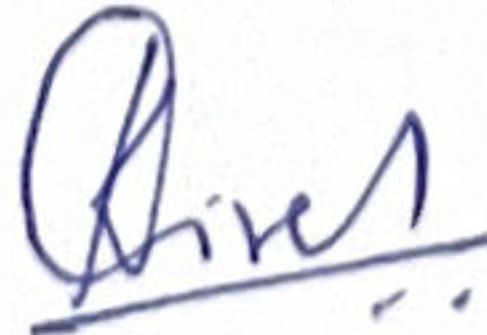
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LIST OF SYMBOLS AND ABBREVIATIONS

Al	:	Aluminium
Ar	:	Argon
BCC	:	Body-centered cubic
AC	:	Alternating current
BOP	:	Bead on plate
BE	:	Backscattered electron
I_b	:	Background current
t_b	:	Background current time
DC	:	Direct current
ELI	:	Extra-low interstitial
EBW	:	Electron beam welding
FSW	:	Friction stir welding
FZ	:	Fusion zone
FESEM	:	Field emission scanning electron microscopy
GTAW	:	Gas tungsten arc welding
HAZ	:	heat affected zone
He	:	Helium
LBW	:	Laser beam welding
LVDT	:	Linear variable differential transformer
OM	:	Optical microscope
OCV	:	Open circuit voltage
PWHT	:	Post-weld heat treatment
I_p	:	Peak current
t_p	:	Peak current time
PAW	:	Plasma arc welding
SMAW	:	Shielded metal arc welding
SEM	:	Scanning electron microscopy
SE	:	Secondary electron
Ti	:	Titanium
TIG	:	Tungsten inert gas