

NOMENCLATURE

ABBREVIATION AND SYMBOL	DESCRIPTION
FSW	Friction Stir Welding
FSP	Friction Stir Processing
AA	Aluminium Alloy
TWI	The Welding Institute
FW	Friction Welding
MIG	Metal Inert Gas
TIG	Tungsten Inert Gas
GTAW	Gas Tungsten Arc Welding
GMAW	Gas Metal Arc Welding
IBW	Ion Beam Welding
USW	Ultrasonic Welding
HAZ	Heat Affected Zone
TMAZ	Thermo Mechanically Affected Zone
DRX	Dynamic Recrystallization
CDRX	Continuous Dynamic Recrystallization
CNC	Computer numerical control
VMC	Vertical Machining Centre
F _x	Force In X Direction
F _y	Force In Y Direction
F _z	Force In Z Direction
N	Rotational Speed
V	Welding Speed
Q	Heat Input
UTS	Ultimate Tensile Strength
YS	Yield Strength
η	% Efficiency

ϵ	% Elongation
EBSD	Electron Back Scattered Diffraction
BFSW	Bobbin Friction Stir Welding
BTFSW	Bobbin Tool Friction Stir Welding
SRFSW	Self-Reacting Friction Stir Welding
SZ	Stir Zone
NZ	Nugget Zone
WC	Weld Center
WN	Weld nugget
T_m	Melting Temperature
AS	Advancing Side
RS	Retreating Side
BM	Base Metal
DOE	Design Of Experiment
ASTM	American Standard For Testing Material
PWHT	Post Weld Heat Treatment
Mpy	Miles Per Year
VHN	Vicker Hardness Number
BHN	Brinell Hardness Number
EDAX	Energy Dispersive X-Ray
SEM	Scanning Electron Microscope
EDM	Electro Discharge Machining
IGC	Intergranular corrosion
IGSCC	Intergranular Stress Corrosion Cracking
SCC	Stress Corrosion Cracking
E_{corr}	Corrosion potential
E_{pit}	Pitting potential
I_{corr}	Corrosion current