LIST OF SYMBOLS

1. Abbreviations

Cr	Chromium
C	Carbon
Si	Silicon
Mn	Manganese
Mo	Molybdenum
N	Nitrogen
Ni	Nickel
Fe	Iron
O	Oxygen
Na	Sodium
Cl	Chlorine
S	Sulfur
NaCl	Sodium chloride
Na_2SO_4	Sodium sulfate
wt.%	Weight percentage
µm	Micron
E	Erosion Rate
k	Constant
V	Impact velocity
n	Velocity exponent
W	Weight loss
α	Impact angle

ε_{vp}	Volume of material removed by single abrasive grain
m_p	Mass of single particle
V_p	Particle Velocity
P	Constant plastic flow stress
Ψ	Ratio of depth of contact to depth of cut
M	Total mass of impinging particle
δ	Deformation wear factor
C_p	Heat capacity of target material
T_m	Melting temperature
Ht	Target Material Hardness
ρ_p	Particle density
L	Depth of deformation
$\Delta\Omega_m$	Mean strain increment induced by each impact
Ω_c	Critical strain for onset of lip formation
H_p	Particle Hardness
HV	Vicker's Hardness
MPa	Mega Pascal
E_T	Total Energy
E_K	Kinetic Energy
E_P	Potential Energy

2. Acronyms

SPE	**S**olid **P**article **E**rosion
FCC	**F**ace **C**entred **C**ubic
BCC	**B**ody **C**entred **C**ubic
VHN	**V**icker's **H**ardness **N**umber
AISI	**A**merican **I**ron and **S**teel **I**nstitute
SS	**S**tainless **S**teel
CFD	**C**omputational **F**luid **D**ynamics
ASTM	**A**merican **S**ociety for **T**esting and **M**aterials
SAE	**S**ociety of **A**utomotive **E**ngineers
PRE	**P**itting **R**esistance **E**quivalent
SLM	**S**elective **L**aser **M**elting
K.E.	**K**inetic **E**nergy
CVD	**C**hemical **V**apour **D**eposition
PVD	**P**hysical **V**apour **D**eposition
LSP	**L**aser **S**hock **P**eening
USSP	**U**ltrasonic **S**hot **P**eening
DLC	**D**iamond **L**ike **C**oating
RSM	**R**esponse **S**urface **M**ethodology
CCRD	**C**entre **C**omposite **R**otatable **D**esign
DOE	**D**esign **O**f **E**xperiments
ANN	**A**rtificial **N**eural **N**etwork
LTHC	**L**ow **T**emperature **H**ot **C**orrosion
HTHC	**H**igh **T**emperature **H**ot **C**orrosion
UTS	**U**ltimate **T**ensile **S**trength

YS	**Y**ield **S**tress/**Y**ield **S**trength
SEM	**S**canning **E**lectron **M**icroscopy
EDS	**E**nergy **D**ispersive **X**-ray **S**pectroscopy
BSE	**B**ack **S**cattered **E**lectron
XRD	**X**-ray **D**iffraction
TEM	**T**ransmission **E**lectron **M**icroscopy
TTT	**T**ime-**T**emperature-**T**ransformation
CCT	**C**ontinuous **C**ooling **T**ransformation
RT	**R**oom **T**emperature
AISI	**A**merican **I**ron and **S**teel **I**nstitute
SAE	**S**ociety of **A**utomotive **E**ngineers
ASME	**A**merican **S**ociety of **M**echanical **E**ngineers
UNS	**U**nified **N**umber **S**ystem
LDX	**L**ean **D**uplex