Ductile Regime Machining of 45S5 Bioglass

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by

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Dedicated to

My Beloved Parents

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List of Abbreviations

HA	Hydroxyapatite
DRM	Ductile Regime Machining
LAM	Laser Assisted Machining
AE	Acoustic Emission
CMP	Chemical Mechanical Planarization
PVD	Physical Vapor Deposition
DOC	Critical Depth of Cut
VMC	Vertical Milling Center
IR	Infrared
AC	Alternating Current
DAQ	Data Acquisition System
SD	Standard Deviation
SP	Spot
ASTM	American Society for Testing and Materials
MRR	Material Removal Rate

Symbols used

Hz	Hertz
℃	Degree Centigrade
mm	Millimeter
HV	Viker’s Hardness
µm	Micrometer
A	Ampere
V	Volt
θ	Theta
Sec	Second
Min	Minute
T	Temperature
K_{ICt}	Fracture Toughness at Temperature t
E_t	Elastic Modulus at Temperature t
H_t	Hardness at Temperature t
C_t	Crack Length at Temperature t
D_{ct}	Critical DOC at Temperature t