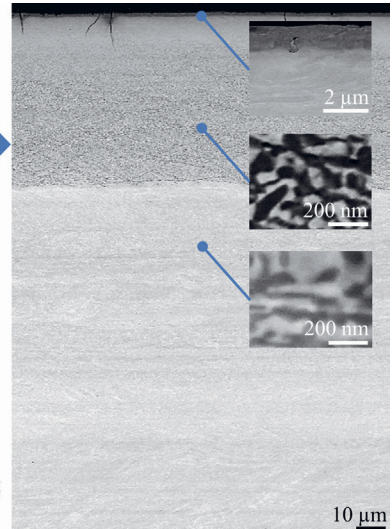
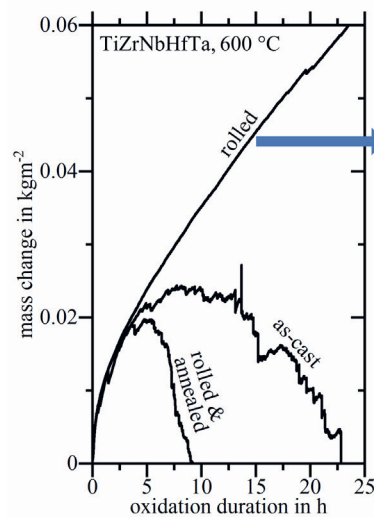


Daniel Dickes

Oxide layer and diffusion zone formation during oxidation of Ti6Al4V and TiZrNbHfTa and their influence on tribological properties



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Preface

“By the time one has finished the last chapter, one can always start anew on earlier chapters in order to keep the information up to date. In this respect the writing is a Sisyphean labour. But, on the more positive side, one continually learns by writing”

Per Kofstadt, Norwegian researcher on high temperature corrosion, in his book “High temperature corrosion”, Elsevier, 1988.

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List of abbreviations

Abbreviations

APT	atom probe tomography
bcc	body-centered cubic
BSE	backscattered electron
EPMA	electron probe micro analyzer
EDS	energy dispersive X-ray spectroscopy
GDOES	glow discharge optical emission spectrometry
hcp	hexagonal close-packed
HEA	high entropy alloy / high entropy alloys
HM	Martens hardness
ICDD	international center for diffraction data
NRA	nuclear reaction analysis
OECD	organization for economic co-operation and development
OEZ	oxygen-enriched zone
SE	secondary electron
SEM	scanning electron microscope
UHMW-PE	ultra-high-molecular-weight polyethylene
XPS	X-ray photoelectron spectroscopy
XRD	X-ray diffraction analysis
XRF	μ X-ray fluorescence analysis