

- 11:10 S25 THE REVERSE OF TRIAXIAL STRAIN FIELDS IN A MULTIFERROIC BiFeO_3 THIN FILM AS STUDIED USING SCANNING X-RAY MICRODIFFRACTION
C.W. Bark, K.C. Cho, Y.M. Koo, S. Ryu, H.M. Jang, Pohang University of Science and Technology (POSTECH), Pohang, Korea
N. Tamura, ALS—Lawrence Berkeley National Laboratory, Berkeley, CA

ICRS-8 MODELING II

Friday a.m. LONGS PEAK

Chairs: **C. Tome, I. Beyerlein**, Los Alamos National Laboratory, Los Alamos, NM

- 8:40 S86 RESIDUAL STRESS AND DEFORMATION SIMULATION OF NITRIDED DISCS
L. Barrallier, MecaSurf Laboratory, Arts et Metiers ParisTech, Aix en Provence, France
P. Yardon, Eurocopter, Marignane, France
D. Deloison, EADS Innovation Works, Suresnes, France
- 9:00 S91 PHASE TRANSFORMATION INVOLVING RESIDUAL STRESSES DURING GASEOUS NITRIDING OF STEEL
S. Jegou, R. Kubler, L. Barrallier, Laboratoire MecaSurf, Arts et Metiers ParisTech, Aix-en-Provence, France
F. Roch, Aubert et Duval, ERAMET Group, Paris, France
- 9:20 S20 PREDICTION OF RESIDUAL STRESS DISTRIBUTION IN PLASMA NITRIDED TOOL STEEL
B. Podgornik, J. Vižintin, University of Ljubljana, Ljubljana, Slovenia
V. Leskovšek, Institute for Metals and Technologies, Ljubljana, Slovenia
D. Nolan, University of Wollongong, Wollongong, NSW, Australia
- 9:40 S170 ON SURFACE TEXTURE AND INTEGRITY IN MACHINED SURFACES
A.K. Balaji, A.R. Paranjpe, C. Rakurty, The University of Utah, Salt Lake City, Utah
- 10:00 BREAK
- 10:30 S32 MEASUREMENT OF THE RESIDUAL STRESS FIELD IN AN ALUMINIUM ALLOY 2014A COMPONENT OF COMPLEX GEOMETRY
S. Hossain, M. Fardi, D.J. Smith, C.E. Truman, University of Bristol, Bristol, UK
U. Stuhr, Paul Scherrer Institute, Villigen, Switzerland
- 10:50 S75 IN-SITU STRAIN MEASUREMENTS IN COMPOSITE CASTINGS USING NEUTRON DIFFRACTION
U. Wasmuth, M. Hofmann, L. Meier, H. Hoffmann, Technische Universität München, Garching, Germany
- 11:10 S130 FINITE ELEMENT SIMULATION OF RESIDUAL STRESS PROFILES IN PEEN FORMING PROCESS
H.Y. Miao, C. Perron, National Research Council Canada, Québec, Canada
M. Lévesque, École Polytechnique de Montréal, Québec, Canada
- 11:30 S138 STUDY ON THE RESIDUAL STRESS AND THE DISTORTION OF THE LARGE GEARS OR AXLES DURING THE HEAT TREATMENT
Y. Wang, Y. Ling, R. Kastelein, Z.A. Xu, SIRRIS, Zwijnaarde, Belgium

ICRS-8 FATIGUE & FRACTURE

Friday a.m. BLANCA PEAK

Chair: **D. Smith**, Bristol University, Bristol, United Kingdom

- 8:30 S180 *INVITED*—IN SITU PROBING OF CRACK GROWTH RETARDATION DURING CYCLIC LOADING
S.Y. Lee, H. Choo, P.K. Liaw, The University of Tennessee, Knoxville, TN
K. An, T.R. Watkins, C.R. Hubbard, Oak Ridge National Laboratory, Oak Ridge, TN
- 9:00 S153 IMPACT OF ZIRCONIUM HYDRIDE PRECIPITATES ON FRACTURE OF A ZIRCONIUM ALLOY
M. Kerr, M.R. Daymond, R.A. Holt, Queen's University, Kingston, Ontario, Canada
J.D. Almer, APS – Argonne National Laboratory, Argonne, IL
- 9:20 S18 ON THE IMPROVEMENT OF THE FATIGUE BEHAVIOUR OF AUSTENITIC STAINLESS STEEL DUE TO SURFACE RESIDUAL STRESSES PRODUCED BY LOW TEMPERATURE CARBURIZING
G. Minak, Università di Bologna, Bologna, Italia
- 9:40 S136 OPERATIONAL RESIDUAL STRESS FORMATION IN VIBRATION-LOADED ROLLING CONTACT
J. Gegner, W. Nierlich, SKF GmbH, Schweinfurt, Germany
- 10:00 BREAK