

Symposium C

MONDAY OCTOBER 9TH



8:15 – 10:15 A.M. ORAL SESSION C1

Chairperson: Levi O. Bueno

Room: ZEISS

8:15 – 9:15 A.M. THE PROCESSING OF ULTRAFINE-GRAINED MATERIALS THROUGH THE APPLICATION OF SEVERE PLASTIC DEFORMATION. **(Invited, C580)** Terence G. Langdon (University of Southern California, USA).

9:15 – 9:30 A.M. CHARACTERIZATION OF CARBURIZED HP ALLOY PRECIPITATES USING EBSD AND MAGNETIC NON-DESTRUCTIVE EVALUATION **(C506)**. João Marcos Alcoforado Rebello (COPPE/UFRJ), Ivan Costa Silva (COPPE/UFRJ), Antonio Carlos Bruno (PUC-RIO), Jean André François Dille (ULB) and Pascal Jaques (CUL).

9:30 – 9:45 A.M. ASSESSING SECOND-PHASE PRECIPITATION DURING WELDING NI-BASE ALLOY FM-52 MODIFIED WITH Ti AND Nb ADDITIONS **(C527)**. Antonio Jose Ramirez (LNLS) and Carlos Mario Garzón (LNLS).

9:45 – 10:15 A.M. EQUILIBRIUM EXPERIMENTS AND CALCULATIONS ON Nb-ALLOYED HIGH-SPEED STEELS **(C547)**. Jerzy A Golczewski (MPI-Stuttgart), Gilberto C Coelho (EEL-USP) and Hellmut F Fischmeister (MPI-Stuttgart). ■



10:15 A.M. - 10:30 A.M. – COFFEE BREAK



10:30 A.M. – 12:30 P.M. – ORAL SESSION C2

Chairperson: Hugo R. Z. Sandim

Room: ZEISS

10:30 – 11:30 A.M. AUSTENITIC STAINLESS STEELS AT HIGH TEMPERATURES: PROCESSING, MICROSTRUCTURE AND PERFORMANCE. **(Invited, C581)** Ronald Lesley Plaut (EPUSP).

11:30 – 11:45 A.M. QUANTIFICATION OF FERRITIC AND AUSTENITIC PHASES IN AISI 430 STAINLESS STEEL **(C542)**. José Mário Vilela (CETEC), Francisco Henrique Silva (Redemat), Margareth Spangler Andrade (CETEC), Nilton Jose Oliveira (CETEC) and José Maria Moraes (ACESITA).

11:45 – 12:00 P.M. CREEP BEHAVIOR OF SERVICE EXPOSED 1Cr-1/2Mo STEEL. PART 1 – CHARACTERIZATION OF PROPERTIES AND DATA PARAMETERIZATION. **(C572)**. Levi de Oliveira Bueno (DEMa / UFSCar)

12:00 – 12:15 P.M. CREEP BEHAVIOR OF SERVICE-EXPOSED 1Cr-1/2MO STEEL. PART 2 – ANALYSIS BASED ON THE THETA METHODOLOGY APPROACH.

(C574). Levi de Oliveira Bueno (DEMa / UFSCar)

12:15 – 12:30 P.M. MICROSTRUCTURE, TOUGHNESS AND CORROSION RESISTANCE EVALUATION OF THE AISI 304 STEEL USED AT HIGH TEMPERATURES. **(C533)**. Juan Manuel Pardal (UFF), Sérgio Souto Maior Tavares (UFF), Vanessa Moura (UFF), Aline Yae Kina (UFF) and José Adailson de Souza (UFF) ■



12:30 P.M. – 2:00 P.M. – LUNCH



2:00 P.M. – 2:45 P.M. – PLENARY SESSION

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2:50 – 4:20 P.M. ORAL SESSION C3

Chairperson: Ronald Lesley Plaut

Room: ZEISS

2:50 – 3:35 P.M. ROLE OF RARE EARTH OXIDE COATINGS ON OXIDATION RESISTANCE OF CHROMIA-FORMING ALLOYS **(C556, Invited Presentation)**. Lalgudi Venkataraman Ramanathan (IPEN) and Stela Maria Fernandes (IPEN)

3:35 – 3:50 P.M. RECRYSTALLIZATION BEHAVIOR OF THE NICKEL-BASED ODS SUPERALLOY PM-1000 **(C511)**. Angelo F. Padilha (Escola Politécnica-USP), Alexandra O.F. Hayama (EEL-USP), Hugo R.Z. Sandim (EEL-USP), Andrea M. Kliauga (DEMa-UFSCar) and Dierk R. Raabe (MPI-E).

3:50 – 4:05 P.M. PROCESSING OF INTERMETALLIC SURFACES **(C553)**. Veronica Buss Almeida (UFPR), Gessica Dias Bazzi (UFPR) and Ana Sofia C.M. Oliveira (UFPR).

4:05- 4:20 P.M. THE 475°C EMBRITTEMENT OF DIN 1.4575 AND INCOLOY MA 956 FERRITIC STAINLESS STEELS **(C504)**. Angelo Fernando Padilha (EPUSP), Isolda Costa (IPEN), Márcio Ferreira Hupalo (SESC/IST) and Maysa Terada (IPEN).

4:05 – 4:20 P.M. CREEP BEHAVIOR OF TYPE 310 STAINLESS STEEL. PART 3: CORRELATIONS OF THE STRESS EXPONENT AND ACTIVATION ENERGY VALUES WITH THE DORN CONSTANT **(C578)**. Levi de Oliveira Bueno (DEMa / UFSCar) and José Luiz Campanelli (DEMa / UFSCar). ■



4:20 A.M. – 4:40 A.M. – COFFEE BREAK



4:20 P.M. – 5:45 P.M. – POSTER SESSION PC1

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5:50 P.M. – 6:35 P.M. – PLENARY SESSION

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TUESDAY OCTOBER 10TH



8:15 – 10:15 A.M. – ORAL SESSION C4

Chairperson: Angelo F. Padilha

Room: ZEISS

8:15 – 9:15 A.M. STRUCTURAL MATERIALS FOR FUSION NUCLEAR REACTORS. (Invited, C583) Anton Möslang (Karlsruhe Research Center)

9:15 – 9:30 A.M. EFFECTS OF AGING ON THE HYDROGEN DIFFUSIVITY AND SOLUBILITY IN A 2,25Cr-1Mo-0.25V STEEL (C566). Luiz Henrique de Almeida (UFRJ), Janyne H. Rodrigues (Petrobras), Leonardo M. Serodio (UFRJ) and Dilson S. dos Santos (UFRJ)

9:30 – 9:45 A.M. STRENGTHENING OF LOW-ACTIVATION 8-10%CR STEELS AFTER NEUTRON IRRADIATION AT LOWER TEMPERATURES (C516). Rolf Rolli (FZK, Germany), Hans Christian Schneider (FZK, Germany), Edeltraud Materna Morris (FZK, Germany) and Anton Möslang (FZK, Germany)

9:45 – 10:00 A.M. INFLUENCE OF STABILIZATION HEAT TREATMENTS ON MICROSTRUCTURE, HARDNESS AND INTERGRANULAR CORROSION RESISTANCE OF THE AISI 321 STAINLESS STEEL (C563). Leandro Dias Lima (UFF), Sérgio Souto M. Tavares (UFF), Aline Yae Kina (UFF), Vanessa Moura (UFF) and Fernando Benedicto Mainier (UFF)

10:00 – 10:15 A.M. MICROSTRUCTURAL EVOLUTION OF CR-MO FERRITIC STEEL (2.25Cr-1Mo) ON LONG TERM HIGH TEMPERATURE OPERATION – CALCULATION OF THE PRECIPITATES FRACTION (C555). Luiz Henrique de Almeida (UFRJ), André Luiz Pinto (IME) and Clesianu R. de Lima (IME) ■



10:15 A.M. - 10:30 A.M. – COFFEE BREAK



10:00 A.M. – 12:30 P.M. – ORAL SESSION C5

Chairperson: Laguldi Ramanathan

Room: ZEISS

10:30 – 11:30 A.M. REFRACTORY METALS AND ALLOYS: PROCESSING AND APPLICATIONS. (Invited, C582) Carlos Ângelo Nunes (USP)

11:30 – 11:45 A.M. SIMULATION OF THE SOLIDIFICATION PATH OF Nb-Si-B SYSTEM ALLOYS (C539). Flávio Ferreira (EEMVR-UFF), G. C. Coelho (USP), C. A. Nunes (USP) and V. M. Chad (USP).

11:45 – 12:00 A.M. EFFECT OF MICROSTRUCTURE ON THE CREEP RESISTANCE OF THE Ti-6Al-4V ALLOY (C524). Miquel Justino R. Barboza; Danieli Aparecida P. Reis (LAS-INPE), Gilberto C. Coelho (USP), Márcia M. Medeiros (USP), Eder Alexandre

C. Perez (Fac. Comunitária Taubaté), (USP) and Francisco Piorino Neto (IAE/AMR-CTA)

12:00 – 12:15 P.M. THE EFFECT OF MECHANICAL-THERMAL TREATMENTS ON THE MICROSTRUCTURE OF NIOBIUM STABILISED STAINLESS STEEL AFTER CREEP (C546). Jesualdo Luiz Rossi (IPEN) and Paulo Iris Ferreira (Sebrae)

12:15 – 12:30 P.M. PHASE TRANSFORMATION IN MECHANICALLY ALLOYED Ti-22.2Si-11.1B POWDERS CONTAINING PROCESS CONTROL AGENT ADDITION (C568). Alfeu Saraiva Ramos (UNIVAP), Newton S. da Silva (UNIVAP), Gilbert Silva (UNIVAP) and Erika Coaglia T. Ramos (ITA) ■



12:30 P.M. – 2:00 P.M. – LUNCH



2:00 P.M. – 2:45 P.M. – PLENARY LECTURE

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2:50 P.M. – 4:20 P.M. – ORAL SESSION C6

Chairperson: Gilberto Carvalho Coelho

Room: ZEISS

2:50 – 3:05 P.M. A NEW ARCHITECTURE IN POROUS ANODIC ALUMINA (C503). Marcia L. Cardoso (UFSCAR), Adilson A. J. de Oliveira (UFSCAR), Cristiane P. de Oliveira (UFSCAR) and Ernesto C. Pereira (UFSCAR)

3:05 – 3:20 P.M. CARBON THERMAL REDUCTION ON CARBON FIBER SURFACE IN C/SICHOY COMPOSITES (C515). Inez Valéria Pagotto Yoshida (Unicamp) and Eduardo Radovanovic (UEM)

3:20 – 3:35 P.M. MANUFACTURING OF BIOMORPHIC ALN COATED Al₂O₃ BY PRESSURELESS INFILTRATION-NITRIDATION OF AL-MG ALLOYS (C535). Carlos Renato Rambo (UFSC) and Dachamir Hotza (UFSC)

3:35 – 3:50 P.M. INTERMETALLICS COMPOUNDS FORMATION IN BRAZING FILETS BETWEEN METALLIZED ALUMINA WITH Ti AND Nb METALLIC/KOVAR (C525) Guadalupe Malaise (Instituto Sabato), Fernanda Regina Francisco (LNLS), Osmar Roberto Bagnato (LNLS)

3:50 – 4:20 P.M. ATOMIC TRANSPORT IN HIGH DIELECTRIC CONSTANT FILMS ON SI INDUCED BY RAPID THERMAL ANNEALING (C530). Felipe Tatsch (UFRGS), Israel Jacob Rabin Baumvol (UFRGS) and Leonardo Miotti (UFRGS) ■



4:20 P.M. – 4:40 P.M. – COFFEE BREAK



4:20 P.M. – 5:45 P.M. – POSTER SESSION AC2

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5:50 P.M. – 7:20 P.M. – ROUND-TABLE

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