

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 EMBRITTLEMENT 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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