

74th ABM International Congress 2019

Sao Paulo, Brazil
1 – 3 October 2019

Volume 1 of 4

ISBN: 978-1-7138-1574-7

Original material in electronic media. Printed material created by authorization of ABM to

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2019) by Associação Brasileira de Metalurgia Materiais e Mineração (ABM)
All rights reserved.

Printed by with permission Curran Associates, Inc. (2020)

For permission requests, please contact Associação Brasileira de Metalurgia Materiais e Mineração (ABM)
at the address below.

Associação Brasileira de Metalurgia Materiais e Mineração (ABM)
Rua Antonio Comparator 218
04605 Sao Paulo-SP Brazil

Phone: (11) 5534-4333

Fax: (11) 5534-4330

abm@abmbrasil.com.br

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

MAINTENANCE AND ENGINEERING

RETROFIT OF STEEL COIL LIFT ASSEMBLY FROM A STEEL METAL SLITTING MACHINE	1
<i>Amorim, Pablo Altoé; Abreu, Flávio Da Silva; Rangel, Luciano Tristão; Menezes, Gabriel Rodrigo Da Silva; Cosmo, Rafaela; Martins, Matheus Rhein</i>	
RHEOLOGICAL ANALYSIS OF FIBROIN AND CHARACTERISATION OF A MEMBRANE OBTAINED FROM THE SILKWORM COCOON	11
<i>Lima, Ingrid Russoni De; Paresque, Mara Carolina Do Carmo; Freitas, Gabriele Cristine Duarte; Silva, Fernanda A. Sampaio Da; Fialho, Bonifácio De Oliveira; Simão, Renata Antoum; Castro, José Adilson De; Fonseca, Gláucio Soares</i>	
INVESTIGATION OF LASER REMELTED THERMAL BARRIER COATING	21
<i>Freitas, Filipe Estevão De; Reis, Adriano Gonçalves Dos; Oliveira, Aline Capella De; Reis, Danieli Aparecida Pereira</i>	
STUDY OF SEATING MORTARS FOR USE IN STRUCTURAL MASONRY	33
<i>Lima, Thuany Espírito Santo De; Pinheiro, Valber Domingos; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio Bernabé; Monteiro, Sérgio Neves</i>	
USE OF ELECTRIC ARC FURNACE DUST IN THE GEOPOLIMERIC CEMENT CONFECTION	41
<i>Oliveira, Isaac Gabriel Peixoto Borges De; Bona, Beatriz Cordeiro De; Pereira, Vinicius Lemos; Torres, Ponnyk Melo; Cardoso, Dilson Nazareno Pereira; Lima, Clesianu Rodrigues De</i>	

MAINTENANCE AND ENGINEERING - ROOT CAUSE AND FAILURE ANALYSIS (RCFA)

STRUCTURAL CHARACTERIZATION OF A DEVICE FOR MEASURING TEMPERATURE IN A GAS PIPE	49
<i>Ferreira, Renato De Souza; Jesus, Wellington Bruno Silva De; Nascimento, Luiz Gabriel Da Silva; Costa, Deibson Silva Da</i>	
ANALYSIS OF EGG AXIS FAILURE USED IN CEMENT PRODUCTION	56
<i>Santos, Renan Celestino Silva; Reis, Mateus Mariano Da Silva; Fontes, Lucas Silva; Junior, Isaú De Souza Alves; Silva, Abraão Santos; Santos, Priscylla Ferreira Dos; Griza, Sandro</i>	
FRACTURE ANALYSIS OF LEAF SPRING SHEET	65
<i>Silva, Abraão Santos; Reis, Matheus Mariano Da Silva; Nascimento, Brenno Lima; Souza, Frederico Castro; Santos, Iris Sterfanie; Griza, Sandro</i>	
INFLUENCE OF MICROSTRUCTURE IN THE FAIL OF A FEMORAL STEM MANUFACTURER IN COBALT-CHROMIUM-MOLYBDENUM CASTING ALLOY ISO 5832-4	72
<i>Cubillos, Patricia Ortega; Santos, Vinicius Oliveira Dos; Novy, Joseph Quadri; Roesler, Carlos Rodrigo De Melo</i>	

FAILURE ANALYSIS ON FILTER BOLTS	83
<i>Filho, Ihana Gabriela Conceição De Jesus Marcos Menino De Macedo; Trindade, Matheus Porto; Griza, Sandro</i>	

MAINTENANCE AND ENGINEERING - ASSET LIFE CYCLE

TECHNICAL SUITABILITY OF MEDIUM-LOADER TIRES: CASE STUDY TO REDUCE MAINTENANCE COSTS AND INCREASE OPERATIONAL SAFETY	90
<i>Dutra, Duan Mateus; Santos, Leonardo Torres Dos</i>	

METHODOLOGY FOR COSTS AND RISKS OPTIMIZATION ASSOCIATED WITH THE RECOVERY OF SULFUR FREIGHT CARS	100
<i>Oliveira, Breno Carvalho De; Almeida, Clayton Guimarães De; Silva, Breno Delgado; Carrano, Eduardo Gontijo</i>	

STRUCTURAL IMPROVEMENT PROPOSAL FOR THE TRUNNIONS MAINTENANCE OF ROTARY CAR DUMPERS.....	113
<i>Martins, Matheus Rhein; Silva, Devanir; Amorim, Pablo Altoé</i>	

APPLICATION OF THE LIFE CYCLE COST ANALYSIS METHOD FOR EVALUATING THE ALTERNATIVES OF INVESTMENT PROJECTS	125
<i>Morais, Giussepp Kelson Castro; Mileipe, Shaney Gonçalves</i>	

INCREASING THE HYDROSTATIC CAPACITY OF MORGOIL® BEARINGS IN A TANDEM COLD MILL	137
<i>Wojtkowski, Tom; Ward, Ian; Osgood, Pete; Schilling, Bob</i>	

PROPOSAL FOR A MODEL OF MAJOR REPAIR PROGRAMMING	145
<i>Bueno, Eduardo Mussi</i>	

MAINTENANCE AND ENGINEERING - RELIABILITY

DEFINITION OF THE IDEAL MOMENT OF INTERVENTION IN SPIRAL COATING OF VERTICAL MILLS	158
<i>Lino, Marlon Fábio Marques; Coutinho, Ricardo Oliveira; Menezes, Kellson Takenaka</i>	

PRODUCTIVITY IN CENTRALIZED MAINTENANCE: TRANSFORMING THE RESULTS OF THE IMPLEMENTATION TEAMS OF A HIGH-PORTABLE STEEL INDUSTRY	167
<i>Júnior, Jerônimo Simeão; Corrêa, Reubber Vinícius</i>	

GUARANTEE OF RELIABILITY OF MILL COATINGS AND RINGS OF HPGR'S WITH THE APPLICATION OF CONDITIONAL MONITORING TECHNOLOGY BY ULTRASSOM	178
<i>Coutinho, Ricardo Oliveira; Arruda, Mario Cesar Castro; Menezes, Kellson Takenaka; Lino, Marlon Marques</i>	

METHODOLOGY FOR PRECISE ALIGNMENT ON SERVOHYDRAULIC TESTING MACHINES	189
<i>Cunha, Thiago Almeida; Castro, Jaime Tupiassú Pinho De</i>	

OBTAINING THE OPTIMIZED INTERVAL BETWEEN STOPS THROUGH RELIABILITY ENGINEERING IN THE HOT STRIP LAMINATOR (LTQ) OF THE ARCELORMITTAL TUBARÃO	202
<i>Greco, Bruno Brunoro; Neto, Ernesto Furtado De Mello; Santana, Fabiano Candido; Eulotério, Octávio</i>	

MAINTENANCE AND ENGINEERING - LUBRICATION MANAGEMENT

INCREASING THE LIFETIME OF MERCEDES BENZ ENGINE LUBRICANT OM501LA	212
<i>Medeiros, Donizete Gonzaga De; Dutra, Christian Deiner; Rodrigues, Mateus Barbosa De Moraes; Saiao, Silvio Sergio Lopes</i>	

MAINTENANCE AND ENGINEERING - ASSET MANAGEMENT

MODEL FOR DEFINING THE MAINTENANCE STRATEGIES FOR THE PRODUCTION LINES OF THE USIMINAS IPATINGA PLANT.	223
<i>Mello, Stenison Dias</i>	

FIXED COST MANAGEMENT - A NEW MANAGEMENT THROUGH AN INTEGRATED TOOL OF EVENTS OF RISK AND OPPORTUNITY	231
<i>Santana, Fabiano Candido</i>	

MAINTENANCE AND ENGINEERING - SPARE PARTS

SEPARATION OF METAL MATERIALS BY THE SPARK METHOD: DIAGNOSIS OF MIXTURES IN THE STOCK OF STEEL COMPANIES	239
<i>Sousa, Gustavo Henrique; Santos, Igor Cuzzuol Dos; Araujo, Athos Fernandes; Braga, Jorgimara De Oliveira; Araújo, Guilherme Vitor De; Fonseca, Marcelo Alves</i>	

MAINTENANCE AND ENGINEERING - NEW MAINTENANCE TECHNOLOGIES

CLASSIFICATION OF CRITICAL DISCONTINUITIES IN RAIL-WAGONS' COUPLINGS AND RODS WITH AID OF ARTIFICIAL NEURAL NETWORKS	250
<i>Amaral, Mateus Ciríaco; Machado, Marcelo Lucas Pereira</i>	

QUALITY AND PRODUCTIVITY PERFORMANCE IMPROVMENT OF CONTINUOUS SLAB CASTING MACHINE THOUGH THE TRIDIMENSIONAL ALIGNMENT PROCESS	261
<i>Costa, Afrânio Marcio; Pereira, Daniel Magno; Rezende, Harlei Pereira; Oliveira, Manoel De; Vieira, Paulo Rogério; Ribeiro, Pedro Henrique Homem; Resende, Wenderson Tcharles</i>	

NEW PREDICTIVE MAINTENANCE TECNOLOGIES USING DATA SCIENCE	272
<i>Fugihara, Marcelo Koiti; Yamada, Fábio Heiji; Alves, Jéssica Moura</i>	

RESULTS FROM AN ASSET DIAGNOSTIC SYSTEM IMPLEMENTATION, INTEGRATING CONTROL AND MAINTENANCE SYSTEMS	280
<i>Nicolay, Marcio</i>	

TOP COMBUSTION STOVE TAILOR MADE HOT REPAIR	292
<i>Diniz, José Carlos; Overlaender, Joerg; Esser, Frank</i>	

STUDY FOR PROTECTION OF WOUND-ROTOR INDUCTION MOTORS	305
<i>Pereira, Matheus Oliveira; Lima, Marcelo De Oliveira; Moreira, Túlio Miranda</i>	

RESEARCH AND INVESTIGATION OF HARDBANDING PROPERTIES USED IN THE OIL INDUSTRY	317
<i>Andrade, André Luis Alvarenga; Galdino, André Gustavo De Sousa; Luz, Temístocles De Sousa; Favre-Nicolin, Viviane Azambuja</i>	

CONDITIONAL MONITORING BY INFRARED THERMOGRAPHY FOR WEIGHT EVALUATION OF SPIRAL COATINGS OF VERTICAL MILLS	329
<i>Lino, Marlon Fábio Marques; Coutinho, Ricardo Oliveira; Menezes, Kellson Takenaka</i>	

FUNDAMENTALS - CORROSION

QUALITATIVE STUDY OF CORROSION PROCESS IN RISER TENSILE ARMOUR WIRES	338
<i>Trindade, Matheus Porto; Jesus, Ihana Gabriela Conceição De; Santos, Maycon Jhosevan Dos; Sussuchi, Eliana Midori; Griza, Sandro</i>	

CORROSION IN WELDED JOINTS BY SMAW PROCESS OF STEEL API5L X70 IN SALINE ENVIRONMENT	350
<i>Araujo, Athos Fernandes; Sousa, Gustavo Henrique; Souza, Franciele Vieira De; Camilo, Carla De Araujo; Braga, Jorgimara De Oliveira; Santos, Igor Cuzzuol Dos</i>	

EVALUATION OF CORROSION RESISTANCE TO SAE 1080 STEEL IN SULFURIC ACID AND WATER	362
<i>Sousa, Gustavo Henrique; Araújo, Guilherme Vitor De; Silva, Geziane Correa Da; Fonseca, Hydia Thaisa Camargos; Pereira, Lídia Fernanda Silva; Araujo, Athos Fernandes</i>	

ELECTROCHEMICAL CHARACTERISTICS OF THE TI-6AL-4V ALLOY IN SALINE ENVIRONMENTS	372
<i>Avila, Breno Mendes Rabelo; Mazini, Jaqueline Polezi; Júnior, Dirceu Da Silva; Quaresma, Lucas De Almeida; Filho, André Itman; Dixini, Pedro Vitor Morbach</i>	

EFFECT OF MICROSTRUCTURE AND COMPOSITION ON THE CORROSION BEHAVIOR OF API 5L X65 MICROALLOYED STEELS IN ACID MEDIA	382
<i>Araujo, Paulo Guilherme Gonçalves De; Furch, Florencia; Fioravante, Igor Alexandre; Macedo, Jonas Fernando; Acciari, Heloisa Andréa; Nakazato, Roberto Zenhei; Codaro, Eduardo Norberto</i>	

SYNTHESIS AND CHARACTERIZATION OF AN IRON SPINEL-BASED OXIDE FILM OBTAINED DURING THE AGING TREATMENT OF MARAGING 300 STEEL IN N ₂ /VAPOR ATMOSPHERE	393
<i>Florez, Mauro Andres Cerra; Sousa, Ana Beatriz Ferreira; Mata, Stephany Aparecida Santos Da; Neto, Moisés Bastos; Silva, Marcelo José Gomes Da</i>	

CORROSION RESISTANCE OF AUSTENITIC AND SUPERAUSTENITIC STAINLESS STEEL IN SYNTHETIC OIL FIELD FORMATION WATER MEASURED BY STEP POTENTIAL	405
<i>Sousa, João Matheus Batista Amaro De; Cardoso, Jorge Luiz; Neto, Pedro De Lima; Silva, Marcelo José Gomes Da</i>	

RESEARCH ON RESISTANCE TO CORROSION OF CARBON STEEL COATED WITH DIFFERENT LAYERS OF PROTECTIVE OIL	416
<i>Paranhos, Raffaele Alves; Costa, Alberto Nei Carvalho; Ferreira, Elivelton Alves; Oliveira, Neilor Da Silva</i>	

CORROSION BEHAVIOR OF WEATHERING STEEL IN DIFFERENT ATMOSPHERIC ENVIRONMENTS	427
<i>Silva, Amanda De Paiva; Silveira, Tatiane Suelen Santos; Monteiro, Jéssica Caetano Fortes; Carneiro, Rogério Augusto; Sicupira, Dalila Chaves; Lins, Vanessa De Freitas Cunha</i>	

ANALYSIS OF CORROSION AND CHARACTERIZATION OF LINE PIPE API 5 CTG.40	436
<i>Jesus, Ihana Gabriela Conceição De; Filho, Marcos Menino De Macedo; Macedo, Matheus Duarte De; Sussuchi, Eliana Midori; Griza, Sandro</i>	
DETERMINING OF THE CORROSION RESISTANCE OF CERTAIN STEEL IN ORDER TO APPLICATION IN HIGH AGGRESSIVE ENVIRONMENT INDUSTRIAL	442
<i>Lana, Cinara Piazzarolo; Soraes, Renata Braga</i>	
ELECTROCHEMICAL TECHNIQUES APPLIED FOR THE COMPARISON OF RESISTANCE TO CORROSION OF BIOMEDICAL ALLOYS	454
<i>Soares, Francielly Moura De Souza; Santana, Ana Isabel De Carvalho; Santos, Emília Monteiro Dos; Santos, Luíza Braga Ferreira Dos; Coimbra, Maria Elisa Rodrigues; Gomes, Paula Anastácia Cairo De Moraes; Elias, Carlos Nelson</i>	
CORROSION RESISTANCE OF THE TITANIUM ALLOYS FOR BIOMEDICAL APPLICATIONS	462
<i>Barbosa, Gabriel Ribeiro; Soares, Francielly Moura De Souza; Monteiro, Emília Dos Santos; Elias, Carlos Nelson</i>	
STUDY OF CORROSION BY HYDROGEN IN HSLA API 5L X70 STEELS	469
<i>Araújo, Paulo Guilherme Gonçalves De; Furch, Florencia; Macedo, Jonas Fernando; Fioravante, Igor Alexandre; Acciari, Heloisa Andréa; Codaro, Eduardo Norberto; Nakazato, Roberto Zenhei</i>	
EVALUATION OF COATING QUALITY IN GALVANIZED STEEL PIPES	480
<i>Cunha, Kellen Tebaldi Da; Veit, Hugo Marcelo</i>	
CHARACTERIZATION OF THE CORROSION MECHANISM IN MARTENSITICAL STAINLESS STEELS AISI 414 AND AISI 415 FROM ELECTROCHEMICAL TECHNIQUES	491
<i>Lima, Darley Da Silva; Araújo, Walney Silva</i>	
NANOCERAMIC COATING IN AGRICULTURAL WIRES AS ANTICORROSIVE PROTECTION	499
<i>Varres, João Vinícius De Souza; Ferreira, Jane Zoppas</i>	
ANALYSIS OF PITTING CORROSION IN API5L X60 STEEL COMPONENTS EXPOSED FOR LONG TIMES USED IN THE OIL AND GAS INDUSTRY	511
<i>Santos, Laís Couto Dos; Brandão, Luiz Paulo Mendonça; Pereira, Elaine Cristina; Silva, Angelus Giuseppe Pereira Da</i>	
CHEMICAL TREATMENT OF BLUING WITH COLD FERRIC CHLORIDE IN CARBON STEEL PARTS.	520
<i>Silva, Ana Carolina Brasil Da; Luiz, Jéssica Vicente; Domingues, Gláucia; Freitas, Bruna Brito;</i>	
A COMPARATIVE STUDY OF ELETROCHEMICAL BEHAVIOR OF GALVANIZED, GALVANNEALED, GALVALUME AND ALUMINIZED COATINGS	529
<i>Silva, Aline Faria Da; Favre-Nicolin, Viviane Azambuja</i>	
ACTION OF THERMAL PROCESSES IN MECHANICAL RESISTANCE AND CORROSION IN STAINLESS STEELS DUPLEX 2205	538
<i>Santos, Eron Nadu</i>	
EFFECTS OF THERMAL TREATMENTS ON RESISTANCE TO CORROSION WITH BLACK LIQUOR, WHITE LIQUOR AND FERRIC CHLORIDE IN STAINLESS STEEL, AUSTENIC 304 AND DUPLEX 2205 AND 2304	549
<i>Santos, Eron Nadu</i>	

FUNDAMENTALS - THERMODYNAMIC AND PHASE DIAGRAMS

ISO-VISCOSITY CURVES FOR CAO-SIO2-AL2O3-MGO STEELMAKING SLAGS AT HIGH TEMPERATURE	557
<i>Pereira, Augusto Lachini; Rocha, Vinicius Cardoso Da; Bielefeldt, Wagner Viana; Vilela, Antônio Cezar Faria</i>	
INCLUSION FORMATION AND STEEL REOXIDATION – EXAMPLES OF THERMODYNAMIC ANALYSIS APPLICATIONS	569
<i>Silva, Aline Lima Da; Pereira, Julio Aníbal Morales; Heck, Nestor Cezar</i>	

FUNDAMENTALS - SHAPE-MEMORY MATERIALS

EVALUATION OF THE ROUGHNESS OF A NITI ALLOY AFTER THE LASER ND:YAG SURFACE TREATMENT	583
<i>Pimenta, Rayander Martins; Siqueira, Rafael Humberto Mota De; Domingues, Gláucia; Santos, Luiz Alberto Dos</i>	
COMPARATIVE ANALYSIS OF TWO DIFFERENT NITI WIRES' PROPERTIES AND FATIGUE LIFE	591
<i>Ribeiro, Lorena Isabela De Oliveira; Amim, João Victor Lucas; Resende, Pedro Damas; Silva, Jéssica Dornelas; Martins, Suzanny Cristina Soares; Santos, Leandro De Arruda; Buono, Vicente Tadeu Lopes</i>	
MECHANICAL BEHAVIOR OF NITI WIRES SUBJECTED TO FATIGUE	601
<i>Amim, João Victor Lucas; Silva, Jéssica Dornelas; Ribeiro, Lorena Isabela De Oliveira; Resende, Pedro Damas; Martins, Suzanny Cristina Soares; Buono, Vicente Tadeu Lopes; Santos, Leandro De Arruda</i>	
PREHEATING TEMPERATURE INFLUENCE ON THE HOT ROTARY FORGING STEP OF A NITI ALLOY	610
<i>Sénéchal, Naiara Vieira Le; Rodrigues, Patrícia Freitas; Teixeira, Edir Neves; Daer, Shimeni Baptista Ribeiro; Fernandes, Francisco Manuel Braz; Paula, Andersan Dos Santos</i>	
THE INFLUENCE OF THE ADDITIVE MANUFACTURING PARAMETERS APPLIED DURING NITI ALLOY PRODUCTION BY SELECTIVE LASER MELTING	621
<i>Sallet, Eduardo Hoisler; Oliveira, Rebeca Vieira De; Rodrigues, Patrícia Freitas; Sousa, Talita Gama De; Teixeira, Rodolfo Da Silva; Sénéchal, Naiara Vieira Le; Gonçalves, Danilo Abílio Correa; Paula, Andersan Dos Santos; Netto, Paulo Inforçatti; Silva, Jorge Vicente Lopes Da</i>	

FUNDAMENTALS - PHYSICAL METALLURGY AND MATERIAL BEHAVIOR

A CONSTITUTIVE MODEL BASED ON THE STRUCTURE OF DISLOCATIONS FOR STRUCTURAL STEELS UNDER FIRE ACTION	633
<i>Souza, Allan Ribeiro De; Blas, Juan Garcia De</i>	
SIMULTANEOUS AND SEQUENTIAL TRANSFORMATIONS WITH NUCLEATION AT PREFERRED SITES	645
<i>Alves, André Luiz Moraes; Siqueira, Felipe Da Silva; Fonseca, Guilherme Dias Da; Fonseca, Gláucio Soares Da; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel</i>	

EFFECT OF AGEING TEMPERATURE AND TIME ON MICROSTRUCTURE AND MECHANICAL PROPERTIES IN AN ULTRAFINE GRAINED 2205 DUPLEX STAINLESS STEEL AFTER COLD ROLLING	656
<i>Maria, Grazielle Gianini Braga; Viana, Nayara Aparecida Lopes; Inácio, Lóren Kelly De Paula; Melo, Renata De Oliveira; Wolf, Witor; Santos, Dagoberto Brandão</i>	
MICROSTRUCTURAL ANALYSIS OF SIMILAR WELD OF 316L AUSTENITIC STAINLESS STEEL WITH HEAT INPUT INCREASE	667
<i>Silva, Erica Marcelino Freitas De Souza; Fonseca, Glaucio Soares Da; Santos, Lucas Rosate Leite Dos</i>	
EVALUATION OF THE 410D FERRITIC STAINLESS STEEL 410D SUBMITTED TO HOT TENSILE TESTS	675
<i>Carvalho, Ana Cecília De; Arruda, Amanda Aparecida Fátima; Queiróz, Rhelman Rossano Urzêdo; Faria, Geraldo Lúcio De; Moreira, Paulo Sérgio</i>	
EFFECT OF THICK OXIDE LAYER ON THE WEAR BEHAVIOR OF A 410D FERRITIC STAINLESS STEEL	687
<i>Arruda, Amanda Aparecida Fátima; Carvalho, Ana Cecília De; Moreira, Paulo Sérgio; Queiróz, Rhelman Rossano Urzêdo; Faria, Geraldo Lúcio De</i>	
INFLUENCE OF THE STRAIN BY WIRE DRAWING IN THE DELTA PHASE PRECIPITATION, MESOTEXTURE AND GRAIN SIZE OF SUPERALLOY 718	698
<i>Azevedo, Luiz Maurício Barreto De; Araújo, Leonardo Sales; Almeida, Luiz Henrique De; Mendes, Matheus Campolina; Ivaniski, Thiago Marque; Nunes, Rafael Menezes.; Rocha, Alexandre Da Silva</i>	
EFFECT OF YTTRIUM ADDITION ON δ PHASE PRECIPITATION ON NICKEL SUPERALLOY 718	709
<i>Silveira, Rosa Maria Sales Da; Guimarães, Alessandra Vieira; Melo, Clarissa Hadad De; Ribeiro, Rafaella Martins; Araujo, Leonardo Sales; Almeida, Luiz Henrique De; Dille, Jean André François</i>	
ANALYSIS OF PHASE TRANSFORMATIONS IN NON-ISOTHERMAL CONDITIONS OF STAINLESS STEEL DUPLEX	718
<i>Freitas, Gabrielle Cristine Lemos Duarte; Fonseca, Gláucio Soares Da; Moreira, Luciano Pessanha; Leite, Duílio Norberto Ferronato</i>	
EVALUATION AND COMPARISON OF QUANTITATIVE STEREOLOGY AND FERRITOSCOPY TECHNIQUES FOR THE FERRITE QUANTIFICATION IN A UNS S31803 DUPLEX STAINLESS STEEL AGED AT 850°C	729
<i>Bayão, Darlan Vale; Faria, Geraldo Lúcio De; Arthuso, Emiliana Cristina Marques; Santos, Rogério Felício Dos; Santos, Carlos Eduardo Dos; Silva, Sidney Nicodemos Da; Pinheiro, Ivete Peixoto</i>	
HYDROGEN INTERACTION IN STAINLESS STEEL DUPLEX 2205 AGED AFTER COLD ROLLING	742
<i>Fernandes, Loyslène Rabelo; Alves, Davi Silva; Claeys, Lisa; Depover, Tom; Verbeken, Kim; Santos, Dagoberto Brandão</i>	
USE OF DILATOMETRY AIMING TO EVALUATE THE METALLURGICAL COMPONENT OF COIL SLUMP IN A SAE 1050 HOT ROLLED STEEL	753
<i>Fernandes, João Lucas Ribeiro E; Souza, Altair Lúcio De; Faria, Geraldo Lúcio De</i>	

INFLUENCE OF THERMAL OXIDATION PARAMETERS ON FATIGUE BEHAVIOUR OF TI-6AL-4V ALLOY	764
<i>Lima, Gustavo Dória; Junior, Isau De Souza Alves; Nascimento, Brenno Lima; Filho, Marcos Menino De Macedo; Trindade, Matheus Porto; Griza, Sandro</i>	
CHARACTERIZATION OF THE OXIDE LAYER FORMED ON A NIOBIUM-MODIFIED HP STAINLESS STEEL BY RAMAN SPECTROSCOPY	775
<i>Silva, Elaine Felix Da; Araújo, Raphael Silva De; Pacheco, Clara Johanna; Almeida, Luiz Henrique De; Eckstein, Carlos Bruno; Junior, Laudemiro Nogueira; Rocha, Adriana Da Cunha; Pereira, Gabriela Ribeiro</i>	
CREEP STRENGTH OF THE STAINLESS STEEL AISI 201LN AT 700°C	783
<i>Pelissari, Gustavo Henrique; Sordi, Vitor Luiz</i>	
MAGNETIC CHARACTERIZATION OF HP STEEL TUBES AFTER SHORT DURATION OVERHEATING IN REFORMING FURNACES	795
<i>Soares, Iane De Araújo; Moraes, Yago Rodrigues De; Pacheco, Clara Johanna; Mendes, Matheus Campolina; Eckstein, Carlos Bruno; Junior, Laudemiro Nogueira; Almeida, Luiz Henrique De; Pereira, Gabriela Ribeiro</i>	
METALLOGRAPHIC PREPARATION OPTIMIZATION FOR ALCO ₂ CR ₂ FENI ₂ HEA MICROSTRUCTURAL CHARACTERIZATION	802
<i>Carvalho, Iana Costa; Esteves, Paulo Davi Borges; Lima, Ygor Pereira De; Santos, Andrey Mariano Dos; Sousa, Talita Gama De; Paula, Andersan Dos Santos; Silva, Marcelo Henrique Prado Da; Teixeira, Rodolfo Da Silva</i>	
INFLUENCE OF THE PREVIOUS COLD DEFORMATION ON INTERCRITICAL ANNEALING ON A DP STEEL	814
<i>Vasconcelos, Charles Hudson Martins De; Moura, Isaque Alan De Brito; Gurgel, Mônica Aline Magalhães; Ferreira, Tatiane Santos; Paula, Andersan Dos Santos</i>	

VOLUME 2

SOAKING TEMPERATURE INFLUENCE ON THE MICROSTRUCTURAL AND CRYSTALLOGRAPHIC TEXTURE OF THE TRIP-ASSISTED STEEL WITH AL ADDITION	825
<i>Nunes, Larissa Fernandes; Gurgel, Mônica Aline Magalhães; Júnior, Eustáquio De Souza Baêta; Paula, Andersan Dos Santos; Brandão, Luiz Paulo Mendonça</i>	
MAGNETIC AND ELECTRIC RESPONSE EVALUATION IN HP-NB STEELS WITH DIFFERENT CHEMICAL COMPOSITION AND AGING STATES	834
<i>Lima, Mariana Gaudencio B.; Fonseca, Ana Beatriz; Arenas, Mônica Patrícia; Pacheco, Clara Johanna; Eckstein, Carlos Bruno; Júnior, Laudemiro Nogueira; Almeida, Luís Henrique De; Pereira, Gabriela Ribeiro</i>	
CHARACTERIZATION BY MAGNETO-OPTIC MICROSCOPY OF THE CARBON- DEPLETED REGION ASSOCIATED WITH THE FORMATION OF OXIDE LAYER IN HP STEEL	842
<i>Neves, Thiago Tôrres Matta; Lima, Cayo Vinicius Da Silva; Pacheco, Clara Johanna; Eckstein, Carlos Bruno; Junior, Laudemiro Nogueira; Almeida, Luiz Henrique De; Pereira, Gabriela Ribeiro</i>	
STRAIN AGING AT AMBIENT TEMPERATURE	853
<i>Miranda, Wesley Pereira De; Ribeiro, Rafaella Martins</i>	

KINETIC STUDY OF SIGMA PHASE PRECIPITATION IN A UNS S31803 DUPLEX STAINLESS STEEL AGED ISOTHERMICALLY AT 750°C, 800°C AND 850°C	860
<i>Bayão, Darlan Vale; Faria, Geraldo Lúcio De; Arthuso, Emiliana Cristina Marques; Júnior, José Rogério De Oliveira; Silva, Sidney Nicodemos Da; Pinheiro, Ivete Peixoto</i>	
COMPUTATIONAL SIMULATION OF TRANSFORMATIONS WITH INHOMOGENEOUS NUCLEATION AND VELOCITY	874
<i>Lyrio, Mariana Sizenando; Ventura, Harison Da Silva; Sá, Gabriella Maria Silveira De; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel</i>	
A STUDY ON THE EFFECT OF THE CLUSTERS' NUMBER AT THE PHASE TRANSFORMATION'S KINETICS	885
<i>Ignácio, Nathan Fernandes; Siqueira, Filipe Da Silva; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel</i>	
SIMULTANEOUS TRANSFORMATIONS WITH NUCLEATION BY CONSTANT NUCLEATION RATE	896
<i>Siqueira, Felipe Da Silva; Alves, André Luiz Moraes; Fonseca, Guilherme Dias Da; Santos, Daniel Gomes De Souza Dos; Duarte, Aline Cristine Lemos; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel</i>	
COMPARATIVE STUDY OF THE ANALYTICAL MODEL WITH COMPUTATIONAL NUCLEATION SIMULATION IN INTERFACES	907
<i>Sá, Gabriella Maria Silveira De; Ventura, Harison Da Silva; Lyrio, Mariana Sizenando; Santos, Ana Gabriella Conceição Dos; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel</i>	
STUDY OF THE KINETIC BEHAVIOR OF THE PHASE TRANSFORMATIONS BY NUCLEATION AND GROWTH IN THE POLYHEDRA INTERFACES OF KELVIN, VORONOI AND MONTE CARLO	914
<i>Fonseca, Guilherme Dias Da; Siqueira, Felipe Da Silva; Alves, André Luiz Moraes; Pinto, Camila Dos Santos; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel</i>	
EXPERIMENTAL VALIDATION OF A NUMERICAL ANALYTICAL MODEL FOR DETERMINING JOHNSON-COOK'S PARAMETERS OF AISI 1045 STEEL	923
<i>Viana, Carlos Alberto Alves; Scaduto, Gustavo Fernando; Menezes, Miguel Ângelo</i>	
COMPUTATIONAL SIMULATION OF NUCLEATION AND GROWTH ON THE GRAIN BOUNDARIES OF A POISSON-VORONOI TESSELATION AND A HEXAGONAL MATRIX IN 2-D	933
<i>Duarte, Aline Cristine Lemos; Lyrio, Mariana Sizenando; Ventura, Harison Da Silva; Siqueira, Felipe Da Silva; Alves, André Luiz Moraes; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel</i>	
COMPUTATIONAL MODELING OF A 3D MATRIX OF DUPLEX STAINLESS STEEL AND ITS ULTIMATE STRENGTH IN FUNCTION OF THE SIGMA PHASE EVOLUTION	943
<i>Santos, Ana Gabriella Conceição Dos; Ventura, Harison Da Silva; Lyrio, Mariana Sizenando; Moreira, Fernanda Nascimento; Sá, Gabriella Maria Silveira De; Assis, Wesley Luiz Da Silva</i>	
DELAY IN STATIC SOFTENING KINETICS OF NB- AND N-BEARING AUSTENITIC STAINLESS STEEL	953
<i>Filho, Sebastião Raimundo De Jesus Belém Leitão; Silva, Eden Santos; Rodrigues, Samuel Filgueiras; Reis, Gedeon Silva</i>	

FUNDAMENTALS - NANOTECHNOLOGY

- SYNTHESIS OF MAGNETITA NANOPARTICLES BY COPRECIPITATION 966
Araujo, Athos Fernandes; Sousa, Gustavo Henrique; Araujo, Guilherme Vitor De; Santos, Igor Cuzzuol Dos; Fernandes, Loyslene Rabelo
- COMPARISON BETWEEN GRAPHENE OXIDE AND REDUCED GRAPHENE OXIDE
USING XRD, SEM AND RAMAN SPECTROSCOPY 973
Oliveira, Anthony Garotinho Barros Assed Matheus De; Lima, Andreza Menezes; Pinheiro, Wagner Anacleto

FUNDAMENTALS - TRIBOLOGY

- IN VITRO AND IN SILICO ANALYSIS OF THE FRETTING-CORROSION IN THE STEM-
HEAD AND STEM-CEMENT INTERFACE OF HIP PROSTHESIS 980
Santos, Vinícius Oliveira Dos; Cubillos, Patricia Ortega; Santos, Claudio Teodoro Dos; Fernandes, Wellington Gilbert; Caminha, Ieda Maria Vieira; Monteiro, Maurício De Jesus; Roesler, Carlos Rodrigo De Melo
- IMPROVEMENT OF WEAR RESISTANCE OF FE-19%CR-1,9%C HIGH CHROMIUM CAST
IRON FOR PROTECTION CHUTES IN TRANSPORT OF IRON ORES 992
Bergami, Leandro Bastos; Martins, Anderson Pereira; Rocha, Diego Loubach Da; Carvalho, Cássio Santos De; Pinto, Flávio Antônio De Moraes; Jr, Adonias Ribeiro Franco

INTEGRATED MANAGEMENT - TAILINGS DISPOSAL AND ENVIRONMENTAL ASPECTS

- NUTRIENTS ACQUISITION IN PANICUM MAXIMUM 'BRS ZURI' IN RESPONSE TO THE
APPLICATION OF FERTILIZERS AND CORRELATION BASED ON STEEL SLAG 1002
Guimarães, Mariana Guedes; Clemente, Eliane De Paula; Teixeira, Paulo Cesar; Donagemma, Guilherme Kangussú; Tavares, Silvio Roberto De Lucena; Pontes, Maria Fernanda Alvarenga; Rodrigues, Natália Fernandes; Straliootto, Rosângela

INTEGRATED MANAGEMENT - QUALITY MANAGEMENT

- IMPLEMENTATION OF WCOM™ AT SUNCOKE ENERGY BRASIL - THE SUNCOKE
WAY 1010
Nascimento, Naiana Moraes Do; Reis, Gislene Barbosa; Silva, José Eustáquio Da

INTEGRATED MANAGEMENT - OCCUPATIONAL SAFETY AND HEALTH MGMT

- THE IMPORTANCE OF PPE MANAGEMENT FOR ACCIDENT PREVENTION AND COST
REDUCTION IN AUTOMOTIVE SECTOR 1019
Fagundes, Gilmaria; Bento, Alexandre Rodizio
- SAFETY HANDS PROGRAM 1028
Llanos, José Luis; Mesquita, Lucas Lima; Rodrigues, Thiago Martins
- PROGRAM LEADERSHIP 1035
Llanos, José Luis; Mesquita, Lucas Lima; Rodrigues, Thiago Martins

PREVENTION OF ACCIDENTS WITH PASSER-BY IN URBAN WORK OF ONSHORE PIPELINE	1041
<i>Costa, Roberta Lima De Souza; Sobrinho, Orlando Rodrigues Da Costa; Scarpini, Verônica Candido; Sá, José Alberto Silva De</i>	

INTEGRATED MANAGEMENT - ENVIRONMENTAL MGMT

APPLICATION OF ADVANCED OXIDATION PROCESS FOR ALGAE CONTROL IN ORNAMENTAL LAKES	1047
<i>Rocha, Erivan Cardoso; Diógenes, Cilene Cláudia; Giuliano, Antônio Donizetti; Nascimento, Fernando Codelo; Moraes, Viviane Tavares De</i>	

RED SLUDGE CHARACTERIZATION AIMING METALS RECOVER	1055
<i>Moraes, Jefferson Salvador De; Lebrão, Guilherme Wolf; Lebrão, Susana Marracini Giampietri; Tenório, Jorge Alberto Soares; Moraes, Viviane Tavares De</i>	

METALLIC COPPER RECOVER FROM WEEE BY HYDROMETALURGY	1064
<i>Silva, Renato Souza E; Lebrão, Susana Marracini Giampietri; Lebrão, Guilherme Wolf; Tenório, Jorge Alberto Soares; Moraes, Viviane Tavares De</i>	

MECHANICAL PROPERTIES EVALUATION OF COMPOUNDS PRODUCED WITH WASTE OF THE MOBILE INDUSTRY	1075
<i>Prioli, Amanda De Andrade; Lebrão, Susana Marracini Giampietri; Lebrão, Guilherme Wolf; Moraes, Viviane Tavares De</i>	

THE COOLING EFFECT OF BOF DUST BRIQUETTES	1085
<i>Oliveira, Luiz Cláudio Pinto; D'Abreu, José Carlos</i>	

DEVELOPMENT OF STANDARDS FOR THE REUSE OF STEEL CO-PRODUCTS IN ROADS AND RAILWAY BALLAST.....	1095
<i>Sandobal, Maria Berenice; Williams, Elisabeth; Dogliani, Beatriz; Bertino, Carina</i>	

THE EFFECTIVENESS OF RED ALGAE ANTIFOULING TO REDUCE THE IMPACT OF LIMNOPERNA FORTUNEI - GOLDEN MUSSEL. A REVIEW	1105
<i>Araújo, Camila Freitas De; Batista, Adriano Corrêa; Gama, Bernardo Antônio Perez Da; Assis, Paulo Santos</i>	

SELECTION OF ALTERNATIVE FOR ZINC WASTE RECYCLING - A CASE STUDY	1115
<i>Chaves, Carlos Alberto; Silva, Wainer Da Silveira E; Calado, Robisom Damasceno; Teixeira, Marco Antonio; Filho, Tone Takayama</i>	

INTEGRATED MANAGEMENT - INNOVATION AND KNOWLEDGE MGMT

INTEGRATION OF THE PRODUCTIVE PROCESS OF PELLETIZING TO ASSET MANAGEMENT	1128
<i>Camilo, Ana Keli Martins Alves; Melo, Bruno Oliveira De; Goggi, Gabriel Rodrigues; Stein, Willian Schuwambach; Silva, Givaldo Rodrigues Da; Silva, Marcelo Milheiro Da; Oliveira, Flavio Geraldo De; Abreu, Thiago Nicoli De; Delunardo, Maxwell; Marques, Alessandra Da Silva; Rezende, Marcio; Godoy, Everson Rodrigo Ornelas De</i>	

VALUE PLAN: A BREAKTHROUGH IN MINDSET OF CONTINUOUS IMPROVEMENT PROCESS AT ARCELORMITTAL TUBARÃO	1140
<i>Fonseca, Andre Luiz Da Silva</i>	

POLYMER, COMPOSITE AND CERAMIC MATERIALS - CERAMIC MATERIALS

CHARACTERIZATION OF ARGILLOUS SOIL FROM THE MUNICIPALITY OF ITAPEMIRIM - ES	1148
<i>Marvila, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez De; Zanelato, Euzébio Barnabé; Lima, Thuany Espirito Santo; Alexandre, Jonas; Siqueira, Andreia Arenari De; Cerqueira, Niander Aguiar</i>	
EVALUATION OF THE SOIL POTENTIAL OF THE MUNICIPALITY OF RIO BONITO / RJ FOR THE PRODUCTION OF CERAMIC BLOCKS	1156
<i>Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio Barnabé; Lima, Thuany Espirito Santo; Alexandre, Jonas; Siqueira, Andreia Arenari De; Xavier, Gustavo De Castro</i>	
CASE STUDY: CONCRETE STRUCTURE RESISTANCE ANALYSIS USING THE SCLEROMETRY TEST	1162
<i>Marvilar, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez; Zanelato, Euzébio Bernabé; Alexandre, Jonas; Monteiro, Sergio Neves; Aguiar, Niander Cerqueira; Souza, Vitor Barbosa De</i>	
ANALYSIS OF COATING MORTARS USING METHODOLOGY OF WEIGHT HIERARCHY	1169
<i>Marvilar, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez; Zanelato, Euzébio Bernabé; Lima, Thuany Espirito Santo; Alexandre, Jonas; Monteiro, Sergio Neves; Silva, Laimara Barroso Da; Guarçoni, Giovanni Bruzzi</i>	
INFLUENCE OF GRANITE WASTE ON THE PROPERTIES OF THE FRESH STATE IN PLASTER MORTAR	1177
<i>Barroso, Laimara Da Silva; Marvila, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez De; Zanelato, Euzébio Bernabé; Alexandre, Jonas; Monteiro, Sergio Neves</i>	
ANALYSIS OF THE USE OF ORNAMENTAL STONE WASTE ON PRESSED BLOCK	1188
<i>Savazzini-Reis, Alessandra; Pimentel, Heloisa Faltz; Silva, Julia Diniz; Dias, Murilo Da Rocha</i>	
STUDY OF THE ADDITION OF TISSUE WASTE IN CONCRETE	1197
<i>Savazzini-Reis, Alessandra; Bussular, Karla Fadini Fiorot; Galvão, Fernanda Dalarme Gomes; Santos, André Pinto Dos; Assis, Bruno Da Silva</i>	
USE OF WASTES IN HYDRAULIC TILE	1205
<i>Savazzini-Reis, Alessandra; Andrade, Diana Malfer; Fagundes, Alana Franzin; Andrade, Rodolfo Giacomim Mendes De</i>	
DEVELOPMENT OF MULTIPLE MORTAR-USE WITH INCORPORATION OF GLASS RESIDUE	1216
<i>Cherene, Mariana Gomes Pinto; Silva, Marilucia Dos Santos; Santos, Diogo Pereira Dos; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Petrucci, Lúcio José Terra</i>	
EVALUATION OF THE INCORPORATION OF PAPER INDUSTRY WASTE IN RED CERAMICS	1225
<i>Siqueira, Andréia Arenari De; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Botelho, Larissa Campos Granato; Paes, Ana Luiza Campinho; Pinheiro, Valber Domigos; Monteiro, Sergio Neves</i>	

INFLUENCE ON THE USE OF A HIGH ENERGY MILL IN THE PROCESSING OF AL ₂ O ₃ – NB ₂ O ₅ – LIF CERAMICS.	1234
<i>Silveira, Pedro Henrique Poubel Mendonça Da; Santos, Eliziane Medeiros Dos; Oliveira, Márcio Jardim De; Magalhães, Hiron Akira Yamada; Demosthenes, Luana Cristyne Da Cruz; Reis, Raphael Henrique Moraes; Jesus, Paulo Roberto Rodrigues De; Santos, Jheison Lopes Dos; Gomes, Alaelson Vieira</i>	
APPLICATION OF BAUXITE TAILINGS TO PRODUCE CLAY BRICKS	1245
<i>Louzada, Beatriz Baiôcco; Costa, Carolina De Souza Pires; Drumond, Pedro Henrique Cota; Mendes, Beatryz Cardoso; Pedroti, Leonardo Gonçalves</i>	
EVALUATION OF PINEAPPLE NATURAL FIBER TREATMENT FOR USE IN CEMENT COMPOSITES	1255
<i>Azevedo, Afonso Rangel Garcez; Reis, Juliana Pessanha; Marvila, Markssuel Teixeira; Zanelato, Euzébio Bernabé; Petrucci, Lucio; Alexandre, Jonas; Monteiro, Sergio Neves; Cecchin, Daiane; Lima, Thuany Espírito Santo</i>	
REPLACEMENT OF GYPSUM FOR ORNAMENTAL ROCK RESIDUE IN COATING MORTARS	1263
<i>Marvila, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez; Zanelato, Euzébio Bernabé; Lima, Thuany Espírito Santo; Alexandre, Jonas; Monteiro, Sergio Neves; Silva, Laimara Barroso Da; Moreira, Pamela</i>	
TECHNOLOGICAL CONTROL OF STRUCTURAL CONCRETE HOLLOW BLOCKS PRODUCED IN THE CITY OF CAMPOS DOS GOYTACAZES/RJ	1270
<i>Lima, Thuany Espírito Santo De; Paes, Ana Luiza Campinho; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio Bernabé; Monteiro, Sérgio Neves</i>	
ANALYSIS OF THE INFLUENCE OF THE MORTAR BEDDING TYPE IN STRUCTURAL MASONRY PRISMS SUBJECTED TO COMPRESSION	1277
<i>Lima, Thuany Espírito Santo De; Pinheiro, Valber Domingos; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio Bernabé; Monteiro, Sérgio Neves</i>	
SYNTHESIS AND CHARACTERIZATION OF HYDROXYPATITA	1283
<i>Belo, Francilene Da Luz; Gonçalves, Camilly Peres; Cândido, Verônica Scarpini; Silva, Alisson Clay Rios Da; Santos, Jheison Lopes Dos; Monteiro, Sérgio Neves; Vasconcelos, Esleane Vilela</i>	
COMPARATIVE ANALYSIS OF RESISTANCE TO CHEMICAL ATTACK OF ADOQUIN CERAMIC AND PRE-MOLDED PARTS OF CONCRETE	1289
<i>Carvalho, Juliana Peixoto Rufino Gazem De; Delaqua, Geovana Carla Girondi; Vieira, Carlos Maurício Fontes</i>	
EVALUATION OF FULL BEDDING CONCRETE BLOCKS PRISMS WITH DIFFERENTS SEATING MORTAR RESISTANCE	1299
<i>Lima, Thuany Espírito Santo De; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio Bernabé; Monteiro, Sérgio Neves</i>	
STUDY OF FACE SHELL BEDDING CONCRETE BLOCKS PRISMS WITH DIFFERENTS SEATING MORTAR RESISTANCE	1305
<i>Lima, Thuany Espírito Santo De; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio Bernabé; Monteiro, Sérgio Neves</i>	

EFFECT OF THE BULK DENSITY ON THE PHYSICAL AND MECHANICAL PROPERTIES OF CLAY BRICKS CONTAINING IRON ORE TAILINGS	1311
<i>Mendes, Beatryz Cardoso; Pedroti, Leonardo Gonçalves; Drumond, Pedro Henrique Cota; Azevedo, Afonso Rangel Garcez De</i>	
EFFECT OF GRANITE RESIDUE ON THE PROPERTIES OF THE STATE HARDENED IN PLASTER MORTAR	1322
<i>Barroso, Laimara Da Silva; Marvila, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez De; Barroso, Lays Da Silva; Zanelato, Euzébio Bernabé; Alexandre, Jonas; Monteiro, Sergio Neves</i>	
DEVELOPMENT OF A COATING MORTAR WITH FILITE INCORPORATION BY MECHANIZED SPRAYED SYSTEM	1331
<i>Paes, Ana Luíza Campinho; Alexandre, Jonas; Botelho, Larissa Campos Granato; Siqueira, Andreia Arenari; Lima, Thuany Espirito Santo De; Pinheiro, Valber Domingos; Azevedo, Afonso Rangel Garcez De</i>	
EVALUATION OF THE ADHESION OF MORTAR TO SUBSTRATES BY VERTICAL LAUNCHING	1343
<i>Zanelator, Euzébio Bernabé; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Bruzzi, Giovanni; Xavier, Gustavo De Castro; Lima, Thuany Espirito Santo De</i>	
INFLUENCE OF INCORPORATION OF WCD IN MORTARS	1350
<i>Macedo, Antonio Márcio De Araújo; Zanelato, Euzébio Bernabé; Manhães, André Luís Flor; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Alexandre, Jonas; Petrucci, Lúcio José Terra</i>	
SYNTHESIS AND CHARACTERIZATION OF PARTIALLY REPLACED HYDROXIAPATITA BY BIOMINERALIZED SILICON	1358
<i>Ribeiro, Suzana Barreto Noronha; Lopesr, Iago José Vitral Rezende; Bezerra, Wendell Bruno Almeida; Junior, Valdir Florencio Da Veiga; Silva, Marcelo Henrique Prado Da</i>	
CHARACTERIZATION OF VARGEM ALTA-ES CLAYS	1366
<i>Zanelato, Euzébio Bernabé; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Lima, Thuany Espirito Santo De; Xavier, Gustavo De Castro; Pirovane, Thais</i>	
CHARACTERIZATION OF CLAYS OF ALEGRE-ES	1374
<i>Zanelato, Euzébio Bernabé; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Lima, Thuany Espirito Santo De; Xavier, Gustavo De Castro; Bruzzi, Giovanni</i>	
COMPARISON OF THE ADHERENCE RESULTS TO THE TRACTION FOR MORTARS USING TWO DIFFERENT EQUIPMENT.	1382
<i>Marvila, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez; Zanelato, Euzébio Bernabé; Lima, Thuany Espirito Santo; Alexandre, Jonas; Monteiro, Sergio Neves; Miguel, Thais Pirovane; Aguiar, Niander Cerqueira; Souza, Vitor Barbosa De</i>	
STUDY OF GEOPOLYMERIC PASTE WITH PARTIAL SUBSTITUTION OF METACAULIM OF THE NORTH REGION FOR BLAST FURNACE SLAG	1388
<i>Porto, Ana Beatriz Rodrigues; Lucas, Mathaus Moraes; Monteiro, Sérgio Neves; Candido, Verônica Scarpini; Silva, Alisson Clay Rios Da</i>	

ANALYSIS OF MECHANICAL PROPERTIES OF THE INCORPORATION OF ORNAMENTAL STONE PROCESSING RESIDUE INTO CEMENT MORTAR FOR CIVIL CONSTRUCTION	1399
<i>Guarconi, Giovanni Bruzzi; Alexandre, Jonas; Marvila, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez De; Zanelato, Euzébio Bernabé; Miguel, Thais Pirovane; Monteiro, Sergio Neves</i>	
EVALUATION OF MORTAR COMMERCIALIZED IN THE MUNICIPALITY OF CAMPOS DOS GOYTACAZES - RJ	1406
<i>Zanelator, Euzébio Bernabé; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Lima, Thuany Espírito Santo De; Xavier, Gustavo De Castro; Bruzzi, Giovani</i>	
MICROSTRUCTURAL CHARACTERIZATION OF STEEL BALLOON POWDER RESIDUE IN CERAMIC MASS FOR PRODUCTION OF STRUCTURAL BLOCKS.	1412
<i>Monteiro, Maria Luiza Da Silva; Gomes, César Augusto De Oliveira; Monteiro, Sérgio Neves; Silva, Alisson Clay Rios Da; Cândido, Verônica Scarpini</i>	
EVOLUTION OF REPAIRS IN TORPEDO LADLE CARS WITH SHOTCRETE	1421
<i>Hemétrio, Braulo Silvano; Couto, Ricardo Israel Do; Magalhães, Roselaine Gonçalves</i>	
SYNTHESIS AND CHARACTERIZATION OF THFE2O4 NANOPARTICLES USING THE COMBUSTION METHOD	1430
<i>Gonçalves, Isadora Conceição; Biasi, Ronaldo Sergio De; Figueiredo, André Ben-Hur Da Silva; Oliveira, Claudio Luiz De</i>	
ANALYSIS OF CHLORIDE IONS AND ITS INFLUENCE IN THE PROCESS OF AGING OF CONCRETE STRUCTURES	1435
<i>Pereira, Ana Paula Dos Santos; Ramos, Flavio James Humberto Tomassini Vieira; Silva, Marcelo Henrique Prado Da</i>	
EFFECT OF HUMIDITY ON THE DEGRADATION MECHANISMS OF THE CH ₃ NH ₃ PB ₁₃ PEROVSKITE	1443
<i>Guimarães, Alexandre Pinheiro; Sousa, Davi Ricardo Santos De; Pires, Leandro Augusto Iorio; Duarte, Leonardo De Araujo; Neto, Neuton Severo De Farias; Cruz, Leila Rosa De Oliveira; Carvalho, Gabriel Bartholazzi Lugão De; Costa, Paulo Victor Nogueira Da</i>	
THE INFLUENCE OF THE INCORPORATION OF THE MUD OF HIGH OVEN IN CERAMIC MASS FOR THE PRODUCTION OF TILES.	1453
<i>Costa, Roberta Lima De Souza; Jesus, Geyna Evellyn Silva De; Silva, Alisson Clay Rios Da; Monteiro, Sérgio Neves; Candido, Verônica Scarpini</i>	
STUDY ON EFFECTIVENESS OF LIGNIN RECOVERED FROM BLACK LIQUOR PRODUCED BY THE PULP AND PAPER INDUSTRY AS CHEMICAL ADMIXTURE FOR PORTLAND CEMENT MORTARS	1463
<i>Batista, Raquel Salgado; Pereira, Dyandra Lorayne Souza; Isenmann, Armin Franz; Tolentino, Evandro</i>	
FUELS BASED ON URANIUM OXIDE	1473
<i>Baptista, Camila Oliveira; Silveira, Pedro Henrique Poubel Mendonça Da; Cardoso, Bruno Figueira De Abreu Ferreira; Gomes, Alaelson Vieira; Figueiredo, André Ben-Hur Da Silva; Oliveira, Claudio Luiz De</i>	

SYNTHESIS AND CHARACTERIZATION OF BAFE12O19 NANOPARTICLES USING THE COMBUSTION METHOD	1480
<i>Baptista, Camila Oliveira; Carvalho, Danúbia Bordim De; Aguilera, Letícia Dos Santos; Vieira, Flávio James Humberto Tommasini; Campos, José Brant De; Oliveira, Claudio Luiz De; Biasi, Ronaldo Sérgio De; Figueiredo, André Ben-Hur Da Silva</i>	
SYNTHESIS AND CHARACTERIZATION OF GEOPOLYMERIC USING KAOLIN CLAY AND ELECTRIC STEELMAKING SLAG AS FORERUNNERS	1485
<i>Bona, Beatriz Cordeiro De; Pereira, Vinicius Lemos; Oliveira, Isaac Gabriel Peixoto Borges De; Bona, Vanessa Cordeiro De; Torres, Ponnyk Melo; Cardoso, Dilson Nazareno Pereira; Lima, Clesianu Rodrigues De</i>	
CHARACTERISTICS AND LIMITATIONS OF BASIC OXYGEN FURNACE SLAG FOR THE USE AS AN AGGREGATE FOR PORTALND CEMENT CONCRETE	1497
<i>Zago, Sara De Carvalho; Vernilli, Fernando; Cascudo, Oswaldo; Silva, Sidney Nascimento; Vieira, André Tarcizo De Oliveira</i>	
COMPUTATIONAL IMAGE ANALYSIS FOR DETERMINATION OF GRAIN SIZE IN CERAMIC MATERIALS	1508
<i>Chagas, João Victor Soares; Caceres, Jaime Alberto Sanchez; Nunes, Lumena Gloria De Souza; Barbieri, Raoni Caetano; Passos, Carlos Augusto Cardoso</i>	
FORMULATION AND EVALUATION OF THE EFFECT OF HEALING TEMPERATURE OF GEOPOLIMERICUS USING CIVIL CONSTRUCTION RESIDUES	1515
<i>Pereira, Vinicius Lemos; Bona, Beatriz Cordeiro De; Oliveira, Isaac Gabriel Peixoto Borges De; Torres, Ponnyk Melo; Cardoso, Dilson Nazareno Pereira; Ferreira, Lygia Maria Policarpio; Lima, Clesianu Rodrigues De</i>	
ANALYSES OF MICROSTRUCTURE AND PEROVSKITE PHASE FORMATION OF LANTHANUM MANGANITE CERAMICS DOPED WITH STRONTIUM OXIDE	1522
<i>Mineiro, Sergio Luiz; Ferreira, Helen Beatriz; Assis, João Marcos Kruszynski De; Nono, Maria Do Carmo De Andrade</i>	
CHARACTERIZATION OF THE MICRO-STRUCTURE OF COPPER FERRITE AND LEAD PRODUCED BY THE COMBUSTION METHOD	1531
<i>Carvalho, Danúbia Bordim De; Loureiro, Gabriela Azevedo; Baptista, Camila Oliveira; Aguilera, Letícia Dos Santos; Campos, José Brant; Biasi, Ronaldo Sérgio De; Figueiredo, André Ben-Hur Da Silva</i>	
CHARACTERIZATION OF STRONG AND LOW ARGILS INCORPORATED WITH HIGH-OVEN SLING FOR THE MANUFACTURE OF RED CERAMICS	1536
<i>Gomes, Lanna Hannah De Sousa; Monteiro, Sérgio Neves; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini</i>	
USE OF POST-CONSUMPTION PACKAGING GLASS IN A RED CERAMICS	1547
<i>Delaqua, Geovana Carla Girondi; Jardim, Verônica Quirino; Vieira, Carlos Maurício Fontes</i>	
IMPROVING SENSITIVITY IN ZNO:AL THIN FILMS DEPOSITED FOR SPRAY PYROLYSIS BY THE RESISTIVE SENSOR VAPOR ETHANOL	1555
<i>Sanchez, Sandro Alberto Ibarra, Jr, Herval Ramos Paes</i>	
STUDY OF PROPERTIES OF ADSORPTION OF MICACEOUS MATERIALS SYNTHESIZED FROM AMAZONIAN KAOLIN	1562
<i>Rocha, Jéssica Brito; Serrão, Fernanda Thamiles De Jesus; Ramos, Jhonny Dos Santos; Hildebrando, Edeamarino Araujo</i>	

PHOTOCATALYTIC COATING BASED ON TIO₂ ON THE SILLAR (IGNIMBRITE) 1570
Guzmán, Rivalino; Lazo, Luis; Gallegos, Daily; Huaracallo, Albeniz; Apaza, Edgar

POLYMER, COMPOSITE AND CERAMIC MATERIALS - COMPOSITE MATERIALS

EFFECT OF EXPOSURE TO THE SALT SPRAY OF MORTAR INCORPORATED WITH THE
GLASS LAPIDATION WASTE (GLW) 1578
*Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio
Barnabé; Lima, Thuany Espirito Santo; Alexandre, Jonas; Xavier, Gustavo De Castro;
Pedroti, Leonardo Gonçalves*

CHARACTERIZATION OF ARGILOUS SOIL FROM THE MUNICIPALITY OF ITAPEMIRIM
- ES 1586
*Azevedo, Afonso Rangel Garcez De; Marvila, Markssuel Teixeira; Zanelato, Euzébio
Barnabé; Lima, Thuany Espirito Santo; Alexandre, Jonas; Barbosa, Victor; Mendes, Beatryz
Cardoso*

THICKNESS INTERFERENCE IN THE MORTAR RESISTANCE OF STRUCTURAL
MASONRY 1594
*Azevedo, Afonso Rangel Garcez De; Paes, Ana Luiza Campinho; Alexandre, Jonas; Botelho,
Larissa Campos Granato; Lima, Thuany Espirito Santo De; Zanelato, Euzébio Barnabé;
Marvila, Markssuel Teixeira; Cerqueira, Niander Aguiar; Barbosa, Victor De Souza*

STUDY OF PRODUCTION OF ARTIFICIAL STONE WITH THE INCORPORATION OF
LAMINATED FLAT GLASS' WASTE IN A POLIMERIC MATRIX 1602
*Peixoto, Juan; Carvalho, Elaine Aparecida Santos; Rodriguez, Rubén Jesus Sánchez;
Menezes, Maria Luiza; Monteiro, Sérgio Neves; Vieirar, Carlos Maurício Fontes*

DEVELOPMENT OF ARTIFICIAL STONE USING GRANITE WASTE AND
POLYURETHANE FROM MAMONE OIL 1611
*Gomes, Maria Luiza Pessanha Menezes; Costa, Elaine Aparecida Santos Carvalho;
Monteiro, Sérgio Neves; Peixoto, Juan; Guimarães, Renan Da Silva; Vieira, Carlos Maurício
Fontes*

TENSILE BEHAVIOR OF EPOXIDIC LAMINATED COMPOSITES REINFORCED WITH
RAMIE FABRIC UNDER DIFFERENT CURING CONDITIONS 1621
Deus, Janine Feitosa De; Rodriguez, Rubén Jesus Sanchez; Monteiro, Sérgio Neves

STUDY OF THE BEHAVIOR OF STRUCTURAL MASONRY PRISMS FILLED WITH LOW
RESISTANCE AND LOW DENSITY GRAVEL 1627
*Pinheiro, Valber Domingos; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Lima,
Thuany Espirito Santo De; Paes, Ana Luiza Campinho; Siqueira, Andréia Arenari De;
Granato, Larissa Campos*

EVALUATION OF ABSORPTION OF WATER BY CAPILLARITY OF MORTAR WITH
INCORPORATION OF ORNAMENTAL ROCK RESIDUE IN DIFFERENT PERCENTAGES 1638
*Miguel, Thaís Pirovane; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Zelanato,
Euzébio Barnabé; Guarçonir, Giovanni Bruzzi; Marvila, Markssuel Teixeira; Monteiro,
Sergio Neves*

CHARACTERIZATION AND MECHANICAL ANALYSIS OF BIOFUELS OF FUNGIC
MATRIX REINFORCED WITH PLANT SUBSTRATE 1646
*Santos, Iris Sterfanie; Sussuchi, Eliana Midori; Matos, Maxwell Paca; Marino, Regina
Helena; Griza, Sandro*

VOLUME 3

DEVELOPMENT OF ALUMINUM ALLOY AA7075 COMPOSITES REINFORCED BY ALUMIN AND SILICON NITRIDE THROUGH POWDER METALLURGY TECHNIQUES	1657
<i>Xavier, Elton Ítalo Vieira; Fernandes, Lorene Ester; Nascimento, Diogo Monteiro Do; Júnior, Moisés Euclides Da Silva; Filho, Oscar Olimpio De Araujo</i>	
MECHANICAL CHARACTERIZATION AND FLAME RESISTANCE OF POLYMERIC COMPOSITES WITH THE ADDITION OF FLY ASH AND MARBLE-GRANITE WASTES	1669
<i>Moraes, Mario Henrique Moreira De; Queiroz, Diogo Pontes De; Ferreira, Victor Hugo Mafra Monfredo; Costa, Denilson Da Silva; Banna, Wassim Raja El; Costa, Deibson Silva Da</i>	
REMOVAL OF OIL SLICKS IN WATER USING EXPANDED VERMICULITE AND WAX-FERRITE COMPOSITES	1680
<i>Figueiredo, André Ben-Hur Da Silva; Nunes, Thiago Dos Santos; Santos, Vanessa Ermes; Baptista, Camila Oliveira; Carvalho, Danúbia Bordim De; Biasi, Ronaldo Sérgio De</i>	
ANALYSIS OF WET ABSORPTION IN COMPOSITION BASED ON POLY(ETHYLENE TETHALATE) BASED AT GEOPOLIMERIC PARTICLES	1684
<i>Santos, Eliziane Medeiros; Ramos, Flávio James Humberto Tommasini Vieira; Gomes, Alaelson Vieira; Macedo, Vinícius Ribeiro Cavaleiro De; Schramm, José Lauro De Oliveira; Meireles, Gabriel Barbosa; Rodriguez, Lucas Henrique Brito; Barbosa, Arnon De Mello; Silva, Matheus Fernandes Vivas Da</i>	
MANUFACTURING OF AA7075 ALUMINUM ALLOY WITH REINFORCEMENT OF NIOBIUM CARBIDE TROUGH POWDER METALLURGY	1694
<i>Nascimento, Diogo Monteiro Do; Júnior, Moisés Euclides Da Silva; Costa, José Endreo Baracho Da; Lira, Itamar Rodrigues De; Filho, Oscar Olimpio De Araújo</i>	
REINFORCED CONCRETE WITH POLYMERIC FIBER RECYCLED FOR ALTERNATIVE USE OF THE CONVENTIONAL CONCRETE OF LOW RESISTANCE	1703
<i>Santos, Romário De Jesus; Santos, Elisnan Alves Dos; Maria, Mariana Pires; Santos, Iris Sterfanie; Pinto, Vitor Alysson Menezes; Cruz, Lana Laís Pereira Da</i>	
DETERMINATION OF MECHANICAL PROPERTIES OF POLYESTER MATRIX COMPOSITE WITH GUARUMAN FIBERS	1710
<i>Pinheiro, Miriane Alexandrino; Hildebrando, Edemarino Araújo; Lima, Rodolfo Moura De Souza; Monteiro, Sergio Neves; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini</i>	
METHODOLOGICAL ANALYSIS OF POLYURETHANE BASED COMPOSITES REINFORCED WITH JUTE MANUFACTURING	1719
<i>Carvalho, Juliana Peixoto Rufino Gazem De; Neves, Anna Carolina Cerqueira; Lopes, Felipe Perissé Duarte; Monteiro, Sérgio Neves; Vieira, Carlos Maurício Fontes</i>	
WEIBULL ANALYSIS OF TENSILE STRENGTH OF HIGH-PERFORMANCE EPOXY MATRIX COMPOSITES REINFORCED WITH CURAUA NATURAL FIBERS	1728
<i>Simonassi, Noan Tonini; Monteiro, Sergio Neves</i>	
QUALITATIVE AND QUANTITATIVE ANALYSIS OF STRUCTURAL CONCRETE THROUGH THE ULTRASSONIC PULSE SPEED	1738
<i>Nascimento, Thais Eloy Guimarães; Santos, Iris Sterfanie; Prata, Ana Larissa Cruz; Sandes, Renan Praciano Ideburque Leal; Martins, Carlos Otávio Damas; Griza, Sandro</i>	

ENERGY ABSORPTION IN BALLISTIC TEST OF ALUMINA-UHMWPE COMPOSITES	1749
<i>Figueiredo, André Ben-Hur Da Silva; Melo, Igor Sena; Aguiar, Yan Augusto Lopes De; Aguilera, Letícia Dos Santos; Biasi, Ronaldo Sérgio De</i>	
MICROSTRUCTURAL CHARACTERIZATION OF GUARUMÃ FIBERS FOR APPLICATION IN POLYMER MATRIX COMPOSITIONS	1758
<i>Lima, Rodolfo Moura De Souza; Alexandrino, Miriane; Paz, Simone Patrícia Aranha Da; Monteiro, Sérgio Neves; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini</i>	
ANALYSIS OF THE BALLISTIC PERFORMANCE OF CERAMICS PRODUCED WITH AND WITHOUT LITHIUM FLUORIDE	1767
<i>Demosthenes, Luana Cristyne Da Cruz; Oliveira, Michelle Souza; Filho, Fabio Da Costa Garcia; Luz, Fernanda Dos Santos; Monteiro, Sergio Neves; Nascimento, Lucio Fabio Cassiano</i>	
FUNCTIONALIZATION OF CURAUÁ FIBERS WITH GRAPHENE OXIDE	1780
<i>Costa, Ulisses Oliveira; Nascimento, Lucio Fabio Cassiano; Garcia, Julianna Magalhaes; Filho, Fabio Da Costa Garcia; Luz, Fernanda Santos Da; Monteiro, Sergio Neves; Pinheiro, Wagner Anacleto; Bezerra, Wendell Bruno Almeida</i>	
THERMAL BEHAVIOR OF EPOXIDIC MATRIX COMPOSITES REINFORCED WITH GRAPHENE OXIDE FUNCTIONALIZED CURAUÁ FIBERS	1789
<i>Costa, Ulisses Oliveira; Nascimento, Lucio Fabio Cassiano; Garcia, Julianna Magalhaes; Pinheiro, Wagner Anacleto; Luz, Fernanda Santos Da; Filho, Fabio Da Costa Garcia; Monteiro, Sergio Neves; Bezerra, Wendell Bruno Almeida</i>	
INFLUENCE OF UV RADIATION IN THE BALLISTIC BEHAVIOR OF A COMPOSITE OF EPOXIDIC MATRIX REINFORCED WITH HYBRID MALLOW/JUTE FABRIC	1798
<i>Costa, Ulisses Oliveira; Oliveira, Michelle Souza; Filho, Fabio Da Costa Garcia; Luz, Fernanda Santos Da; Garcia, Julianna Magalhães; Silva, Anderson Oliveira Da; Figueiredo, André Ben-Hur Da Silva; Nascimento, Lucio Fabio Cassiano; Monteiro, Sergio Neves</i>	
THERMAL ANALYSIS OF THE EPOXY-FIBER MALVA COMPOSITE FOR APPLICATION IN MULTI-SQUASH BALLISTIC ARMORING	1805
<i>Nascimento, Lucio Fabio Cassiano; Monteiro, Sérgio Neves; Souza, Andressa Teixeira</i>	
THE INFLUENCE OF THE COCO FIBER MERCHANDISE PROCESS	1814
<i>Nicolau, Géssica Da Silva; Monsorens, Karollyne Gomes De Castro; Silva, Anderson Oliveira Da; Oliveira, Suzane De Sant'Ana; Weber, Ricardo Pondé</i>	
SYNTHESIS AND CHARACTERIZATION OF GLUTAMINE / PEG-COATED MAGNETITE PARTICLES FOR APPLICATION IN THE MEDICAL AREAS	1823
<i>Silva, Fernanda Aparecida Sampaio Da; Pereira, Vanessa Gomes; Campos, Marcos Flávio De</i>	
INFLUENCE OF GRANULOMETRY FLYING WASHES RESIDUES IN MECHANICAL PROPERTIES AND FLAMMABILITY OF COMPOSITES	1831
<i>Ferreira, Victor Hugo Mafra Monfredo; Santos, Eryck Simplício Dos; Moraes, Mario Henrique Moreira De; Daniel, Brenda Thayssa Figueira; Costa, Denilson Da Silva; Costa, Deibson Silva Da</i>	

EVALUATION OF ENERGY ABSORPTION OF THE EPOXY MATRIX COMPOSITE REINFORCED WITH TUCUM FIBER THROUGH IZOD IMPACT TEST AND BALLISTIC IMPACT OF AMMUNITION .22	1838
<i>Luz, Fernanda Santos Da; Filho, Fabio Da Costa Garcia; Demosthenes, Luana Cristyne Da Cruz; Oliveira, Michelle Souza; Costa, Ulisses Oliveira; Bezerra, Wendell Bruno Almeida; Pereira, Artur Camposo; Monteiro, Sergio Neves</i>	
EVALUATION OF THE MECHANICAL BEHAVIOR OF POLYMERIC COMPOSITES REINFORCED WITH SISAL FIBERS	1846
<i>Filho, Edwillson Gonçalves De Oliveira; Fujiyama, Roberto Tetsuo; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini; Monteiro, Sergio Neves</i>	
EVALUATION OF THE MECHANICAL BEHAVIOR OF POLYMERIC COMPOSITES REINFORCED WITH JUTE FIBERS	1861
<i>Filho, Edwillson Gonçalves De Oliveira; Fujiyama, Roberto Tetsuo; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini; Monteiro, Sergio Neves</i>	
EVALUATION OF THE MECHANICAL BEHAVIOR OF POLYMERIC COMPOSITES REINFORCED WITH PIASSAVA FIBERS	N/A
<i>Filho, Edwillson Gonçalves De Oliveira; Fujiyama, Roberto Tetsuo; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini; Monteiro, Sergio Neves</i>	
MECHANICAL PROPERTIES OF EPOXIDE COMPOSITES REINFORCED WITH MALVA FIBERS	1878
<i>Nascimento, Lucio Fabio Cassiano; Monteiro, Sérgio Neves; Junio, Raí Felipe Pereira</i>	
EVALUATION OF THE MECHANICAL BEHAVIOR OF POLYMERIC COMPOSITES REINFORCED WITH CARNAUBA FIBERS	1890
<i>Filho, Edwillson Gonçalves De Oliveira; Fujiyama, Roberto Tetsuo; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini; Monteiro, Sergio Neves</i>	
OPTIMIZATION OF MULTICAMBLED ARMOR SYSTEM THROUGH FRONT LAYER REDUCTION	1904
<i>Pereira, Artur Camposo; Filho, Fabio Da Costa Garcia; Luz, Fernanda Santos Da; Demosthenes, Luana Cristyne Da Cruz; Oliveira, Michelle Souza; Costa, Ulisses Oliveira; Bezerra, Wendell Bruno Almeida; Monteiro, Sergio Neves</i>	
THERMAL CHARACTERIZATION OF POLYESTER RECYCLING BY-PRODUCTS RESIN WITH FIBER GLASS	1914
<i>Vieira, Willian Zam; Rossato, Fernanda Bordini; Ivo, Vitor Souza; Laranja, Débora Henrique; Montuori, Giovanna Pierina; Vedovello, Juliana Sonnini; Ramos, Maria Gabriela Congento; Jermoloviccius, Luis Alberto; Lebrão, Guilherme Wolf</i>	
PRODUCTION OF CONCRETE OF GEOPOLYMERIC CEMENT WITH PARTIAL REPLACEMENT OF METACAULIM OF THE NORTH REGION BY BLAST FURNACE SLAG	1922
<i>Porto, Ana Beatriz Rodrigues; Fanjas, Andrey Victor Lima; Oliveira, Marco Antonio Barbosa De; Monteiro, Sérgio Neves; Silva, Alisson Clay Rios Da</i>	
EVALUATION OF THE THERMOMECHANICAL BEHAVIOR OF EPOXY COMPOSITE REINFORCED WITH FIQUE FABRIC	1934
<i>Oliveira, Michelle Souza; Filho, Fabio Da Costa Garcia; Luz, Fernanda Santos Da; Pereira, Artur Camposo; Demosthenes, Luana Cristyne Da Cruz; Nascimento, Lucio Fabio Cassiano; Monteiro, Sergio Neves</i>	

SYNTHESIS OF MANGANESE OR ZINC FERRITE IN CONDUCTOR FILMS IN PMMA MATRIX	1941
<i>Ramos, Flávio J. H. Tommasini Vieira; Tienne, Lucas Galhardo Pimenta; Marques, Maria De Fátima Vieira; Silva, Marcelo Henrique Predo Da; Aguilera, Letícia Dos Santos; Figueiredo, André Ben-Hur Da Silva; Santana, Simone Izabel Vieira De</i>	
ANALYSIS OF REPRODUCTION OF IRON ORES RESIDUES IN COMPOSITE MATERIALS: DRAIN RESISTANCE AND FLAMMABILITY	1949
<i>Almeida, Lucas Rezende; Oliveira, Gabriel Da Cruz; Silva, Willian Rayol Da; Mendes, Bruno Henrique Alves; Daniel, Brenda Thayssa Figueira; Costa, Denilson Da Silva; Costa, Deibson Silva Da</i>	
METAL WASTE OF ALUMINUM IN POLYESTER COMPOSITES: MECHANICAL STRENGTH AND FLAMMABILITY	1960
<i>Oliveira, Gabriel Da Cruz; Almeida, Lucas Rezende; Silva, Willian Rayol Da; Mendes, Bruno Henrique Alves; Daniel, Brenda Thayssa Figueira; Costa, Denilson Da Silva; Costa, Deibson Silva Da</i>	
ECOLOGICAL CEMENT PRODUCTION WITH CLAY AND CHARCOAL ASH BY RESIDENTS OF THE VILLAGE OF BACURITEUA IN SANTARÉM NOVO / PA	1970
<i>Oliveira, Adriane Pimentel; Coelho, William Rayplham Pereira; Barra, Antônio Mateus Darwich; Souza, Jackeline Meireles Hipolito De</i>	
USE OF BAMBOO WASTE AS REINFORCEMENT OF COMPOSITES TO BE USED AS OSB PANELS	1976
<i>Lopes, Mariana Dias Machado; Pádua, Magno De Souza; Neves, Anna Carolina Cerqueira; Lopes, Felipe Perissé Duarte; Vieira, Carlos Maurício Fontes</i>	
EVALUATION OF MECHANICAL BEHAVIOR IN TENSION OF GUARUMÃ FIBERS	1986
<i>Reis, Raphael Henrique Moraes; Nunes, Larissa Fernandes; Ramos, Flávio James Humberto Tommasini Vieira; Nascimento, Lúcio Fabio Cassiano; Monteiro, Sergio Neves</i>	
EVALUATION OF DYNAMIC COMPRESSION FRACTURE TOUGHNESS OF CARBON COMPOSITES BY DIGITAL IMAGE CORRELATION	1994
<i>Cidade, Rafael De Azevedo; Castro, Daniel Scandiuzzi Valença De; Castrodeza, Enrique Mariano</i>	
MECHANICAL EVALUATION OF EPOXIDE COMPOSITES REINFORCED WITH JUTE FABRIC AND DOPED WITH BLACK CARBON THROUGH THE TENSION TEST	2006
<i>Reis, Raphael Henrique Moraes; Nunes, Larissa Fernandes; Ramos, Flávio James Humberto Tommasini Vieira; Nascimento, Lúcio Fabio Cassiano; Monteiro, Sergio Neves</i>	
INVESTIGATION OF THE RETICULANT AGENT EFFECTS IN HYDROGELS AND SMART COMPOSITES OF NANOHYDROXYAPATITE AND PNIPAAm	2016
<i>Santos, Luiza Braga Ferreira Dos; Soares, Francielly Moura De Souza; Monteiro, Emília Dos Santos; Gomes, Paula Anastácia Moraes Cairo; Coimbra, Maria Elisa Rodrigues; Elias, Carlos Nelson</i>	
ISOFTÁLICA POLYESTER COMPOUND WITH MARBLE AND GRANITE WASTE CHARGE	2023
<i>Barbosa, Karla Suellen Lino; Lima, Ana Caroline De Miranda; Mendes, Bruno Henrique Alves; Santos, Iara Ferreira; Costa, Deibson Silva Da; Souza, José Antônio Silva</i>	

HYBRID POLYMERIC COMPOSITIONS WITH CHARGE OF MARBLE AND GRANITE RESIDUE AND FIBER INSERT OF JUTA	2032
<i>Barbosa, Karla Suellen Lino; Mendes, Bruno Henrique Alves; Santos, Iara Ferreira; Silva, Deibson Costa Da; Souza, José Antônio Silva</i>	
USE OF METAL FIBERS AND RED MUD IN HYBRID POLYMERIC COMPOSITES	2041
<i>Queiroz, Diogo Pontes De; Moraes, Mario Henrique Moreira De; Costa, Denilson Silva Da; Souza, José Antonio Da Silva; Maia, Raimunda Figueiredo Da Silva; Costa, Deibson Silva Da</i>	
SINTERIZATION OF GEOPOLYMER COMPOSITE OF BLAST FURNACE WASTE BASED FROM NIOBIA (NB2O5)	2048
<i>Pereira, Ana Paula Dos Santos; Silva, Marcelo Henrique Prado Da; Santos, Jheison Lopes Dos; Ramos, Flávio James Humberto Tommasini Vieira</i>	
UNSERVICEABLE TIRE RUBBER POWDER IN SUBFLOOR MORTAR	2055
<i>Botelho, Larissa Campos Granato; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Monteiro, Sergio Neves; Siqueira, Andreia Arenari De; Paes, Ana Luiza Campinho; Pinheiro, Valber Domingos</i>	
FRACTOGRAPHIC ANALYSIS OF AN INTERFACIAL ADHESION STUDY OF A COMPOSITE OF MATRIX POLYESTER REINFORCED WITH FIBER OF THE PALMA ENGAGEMENT FROM THE PROCESS OF EXTRACTION OF PALMA OIL	2065
<i>Filho, Edwillson Gonçalves De Oliveira; Rodrigues, Jean Da Silva; Fujiyama, Roberto Tetsuo; Branco, César Tadeu Nasser Medeiros; Sousa, Fábio Santos De; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini; Monteiro, Sergio Neves</i>	
INFLUENCE OF RED MUD GRANULOMETRY ON THE MECHANICAL PROPERTIES AND FLAMMABILITY OF COMPOSITES	2074
<i>Santos, Eryck Eduardo Simplicio Dos; Ferreira, Victor Hugo Mafra Monfredo; Daniel, Brenda Thayssa Figueira; Mendes, Bruno Henrique Alves; Costa, Deibson Silva Da</i>	
PROCESSING OF THE COFE2O4/RGO NANOCOMPOSITE BY THE HYDROTHERMAL METHOD	2086
<i>Silva, Wesley Oliveira Da; Torquato, Matheus; Figueiredo, André Ben-Hur Da Silva; Pinheiro, Wagner Anacleto; Borges, Luiz Eduardo Pizarro</i>	
MATERIAL ANALYSIS FOR HELICOPTER BLADES	2091
<i>Camargo, Letícia Quaglio; Salerno, Gigliola</i>	
PRODUCTION AND MECHANICAL CHARACTERIZATION OF COMPOUNDS OF VEGETABLE POLYURETHAN RESIN AND EPOXY REINFORCED BY BAMBU FIBER	2104
<i>Lopes, Mariana Dias Machado; Pádua, Magno De Souza; Lopes, Felipe Perissé Duarte; Vieira, Carlos Maurício Fontes</i>	
ANALYSIS OF TENSILE STRENGTH OF PIASSAVA FIBERS WASTE	2112
<i>Carvalho, Juliana Peixoto Rufino Gazem De; Neves, Anna Carolina Cerqueira; Lopes, Felipe Perissé Duarte; Carvalho, Eduardo Atem De; Monteiro, Sérgio Neves; Vieira, Carlos Maurício Fontes</i>	
MORPHOLOGICAL ANALYSIS BY ELECTRONIC MICROSCOPY OF SCANNING OF REDUCED GRAFENE OXIDE ADHESION IN NATURAL FIBERS	2123
<i>Torquato, Matheus; Reis, Raphael Henrique Moraes; Demosthenes, Luana Cristyne Da Cruz; Oliveira, Anthony Garotinho Barros Assed Matheus De; Silva, Wesley Oliveira Da; Silva, Anderson Oliveira Da; Monteiro, Sergio Neves; Junior, Emilson Ribeiro Viana</i>	

PRODUCTION AND CHARACTERIZATION OF ARTIFICIAL ROCK WITH WASTE QUARTZITES OF LAVRA AND ORNAMENTAL ROCK PROCESSING	2133
<i>Agrizzi, Carlos Paulino; Gadioli, Mônica Castoldi Borlini; Santos, Elaine Aparecida Carvalho Costa; Delaqua, Giovana Carla Girondi; Vieira, Carlos Maurício Fontes</i>	

STRUCTURAL DIMENSIONING OF ONE REINFORCED CONCRETE BEAM: SOFTWARE AND MANAUAL CALCULATION COMPARISON	2139
<i>Vilela, Paulo Augusto Timbó</i>	

POLYMER, COMPOSITE AND CERAMIC MATERIALS - POLYMERS

ALTERNATIVE ROUTE FOR THE USE OF GLAUCONITE	2149
<i>Rabelo, Lucas Araújo; Fernandes, Manoel Robério Ferreira</i>	

STUDY GREEN BANANA PEEL FOR THE ELABORATION OF A SKIN INJURY BIOMATERIAL	2155
<i>Ferreira, Elisângela Da Silva; Cândido, Verônica Scarpini; Silva, Alisson Clay Rios Da; Neves, Sérgio Monteiro; Paz, Simone Patrícia Aranha Da; Melo, Caio Cesar Amorim De</i>	

MICROSTRUCTURAL CHARACTERIZATION OF AÇAÍ ENDOCARPO	2164
<i>Vasconcelosr, Esleane Vilela; Belo, Francilene Da Luz; Monteiro, Sérgio Neves; Silva, Alisson Clay Rios Da; Candido, Verônica Scarpini</i>	

HARACTERIZATION OF A MEMBRANE OF SKIN INJURY CARBOXYMETHYL CELLULOSE	2170
<i>Paranhos, Sheila Barbosa; Ferreira, Elisângela Da Silva; Paz, Simone Patrícia Aranha Da; Neves, Sérgio Monteiro; Silva, Alisson Clay Rios Da; Cândido, Verônica Scarpini</i>	

PHYSICAL-CHEMICAL CHARACTERIZATION OF POLYARAMIDE FIBER IRRADIATED BY ULTRAVIOLET AND GAMMA RADIATION	2180
<i>Silva, Anderson Oliveira Da; Monsores, Karollyne Gomes De Castro; Oliveira, Suzane De Sant' Ana; Nicolau, Géssica Da Silva; Passalini, Pedro Guilherme Sousa; Weber, Ricardo Pondé; Monteiro, Sérgio Neves</i>	

ANALYSIS OF ACCELERATED EPOX VERNIZ DEGRADATION	2189
<i>Goes, Robson Oliveira; Vares, João Vinícius De Souza; Meneguzzi, Alvaro</i>	

BEHAVIOR OF POLYSTYRENE FATIGUE DEGRADED BY ULTRAVIOLET RADIATION	2202
<i>Monsores, Karollyne Gomes De Castro; Silva, Anderson Oliveira Da; Oliveira, Suzane De Sant'Ana; Nicolau, Géssica Da Silva; Alves, Débora De Lima; Weber, Ricardo Pondé; Filho, Paulo Feliciano Soares</i>	

TRIBOLOGICAL AND THERMAL CHARACTERIZATION IN HUMAN HAIR	2210
<i>Alves, Débora De Lima; Demosthenes, Luana Cristyne Da Cruz; Elzubair, Amal; Jr, Sérgio De Souza Camargo; Weber, Ricardo Pondé</i>	

METAL PRODUCTS - FERROUS METAL PRODUCTS

MICROSTRUCTURAL EVALUATION OF THE AISI 310 STAINLESS STEEL AFTER HEATING TO DIFFERENT TEMPERATURES	2218
<i>Santos, Bismarck Da Silva; Machado, Marcello Ferreira; Braga, Fábio De Oliveira; Sena, Lídia Ágata De</i>	

MICROSTRUCTURE AND MECHANICAL PROPERTIES OF A LEAN DUPLEX STAINLESS STEEL AGED AT 475°C	2230
<i>Santos, Henrique Meckler; Reis, Thompson Júnior Ávila; Godefroid, Leonardo Barbosa</i>	
INFLUENCE OF CONTINUOUS ANNEALING HEAT TREATMENT ON THE MECHANICAL PROPERTIES OF A HSLA SAE J2340 – 340X	2241
<i>Santos, Laerte Correa Dos; Silveira, Pedro Henrique Poubel Mendonça Da; Gomes, Alaelson Vieira</i>	
DEVELOPMENT AND MANUFACTURING OF A BRAKE DISC FOR A FORMULA SAE VEHICLE	2252
<i>Sanches, Carolina Berton; Salmazo, Vinícius De Araújo; Menezes, Miguel Ângelo</i>	
THERMOMECHANICAL SIMULATIONS OF HOT STAMPING AND QUENCHING AND PARTITIONING PROCESSES IN A 22MNB5 STEEL	2260
<i>Kraszczuk, André; Echeverri, Edwan Anderson Ariza; Monlevade, Eduardo Franco De; Tschiptschin, André Paulo</i>	
COMPARATIVE STUDY BETWEEN STEEL JOINTS S355NL BY FCAW WITH NATIONAL AND IMPORTED TUBULAR WIRE	2273
<i>Guedes, Camila Fagundes De Paula; Fonseca, Gláucio Soares Da; Santos, Lucas Rosate Leite Dos</i>	
EVALUATION OF ENERGY ABSORPTION OF A HIGH HARD STEEL	2282
<i>Oliveira, Suzane De Sant' Ana; Monsores, Karollyne Gomes De Castro; Silva, Anderson Oliveira Da; Nicolau, Géssica Da Silva; Weber, Ricardo Pondé</i>	
MECHANICAL BEHAVIOR OF A NEW HIGH HARDNESS ARMOR STEEL	2289
<i>Oliveira, Suzane De Sant' Ana; Monsores, Karollyne Gomes De Castro; Silva, Anderson Oliveira Da; Nicolau, Géssica Da Silva; Pereira, Vinicius De Souza; Weber, Ricardo Pondé</i>	
NIOBIUM AND MOLYBDENUM EFFECT ON MECHANICAL PROPERTIES AND MICROSTRUCTURE OF A MICROALLOYED STEEL	2296
<i>Junior, Dirceu Da Silva; Avila, Breno Mendes Rabelo; Mazini, Jaqueline Polezi; Quaresma, Lucas De Almeida; Filho, André Itman</i>	
MOLYBDENUM AND NIOBIUM EFFECT ON MICROSTRUCTURE, IMPACT AND CORROSION RESISTANCE OF MICROALLOYED STEELS	2306
<i>Mazini, Jaqueline Polezi; Filho, André Itman; Ávila, Breno Mendes Rabelo; Junior, Dirceu Da Silva; Oliveira, Pedro Gabriel Bonella De</i>	
MICROSTRUCTURAL AND MECHANICAL CHARACTERIZATION OF FE-25CR-0,2TI AND FE-25-CR-0,2Y ALLOYS	2315
<i>Jesus, Thácylla Jamille Mecnas De; Barreto, Brendon Costa; Macedo, Michelle Cardinale Souza Silva; Souza, Sandra Andreia Stewart De Araújo</i>	
MICROSTRUCTURAL AND MECHANICAL CHARACTERIZATION OF FE-25CR–XTI ALLOYS	2325
<i>Barreto, Brendon Costa; Jesus, Thácylla Jamille Mecnas De; Macedo, Michelle Cardinale Souza Silva; Souza, Sandra Andreia Stewart De Araújo</i>	
SENSITIZATION ANALYSIS OF AISI 409 STAINLESS STEEL WELDED JOINTS BY POTENTIODYNAMIC ELECTROCHEMICAL REACTIVATION (DL-EPR)	2334
<i>Scala, Giovanna; Rollo, Gustavo Victor Relva; Faggian, Fabio Noveli; Lebrão, Susana Marraccini Giampietri; Lara, José Agustín Castillo; Colosio, Marco Antonio</i>	

YB:FIBER LASER WELDING PARAMETERS OPTIMIZATION OF THE ASTM 201LN AUSTENIC STAINLESS STEEL SUBMITTED TO THERMOMECHANICAL PROCESSING FOR REVERSION	2345
<i>Moraes, Náhrima Chambela; Souza, Camila Oliveira De; Silva, Carolline Serafim Da; Lima, Milton Sergio Fernandes De; Paula, Andersan Dos Santos</i>	
EXPLICIT DYNAMIC SIMULATION OF A DUPLEX AND SUPERDUPLEX STRIP FORMING PROCESS	2355
<i>Rizzo, Marlon Galileu; Machado, Marcelo Lucas Pereira</i>	
CORROSION BEHAVIOUR OF WEATHERING STEEL EXPOSED FOR 36 MONTHS IN MARINE ATMOSPHERE	2368
<i>Júnior, Adalberto Calazans De Souza; Favre-Nicolin, Viviane Azambuja</i>	
FAILURE ANALYSIS OF SUBMARINE UMBILICAL TENSION ARMOR WIRES	2376
<i>Nascimento, Brenno Lima; Trindade, Matheus Porto; Reis, Matheus Mariano Da Silva; Silva, Abraão Santos; Gama, Thiago Santana; Silva, Samuel Deoteronio Da; Andrade, José Fábio Abreu De; Griza, Sandro</i>	
PROPOSED SIMPLIFIED METHODOLOGY FOR FATIGUE TESTS ON ARMOR WIRES OF SUBMARINE UMBILICAL	2388
<i>Nascimento, Brenno Lima; Trindade, Matheus Porto; Reis, Matheus Mariano Da Silva; Lima, Gustavo Dória; Gama, Thiago Santana; Silva, Samuel Deoteronio Da; Andrade, José Fábio Abreu De; Griza, Sandro</i>	
EXPERIMENTAL CREEP STUDY OF AUSTENITIC STEEL AISI 310 - AN APPROACH ON THE FRACTURE AND THE CRACK GROWTH	2398
<i>Garcia, Julianna Magalhães; Brandão, Luiz Paulo Mendonça; Costa, Ulisses Oliveira; Filho, Fabio Da Costa Garcia</i>	
FAILURE ANALYSIS IN WATER INJECTION VALVE SPRING	2409
<i>Jesus, Ihana Gabriela Conceição De; Macedo, Mateus Duarte; Júnior, Isau De Souza Alves; Lima, Gustavo Dória; Griza, Sandro</i>	
EVALUATION OF QUANTIFICATION METHODS FOR MARTENSITE VOLUMETRIC FRACTION FORMED DURING THE COLD ROLLING PROCESS OF ON ASTM 201LN STEEL	2418
<i>Cordeiro, Leandra Carla Aparecida; Alves, Yuri Mikael Dos Santos; Silva, Carolline Serafim Da; Souza, Camila Oliveira De; Moraes, Náhrima Chambela; Paula, Andersan Dos Santos; Brandão, Luiz Paulo Mendonça</i>	
DESIGN AND CONSTRUCTION OF A SERVER FOR AMBER SMOOTH BOTTLE OF 600ML	2430
<i>Rosa, Bruno De Paula; Gomes, Igor Augusto Zatti; Kontos, Cristian Markakis; Arce, Tarcisio Wessler; Biazui, Wender Kotovas; Barbosa, Fernando Montanare; Laporte, Daniel José; Branco, Fabiano Pagliosa</i>	
INFLUENCE OF CHEMICAL COMPOSITION AND AUSTENITIZATION TEMPERATURE ON THE MICROSTRUCTURE AND MECHANICAL BEHAVIOR OF HOT WORK TOOL STEELS	2438
<i>Moraes, Natasha Nogueira De; Corrêa, Elaine Carballo Siqueira; Lopes, Wellington; Pimenta, Adriene Anita Dos Santos; Silva, Carlos Ferreira Da</i>	

EFFECT OF MICROALLOYING ADDITION AND CONTROLLED ROLLING ON THE MICROSTRUCTURE AND MECHANICAL PROPERTIES OF A BASIC LOW CARBON STEEL	2450
<i>Santos, Vanessa Veríssimo Dos; Faria, Ricardo José De; Faria, Geraldo Lúcio De</i>	

STUDY AND CHARACTERIZATION OF A-286 SUPERALLOY SURFACE PROPERTIES	2464
<i>Almeida, Cássia De Souza; Junior, Cláudio Faria Lopes; Mendes, Patrícia Sousa Nilo; Silva, Erica Marcelino Freitas De Souza; Silva, Ladário Da</i>	

VOLUME 4

STRUCTURAL EVOLUTION DURING THE DEFORMATION OF 304L AND 201LN AUSTENITIC STAINLESS STEELS INVESTIGATED BY X-RAY DIFFRACTION WITH SYNCHROTRON RADIATION	2476
<i>Alves, Yuri Mikael Dos Santos; Oliveira, Marcellly Quintão; Silva, Carolline Serafim Da; Ferrão, Thiago Henrique Fernandes Dias; Rodrigues, Patrícia Freitas; Paula, Andersan Dos Santos</i>	

INFLUENCE OF AGING TREATMENT VARIABLES ON HARDNESS OF 350 MARAGING STEEL	2487
<i>Tavares, Rogério Itaborahy; Santana, Simone Izabel Vieira De; Paula, Andersan Dos Santos; Brandao, Luiz Paulo; Santiago, Gabriel Augusto De Avila</i>	

COMPARATIVE STUDY OF HIGH TEMPERATURES CORROSION AL ₂ O ₃ + ALPO ₄ E AL ₂ O ₃ AND COATINGS ON P92-STEEL	2495
<i>Gallo, Gerson Ortiz; Rizzo, Fernando Cosme; Kranzmann, Axel; Monteiro, Mauricio De Jesus; Schulz, Wencke; Nofz, Marianne; Sojref, Regine</i>	

FLANGE FAILURE ANALYSIS USED IN FOOD PROCESSING EQUIPMENT	2507
<i>Nascimento, Brenno Lima; Santos, Príscylla Ferreira Dos; Cardoso, Raphael Calazans; Júnior, Isau De Souza Alves; Macedo, Matheus Duarte De; Griza, Sandro</i>	

ANALYSIS OF SCREW FAILURES USED IN MINING EQUIPMENT	2514
<i>Reis, Matheus Mariano Da Silva; Thompson, Felipe De Freitas; Macedo, Matheus Duarte; Júnior, Isau De Souza Alves; Santos, Príscylla Ferreira Dos; Griza, Sandro</i>	

STUDY OF MANGETIC PROPERTIES OF MARAGING 350 STEEL AS A FUCNTION OF GRAIN SIZE	2522
<i>Araújo, Jônatas Targino; Cardoso, Jorge Luiz; Tavares, Sérgio Souto Maior; Pardal, Juan Manuel; Silva, Marcelo José Gomes Da</i>	

FAILURE ANALYSIS OF THE HEATING ELEMENT USED IN THE FRESH WATER CALORIFIER	2533
<i>Reis, Matheus Mariano Da Silva; Santos, Príscylla Ferreira Dos; Fontes, Lucas Silva; Jesus, Ihana Gabriela Conceição De; Griza, Sandro</i>	

CHARACTERIZATION AND FAILURE ANALYSIS OF THE ROLLER SHIRT OIL COMPACTOR	2545
<i>Junior, Isau De Souza Alves; Thompson, Felipe De Freitas; Santos, Renan Celestino Silva; Santos, Príscylla Ferreira Dos; Reis, Matheus Mariano Da Silva; Griza, Sandro</i>	

PITTING CORROSION ANALYSIS OF STAINLESS STEEL DUPLEX S31803 SUBMITTED TO THE CORROSIVE MEDIA	2553
<i>Souza, Lucas Menezes De; Pereira, Elaine Cristina; Sanchez, Sandro Alberto Ibarra; Monteiro, Sérgio Neves</i>	

STATIC STRAIN AGING IN 316 AUSTENITIC STAINLESS STEEL 2563
Monteiro, Sérgio Neves; Ribeiro, Matheus Pereira; Filho, Fabio Da Costa Garcia; Luz, Fernanda Santos Da; Pereira, Artur Campos

CHARACTERIZATION OF 1020 CARBON STEELS, GALVANIZED AND STAINLESS 304 WHEN EXPOSED IN CORROSIVE ENVIRONMENT OF RECOVERY BOILERS 2572
Monteiro, Letícia Soares; Pereira, Elaine Cristina; Figueiredo, Arthur Ribeiro; Monteiro, Sérgio Neves

THE EVOLUTION OF MICROSTRUCTURE, MECHANICAL PROPERTIES AND CRYSTALLOGRAPHIC TEXTURE IN THE MANUFACTURE OF CA-60 BARS 2583
Pereira, Pedro Guilherme Do Nascimento; Abreu, Iuri Araújo; Arrais, Dário Freire; Pinheiro, Gilvania Kátia Cruz; Herculano, Luís Flávio Gaspar; Abreu, Hamilton Ferreira Gomes De

EXPERIMENTAL STUDY ON FATIGUE PERFORMANCE OF A DISSIMILAR WELDED JOINT USED IN AUTOMOTIVE EXHAUST SYSTEM..... 2593
Silva, Fábio Dos Santos; Morais, Willy Ank De

METAL PRODUCTS - NON-FERROUS METAL PRODUCTS

ANNEALING OF ALUMINUM ALLOY AA 7075 AFTER COLD ROLLING 2599
Souza, Saul Hissaci De; Padilha, Angelo Fernando; Oliveira, Rene Ramos De

REUSE OF MACHINING CHIPS BY MECHANICAL ALLOYING FOR THE MANUFACTURE AND CHARACTERIZATION OF METALLIC POWDERS OF ALUMINUM ALLOY AA6061 2609
Xavier, Elton Ítalo Vieira; Fernandes, Lorene Ester; Nascimento, Diogo Monteiro Do; Júnior, Moisés Euclides Da Silva; Zarzar, Sandra Torres; Araújo, Everthon Rodrigues De; Filhor, Oscar Olimpio De Araujo

MANUFACTURING AND CHARACTERIZATION OF AA4XXX ALUMINUM ALLOYS PREPARED FROM ELEMENTARY POWDERS OF ALUMINUM AND SILICON VIA POWDER METALURGY TECHNIQUES 2617
Santos, Elinaldo Neves Dos; Araújo, Everthon Rodrigues De; Sobreira, Thamy Gomes Pacheco; Lira, Heronilton Mendes De; Júnior, Ednaldo Evangelista De Lacerda; Filho, Oscar Olimpio De Araujo

STUDY FOR CHARACTERIZATION OF THE CU-ZN ALLOY AND ITS OXIDES USING THE SPECTROSCOPIC ELIPSOMETRY TECHNIQUE 2631
Junior, Cláudio Faria Lopes; Machado, Glauco Silva De Assis; Mendes, Patrícia Sousa Nilo; Mendes, Priscila Sousa Nilo; Huguenin, José Augusto Oliveira; Ferreira, Eivelton Alves; Silva, Ladário Da

HYDROGEN EFFECT IN 718 NICKEL-BASED ALLOY TENSILE STRENGTH 2643
Filho, Fabio Da Costa Garcia; Oliveira, Michelle Souza; Demosthenes, Luana Cristyne Da Cruz; Bezerra, Wendell Bruno Almeida; Luz, Fernanda Santos Da; Costa, Ulisses Oliveira; Garcia, Julianna Magalhães; Monteiro, Sergio Neves

COPPER MONOCRYSTAL TORSION ORIENTED IN THE SUPER COMPACT DIRECTION 2650
Monteiro, Sergio Neves; Filho, Fabio Da Costa Garcia; Luz, Fernanda Santos Da; Ferreira, Carlos Luiz; Pinheiro, Wagner Anacleto

CHARACTERIZATION OF MAGNESIUM ALLOY AZ31 PROCESSED BY SYMMETRIC AND ASYMMETRIC ROLLING 2664
Luiz, Jéssica Vicente; Pimenta, Rayander Martins; Almeida, Darlene Souza Da Silva

ADDITIVE MANUFACTURING OF TITANIUM APPLIED IN DENTISTRY: A BIBLIOMETRIC ANALYSIS. 2671
Oliveira, Fábio Silva De; Eufázio, Edilvando Pereira

SYNTHESIS OF THIN FILMS METAL BY ELECTRON BEAM DEPOSITION FOR X - BAND APPLICATION (8 - 12 GHZ) 2679
Silva, Wesley Oliveira Da; Ferreira, Carlos Luiz

COMPARATIVE STUDY OF THE USE OF MATERIALS IN SEALING RINGS: PTFE VERSUS BRONZE (CUAL) WITH SUPERFICIAL SP VERSUS BRASS (CUAL) WITH SURFACE PB. 2690
Neuba, Lucas De Mendonça; Oliveira, Alessandro De; Palmeira, Alexandre Alvarenga; Monteiro, Sergio Neves

OTHER METALLURGICAL PROCESSES - SURFACE ENGINEERING

CHARACTERIZATION OF THE DEFECT OF SURFACE DIRT (0SUJ) ON METAL STEEL SHEETS - PLTCM 2698
Félix, Glaudistoni Da Silva; Martins, Marcelo; Polini, Glaucio; Melo, Leonardo Souza De; Serafim, Eder Adolfo; Rampellotti, Paulo Roberto; Neto, Bruno Knepel

STUDY OF THE FRICTION IN THE CHIP-TOOL CONTACT 2709
Gomes, Luísa De Amorim Makhoul; Mougó, Adriane Lopes

OTHER METALLURGICAL PROCESSES - POWDER METALLURGY

STUDY ON THE EFFECT OF NBC GRAIN SIZE IN THE LIQUID-PHASE SINTERING OF NBC-NI CEMENTED CARBIDE BY COMPUTATIONAL SIMULATION 2717
Morais, Luara Da Costa; Beneduce, Flavio; Magnaboscor, Rodrigo; Ribeiro, Tiago Ramos

COMPARISON OF MANUFACTURED SAMPLES BY SELECTIVE LASER MELTING FROM SPHERICAL AND IRREGULAR POWDERS OF THE Ti53Nb ALLOY 2725
Hernández, Jhoan Sebastian Guzmán; Nobre, Rafael De Moura; Júnior, Daniel Luiz Rodrigues; Nunes, Enzo Rozenti; Bayerlein, Daniel Leal; Falcão, Railson Bolsoni; Leva, Edwin Sallica; Oliveira, Henrique Rodrigues; Chastinet, Victor Lira; Landgraf, Fernando José Gomes

USING SCANNING ELECTRON MICROSCOPY AND MICROANALYSIS BY EDS IN THE STRUCTURAL ANALYSIS OF METAL MATRIXES 25%FE-50%CU-25%NBH OBTAINED BY HOT PRESSING 2738
Martins, Marina Furbino; Oliveira, Hellen Cristine Prata De; André, Priscila De Souza; Batista, Adriano Corrêa; Assis, Paulo Santos

SINTER FORGING PROCESS: A REVIEW 2748
Rosiak, André; Wermuth, Diego Pacheco; Costa, Luana De Lucca De; Silva, Leticia Dupont; Schaeffer, Lirio

STUDY OF ALUMINUM OBTAINED BY POWDER METALLURGY CONVENTIONAL AND PLASMA SINTERING 2760
Körbes, Arthur; Cardoso, Gilceu Dos Santos; Costa, Luana De Lucca De; Rosiak, André; Wermuth, Diego Pacheco; Schaeffer, Lirio; Rocha, Alexandre Da Silva

MANUFACTURE OF DURALUMIN ALLOYS THROUGH POWDER METALLURGY 2771
Souza, Bianca Nathália Andrade De; Alves, Elizeth Oliveira; Amaro, Daniel Ricardo Araújo

EQUIATOMIC NITI AND TI44-NI47-NB9 ALLOY CONVENTIONAL SINTERING FROM
ELEMENTARY POWDERS 2782
*Caminha, Clara Beatriz Melo Moreira; Vasconcelos, Claudio José Ferro De Sá Ferreira;
Santos, Gabriel Fernandez; Paz, Harllon Oliveira Da; Lima, Landerman Guimarães; Rocha,
Tales Chaves Bezerra; Teixeira, Rodolfo Da Silva; Casanova, Andrey De Moraes Barcelos;
Sénéchal, Naiara Vieira Le; Ferrão, Thiago Henrique Fernandes Dias; Rodrigues, Patrícia
Freitas; Sousa, Talita Gama De; Paula, Andersan Dos Santos*

OTHER METALLURGICAL PROCESSES - OTHER METALLURGICAL PROCESSES

EVALUATION OF EFFECT OF ADDITION OF SILICON ON THE DEOXIDIZING POWDER
DURING HOT ROLLING OF C-MN STEEL 2794
*Mangualde, Livia Ananias Dos Santos; Trindade, Vicente Braz; Silva, Júlio Márcio Silveira
E; Buono, Vicente Tadeu Lopes*

HYDROMETALLURGICAL RECOVERY OF MANGANESE FROM BLAST FURNACE
SLAG 2806
*Sousa, Gustavo Henrique; Santos, Igor Cuzzuol Dos; Braga, Jorgimara De Oliveira;
Fernandes, Loyslene Rabelo; Araujo, Athos Fernandes*

COMPARATIVE STUDY OF IDENTIFICATION AND QUANTIFICATION OF RETAINED
AUSTENITE IN STEEL TRIP BY DRX E EBSD. 2814
*Pinto, Lourdes Amélia; Escobar, Diana Perez; Santos, Olívia De Souza Heleno; Andrade,
Rodrigo Ribeiro De; Carneiro, José Rubens Gonçalves*

INFLUENCE OF FRICTION STIR PROCESSING (FSP) PARAMETERS IN THE MACRO
AND MICRO ASPECTS OF AN 1050 ALUMINUM SHEET WITH 3 MM THICKNESS 2821
*Souza, Carolina Alencar Caldeira De; Santos, Kaio Ferreira Dos; Santos, Rafael Oliveira;
Meirelles, Bruna Godoi; Borodiak, Miguel; Diniz, Saulo Brinco*

REDUCTION OF DEFECTS CAUSED BY EXCESS COATING ON THE EDGE AT
GALVANIZING 2 IN ARCELORMITTAL VEGA 2831
Carvalho, Fernando De; Oliveira, Gabriela Gomes De; Colzani, Luciano

ENERGY BALANCE OF OVEN FOR COKE MANUFACTURING IN HEAT RECOVERY
COKE PLANT 2847
*Casemiro, Renata Lima; Tapanes, Neyda De La Caridad Om; Santana, Ana Isabel De
Carvalho; Gaidzinski, Roberta*

A COMPARATIVE ANALYSIS OF NON-METALLIC INCLUSIONS USING SPARK-DAT,
ASCAT AND OPTICAL MICROSCOPE IN STEELS 2859
*Passigatti, Sirlene Trugilho Perin; Furtado, Henrique Silva; Mendes, Charles Alvimar; Jesus,
Henrique Severiano De; Scarpati, Iran; Vieira, Estéfano Aparecido*

THE USE OF COMPUTATIONAL THERMODYNAMICS ON THE EXTRACTION OF
METALS FROM RED MUD USING HYDROMETALLURGICAL ROUTE 2870
*Junior, Amilton Barbosa Botelho; Espinosa, Denise Crocce Romano; Tenório, Jorge Alberto
Soares*

LIME MUD WASTE VALORIZATION IN THE STEEL INDUSTRY 2879
*Silva, Daniel Dos Santos; Coleti, Jorge Luís; Junca, Eduardo; Grillo, Felipe Fardin;
Oliveira, José Roberto De; Tenório, Jorge Alberto Soares*

DEVELOPMENT OF TOOL FOR COMPRESSION TEST TO HOT OF STACKED DISCS	2887
<i>Rosiak, André; Costa, Luana De Lucca De; Brito, Alberto Moreira Guerreiro; Schaeffer, Lirio</i>	
MICROSTRUCTURE AND CRYSTALLOGRAPHIC TEXTURE OF NB-47TI ALLOY PRODUCED BY SELECTIVE LASER MELTING	2897
<i>Nobre, Rafael De Moura; Bauri, Luiz Felipe; Hernández, Jhoan Sebastian Guzmán; Bayerlein, Daniel Leal; Falcão, Railson Bolsoni; Sallica-Leva, Edwin; Oliveira, Henrique Rodrigues; Chastinet, Victor Lira; Júnior, Daniel Rodrigues; Landgraf, Fernando José Gomes</i>	
BATCHPUMP: AN ALTERNATIVE TO PRESSURE VESSEL	2909
<i>Freitas, Adriano Gomes De; Santos, Ricardo Borges Dos; Oliveira, Vitor Furlan De; Lima, Yuri Oliveira; Riascos, Luis Alberto Martinez</i>	
ANALYSIS OF THE FORMATION AND MICRO HARDNESS PREDOMINANTLY OF THE SIGMA INTERMETALLIC PHASE IN A DUPLEX STAINLESS STEEL SAF 2205	2920
<i>Almeida, Daniel Aquer De Miranda; Lima, Eric Fortunato Soares; Ribeiro, Leandro Rodrigues; Vieira, Pedro Chaves; Alencar, Roberto Abreu; Silva, Marcelo José Gomes Da</i>	
SELECTIVE COPPER SEPARATION PRESENT IN LIQUORS OF LEACHING OF PRINTED CIRCUIT BOARDS BY SOLVENT EXTRACTION: A SYSTEMATIC REVIEW OF THE LITERATURE	2928
<i>Costa, Bruna Elisa; Pereira, Matheus Mello; Leão, Versiane Albis</i>	
INFLUENCE OF COLD STRAIN SPEED IN THE MICROSTRUCTURE AND MECHANICAL PROPERTIES OF A SAE 1013 STEEL USED IN THE MANUFACTURE OF CA-60 BARS	2938
<i>Arrais, Dário Freire; Pinheiror, Gilvania Katia Cruz; Pereira, Pedro Guilherme Do Nascimento; Abreu, Hamilton Ferreira Gomes De</i>	
<u>OTHER METALLURGICAL PROCESSES - WELDING</u>	
EMPLOYMENT OF WELDING COSTS TO SELECT OPERATIONAL PARAMETERS FOR WELD OVERLAY DEPOSITED BY FCAW	2949
<i>Pessoa, Antonio Rodolfo Paulino; Mascarenhas, João Paulo Viana</i>	
EFFECT OF POST-WELD HEAT TREATMENT ON THE MICROSTRUCTURE OF LASER WELDED DUPLEX STAINLESS STEEL UNS S32304	2962
<i>Magalhães, Aparecida Silva; Magalhães, Charles Henrique Xavier Morais; Lima, Milton Sergio Fernandes De; Godefroid, Leonardo; Faria, Geraldo Lúcio De</i>	
RESPONSE SURFACE METHODOLOGY: A TOOL TO PREDICT SHEAR STRENGTH IN WELDED JOINTS FOR FRICTION STIR SPOT WELDING PROCESS	2973
<i>Aita, Carlos Alfredo Gracioli; Rosendo, Tonilson De Souza; Tier, Marco Antônio Durlo</i>	
PROCESS PARAMETERS OPTIMIZATION OF HYBRID JOINTS OF AA6082-T6 WITH STRUCTURAL ADHESIVE FOR THE AUTOMOTIVE INDUSTRY	2982
<i>Silva, Bruno Hessel; Oliveira, Bráulio Salumão De; Zepon, Guilherme; Bolfarini, Claudemiro</i>	
ANALYSIS OF ELECTROLYTIC NICKEL ADDITION ON UNS S32750 SUPERDUPLEX STEEL LASER WELDING	2993
<i>Carvalho, Leonardo Vilela De Menezes; Junior, Eli Jorge Da Cruz; Ventrella, Vicente Afonso</i>	

DEVELOPMENT OF A TUBULAR WIRE WITH AISI 1006 CARBON STEEL STRIP AND METALLIC FLUX CONTAINING NICKEL, CHROMIUM AND IRON POWDER FOR FCAW	3001
<i>Ferreira, Maria Mariana Simões; Liberato, Frank De Mello; Bracarense, Alexandre Queiroz</i>	
SOLDABILITY STUDY OF AZ31B ALUMINUM AND AZ31B MAGNESIUM SHEETS WITH 4MM OF THICKNESS BY FRICTION STIR WELDING (FSW).	3010
<i>Santo, Kaio Ferreira Dos; Souza, Carolina Alencar Caldeira De; Santos, Rafael Oliveira; Meirelles, Bruna Godoi; Borodiak, Miguel; Silva, Ana Carolina Brasil Da; Jr, Rogério Albergaria De Azevedo; Martins, Niander Vargas; Diniz, Saulo Brinco</i>	
INFLUENCE OF THE ROLLING DIRECTION IN THE DRAWABILITY OF TAILOR WELDED BLANKS OBTAINED BY LASER WELDING	3020
<i>Anjos, Tamires Repolês Dos; Lobato, Marcos Müller; Braga, Fábio De Oliveira</i>	
NUMERICAL INFLUENCE OF INTERFACE IMPEDANCE IN ERW PROCESS, BASED IN A TEMPERATURE PROFILE MATHEMATICAL MODEL	3030
<i>Calvimontes, Sergio Cordero; Ribeiro, Rafaella Martins</i>	
STUDY OF THE WELDABILITY OF A STEEL API 5L X65Q BY THE SMAW PROCESS	3042
<i>Gonçalves, Thais Soares; Porcaro, Rodrigo Rangel; Cândido, Luiz Cláudio</i>	
THERMAL PROFILE ANALYSIS APPLIED IN A DISSIMILAR FLASH-BUTT WELDING, BASED IN A MATHEMATICAL MODEL	3053
<i>Calvimontes, Sergio Cordero; Cabral, Antônio José Oliveira; Ribeiro, Rafaella Martins</i>	
STUDY OF TITANIUM CHIPS UTILITY TO PRODUCE CARBIDE IN MCAW WELD BEAD	3062
<i>Júnior, José Gedael Fagundes; Vaz, Cláudio Turani; Bracarense, Alexandre Queiroz</i>	
STUDY OF THE INFLUENCE OF WELDING ENERGY ON HAZ MICROSTRUCTURE AND HARDNESS OF A API 5L X80 STEEL	3072
<i>Dagostini, Vinícius Dos Santos; Vieira, Estéfano Aparecido; Luz, Temístocles De Sousa</i>	
ALTERNATIVE METHOD FOR CALCULATING THE CONSUMABLE-ELECTRODE FUSION WELDING DEPOSITION RATE	3084
<i>Calvimontes, Sergio Cordero; Ribeiro, Rafaella Martins; Cabral, Antônio José Oliveira</i>	
ASSESSMENT OF CORROSION RESISTANCE IN WELD JOINTS BY THE GMAW AND FCAW PROCESSES ON ASTM A572 STEEL	3098
<i>Santos, Fernando Vidal Dos; Carneiro, João Santiago Pedro; Carneiro, José Rubens Gonçalves; Brito, Pedro Paiva; Araújo, Carlos Roberto De</i>	
EFFECT OF WELDING PARAMETER ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF RAILS WELDED USING FLASH BUTT WELDING	3108
<i>Bauri, Luiz Felipe; Centeno, Dany Michell Andrade; Rodrigues, Mariana Moreno; Alves, Luiz Henrique Dias; Goldenstein, Hélio</i>	
MATHEMATICAL MODEL OF FLASH BUTT WELDING OF DUAL PHASE STEELS BY FINITE-DIFFERENCE METHOD	3120
<i>Sá, Guilherme Ribeiro De; Oliveira, Augusto César Lacerda De; Cabral, Antônio José Oliveira</i>	

OTHER METALLURGICAL PROCESSES - HEAT TREATMENT

EFFECT OF TEMPERATURES RAMPES IN THE OVERAGING STAGE IN THE MECHANICAL PROPERTIES OF STEEL TRIP780.	3132
<i>Magalhães, Rafael Ricardo; Costa, Fernando De Souza; Gonzalez, Berenice Mendonça</i>	

EVALUATION OF PREVISIBILITY MODELS OF PHASE TRANSFORMATION KINETICS APPLIED TO AUSTENITE-PEARLITE TRANSFORMATION UNDER CONTINUOUS COOLING	3144
<i>Rodrigues, Karine Fernandes; Faria, Geraldo Lúcio De</i>	
CHARACTERIZATION OF PHASE TRANSFORMATIONS UNDER CONTINUOUS COOLING OF A TRIP 780 STEEL	3155
<i>Magalhães, Charles Henrique Xavier Morais; Mourão, Gabriel Marques Magalhães; Campos, Pablo Henrique Kelly; Faria, Geraldo Lúcio De</i>	
INFLUENCE OF QUENCHING TREATMENTS WITH INTERCRITICAL AUSTENITIZATION ON THE MECHANICAL BEHAVIOR OF A FERRITIC STAINLESS STEEL OF TYPE UNS S41003	3167
<i>Nunes, Isadora Pereira; Faria, Geraldo Lúcio De; Lacerda, José Carlos De; Godefroid, Leonardo Barbosa</i>	
EFFECT OF NIOBIUM ON THE AGING OF LOW-CARBON STEELS	3179
<i>Guadanini, Luiz Gustavo Lopes; Santos, Getúlio Fonseca Dos; Silva, Letícia Barbosa; Lino, Roney Eduardo</i>	
MICROSTRUCTURAL EVOLUTION AND MECHANICAL PROPERTIES OF UNS S2205 DUPLEX STAINLESS STEEL AFTER HOMOGENIZATION, COLD ROLLING AND ANNEALING	3188
<i>Dias, Francislayne Lages; Stumpf, Guilherme Cardeal; Santos, Dagoberto Brandão</i>	
EVOLUTION OF THE MICROSTRUCTURE, TEXTURE AND MECHANICAL PROPERTIES OF A MICROALLOYED NIOBIUM STEEL DURING THE ANNEALING CYCLE	3200
<i>Marinho, Marcos Natanael; Costa, Fernando De Souza; Santos, Dagoberto Brandão</i>	
METHODOLOGY FOR CCT DIAGRAM CONSTRUCTION FOR HSLA SOUR SERVICE STEELS BY USING DEFORMATION DILATOMETRY AND SEM/EBSD	3211
<i>Castro, Cynthia Serra Batista; Nogueira, Túlio Cesar; Barbosa, Ronaldo; Escobar, Diana Perez</i>	
MORPHOLOGICAL CHANGES IN THE MICROSTRUCTURE IN NEW HIGH MO SUPER FERRITIC STAINLESS STEELS	3222
<i>Moura, Lorena Braga; Masoumi, Mohammad; Reis, Francisco Evaristo Uchoa; Carneiro, Alexander Catunda; Félix, Lucas Sousa; Abreu, Hamilton Ferreira Gomes De</i>	
SPHEROIDIZATION FROM AN INTERCRITICAL ANNEALING WITH HIGH COOLING RATE ASSOCIATED WITH COLD DEFORMATION AND SUBSEQUENT SUBCRITICAL ANNEALING IN SAE 52100 STEEL	3232
<i>Spindola, Mirelle Oliveira; Buono, Vicente Tadeu Lopes</i>	
EFFECT OF SENSITIZATION TREATMENT ON THE MICROSTRUCTURES AND PROPERTIES OF 204C2 AUSTENITIC STAINLESS STEELS	3241
<i>Song, Renbo; Wang, Tianyi; Cai, Hengjun; Wen, Jian; Su, Yang; Guo, Ke</i>	
REFINEMENT STRENGTHENING OF A NOVEL LOW COST-HIGH PROPERTIES AUSTENITIC STAINLESS STEEL VIATWIP/TRIP EFFECTS.....	3252
<i>Song, Renbo; Su, Yang; Cai, Hengjun; Wen, Jian; Wang, Tianyi; Guo, Ke</i>	

QUENCHING HEAT TREATMENT INFLUENCE ON DIFFERENT TEMPERATURES IN A STEEL MICROSTRUCTURE WITH AL AND NB ADDITION	3263
<i>Gurgel, Mônica Aline Magalhães; Nunes, Larissa Fernandes; Júnior, Eustáquio De Souza Baêta; Botelho, Ramón Alves; Araújo, Leonardo Sales; Brandão, Luiz Paulo Mendonça; Paula, Andersan Dos Santos</i>	
EROSIVE ABRASIVE WEAR BEHAVIOR OF A HYPOEUTECTIC HIGH-CHROMIUM CAST IRON DESTABILIZED BETWEEN 930 AND 1050 °C	3275
<i>Rocha, Diego Loubach Da; Martins, Anderson Pereira; Carvalho, Cássio Santos De; Pinto, Flávio Antônio De Moraes; Jr, Adonias Ribeiro Franco</i>	
EFFECT OF HEAT TREATMENT ON THE PROPERTIES OF A MARAGING 300 STEEL	3287
<i>Barrio, Regina Coeli Araújo Vieira Gunyics; Muniz, Letícia Rabelo; Mata, Stephany Aparecida Santos Da; Silva, Marcelo José Gomes Da; Abreu, Hamilton Ferreira Gomes De</i>	
INTERCRITICAL ANNEALING TEMPERATURE INFLUENCE ON AUSTENITE FORMATION FOR TRIP-ASSISTED STEEL PRODUCTION	3297
<i>Nascimento, Gabriel Onofre Do; Nunes, Thaissa Sampaio; Santos, Laís Couto Dos; Tolomelli, Flávia Tereza Dos Santos Fernandes; Moreira, Luciano Pessanha; Paula, Andersan Dos Santos</i>	
EFFECT OF HEAR TREATMENT ON THE RESISTANCE TO THE MARINE MEDIUM OF A STRUCTURAL STEEL	3309
<i>Silva, Hariston Rubens Pita Dos Santos; Vasconcelos, Maurício Dos Santos; Souza, Francielly Moura De; Diaz, Gisel Chenard; Rezende, Mônica Costa; Tapanes, Neyda De La Caridad Om; Pinto, Wilma Clemente De Lima; Santana, Ana Isabel De Carvalho</i>	
COMPARATIVE STUDY BETWEEN THE EFFECTS OF HEAT TREATMENT OF CEMENTING AND SOLUBILIZATION IN AISI 304H AUSTENITIC STAINLESS STEEL	3318
<i>Pinheiro, Bruno Ribeiro; Almeida, Ana Karine Pereira De; Silva, Marcelo José Gomes Da</i>	

Author Index