

72nd ABM International Congress 2017

Sao Paulo, Brazil
2 - 6 October 2017

Volume 1 of 5

ISBN: 978-1-5108-7846-4

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© (2017) by Associação Brasileira de Metalurgia Materiais e Mineração (ABM)
All rights reserved.

Printed by Curran Associates, Inc. (2019)

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

MANPOWER PRODUCTIVITY IN STEEL MILLS OF LATIN AMERICA	1
<i>Dornelas, Francisco Coutinho</i>	
KINETICS OF OXIDATION AND CALCULATION OF APPARENT ACTIVATION ENERGY FOR THE FORMATION OF OXIDES IN ROLLED STAINLESS STEEL 253 MA AT HIGH TEMPERATURES IN AIR	12
<i>Vicente, André De Albuquerque; Cabral, Débora Arruda; Marques, Igor Jordão; Santos, Tiago Felipe De Abreu; Espinosa, Denise Crocce Romano; Tenório, Jorge Alberto Soares</i>	
MICROSTRUCTURAL CHARACTERIZATION OF PROTECTIVE OXIDES LAYERS FORMED ON THE SURFACES OF A ROLLED AUSTENITIC STAINLESS (253 MA®) AT HIGH TEMPERATURES IN AIR	22
<i>Vicente, André De Albuquerque; Cabral, Débora Arruda; Marques, Igor Jordão; Santos, Tiago Felipe De Abreu; Espinosa, Denise Crocce Romano; Tenório, Jorge Alberto Soares</i>	
CHARACTERIZATION OF A DUPLEX STAINLESS STEEL JOINT WELDED BY TIG PROCESS IN ROOT AND FILLING WITH MIG-MAG PROCESS	34
<i>Vicente, André De Albuquerque; Cabral, Débora Arruda; Bueno, Alexandre; Turra, Thiago Viana De Oliveira; Santos, Tiago Felipe De Abreu; Tenório, Jorge Alberto Soares</i>	
CARBURIZING OF AISI 316 STEEL	45
<i>Soares, Henrique Gobbi; Franco Jr, Adonias Ribeiro</i>	
MAGNETIC ANISOTROPY OF MANGANESE FERRITE-PARAFFIN COMPOSITES	55
<i>Melo, Gabriel Burlandy Mota De; Aguilera, Letícia Dos Santos; Figueiredo, André Ben-Hur Da Silva; Biasi, Ronaldo Sérgio De</i>	
THE FORMATION OF EXPANDED FERRITE ON NITRIDING A FERRITIC STAINLESS STEEL	61
<i>Pinedo, Carlos Eduardo; Magnabosco, Rodrigo; Silva, Wanderson Rodrigues Da</i>	
PRODUCTIVITY INCREASE IN TANKS PAINTING ON PROCESS OF SHIPBUILDING	72
<i>Bagger, Karl Kristian; Santos, Alexander Dos Santos E; Gasparini, Fábio Luis; Almeida, Leonardo Guerra De</i>	
INCORPORATION ANALYSIS OF WASTE IN CERAMIC MASS	88
<i>Reis, Alessandra Savazzini; Sagrillo, Viviana Possamai Della; Valenzuela-Diaz, Francisco Rolando</i>	
A COMPARATIVE STUDY OF FRAGILIZATION BY HYDROGEN OF API 5L B AND X52MS STEELS CARBON	100
<i>Figueiredo, Rodrigo Monzon; Oliveira, Mariana Cristina De; Paula, Leandro Jesus De; Acciari, Heloisa Andréa; Codaro, Eduardo Norberto</i>	
ANALYSIS OF POLLUTANTS PRESENT IN THE FOUNDRY SAND	115
<i>Rodrigues, Viviane Sardilli; Karolski, Bruno; Romano, Denise Crocce Espinosa; Tenório, Jorge Alberto Soares</i>	
RECOVERY OF COPPER BY ELETRONIC SCRAP	123
<i>Fernandes, Loyslene Rabelo</i>	
ANNEALING OF ALUMINUM ALLOY AA 7075 AFTER COLD ROLLING	132
<i>Souza, Saul Hissaci De; Padilha, Angelo Fernando</i>	
HYDROGEN ACTION ON DUCTILITY LOSS IN STAINLESS STEEL AISI 409	143
<i>Lima, Marcelo Tadeu Tomazela</i>	
PROPOSAL AND EVALUATION OF A REFERENCE MODEL OF RELIABILITY CENTERED MAINTENANCE (RCM) FOR STEEL INDUSTRY APPLICATIONS	151
<i>Brand, Fabio Andre</i>	
KIRKENDALL POROSITY IN DISSIMILAR WELDING JOINTS BETWEEN FE-CR-AL ALLOY AND STAINLESS STEEL AISI 310 AFTER ISOTHERMIC HEAT TREATMENT AT 1150°C IN AIR	163
<i>Vicente, André De Albuquerque; Lima, Giovanni Jonas De; Cabral, Débora Arruda; Faggian, Carlos Alberto; Santos, Tiago Felipe De Abreu; Tenório, Jorge Alberto Soares</i>	
MICROSTRUCTURAL EVOLUTION DURING HOMOGENIZATION OF ALUMINUM ALLOY AA 7108	173
<i>Gianiselle, Felipe; Fernandes, Ricardo Do Carmo; Padilha, Angelo Fernando</i>	
DEVELOPMENT OF SLURRY POT TESTER TO SIMULATE THE EROSION WEAR DUE TO SLURRY EROSION	183
<i>Reis, Luiz Henrique Simões Dos; Amorim, Pablo Altoé; Carvalho, Sandro Mauro De; David, Victor Pizetta</i>	
CRITICAL ANALYSIS OF STANDARDS AND DEFECTS ARISING FROM ALUMINOTHERMIC WELDING	195
<i>Schifino, Alessandra Regina Machado; Reguly, Afonso</i>	
PROTECTION OF ARMOUR IN THE LINE OF INTERFACE BETWEEN CERAMIC PLATES	207
<i>Gomes, Alaelson Vieira; Chagas, Carlos Frederico De Matos; Trindade, Willian; Júnior, Edio Pereira Lima; Guimarães, Guilherme Pinto; Monteiro, Sergio Neves; Caldeira, Aldélio Bueno; Louro, Luís Henrique Leme; Santos, Jheison Lopes Dos</i>	
INFLUENCE OF BURN TEMPERATURE IN RED CERAMICS	214
<i>Azevedo, Afonso Rangel Garcez De; Alexandre, Jonas; Zanelato, Euzébio Bernabé; Marvila, Markssuel Teixeira; Cerqueira, Niander Aguiar</i>	
COST ANALYSIS USING NON-STANDARDIZED CERAMIC BLOCKS	220
<i>Azevedo, Afonso Rangel Garcez De; Alexandre, Jonas; Zanelato, Euzébio Bernabé; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Xavier, Gustavo De Castro</i>	
EVALUATION OF THE EFFECTS OF THE VARIATION OF THERMAL ENERGY ON THE MORPHOLOGY OF THE MACRO-MICRO STRUCTURE OF THE WELD METAL USING THE PROCESS AUTOGENOUS OF GTAW FOR STEEL AISI304	227
<i>Demarque, Rudinei; Castro, José Adilson De; Santos, Ellem Patricia Dos; Queiroz, Anderson Vergilio; Siva, Leonardo Martins Da; Xavier, Carlos Roberto; Silva, Rafaela Dos Santos</i>	

STUDY OF THE INCORPORATION OF CALCARY IN CERAMIC BRICKS	239
<i>Marvila, Markssuel Teixeira; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Zanelato, Euzébio Bernabé; Monteiro, Sérgio Neves; Azevedo, Bruno Rangel</i>	
TECHNOLOGIES OF ALUMINA-MAGNESIA REFRACTORIES FOR STEEL LADLES PART II, CASTABLE PROPERTIES UNDER RESTRAINED HEATING	247
<i>Nakabo, Kazuya; Nishida, Shigefumi; Kitamura, Masatsugu</i>	
BALLISTIC EVALUATION OF EPOXY-RAMIE AND EPOXY-ARAMID COMPOSITES USED IN CERAMIC MULTILAYERED ARMORS	258
<i>Braga, Fábio De Oliveira; Milanezi, Thiago Lara; Monteiro, Sergio Neves; Louro, Luis Henrique Leme; Gomes, Alaelson Vieira; Lima Jr, Édio Pereira</i>	
OBTAINING THE METAL TANTALUM FROM THE MAGNESIOTHERMIC REDUCTION OF THE TA₂O₅ PLASMA	268
<i>Souza, Altair Vieira De; Franco Júnior, Adonias Ribeiro; Nascimento, Ramiro Conceição</i>	
EVALUATION OF CORROSION RESISTANCE OF TWO HIGH MANGANESE STEELS AND 9% NICKEL STEEL IN SOLUTION OF H₂SO₄	275
<i>Flórez, Mauro Andrés Cerra; Vieira, Matheus De Lima; Guedes, Thiago César Souza; Araújo, Walney Silva; Silva, Marcelo José Gomes Da</i>	
TECHNOLOGIES OF ALUMINA-MAGNESIA REFRACTORIES FOR STEEL LADLES PART I, BRICK DEVELOPMENT	285
<i>Iida, Masakazu; Doi, Naoko; Tomiya, Hisashi; Torigoe, Atsushi; Ramos, Vladnilson Peter De Souza; Galesi, Douglas Fernando; Leao, Carlos Ferreira</i>	
FORMATION OF CRACKS BY LIQUID METAL EMBRITTLEMENT ON WELDING NUGGET OF ZINC COATED DUAL PHASE STEEL	296
<i>Miranda, Gabriela Pereira De; Vieira, Sergio Luiz</i>	
INFLUENCE OF CONCENTRATION AND PH ON THE LIMITING CURRENT DENSITY OF AN ELECTRODIALYSIS ION EXCHANGE MEMBRANE SYSTEM FOR COBALT (II) SEPARATION	308
<i>Feijoo, Gustavo Coelho; Scarazzato, Tatiana; Espinosa, Denise Croce Romano; Tenório, Jorge Alberto Soares</i>	
FAILURE ANALYSIS IN UNS S32750 DUPLEX STAINLESS STEEL TUBING FOR OCEAN WATER TREATMENT	320
<i>Pazeto, Kleber Da Silva; Carpintero, Leonardo; Braga, Fábio De Oliveira; Sena, Lidia Ágata De; Conceição, Monique Osório Talarico Da; Monteiro, Sergio Neves</i>	
BIOHYDROMETALLURGICAL PROCESSES: RECOVERY METALS FROM ELECTRONIC SOLID WASTE USING MESOPHILIC BACTERIA	331
<i>Utamura, Solange Kazuo; Rosario, Carlos Gonzalo Alvarez; Moraes, Viviane Tavares De; Tenório, Jorge Alberto Soares; Espinosa, Denise Croce Romano</i>	
RECONDITING BEARINGS ADDING VALUE ASPECTS	341
<i>Oliveira, Ricardo Rocha De</i>	
GRANULATION METHODS FOR METALS AND FERROALLOYS	349
<i>Polanco, Fernando Hernández; Damasco, Roberto</i>	
COMBUSTION SYNTHESIS OF MAGNETIC NANOPARTICLES USING A CONCAVE CONTAINER	360
<i>Figueiredo, André Ben-Hur Da Silva; Carvalho, Daniele Gomes; Aguilera, Letícia Dos Santos; Biasi, Ronaldo Sérgio De</i>	
ALUMINA WITH ADDITION OF NIOBIA, SILICA AND MAGNESIA FOR BALLISTIC PROTECTION	369
<i>Gomes, Alaelson Vieira; Chagas, Carlos Frederico De Matos; Trindade, Willian; Júnior, Edio Pereira Lima; Jesus, Paulo Roberto Rodrigues De; Nascimento, Lucio Fabio Cassiano; Santos, Jheison Lopes Dos; Caldeira, Aldélio Bueno; Monteiro, Sergio Neves; Louro, Luis Henrique Leme</i>	
DEVELOPMENT OF ORNAMENTAL STONE WASTE ADDED CLAY CERAMIC FOR PAVEMENT APPLICATION	378
<i>Pereira, Artur Camposo; Monteiro, Sergio Neves; Assis, Foluke Salgado De; Braga, Fabio Oliveira; Vieira, Carlos Mauricio Fontes; Silva, Bertacia Mendes Da</i>	
THE STUDY OF THE REMOVAL OF CO, CU AND NI FROM AQUEOUS SOLUTION BY RESIN CHELATING PUROLITE S950 UNDER THE EFFECT OF PH VARIATION	390
<i>Perez, Isadora Dias; Correa, Mónica Maria Jiménez; Tenório, Jorge Alberto Soares; Espinosa, Denise Croce Romano</i>	
MICROSTRUCTURAL AND ELECTRICAL CHARACTERIZATION OF A SOFC FUEL CELL TYPE	398
<i>Motta, Ana Cláudia S. G.; Gonçalves, Ana Cláudia Silva; Ramires, Rodrigo Dias; Furtado, José Geraldo De Melo</i>	
THE INFLUENCE OF POST WELD HEAT TREATMENT FOR STRESS RELIEF ON HARDNESS OF WELD WITH ER410NIMO FILLER MATERIAL	407
<i>Turra, Thiago Viana De Oliveira; Bueno, Alexandre; Vicente, André De Albuquerque; Espinosa, Denise Croce Romano; Tenório, Jorge Alberto Soares</i>	
USING COMPOSITE SIO₂ (62-68)-MGO+CAO (29-39) IN THE PROTECTIONS OF CERAMICS MACHINE INJECTION MASS IN HOLES WITHDRAWAL OF PIG IRON AND SLAG LIQUID INTERIOR OF BLAST FURNACES	417
<i>Nogueira, Anderson Carvalho</i>	
MICRO-STRUCTURAL CHARACTERIZATION AND SEMI-QUANTITATIVE CHEMICAL ANALYSIS OF FERRITE AND AUSTENITE PHASES IN DUPLEX STAINLESS STEELS	426
<i>Vicente, André De Albuquerque; Cabral, Débora Arruda; Coleti, Jorge Luís; Telles, Victor Bridi; Santos, Tiago Felipe De Abreu; Tenório, Jorge Alberto Soares</i>	
A STUDY OF THE HOT CRACK FORMATION IN HIGH STRENGTH ALUMINUM ALLOYS WELDED BY YB:FIBER LASER	436
<i>Siqueira, Rafael Humberto Mota De; Carvalho, Sheila Medeiros De; Lima, Milton Sergio Fernandes De</i>	

SPEED OF DRAG OF MN-ZN FERRITE NANOPARTICLES DETERMINATION	446
<i>Aguilera, Leticia Dos Santos; Balthazar, Lucas Barbosa; Campos, José Brant De; Biasi, Ronaldo Sergio De; Figueiredo, André Ben-Hur Da Silva</i>	
INFLUENCE OF THE SOLID-LIQUID RATIO ON THE HYDROMETALLURGICAL ROUTE OF ACID LEACHING OF WASTE PRINTED CIRCUIT BOARDS FROM COMPUTER AIMING METAL RECOVERY	455
<i>Carvalho, Mariana Alves De; Caldas, Marcos Paulo Kohler; Espinosa, Denise Crocce Romano; Tenório, Jorge Alberto Soares</i>	
ANALYSIS OF INTERNATIONAL STANDARDS ON CONCRETE REINFORCING STEEL BAR	467
<i>Madias, Jorge; Wright, Michael; Behr, Gustavo; Valladares, Vanessa</i>	
STUDY OF ALUMINA DISSOLUTION IN CRYOLITIC BATH TO THE VERTICAL SODERBERG (VSS) ALUMINIUM PRODUCTION PROCESS	479
<i>Marinho, Diego Cota; Mourão, Marcelo Breda</i>	
EVALUATION OF CRYSTALLITE SIZE IN GRAPHENE OXIDE BY DIFFERENT TECHNIQUES	491
<i>Lima, Andreza Menezes; Faria, Géssica Seara; Flores, Jhonny Oswaldo Huertas; Cruz, Leila Rosa De Oliveira; Pinheiro, Wagner Anacleto</i>	
STUDY OF SLAGS EMPLOYED IN ALUMINOTHERMIA OF FE-NB	497
<i>Andrade, Livia Silvestre; Silva, André Luiz; Vasconcellos Da Costa E</i>	
MOLECULAR JUNCTIONS OF GRAPHENE AND PHAGRAPHENE NANORIBBON: A STUDY BY DFT AND EHT/NEGF	508
<i>Nisioka, Kazuko Ramos; Felipe, Rafaela Farinha; Côrrea, Samuel Maciel; Santos, Julio César Da Silva Dos; Nero, Jordan Del; Silva Jr, Carlos Alberto Brito Da</i>	
EVALUATION OF THE INFLUENCE OF TEMPERATURE ON TENSILE STRENGTH AND IZOD IMPACT RESISTANCE ON POLY (METHYL METHACRYLATE) (PMMA)	520
<i>Candido, Verônica Scarpini; Silva, Alisson Clay Rios Da; Silva, Gilmar Cunha Da; Monteiro, Sérgio Neves</i>	
MICROSTRUCTURAL CHARACTERIZATION OF AISI 316L AUSTENITIC STAINLESS STEEL DISSIMILAR COATING ON THE FACE OF AN ASTM A516 GRADE 70 CARBON STEEL WELD	530
<i>Candido, Verônica Scarpini; Silva, Alisson Clay Rios Da; Pires Junior, Hélio; Monteiro, Sérgio Neves</i>	
MATHEMATICAL MODEL FOR TEMPERATURE' S PROFILE IN A STEEL PIPE QUENCHED BY WATER COOLING RINGS	538
<i>Gomes, Daniela Fátima; Tavares, Roberto Parreiras; Braga, Bernardo Martins</i>	
ASSET MANAGEMENT OF METALLIC STRUCTURES AND PIPES FOR THE DISTRIBUTION OF GASEOUS FLUIDS AT ARCELORMITTAL TUBARÃO	550
<i>Madeira, Cinara Piazzarolo Lana; Rezende, Julio Cesar Maciel; Martinelli, Marcelo Marchesi; Fonseca Junior, Laudelino</i>	
INFLUENCE OF TEMPERATURE IN THE PHYSICAL AND MECHANICAL PROPERTIES OF CERAMICS PRODUCED WITH GROG	560
<i>Medeiros, Verônica Silva Costa; Pitanga, Heraldo Nunes; Pedroti, Leonardo Gonçalves; Mendes, Beatryz Cardoso; Júnior, José Carlos Borba; Lopes, Márcia Maria Salgado</i>	
PERFORMANCE EVALUATION OF GRANITE WASTE BASED PAINT FOR BUILDINGS	571
<i>Lopes, Márcia Maria Salgado; Alvarenga, Rita De Cássia Silva Sant'Anna; Pedroti, Leonardo Gonçalves; Cardoso, Fernando De Paula; Morais, Camila Starling Sousa; Mendes, Beatryz Cardoso; Medeiros, Verônica Silva Costa</i>	
CONSTITUTIVE MODELING OF REFRACTORY STRUCTURES CONSIDERING DAMAGE EFFECTS	583
<i>Teixeira, Lucas Breder; Penna, Samuel Silva</i>	
SURFACE WEATTABILITY OF HEXAGONAL BORON NITRIDE (H-BN) IN VACUUM BRAZING PROCESS	595
<i>Rosales, Marcio José Cuccolo; Afonso, Conrado Ramos Moreira</i>	
RELIABILITY ENGINEERING CONTRIBUTION TO REDUCE FAILURE RATE IN THE CONTINUOUS CASTING OF ARCELORMITTAL TUBARÃO	603
<i>Albani Junior, Severino; Silva, Victor Faitanin; Sant'Anna, Iuri Pinheiro De</i>	
CORROSIVE BEHAVIOR OF TI-35NB-XSI ALLOYS IN FLUORIDATED ARTIFICIAL SALIVA	616
<i>Matos, Gustavo Reis Leite; Souza, Sandra Andreia Stewart De Araújo; Macedo, Michelle Cardinale Souza Silva</i>	
STUDY OF THE OXIDATION ASSISTED INTERGRANULAR CRACKING ON INCONEL 718	627
<i>Varela, Amanda De Vasconcelos; Deus, Henrique Dias De; Rezende, Monica Costa; Almeida, Luiz Henrique De</i>	
METALLURGICAL AND PROCESS STRATEGY FOR THE PRODUCTION OF 700 MPA HOT ROLLED STRUCTURAL STEEL COIL	636
<i>Stalheim, Douglas Glenn</i>	
OBTAINMENT OF ADI BY AUSTEMPERING TREATMENT USING ZAMAK 5 BATH	648
<i>Pereira, Leonardo; Júnior, Luiz Francisco Seibel; Pasini, Willian Martins; Amaral, Regis Fabiano Do; Barcellos, Vinicius Karlinski De</i>	
PRE-SHAPED REFRACTORY CASTABLE FOR REHEATING FURNACE BURNER BLOCKS	656
<i>Domiciano, Vitor Guarnier; Inocêncio, Eugely De Almeida</i>	
IZOD TOUGHNESS RESISTANCE OF JUTE FABRIC REINFORCED POLYESTER COMPOSITES	663
<i>Assis, Foltuke Salgado De; Monteiro, Sergio Neves; Pereira, Artur Camposo</i>	
POLYESTER MATRIX COMPOSITES REINFORCED WITH JUTE FIBER APPLIED IN MULTILAYERED ARMOR	671
<i>Assis, Foltuke Salgado De; Monteiro, Sergio Neves; Pereira, Artur Camposo; Lima Júnior, Édio Pereira</i>	
INTEGRATED INSPECTION SYSTEM FOR ASSET MANAGEMENT AT ARCELORMITTAL TUBARÃO	680
<i>Gagno Junior, Antonio Carlos Aguiar; Pires, Jorge; Santos, Alexandre Vellozo Dos</i>	
USE OF THE BLIND-HOLE DRILLING TECHNIQUE FOR REDUCING CRITICAL STRESSES	689
<i>Alves, Luiz Henrique Dias; Faustino, Aislan José Felipe; Ouverney, Filipe Otávio Nunes; Silva, Gabriel Castro Ribeiro Ferreira E; Carvalho, Guilherme De Souza; Santos, Rafael Oliveira</i>	

ORDER-BASED ATTRIBUTE WEIGHTING OF STAINLESS STEEL SHAFT REPAIR USING WELD OVERLAY	698
<i>Corrêa, Alessandro De Castro; Pereira, Cícero Alberto Pereira Belém; Assunção, Paulo D'Angelo Costa; Corrêa, Danielle Cristina Gonzaga; Leão, Cláudia Canto De Souza; Peixoto, Arildomá Lobato</i>	

VOLUME 2

EVALUATION OF MECHANICAL BEHAVIOR OF BOLTED JOINTS USING NUMERICAL SIMULATION	708
<i>Cardoso, Raphael Calazans; Thompson, Felipe De Freitas; Griza, Sandro</i>	
MICROSTRUCTURE AND MECHANICAL PROPERTIES OF A HIGH RESISTANCE STEEL SUBMITTED TO FAST COOLING	719
<i>Cipriani, Leandro Scheffer; Santos, Odair José Dos; Buono, Vicente Tadeu Lopes</i>	
MECHANICAL CHARACTERIZATION OF COMPOSITE POLYPROPYLENE MATRIX ADDED BAMBOO LONG FIBERS	726
<i>Maciel Junior, Renardir Peixoto; Alencar, Roberto Abreu; Melo, Santino Loran Silvestre De; Deus, Enio Pontes De</i>	
LEAN CONCEPTS IN THE SLAB CONDITIONING STEP AT ARCELORMITTAL TUBARÃO	739
<i>Corona, Mateus Costa; Guerra, Gladistone De Souza; Cunha, Elcimar Silva; Andrade, Luiz Alberto; Ney, Vitor Bogaci; Silva, Adriano Cesar; Cavalcante, Fabio Luiz Bassetti</i>	
FAILURE ANALYSIS IN PART OF STRUCTURE OF FIXATION OF SMALL WIND TURBINE	749
<i>Alencar, Roberto Abreu; Maciel Junior, Renardir Peixoto; Deus, Enio Pontes De</i>	
STUDY OF THE RELATIONSHIP BETWEEN PLASTIC DEFORMATION AND CORROSION RESISTANCE OF API 5L X65 IN ACID MEDIUM	762
<i>Oliveira, Mariana Cristina De; Pressiani, Maximiliano; Figueredo, Rodrigo Monzon; Acciari, Heloisa Andréa; Codaro, Eduardo Norberto</i>	
STUDY OF THE RECYCLING OF POLYETHYLENE FOR THE PRODUCTION OF BLENDS	770
<i>Paiva Júnior, Sérgio Luis De Moura; Melo, Santino Loran Silvestre De;</i>	
ANALYSIS OF FAILURE MODES IN TRUCK TIRES OUTSIDE ROAD IN A MINING	778
<i>Silva, Elifas Levi Da; Nogueira, Paulo Roberto Dutra; Melo, Guilherme Sousa; Teles, Ladir Antunes; Souza, Silvio Diniz; Paula, Adilson Cesar Melo De</i>	
QUALITATIVE CHARACTERIZATION OF THE CATIONIC MEMBRANES HDX 100 AND PC-SK BY MEV/SEM AND FT-IR	790
<i>Barros, Kayo Santana; Tenório, Jorge Alberto Soares; Espinosa, Denise Croce Romano; Perez, Isadora Dias</i>	
INFLUENCE OF SCRAP CLASSIFICATION AND PROCESSING ON CHLORINE CONTENT OF EAF DUST	798
<i>Buzin, Pedro Jorge Walburga Keglevich De; Heck, Nestor Cezar; Vilela, Antônio Cezar Faria</i>	
DETECTION OF INTERNAL GAS RECIRCULATION THROUGH TESTS ON A VACUUM DEGASSING PLANT	810
<i>Nogueira, Volney Viana</i>	
SELECTIVE EXTRACTION OF CALCIUM AND MAGNESIUM FROM CONCENTRATED NICKEL SULFURIC LIQUOR VIA SOLVENT EXTRACTION	822
<i>Guimarães, Alexandre Silva; Mansur, Marcelo Borges</i>	
SHARED MAINTENANCE IN MINERAL PROCESSING AREA	830
<i>Milanez, Jezuele; Santos, César Júnior Dos; Ferraz, Germano Mariano; Lima, Eduardo Luiz Giffoni; Pereira, Keila Aparecida Ferraz; Resende, Fernando Murta; Fonseca, Pablo Ferreira; Andrezza, Yuri Lucena Peixoto; Ramos, Victor Magnum Vieira</i>	
COMPARATIVE STUDY OF AUSTENITE-FERRITA TRANSFORMATION IN TWO IF STEELS WITH DIFFERENT CHEMICAL COMPOSITIONS	841
<i>Faria, Geraldo Lúcio De; Cezário, Ana Luíza Soares</i>	
STRAIN-INDUCED MARTENSITIC TRANSFORMATION DURING CRYOGENIC ROLLING IN 304L STAINLESS STEEL	854
<i>Alves, Juciane Maria; Brandão, Luiz Paulo Mendonça; Paula, Andersan Dos Santos</i>	
HARDENABILITY ANALYSIS AND MICROSTRUCTURAL CORRELATION OF ABNT 1045 AND ABNT 4140 STEELS	861
<i>Marques, Davi Alves; Pereira, Pedro Guilherme Do Nascimento; Alencar, Roberto Abreu; Silva, Marcelo José Gomes Da</i>	
CHARACTERIZATION OF SINTERED VALVE SEAT INSERTS OBTAINED WITH AISI M2 HIGH-SPEED STEEL AFTER AIR QUENCHING	873
<i>Gomes, Maurílio Pereira; Santos, Igor Passos Dos; Reis, Luís Augusto Mendes Dos; Couto, Camila Pucci; Mucsi, Cristiano Stefano; Colosio, Marco Antônio; Rossi, Jesualdo Luiz</i>	
MICROSTRUCTURE OF SOLIDIFICATION AND MECHANICAL PROPERTIES OF SN-0.5WT.%NI ALLOY FOR SOLDERS AND COATING	881
<i>Xavier, Marcella Gautê Cavalcante; Cruz, Clarissa Barros Da; Kakitani, Rafael; Silva, Bismarck Luiz; Spinelli, José Eduardo; Cheung, Noé</i>	
TRANSIENT UNIDIRECTIONAL SOLIDIFICATION, MICROSTRUCTURE AND INTERMETALLICS OF SN-NI ALLOYS	892
<i>Xavier, Marcella Gautê Cavalcante; Cruz, Clarissa Barros Da; Kakitani, Rafael; Silva, Bismarck Luiz; Cheung, Noé; Spinelli, José Eduardo</i>	
STUDY OF THE ADHESION OF GRAFENE OXIDE IN AN AROMATIC POLYAMIDE FABRIC BY THERMAL TREATMENT	904
<i>Silva, Anderson Oliveira Da; Lima, Andrezza Menezes; Faria, Géssica Seara; Monsorez, Karollyne Gomes De Castro; Marques, Maria De Fátima Vieira; Pinheiro, Wagner Anacleto; Weber, Ricardo Pondé</i>	
INCREASE OF BEARING'S RELIABILITY IN BACK UP ROLLS IN ROLLING MILLS	914
<i>Pereira, Marcelo Gonçalves; Massoti, João Guilherme Brigoni; Silva, Danilo Amorin Da; Santos, Edmilson R. O.; Barbosa, Dario G.</i>	

APPLICATION OF THE CALPHAD METHOD IN THE DEVELOPMENT OF NEW REDUCED ACTIVATION FERRITIC MARTENSITIC STEEL	924
<i>Pasini, Willian Martins; Bellé, Matheus Roberto; Barcellos, Vinicius Karlinski De</i>	
DURABILITY OF SOIL-CEMENT BLOCKS WITH THE INCORPORATION OF LIMESTONE RESIDUE FROM THE PROCESSING OF MARBLE	936
<i>França, Bruno Rangel; Azevedo, Afonso Rangel Garcez; Zanelato, Euzébio Bernabé; Alexandre, Jonas; Oliveira, Sérgio Rafael Cortes De; Monteiro, Sérgio Neves; Marvila, Markssuel Teixeira</i>	
COMPARATIVE STUDY OF MECHANICAL PROPERTIES OF SAE 10B22 AND 1005 STEELS AFTER CORROSION IN ELECTROLYTIC SOLUTIONS	947
<i>Silva, Priscila Caroline Albuquerque Da; Guedes, Fabricia Nunes De Jesus; Assis, Jéssica Ferreira De; Costa, Isadora De Mello Etrusco Lima Da; Araújo, Athon Fernandes De</i>	
STUDY ON THE MECHANICAL BEHAVIOR OF POLYCARBONATE AFTER THERMAL DEGRADATION	957
<i>Candido, Verônica Scarpini; Silva, Alisson Clay Rios Da; Paiva, Cleyson Santos De; Ferreira, Carlos Alberto Martins; Monteiro, Sérgio Neves</i>	
CHARACTERISTICS OF ADDITIVE MANUFACTURED POWER-BED LASER- FUSED AUSTENITIC STAINLESS STEEL FOR SURGICAL IMPLANTS	965
<i>Busato Junior, Edgar; Larosa, Maria Aparecida; Munhoz, André Luiz; Jardini, Zavgaglia, Cecília Amélia De Carvalho</i>	
STUDY ON PHASE FIELD MODEL FOR DIFFERENT INTERFACE THICKNESS	975
<i>Maciel, Rodrigo Ramalho; Martorano, Marcelo De Aquino</i>	
USE OF SLATE WASTE FOR MINERAL FILLER PRODUCTION: POTENTIAL USE IN COMPOSITE MATERIALS	987
<i>Gonçalves, Filipe Mattos; Torres, João Walter Meneses; Pascoal, Aline Da Luz; Ferreira, Eugênio Eustáquio; Ferreira, Telma Ellen Drummond; Alexandrino, Júnia Soares</i>	
PAPER AND CELLULOSE WASTE CHARACTERIZATION FOR THE USE OF PIG IRON MANUFACTURE	993
<i>Silva, Daniel Dos Santos; Coleti, Jorge Luís; Telles, Victor Bridi; Junca, Eduardo; Tenório, Jorge Alberto Soares</i>	
THICKNESS MEASUREMENT OF THIN FILM OF TIN OXIDE BY ELLIPSOMETRY	998
<i>Confort, Camila Sampaio; Silva, Daniel De Carvalho; Terra, Caroline Da Silva; Gurgel, Monica Aline Magalhães; Nunes, Nayara Ferreira; Teixeira, Rodolfo Da Silva; Ferreira, Elivelton Alves; Lima, Ingrid Russoni De; Silva, Ladário Da</i>	
STUDY OF OPTICAL PROPERTIES OF FINE FILM OF TITANIUM ANODIC OXIDE BY ELIPSOMETRY	1006
<i>Oliveira, Michele De Almeida; Nunes, Nayara Ferreira; Ferreira, Elivelton Alves; Silva, Paulo Roberto Da; Silva, Ladário Da; Oliveira, Thomas Nascimento Caldeira De; Silva, Ladário Da</i>	
ELLIPSOMETRIC CHARACTERIZATION OF ALLOY OF TI-NB AND YOUR OXIDES	1014
<i>Santos, Ramona Rodrigues; Alves, Raísa Siqueira; Terra, Caroline Da Silva; Nunes, Nayara Ferreira; Gurgel, Monica Aline Magalhães; Elias, Carlos Nelson; Silva, Ladário Da</i>	
STUDY OF MICROSTRUCTURAL CHARACTERIZATION TECHNIQUES OF DUPLEX STAINLESS STEELS BY OPTICAL MICROSCOPY	1022
<i>Santos, Daniella Caluscio Dos; Barbosa, Gustavo Lucacsak;</i>	
BIOLEACHING IN REACTORS FOR TREATMENT OF COPPER ORE FROM CARAJÁS REGION (PA)	1034
<i>Alves, Joner Oliveira; Palmieri, Maurício César; Carmo, Andre Luiz Vilaça Do; Buzzi, Daniella Cardoso; Ferreira, Rafael Vicente De Pádua; Filho, Hélio Raymundo Ferreira; Nascimento, Dryelle De Nazaré Oliveira Do</i>	
MICROSTRUCTURAL EVALUATION OF A 5052 H34 ALUMINUM ALLOY USED IN MULTILAYARED ARMOR	1045
<i>Braga, Fábio De Oliveira; Azevedo, Thales Moreira De; Braga, Wesley Soares; Lavatori, Ana Alice Gomes; Oliveira, Leandro Guimarães De; Lopes, Pedro Henrique Lameirão Machado; Monteiro, Sergio Neves; Conceição, Monique Osório Talarico Da</i>	
MECHANICAL PROPERTIES AND MICROSTRUCTURE OF HIGH STRENGTH STEEL WELD METALS OBTAINED BY GMAW AND SMAW PROCESSES	1057
<i>Gomes, Antonio José De Carvalho; Queiroz, Samuel Soares; Jorge, Jorge Carlos Ferreira; Souza, Luís Felipe Guimarães De; Mendes, Matheus Campolina; Araujo, Leonardo Sales</i>	
TECHNICAL VIABILITY OF THE USE OF EAF SLAG AND GRANULATED BLAST FURNACE SLAG (CHARCOAL) AS A HYDRAULIC BINDER	1067
<i>Almada, Sandro De Oliveira; Gumieri, Adriana Guerra; Gomes, Abdias Magalhães</i>	
AGEING OF ION-EXCHANGE MEMBRANES AND MICROSTRUCTURE CHARACTERIZATION BY SEM-EDS AND TGA	1076
<i>Jesus, Juliana Mendonça Silva De; Scarazzato, Tatiana; Tenório, Jorge Alberto Soares; Espinosa, Denise Croce Romano</i>	
PROCESS OF RECOVERY OF THE METALLIC CONTENT CONTAINED IN STEELMAKER SLUDGE	1088
<i>Souza, Erivelto Luís De; Araújo, Fernando Gabriel Da Silva; Oliveira, Cristovam Paes De; Gomes, José Emanuel Lopes</i>	
ANALYSIS OF PET FIBER VOLUME VARIATION IN THE PRODUCTION OF SUSTAINABLE CONCRETES TO IMPROVE ITS DEFORMATION CAPACITY	1100
<i>Rodrigues, Nara Caroline Da Silva; Carvalho, Magmy Maisy De Barros; Balbino, Anna Victória Moraes; Vasconcelos, Adriano Luiz; Roma</i>	
MICROSTRUCTURE, TEXTURE AND MECHANICAL PERFORMANCE OF THE STAINLESS DUPLEX STEEL UNS S32205 SUBMITTED TO WARM ROLLING	1110
<i>Santos, Dagoberto Brandao; Alves, Davi Silva; Ferreira, Aline Oliveira Vasconcelos; Moutinho, Iane Dutra; Oliveira, Indiana Rosa</i>	
MECHANICAL BEHAVIOR OF SIC ADDITIVATED WITH ALUMINUM AND YTTRIUM OXIDES PRODUCED BY SHS	1124
<i>Saleiro, Gisele Teixeira; Gonçalves, Danilo Correa; Carvalho, Danúbia Bordim De; Neto, Célio Albano Da Costa; Campos, José Brant De; Lima, Eduardo De Sousa</i>	
RESPONSE TO BALLISTIC IMPACT OF ARAMID FABRIC IMPREGNATED WITH A NON-NEWTONIAN FLUID	1134
<i>Figueiredo, André Ben-Hur Da Silva; Lima, Monique Vital De; Baêta Junior, Eustáquio De Souza; Aguilera, Leticia Dos Santos</i>	

USE OF CIVIL CONSTRUCTION RESIDUES FOR USE IN MORTAR	1142
<i>Barroso, Laimara Da Silva; Ribeiro, Marcelle Do Patrocinio; Marvila, Markssuel Teixeira; Azevedo, Afonso Rangel Garcez De; Zanelato, Euzébio Bernabé; Petrucci, Lúcio José Terra; Monteiro, Sérgio Neves</i>	
APPLICABILITY OF THE TRIPLE BARRIER CONCEPT IN BELT CONVEYORS HOUSING	1149
<i>Silva, Danilo Amorim Da; Santos, Edmilson Ricardo De Oliveira; Pereira, Marcelo Gonçalves</i>	
STUDY OF PARAMETERS THAT AFFECT THE AGING OF 350 MARAGING STEEL	1160
<i>Tavares, Rogério Iaborahy; Santana, Simone Izabel Vieira De; Paula, Anderson Dos Santos; Brandão, Luiz Paulo Mendonça; Silva, Fábio Lima Da</i>	
SURFACE ANALYSIS OF AISI 304 STAINLESS STEEL WELDED JOINT	1171
<i>Silva, Paulo Roberto Da; Terra, Caroline Da Silva; Ferreira, Elivelton Alves; Huguenin, José Augusto Oliveira; Silva, Ladário Da</i>	
MECHANICAL BEHAVIOR IN FLEXURE, COMPRESSION AND TORSION LOADING OF COMPOSITE MATERIAL	1179
<i>Salerno, Gigliola; Haddad, Rafael Rolli</i>	
PERFORMANCE EVOLUTION OF BELT CONVEYOR SUPPORTED BY ASSET MANAGEMENT AND RELIABILITY ENGINEERING	1188
<i>Silva, Ivo Sebastião Costa E</i>	
STRESS CONTROL FATIGUE BEHAVIOR OF FERRITIC STAINLESS STEEL	1200
<i>Salerno, Gigliola; Buongiorno, Felipe</i>	
MAINTENANCE IN SPARE PARTS: A CASE STUDY TO REDUCE STOPPED TIME	1211
<i>Rocha, Gabriel Mori Da; Franco, Luciano José Vieira; Leite, Jussara Fernandes; Barbosa, Heleno Alves; Lopes, Anderson Correa; Correa, Emandes José</i>	
TEXTURE ANALYSIS BY X-RAY DIFFRACTION OF IF-STEELS WITH DIFFERENT ADDITIONS OF TITANIUM, NIOBIUM AND PHOSPHORUS	1223
<i>Santos, Andrea Pedroza Da Rocha; Rocha, Adriana Da Cunha; Araújo, Leonardo Sales</i>	
COMPARISON OF MAINTENANCE INDICATORS: A CASE STUDY CARRIED OUT ON PULP PUMPS	1232
<i>Souza, Izabel Cristina De Freitas; Franco, Luciano José Vieira; Leite, Jussara Fernandes; Zeferino, Fernanda Maciel; Ferreira, Alexandre Magno Franco; Rodrigues, Márcio Roberto; Vieira, Maurício; Ferreira, Nilo Antunes;</i>	
ELLIPSOMETRIC CHARACTERIZATION OF AM60 ALLOY	1244
<i>Tona, Jamille Da Silva Carvalho; Reis, Giselle Viana De Carvalho Dos; Gurgel, Mônica Aline Magalhães; Fernandes, Elivelton Alves; Souza, Michele Lemos De; Silva, Ladário Da</i>	
REPRODUCIBILITY ANALYSIS OF CIGS SOLAR CELLS PROCESSING	1252
<i>Costa, Paulo Victor Nogueira Da; Fonseca, Matheus Garcia; Lima, Renan De Melo Correia; Medeiro, Rodrigo Amaral De; Ferreira, Carlos Luiz; Gomes, Alaelson Vieira; Schneller, E.; Dhery, Neelkanth G.; Shinde, O.; Cruz, Leila Rosa</i>	
DEVELOPMENT OF A CENTRIFUGE FOR MATERIALS PROCESSING IN HIGH ACCELERATIONS	1264
<i>Tenório, Plínio Ivo Gama; An, Chen Ying; Toledo, Rafael Cardoso; Bandeira, Irajá Newton; Freitas, Filipe Estevão; Fumachi, Edson Fernando; Lomas, Pedro Tiago Bernabé</i>	
INFLUENCE OF BORON ADDITION ON THE STRUCTURE OF HIGH CHROMIUM WHITE CAST IRON WITH MOLYBDENUM IN THE MELT STATE AND HEAT TREATED	1276
<i>Antônio, Loudiana Mosqueira; Pacheco, Dimas De Andrade; Oliveira, Cláudio Gonçalves De; Silva, Laura De Lima E; Godoy, Cristina; Pinheiro, Ivete Peixoto</i>	
STUDY OF ABLATION ON METAL SURFACES IRRADIATED WITH FEMTOSSECOND LASER	1285
<i>Nogueira, Alessandro Francelino; Paulo, Centro Tecnológico Da Marinha Em São; Samad, Ricardo Elgul; Vieira Junior, Nilson Dias; Lima, Milton Sergio Fernandes De; Rossi, Wagner De</i>	
PERMEABLE POLYMERIC COMPOSITES WITH CONSTRUCTION AND DEMOLITION WASTE	1297
<i>Silva, Rosana Vilarim Da; Rupp, Nicholas Henrique Dos Santos; Bosi Junior, Ecio; Oliveira, Victor De Brito; Almeida, Thiago De; Araújo, Geórgia Serafim; Filho, André Itman; Louzada, Deslvia Machado</i>	
STUDY OF CORROSION RESISTANCE BETWEEN REBARS WITH DIFFERENT MICROSTRUCTURES BY CHLORIDE IONS	1309
<i>Vieira, Matheus De Lima; Silva, Francisco Alberto Marreiros Da Rocha Da; Flórez, Mauro Andrés Cerra; Silva, Marcelo José Gomes Da; Araújo, Walney Silva</i>	
EVALUATION OF THE MECHANICAL CHARACTERISTICS OF A PROSTATE FOR MEDIUM PUPPIES OF PLA MATERIAL IMPRESSED IN 3D	1320
<i>Croucillo, Andressa Pereira Dos Reis; Arruda, José Dimas De; Souza, Edilberto Da Silva; Silva, José Sebastião Dos Reis; Tavares, Emerson Rodrigo Alves; Araujo, Cassio Roberto De; Hermsdorff, Leandro Lopes; Carvalho, Luiz Cláudio De</i>	
IMPROVEMENT IN THE PERFORMANCE OF THE SPIRAL CLASSIFIERS USED IN THE IRON ORE BENEFIT PROCESS	1330
<i>Almeida, Cristiano Simplicio Guimarães De; Souza, Edilberto Da Silva; Arruda, José Dimas De; Ferreira, Alexandre Magno Franco; Ganime Junior, Alfredo; Ferreira, Nilo Antunes</i>	
MECHANICAL EVALUATION OF MATERIALS COMPOSITE OF CEMENTITIOUS MATRICES REINFORCED WITH POLY(ETHYLENE TEREPHTHALATE) FIBERS	1341
<i>Machado, Priscila Alves Da Silva; Delgado, Luciano Da Silva; Pessoa, André Luiz Bastos; Machado, Lorena Alves Da Silva</i>	
NANOINDENTATION APPLIED TO THE 304L AND 201LN AUSTENITIC STAINLESS STEELS	1350
<i>Silva, Carolline Serafim Da; Souza, Camila Oliveira De; Casanova, Andrey De Moraes Barcelos; Teixeira, Rodolfo Da Silva; Alves, Juciane Maria; Paula, Anderson Dos Santos; Brandão, Luiz Paulo Mendonça</i>	
ADIABATIC SHEAR BAND INDUCED BY HIGH RATE DEFORMATION IN A BALLITIC STEEL	1362
<i>Oliveira, Suzane De Sant'Ana; Monsorens, Karollyne Gomes De Castro; Silva, Anderson Oliveira Da; Souza, Elson Renato Santos; Weber, Ricardo Pondé; Suarez, João Carlos Miguez</i>	
PRE-COOLED IN BRINE EFFECT IN MARTENSITE FORMATION DURING THE PILOT ROLLING OF 201LN AUSTENITIC STAINLESS STEEL	1370
<i>Souza, Camila Oliveira De; Dasilva, Carolline Serafim; Alves, Juciane Maria; Paula, Anderson Dos Santos; Brandão, Luiz Paulo Mendonça; Diniz, Saulo Brinco; Oliveira, Isabela Santana De</i>	

ANALYSIS OF THE TRANSIENT TREAD SLIP SLEEVE STRETCH ANALYSIS BETWEEN AXIS	1381
<i>Dutra, Cristian Deiner; Arruda, José Dimas De; Souza, Edilberto Da Silva; Silva, José Sebastião Dos Reis; Araújo, Cássio Roberto De; Hermsdorff, Leandro Lopes; Vieira, Maurício; Ferreira, Nilo Antunes; Ferreira, Alexandre Mágnio Franco</i>	
EFFECT OF NB ADDITION ON THE MICROSTRUCTURE OF HYPEREUTETIC HIGH CHROMIUM WHITE CAST IRON	1393
<i>Pacheco, Dimas De Andrade; Godoy, Geralda Cristina Duães De; Oliveira, Cláudio Gonçalves De; Antônio, Loudiana Mosqueira; Bueno, Mário José</i>	
ANALYSIS OF SILICON NITRIDE THIN FILMS OPTICAL PROPERTIES OBTAINED BY MAGNETRON SPUTTERING	1400
<i>Abreu, João Luís Aguiar De; Silva, Ladário Da</i>	
SYNTHESIS AND ELLIPSOMETRIC CHARACTERIZATION OF GLASS BASED ON DISTRIBUTOR SLAG	1408
<i>Silva, Camila Ferreira Da; Alves, Elivelton Ferreira; Paralovo, José Luiz; Reis, Raphael Midea Cuccovia Vasconcelos; Santos, Ésoly Madeleine Bento Dos; Agripino, Ledson Martins; Goulart, Livia Lopes De Oliveira; Marcelo, Célio De Jesus; Lima, Ingrid Russoni De; Silva, Ladário Da</i>	

VOLUME 3

COMPARISON OF THE OXIDATION RESISTANCE OF HOT DEEP GALVANIZED WIRES BY APPLYING DIFFERENT CHROMIUM CONVERSION LAYERS	1418
<i>Mokan, João Vitor; Ferreira, Jane Zoppas</i>	
BALLISTIC BEHAVIOR OF $Al_2O_3-Nb_2O_5$-LIF CERAMIC COMPOUND	1429
<i>Santos, Jheison Lopes Dos; Marçal, Rubens Lincoln Santana Blazutti; Monteiro, Sérgio Neves; Rocha, Daniel Navarro Da; Gomes, Alaelson Vieira; Júnior, Edio Pereira Lima; Louro, Luis Henrique Leme</i>	
MECHANICAL PROPERTIES OF $Al_2O_3-Nb_2O_5$-LIF BASED CERAMIC COMPOSITE	1441
<i>Santos, Jheison Lopes Dos; Marçal, Rubens Lincoln Santana Blazutti; Monteiro, Sérgio Neves; Jesus, Paulo Roberto Rodrigues De; Santos, Maria Aparecida Pinheiro Dos; Louro, Luis Henrique Leme</i>	
EFFECT OF SOAKING TEMPERATURE AND CRYOGENIC COOLING ON FE-NI-CR ALLOY HEAT TREATMENT	1451
<i>Nunes, Larissa Fernandes; Simonassi, Noan Tonini; Paula, Andersan Dos Santos</i>	
EVALUATION OF ELASTIC PROPERTIES IN EPOXY COMPOSITES REINFORCED WITH COIR FIBER	1463
<i>Luz, Fernanda Santos Da; Monteiro, Sergio Neves</i>	
EVALUATION OF INTERFACIAL ADHESION OF THE COIR AND PALF FIBERS IN THE EPOXY MATRIX BY PULLOUT TEST	1470
<i>Luz, Fernanda Santos Da; Monteiro, Sergio Neves</i>	
EFFECT OF THE TYPE OF HEAT TREATMENT AND THEIR PARAMETERS IN THE HARDNESS OF THE CONSTITUENTS PRESENT IN DUAL PHASE STEELS	1478
<i>Corrêa, Elaine Carballo Siqueira; Silva, Nayara Aparecida Neres Da; Lourenço, Pedro Penna Coelho; Santos, Carlos Eduardo Dos; Lopes, Wellington; Braga, Cintia</i>	
CONTACT LENS SURFACE DEGRADATION ANALYSIS	1488
<i>Cedro, Hugo De León Carvalho; Paralovo, José Luiz; Carvalho, Silvânia Alves De; Huguenin, José Augusto Oliveira; Ferreira, Elivelton Alves; Lima, Ingrid Russoni De; Silva, Ladário Da</i>	
STUDY ABOUT THE INCORPORATION OF SIC ONTO THE POLY (METIL METACRILATE) MATRIX FOR MASS POLYMERIZATON	1497
<i>Ramos, Flávio James Humberto Tommasini Vieira; Ferreira, Leonardo Da Cunha; Monteiro, Sergio Neves; Affonso, Matheus R; Brandão, Victor S; Lira, Caio V C; Lopes, Pedro H L M</i>	
THE INFLUENCE OF RECYCLE NO BAKE ON ITS MECHANICAL PROPERTIES AND AT THE FINISHING CAST	1507
<i>Braga, Tamielis Rodrigues; Souza, Jessica Ohana Cançado Braga De; Pereira, Fabiana Faria Carvalho</i>	
INFLUENCE OF QUENCHING AND TEMPERING PARAMETERS ON THE HARDNESS AND MICROSTRUCTURE OF AISI M2 STEEL	1519
<i>Corrêa, Elaine Carballo Siqueira; Rosa, Júnia Bicalho Duarte; Magalhães, Aline Silva; Lopes, Wellington; Braga, Cintia; Lourenço, Pedro Penna Coelho</i>	
PROPOSAL FOR A METHODOLOGY FOR INDUSTRIAL MAINTENANCE PLANNING	1527
<i>Santos, Rodrigo Costa Dos; Assis, Aduino Martins De</i>	
INFLUENCE OF ELASTIC RECOVERY IN SURFACE INTEGRITY IN MICROMILLING OF SUPER DUPLEX STAINLESS STEEL	1539
<i>Mougo, Adriane Lopes; Araujo, Anna Carla</i>	
INCREASE IN THE RELIABILITY OF THE SINTER PLANT THROUGH THE METHODOLOGY OF ANALYSIS AND PROBLEMS SOLUTION	1549
<i>Mileipe, Shaney Gonçalves; Crasto, Bruno Bermudes; Matos, Denisson Tonoli De; Lana, Márcio De Souza</i>	
TUBE DEVELOPMENT ERW/HFIW CASING API5CT GRADE N80 HIGH COLLAPSE	1561
<i>Ferreira, Marcus Wolter; Gomes, Igor De Oliveira; Melo, Luis Carlos Rodrigues; Boni, Luiz Paulo; Cordeiro, Wilson Rosa</i>	
BALISTIC EVALUATION OF A HYBRID COMPOSITION REINFORCED WITH CURAUÁ BLANK AND POLYARAMID FABRIC	1573
<i>Silva, Anderson Oliveira Da; Oliveira, Suzane De Sant' Ana; Monsorens, Karollyne Gomes De Castro; Weber, Ricardo Pondé; Monteiro, Sérgio Neves</i>	
EVALUATION OF FIR AND UNSTABLE CRACK PROPAGATION REGION FROM DATA OBTAINED BY INSTRUMENTED CHARPY TEST	1583
<i>Costa, Nelson De Freitas; Reguly, Afonso;</i>	

INFLUENCE OF METAKAOLIN COMPLETE CALCINATION IN THE MECHANICAL STRENGTH OF GEOPOLIMÉRIC MORTARS	1595
<i>Rocha, Thais Da Silva; Dias, Dylmar Penteado; França, Fernando César Coelho; Monteiro, Sérgio Neves; Azevedo, Afonso Rangel Garcez De; Guerra, Rafael Rangel De Salles</i>	
USEFULL LIFE INCREASE OF THE FRONT TIRES OF CATERPILLAR LOADERS MOD: 992G/K IN OPERATIONS MANAGEMENT IN ÁGUA LIMPA	1603
<i>Cota, Daniela Miranda; José, Fábio; Silva, Amarsirley</i>	
ANALYSIS OF ABRASIVE WEAR ON THE SURFACE OF PIPE ROLLERS OF BELT CONVEYORS	1615
<i>Santos, Zirlene Alves Da Silva; Gonçalves, Maxsuell Mendes; Carmo, Vitor Pires Alves Do</i>	
GÁS METAL ARC WELDING OF THE STEEL SAE 4130: INFLUENCE OF THE PRE-HEATING	1627
<i>Siman, Matheus Soares; Paixão, Nathália Mello M.; Cardoso, Denise Lemos; Santana, Ivan José De</i>	
PRODUCTION AND CHARACTERIZATION OF ARTIFICIAL STONE FROM CHAMOTTE AND GRAVEL IN EPOXYDIC MATRIX	1639
<i>Costa, Elaine Aparecida Santos Carvalho; Gomes, Maria Luiza Pessanha Menezes; Sobrinho, Larissa Nascimento; Monteiro, Sérgio Neves; Rodríguez, Rubén J. Sánchez; Fontes, Carlos Maurício Vieira</i>	
STAINLESS STEEL MARTENSITE QUANTIFICATION BY MEANS OF EDDY CURRENT TESTING	1648
<i>Silva, Vitor Manoel De Araújo; Camerini, Cesar Giron; Pardal, Juan Manuel; Blás, Juan Carlos Garcia De; Pereira, Gabriela Ribeiro</i>	
EVALUATION BETWEEN THE SMAW AND GMAW WELDING PROCESS FOR THE MANUFACTURE OF COATINGS IN PROPULSION AXLES	1658
<i>Belém, Cícero Alberto Pereira; Corrêa, Alessandro De Castro; Assunção, Paulo D'Angelo Costa; Corrêa, Danielle Cristina Gonzaga; Leão, Claudia Canto De Souza; Peixoto, Arildomá Lobato; Ferreira, Victor Oliveira</i>	
EVALUATION OF NITRATE LAYER BY ELECTRIC DISCHARGE OF QUENCHED AND TEMPERED SAE 52100 STEEL	1673
<i>Oliveira, Steferson Ferreira De; Silva, Ernane Rodrigues Da; Câmara, Marcelo Araújo; Murta, Rafael Moraes Ataíde</i>	
TENSILE STRENGTH EVALUATION IN COMPOSITES WITH POLYESTER MATRIX INCORPORATING WITH NATURAL FABRIC OF MALVA FIBER	1684
<i>Silva, Luís Carlos Da; Moraes, Ygor Macabu De; Ribeiro, Carolina; Souza, Djalma; Lopes, Felipe Perissé Duarte; Margem, Jean Igor; Margem, Frederico Margem Muylaert; Monteiro, Sergio Neves</i>	
INDIVIDUAL BALLISTIC PERFORMANCE OF COMPOSITES REINFORCED WITH SISAL UNDER CALIBER 7.62 MM AMMUNITION	1690
<i>Silva, Luís Carlos Da; Bolzan, Lucas Tedesco; Monteiro, Sérgio Neves</i>	
STUDY OF THE FEASIBILITY OF PRODUCTION OF MODULAR ECOLOGICAL BRICK OF SOIL-CEMENT WITH INCORPORATION OF WASTE OF THE MANUFACTURE OF PAPER	1696
<i>Fernandes Junior, Wellington; Vellasco, Maria Angélica Oliveira; Nunes, Israel Nelo; Alexandre, Jonas; Oliveira, Sergio Rafael Cortes De; Monteiro, Sergio Neves; Azevedo, Afonso Garcez Rangel De</i>	
COMPARATIVE TENSILE TEST ANALYSIS BETWEEN EPOXY COMPOSITES REINFORCED WITH CURAUA FIBER AND FIBERGLASS	1705
<i>Silva, Luís Carlos Da; Lopes, Felipe Perissé Duarte; Vieira, Janaína Da Silva; Margem, Frederico Muylaert; Monteiro, Sergio Neves; Vieira, Carlos Maurício Pontes</i>	
DETECTION OF LOW CARBURIZATION LEVEL IN REFORMER TUBES USING A MAGNETIC SENSOR	1712
<i>Arenas, Mónica P.; Lopez, Juan Esteban Correa; Pacheco, Clara Johana; Almeida, Luiz Henrique De; Eckstein, Carlos Bruno; Nogueira Junior, Laudemiro; Rebello, João Marcos A.; Pereira, Gabriela Ribeiro</i>	
CHARPY AND IZOD IMPACT RESISTENCE IN EPOXY MATRIX COMPOSITES REINFORCED WITH FIQUE FIBERS	1720
<i>Silva, Luís Carlos Da; Teles, Maria Carolina Andrade; Ferreira, Marcos Vinícius Fonseca; Lopes, Felipe Perissé Duarte; Margem, Frederico Muylaert; Monteiro, Sergio Neves</i>	
RADIOGRAPHIC ASSAY OF LAMINATED JOINTS OF POLYMERIC MATERIAL REINFORCED BY GLASS FIBER	1728
<i>Ferreira, Cintia Guimarães; Oliveira, Davi Ferreira De; Lopes, Ricardo Tadeu; Martins, Fabiana Dias Fonseca; Pereira, Gabriela Ribeiro</i>	
RESTORATION OF OBLITERATED MARKS ON METALLIC SAMPLES BY MAGNETO-OPTICAL IMAGING NON-DESTRUCTIVE METHOD	1737
<i>Lima, Mariana Gaudencio Barbosa; Pacheco, Clara Johana; Nóbrega, Maria Cecília De Souza; Pereira, Gabriela Ribeiro</i>	
CHARACTERIZATION OF NANOCOMPOSITES BASED ON BORON CARBIDE PARTICLES DISPERSE INTO THE ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE MATRIX	1747
<i>Ramos, Flávio James Humberto Tommasini Vieira; Júnior, Édio Pereira Lima; Monteiro, Sergio Neves; Gomes, Ataelson Vieira; Silva, Marcelo H Prado Da; Cosenza, Carla S</i>	
REPLACEMENT OF THE COAL PULVERIZATION PLANT BURNER	1755
<i>Ito, Marcelo; Teixeira, Felipe Clemente Motta; Faria, Fernando Maia De; Ruiz, Martin Ignácio; Arantes, Rodrigo De Pádua</i>	
TENSILE RESISTANCE AND FLEXION OF COMPOSITION OF POLYCARBONATE MATRIX REINFORCED WITH NATURAL FIBER FROM SISAL	1768
<i>Simonassi, Noan Tonini; Pereira, Ana Paula; Ramos, Flávio James Humberto Tommasini Vieira; Monteiro, Sergio Neves</i>	
PERFORMANCE EVALUATION IN IZOD IMPACT OF POLYESTER MATRIX COMPOSITES REINFORCED WITH FIQUE FABRIC AND CURAUA NON-WOVEN FABRIC	1774
<i>Simonassi, Noan Tonini; Pereira, Artur Camposo; Filho, Fábio Da Costa Garcia; Monteiro, Sergio Neves</i>	
INFLUENCE OF ULTRAVIOLET RADIATION IN THE MECHANICAL BEHAVIOR OF LAMINATED COMPOUNDS OF LOW-DENSITY POLYETHYLENE (LDPE) CONTAINED BY RESIN BASED ON ETHYLIANO ACRYLATE AND SILICONE	1783
<i>Monsores, Karollyne Gomes De Castro; Silva, Anderson Oliveira Da; Weber, Ricardo Pondé; Figueiredo, André Ben-Hur Da Silva</i>	

SIX SIGMA TO INCREASE PRODUCTIVITY IN MAINTENANCE TEAMS	1795
<i>Souza, André Luis Martins De; Evangelista, Renata Alessandra; Bueno, Alexandre Assis; Miranda, Marcelo De Paole; Silva, Pedro De Freitas; Magalhães, Lucas Oliveira</i>	
ANALYSIS TIME AND TEMPERATURE INFLUENCE IN PROCESS OF RECLINATION AND GROUNDING LEATHER UNS C272000	1807
<i>Ceresani, Sidmar Aparecido; Santos, Givanildo Alves Dos; Nakamoto, Francisco Yastami; Bock, Eduardo Guy Perpétuo</i>	
EVALUATION OF NITRATE LAYER BY ELECTRIC DISCHARGE ON TITANIUM ALLOY Ti6Al4V	1813
<i>Oliveira, Steferson Ferreira De; Murta, Rafael Morais Ataíde; Silva, Ernane Rodrigues Da; Santos, Rogério Felício Dos</i>	
NEW ANTI-OXIDATION TECHNOLOGY FOR TROUGH AND RUNNERS CASTABLES: A SUCCESSFUL SOLUTION AT ARCELOR MITTAL TUBARÃO BLAST-FURNACE #02	1823
<i>Sako, Eric Yoshimitsu; Alves, Wiliam; Rangel, Bruno Gonçalves; Januário, Nilton Fernando Dos Santos; Galesi, Douglas Fernando; Costa, Cláudio Cesar Da; Ruy, Douglas; Fujiwara, Hiroshi</i>	
COMPARISON OF PERMEABILITY IN LIME MORTARS COATED WITH ACRYLIC PAINT AND SOIL BASED PAINT	1832
<i>Mendes, Thainá Silveira Garcia; Lauer, Matheus Tolentino; Mendes, Beatryz Cardoso; Lopes, Márcia Maria Salgado; Ishihara, Marina Keiko; Fassoni, Délio Porto</i>	
TECHNOLOGICAL INDICATORS ON COATINGS FOR METALLIC PIPES USED IN THE PETROCHEMICAL INDUSTRY	1842
<i>Oliveira, Bráulio Salumão De; Milanez, Douglas Henrique; Leiva, Daniel Rodrigo; Filho, Walter José Botta; Kiminami, Claudio Shyinti</i>	
A STUDY OF THE DISSOLUTION OF PRECIPITATES DURING MICROALLOYED STEELS REHEATING USING COMPUTATIONAL THERMODYNAMICS	1852
<i>Borba, Elenice Cavichio; Castro, Cynthia Serra Batista; Escobar, Diana Maria Perez; Murari, Fabio Dian; Mendestaiss, Ed Juarez; Silva, André Luiz Vasconcellos Da Costa E; Andrade, Margareth Spangler</i>	
DEVELOPMENT OF HOT STEEL COIL TO MEET THE REQUIREMENTS OF EN10149-S700 AT ARCELORMITTAL TUBARÃO	1862
<i>Porto, Ricardo; Souza, Marden Valente De; Mohallem, James Albert Dos Santos Soares; Storch, Breno Torezani; Murad, Bruno Bastos Da Silva; Henriques, Bruno Rodrigues; Pereira, Nilvânia Lucelia De Souza</i>	
HYDROGEN EFFECT ON THE MECHANICAL PROPERTIES OF 2,25CR-1MO-0,25V STEEL UNDER DIFFERENT AGING CONDITION	1872
<i>Manosalva, Angela Lorena Cardenas; Silva, Renata Oliveira Da; Eckestein, Carlos Bruno; Santos, Dilson Silva Dos</i>	
HEAT AFFECTED ZONE STUDY OF API 5L X100 STEEL THROUGH COMPUTATIONAL AND THERMAL WELDING SIMULATION	1883
<i>Oliveira, Victor Hugo Pereira Moraes E; Filho, João Da Cruz Payão; Girão, Izabela Ferreira; Ramos, Ismael Ribeiro</i>	
THERMODYNAMICS STUDY OF THE INFLUENCE FROM MN, NB, S AND TI ON HSLA PRECIPITATION	1895
<i>Brites, Joelma Krugel; Martins, João Batista Ribeiro; Miranda, Mariane Gonçalves De; Orlando, Marcos Tadeu D'Azeredo; Vieira, Estéfano Aparecido</i>	
IMPROVEMENT OF THE PERFORMANCE OF STEEL GRADE 1040 FOR THE MANUFACTURE OF REINFORCING BAR	1905
<i>Roman, William Sergio Flores</i>	
MICROSTRUCTURAL EVOLUTION OF A 7474-T7351 ALUMINUM ALLOY SUBMITTED TO A BROADSIDING AND RECRIDALIZED WITH DIFFERENT SOAKING TIMES	1917
<i>Diniz, Saulo Brinco; Cruz, Renato Batista Da; Paula, Andersan Dos Santos; Brandão, Luiz Paulo Mendonça</i>	
APPLICATION OF RESIDUAL STRESS ANALYSIS SOFTWARE ON COLD ROLLED METALLIC SPECIMENS	1928
<i>Lago, Ariel José Assayag Do; Torres, Beatriz Sampaio; Faria, Géssica Seara; Alves, Juciane Maria; Sousa, Talita Gama De; Borges, Hugo Serrão Ribeiro; Reis, Rebeca Pinheiro Dos; Lima, Lucas Alexandre Gonçalves; Brandão, Luiz Paulo Mendonça</i>	
STATIC SOFTENING OF AUSTENIC STAINLESS STEEL N-HIGH ASTM F-1586	1937
<i>Filho, Sebastião Raimundo De Jesus Bélem Leitão; Mesquita, Ramaiany Carneiro; Lopes, Bruno Leonardy; Silva, Eden Santos; Reis, Gedeon Silva; Rodrigues, Cíntia Leite</i>	
ULTRASONIC SIGNAL PROCESSING FOR THE CHARACTERIZATION OF A HEAT RESISTANT AUSTENITIC STEEL THAT PRESENTED DIFFERENTES AGING STATES	1949
<i>Siqueira, Natalie Chaves De; Arenas, Mónica Patrícia; Almeida, Priscila Duarte De; Araújo, Leonardo Sales; Eckstein, Carlos Bruno; Júnior, Laudemiro Nogueira; Almeida, Luiz Henrique De; Pereira, Gabriela Ribeiro</i>	
MICROSTRUCTURE AND MICROHARDNESS OF EUTECTIC AL-SI-NI ALLOY TREATED BY LASER SURFACE REMELTING	1959
<i>Ramos, Lucas Ribeiro; Kakitani, Rafael; Cheung, Noé; Garcia, Amauri</i>	
INFLUENCE OF SAMPLE GEOMETRY ON THE FLC₀ MEASUREMENT FOR THE 90/10 BRASS	1969
<i>Almeida, Leandro De; Moreira, Victor Caso; Andrade, Gustavo Tressia De</i>	
INSPECTION, REPAIR AND FAILURE ANALYSIS IN A HEAT RECOVERY BOILER THAT USE COKE PLANT GAS	1976
<i>Júnior, José Gonçalves Pacheco; Magalhães, Igor Striotto Kramer; Souza, Kallin De; Materna, Fernando Gonçalves; Ferreira, Davi Fernando Soares</i>	
RARE EARTH MAGNETS – THE NEED FOR PROTECTION AGAINST CORROSION	1988
<i>Santos, Célia Aparecida Lino Dos; Panossian, Zehbour</i>	
THERMODYNAMIC EVALUATION OF HIGH ALUMINUM STEELS	2000
<i>Aguiar, Paola Lazari De; Hauengen, Christien Guisard; Pinto, Fábio Lopes; Lins, Márcio Frazão Guimarães; Silva, André Luiz Vasconcellos Da Costa E</i>	
WORKING WITH ANALYTIC TOOL IN THE HOT STRIP MILL	2008
<i>Bragaça, Anderson Esteves; Bragaça, Camila Fernandes Rezende; Cordeiro, Lavínia Misson; Ribeiro, Marcio Adriano Pereira</i>	

EDDY CURRENT AND INSPECTION OF COATINGS FOR STORAGE TANKS	2014
<i>Lima, Marcella Grosso; Pacheco, Clara Johanna; Lima, Andre Henrique Mascarenhas; Correa, Mónica Patricia Arenas; Margarit-Mattos, Isabel Cristina Pereira; Soares, Sergio Damasceno; Pereira, Gabriela Ribeiro</i>	
SERVICE LIFE FOR SEALED SPHERICAL ROLLER BEARINGS	2023
<i>Martelli, Rogerio; Trani, Fabricio Sartori; Paula, Luiz Carlos De; Silva, Bruno Avelino De Souza</i>	
STUDY OF THE CEMENTATION IN A SOLID ENVIRONMENT OF AN AISI 5115 STEEL FOR SUPERFICIAL WEAR RESISTANCE APPLICATIONS	2033
<i>Muniz, Tainan Ferreira; Cheloni, Leticia Maria De Melo Silva; Mendes, Milena Kellen Oliveira</i>	
INFLUENCE OF ENCAPSULANT DISSOLUTION BY ORGANIC SOLVENT ON SILVER LEACHING FROM PHOTOVOLTAIC PANELS	2044
<i>Prado, Pedro Forastieri De Almeida; Tenório, Jorge Alberto Soares; Espinosa, Denise Croce Romano</i>	
STUDY OF THE PRECIPITATES DISSOLUTION DURING THE SLAB REHEATING OF MICROALLOYED STEELS	2056
<i>Castro, Cynthia Serra Batista; Escobar, Diana Pérez; Murari, Fábio Dian; Barbosa, Ronaldo Antônio Neves Marques; Andrade, Margareth Spangler</i>	
EVALUATION OF ANTIBACTERIAL POTENTIAL OF FERRITE NANOPOWDERS CU-AG AGAINST S. AUREUS AND P. AERUGINOSA	2065
<i>Gomes, Gabriel Alves; Aguilera, Leticia Dos Santos; Figueiredo, André Ben-Hur Da Silva; Costa, Gisela Lara Da</i>	
DIDYMIUM OBTAINMENT FROM RARE EARTH OXIDES PRODUCED IN ARAXÁ, BRAZIL	2073
<i>Silva, Andre Luiz Nunes Da; Neto, João Batista Ferreira; Landgraf, Fernando José Gomes; Ett, Gerhard; Santos, Celia Aparecida Lino Dos; Silveira, João Ricardo Filipini Da; Vieira, Fabiana Yamasaki Martins; Luz, Maciel Dos Santos</i>	
STUDY OF MECHANISMS AND PREVENTIVE MEASUREMENTS OF STAIN FORMATION IN GALVANIZED STEELS	2086
<i>Pimenta, Egnalda Pereira Da Silva; Guimarães, Juliana Porto; Andrade, Rodrigo Luiz; Dornelas De</i>	
FAILURE ANALYSIS OF ROTARY KILN'S TERTIARY AIR DUCTS	2098
<i>Thomazi, Cleber Caetano; Brant, Yuri Castilho Caldeira; Bailona, Baltazar Agenor; Ito, Hamilton Lelis; Neto, Osvaldo Da Silva</i>	
INSPECTION OF GFRP ADHESIVE JOINTS BY ULTRASONIC TESTING AND 3D MICROTOMOGRAPHY	2110
<i>Fontes, Ariella Vianna; Almeida, Priscila Duarte De; Soares, Sergio Damasceno; Pereira, Gabriela Ribeiro</i>	
DEVELOPMENT OF ULTRA-HIGH STRENGTH STEEL OF 1180 MPA CLASS FOR APPLICATION IN THE AUTOMOTIVE INDUSTRY	2118
<i>Arruda, Marcus Vinicius Pereira; Pereira, João Francisco Batista; Rodrigues, Paulo José Duarte</i>	

VOLUME 4

INTEGRATED PROCESS AND PRODUCT CONTROL FOR QUALITY MANAGEMENT IN THE HOT ROLLING AT VOTORANTIM	2129
<i>Ferreira, Izabelle Lannes Salgueiro; Souza, Raphael Barbosa De; Silva, José Carlos Da; Freitas, Gabrielle Cristine Lemos Duarte</i>	
MICROSTRUCTURE AND MECHANICAL PROPERTIES OF FRICTION STIR WELDED 8 MM PIPE SAF 2507 SDSS	2140
<i>Giorjão, Rafael Arthur Reghini; Pereira, Victor Ferrinho; Terada, Maysa; Fonseca, Eduardo Bertoni Da; Marinho, Ricardo Reppold; Garcia, Diego Martins; Tschiptschin, André Paulo</i>	
STRUCTURAL AND THERMOPHYSIC STUDY OF A NITI ALLOY SUBMITTED TO DISTINCT SOLUTION HEAT TREATMENTS	2152
<i>Rodrigues, Patricia Freitas; Fernandes, Francisco Manuel Braz; Paula, Andersan Dos Santos; Ribeiro, Shimeni Baptista; Teixeira, Edir Neves; Diniz, Saulo Brinco</i>	
PRODUCTION OF CELLULOSE NANOPARTICLES BY ACID HIDROLYSIS FROM LONG BAMBOO FIBERS	2162
<i>Araujo, Jônatas Targino; Amorim, Laudenor; Deus, Enio Pontes De; Melo, Santino Loruán Silvestre De</i>	
MECHANICAL PROPERTIES OF WELDED JOINT OBTAINED BY HYBRID LASER-GMAW PROCESS	2169
<i>Corrêa, Fernando Antônio; Costa, Jeferson Frederico Monteiro; Jorge, Jorge Carlos Ferreira; Souza, Luís Felipe Guimarães De</i>	
EVALUATION OF SUPERELASTICITY IN NI-RICH NITI ALLOYS WITH THERMAL PRE-CYCLING BY INSTRUMENTED ULTRAMICROHARDNESS ANALYSIS	2179
<i>Teixeira, Rodolfo Da Silva; Diniz, Saulo Brinco; Silva, Carolline Serafim Da; Gurgel, Mônica Aline Magalhães; Paula, Andersan Dos Santos; Rodrigues, Patricia Freitas; Fernandes, Francisco Manuel Braz</i>	
CHARACTERIZATION OF THE SOLID WASTE ORIGINATED FROM THE BENEFICIATION PLANT OF SCRAP METAL USED IN STEEL PRODUCTION	2188
<i>Siviero, Ana Flávia Tardin; Galuppo, Mariana Vilela; Marcellino, Matheus Moraes Assumpção; Magalhães, Diego Corrêa; Pereira, Livia Gomes; Guimarães, Damaris</i>	
MATERIALS SELECTION FOR MANUFACTURING AERONAUTICAL COMPONENTS IN COMPOSITES INTEGRATING ENVIRONMENTAL AND ECONOMIC ISSUES	2200
<i>Oliveira, Bráulio Salumão De; Santos, Celise Villa Dos; Leiva, Daniel Rodrigo; Faria, Leandro Innocentini Lopes De; Gregolin, José Angelo Rodrigues</i>	
TRANSIENT THREE-DIMENSIONAL MATHEMATICAL MODELING OF ARC WELDING	2212
<i>Alves, João Lucas Lautenschlager Cortez; Martorano, Marcelo De Aquino</i>	
FERRITE CONTENT METER ANALYSIS FOR DELTA FERRITE EVALUATION ON SUPERDUPLEX STAINLESS STEEL	2223
<i>Camerini, Cesar Giron; Silva, Vitor Manoel De Araújo; Soares, Iane De Araújo; Santos, Rafael Wagner Florêncio Dos; Ramos, Julio Endress; Santos, João Marcio De Castilho; Pereira, Gabriela Ribeiro</i>	

INFLUENCE OF MOLAR ACTIVATION SOLUTION CONCENTRATION AND ACTIVATOR/PRECURSOR RATIO ON COMPRESSIVE STRENGTH OF GEOPOLYMERIC MORTARS	2234
<i>Rangel, Greisson Peixoto; Dias, Dylmar Penteado; Oliveira, Alexandre Magno Alves De; Azevedo, Afonso Rangel Garcez; Monteiro, Sergio Neves; Marvillar, Markssuel Teixeira</i>	
IMPLEMENTATION OF THE FAST TRACK CONCEPT IN A HEAVY HAUL RAILROAD	2240
<i>Silva, Breno Delgado; Castro, Gustavo Barros; Castro, Thiago Nunes De; Santos, J3sus Jonatan Souza; Oliveira, Breno Carvalho De; Matos, Lucio Fl3vio Drummond; Leal, Vinicius De Alvarenga</i>	
EFFECTS OF LOADING ON THE SATURATION CRACK LENGTH OF COMPRESSIVE PRECRACKED SPECIMENS OF API 5L X60 STEEL	2253
<i>Santos, Thinnie Hahn Dos; Kwietniewski, Carlos Eduardo Fortis; Rigoni, R3mulo F. Guerra</i>	
INFLUENCE OF MICROSTRUCTURE OF C-MN STEELS ON THE ULTRASONIC VELOCITY	2266
<i>Rivelli, Bruna Fernandes; Dias, Ana Cl3udia Azevedo; Costa Junior, Elexander Da; Ferreira, Carlos Roberto; Marques, Fagner De Paula; Trindade, Vicente Braz</i>	
DETERMINATION OF TECHNOLOGICAL PROPERTIES OF RED CERAMICS FIRED AT 850°C FOR THE PRODUCTION OF BRICKS	2273
<i>Candido, Ver3nica Scarpini; Racanelli, Leda De Azevedo; Souza, Jos3 Ant3nio Da Silva; Silva, Alisson Clay Rios Da; Monteiro, S3rgio Neves</i>	
COPPER-GRAPHENE COMPOSITES PRODUCED BY COLD DIE COMPACTATION OF POWDER METALLURGY	2278
<i>Faria, G3ssica Seara; Lima, Andreza Menezes; Pinheiro, Wagner Anacleto; Ribeiro, Alexandre Antunes; Brand3o, Lu3z Paulo Mendon3a</i>	
STUDY OF THE EFFECT OF HEAT TREATMENT ON THE HARDENING COEFFICIENT OF AL-0,05% CU- [0,35-0,45]% FE - 0,15% ZR ALLOY	2286
<i>Cardoso, Marcos Felipe Mac3do; Fernandes, Everaldo Afonso; Quaresma, Jos3 Maria Do Vale; Rodrigues, Anna Marcia Rocha; Prazeres, Emerson Rodrigues; Sousa, Carlos Alexandre Cavalcante De</i>	
STUDY OF CAPILLARITY FOR MULTIPLE-USE MORTARS	2297
<i>Marvila, Markssuel Teixeira; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Zanelato, Euz3bio Bernab3; Monteiro, Sergio Neves; Delaqua, Geovana Carla Giron3i; Amaral, Lucas Fonseca</i>	
STRUCTURAL EVALUATION OF NI-RICH NITI ALLOY REMELTED BY VAR PROCESS AND SOLIDIFIED IN COPPER CRUCIBLE	2304
<i>Santos, Fabiana Da Silva; Paula, Andersan Dos Santos; Rodrigues, Patr3cia Freitas; Fernandes, Francisco Manuel Braz; Ribeiro, Shimeni Baptista; Teixeira, Edir Neves</i>	
ESTIMATION OF G PHASE FORMATION IN HP STEEL VIA COMPUTATIONAL THERMODYNAMICS	2316
<i>Lima, Renato Affonso De; Mendes, Matheus Campolina; Nascimento, Mario Lu3z Cruz; Lima, Lu3z Gustavo Oliveira; Araujo, Leonardo Sales; Almeida, Lu3z Henrique De</i>	
EFFECT OF THE SOLIDIFICATION PATH ON THE MICROSTRUTURE AND (TL,NB)(C,N) PRECIPITATION ON A HTP WITH LOW MN HIGH NB STEEL	2323
<i>Escobar, Diana P3rez; Castro, Cynthia Serra Batista; Borba, Elenice Cavichioli; Oliveira, Alisson Paulo De; Camei, Kenji; Taiss, Ed Juarez Mendes; Silva, Andr3 Lu3z Vasconcellos Da Costa E; Andrade, Margareth Spangler</i>	
CORROSIVE BEHAVIOR OF MAGNESIUM ALLOYS ZK30 AND ZK60 IN SBF KOKUBO	2335
<i>Agostini, Tobias Bertoldi; Rodrigues, Joel Da Silva; Malfatti, C3lia De Fraga</i>	
PRODUCTION AND CHARACTERIZATION OF BIOFILMS OF SWEET POTATO STARCH AND GLOVER PLASTICATED WITH GLICEROL AND SORBITOL	2342
<i>Lopes, J3ssica Sobrinho; Lima, Ana Carolina Dos Reis; Souza, Brenda Samira Guimar3es De; Silva, H3rita Da Silva; Toro, Maricely Janette Uria; Silva, Simone Yasue Simote</i>	
EVALUATION OF CHARPY IMPACT RESISTANCE OF EPOXY COMPOSITES REINFORCED WITH HYBRID BLANKET OF MALVA AND JUTE	2353
<i>Vieira, Janaina Da Silva; Moraes, Ygorygor Macab3 De; Souza, Djalma; Monteiro, Sergio Neves; Margem, Jean Igor; Lopes, Felipe Periss3 Duarte; Barcelos, Mariana; Gl3ria, Gabriel; Ribeiro, Edson</i>	
PRODUCTION AND CHARACTERIZATION OF CU/NBTI MICROCOSPOSITE	2360
<i>Sousa, Talita Gama De; Brand3o, Lu3z Paulo Mendon3a; Corr3a, Vivian Reis</i>	
QUALITATIVE ANALYSIS OF THE CHLORINE PATH THROUGH ELECTRIC STEELMAKING PROCESS AND ITS DISTRIBUTION IN EMISSIONS AND EAF DUST	2368
<i>Buzin, Pedro Jorge Walburga Keglevich De; Heck, Nestor Cezar; Vilela, Ant3nio Cezar Faria</i>	
ANALYSIS OF THE INFLUENCE OF CONCRETE IN THE PROCESS OF ZAR 280 STEEL INDUCTION CORROSION	2380
<i>Andrade, Talita Julha Pereira De; Dias, Lucas Barcelos; Melo, Gabriel Burlandy Mota De; Arantes, Mariana Matos; Carvalho, Daniele Gomes</i>	
SCRAP SAMPLING AND THE CHLORINE EXISTING IN ORGANIC CONTAMINANTS	2390
<i>Buzin, Pedro Jorge Walburga Keglevich De; Tubino, Rejane Maria Candiota; Heck, Nestor Cezar; Vilela, Ant3nio Cezar Faria</i>	
OSB PANELS PRODUCED THROUGH THE ADDITION OF BABAÇU COCONUT FIBERS	2400
<i>Dias, Lucas Barcelos; Andrade, Talita Julha Pereira; Rocha, Laysa Sousa; Arantes, Mariana Matos; Schueler, Maria Vanessa Egger; Nascimento, Alexandre Miguel Do; Carvalho, Daniele Gomes</i>	
MICROSTRUCTURE AND HARDNESS OF LOW CARBON STEEL WITH HIGH MANGANESE (27% P) ROLLED	2408
<i>Lima, Marcos Natan Da Silva; Maia, Pedro Paulo Nunes; Abreu, Hamilton Ferreira Gomes De</i>	
INFLUENCE OF PROCESS VARIABLES ON MACRO DEFECTS FORMATION DURING THE FRICTION STIR PROCESSING	2416
<i>Silva, Angelo Siqueira Da; Dintz, Saulo Brinco; Casanova, Andrey De Mortes Barcelos; Paula, Andersan Dos Santos; Brand3o, Lu3z Paulo Mendon3a</i>	

MAINTENANCE PLANNING OF RAILWAY ASSETS VIA SOLUTION OF THE MULTIOBJECTIVE TRAVELING TRADER PROBLEM	2428
<i>Oliveira, Breno Carvalho De; Almeida, Clayton Guimarães De; Santos, Jesus Jonatan Souza; Castro, Gustavo Barros; Silva, Breno Delgado; Carrano, Eduardo Gontijo</i>	
IMPLEMENTATION OF THE PROJECT MANAGEMENT OFFICE AS AN INTEGRATED MANAGEMENT STRATEGY IN THE MINES OF THE DIRETORIA DE FERROSOS SUDESTE	2438
<i>Borba, Marcio José Campos; Vieira, Erton Andrade; Silva, Fábio Lucas; Mendes, João Marcelo Tarbes Vianna; Assis, Thales Vinicius Gomes De; Costa, Ana Paula De Paiva; Furtado, Andrea De Oliveira; Costa Junior, Efigenio Rodrigues Da</i>	
EVALUATION OF CORROSION RESISTANCE OF HIGH MANGANESE STEELS AND 9% NICKEL STEEL IN SOLUTION OF NACL	2447
<i>Lima, Marcos Natan Da Silva; Florez, Mauro Andres Cerra; Maia, Pedro Paulo Nunes; Araújo, Walney Silva; Abreu, Hamilton Ferreira Gomes De</i>	
COPPER THIN FILMS OBTAINED BY CATHODIC CAGE: ANALYSIS OF PLASMA CONFINEMENT BY INCREASING THE THICKNESS OF THE CAGE LID AND THE DEPOSITION PARAMETERS	2457
<i>Fernandes, Fernanda De Melo; Costa, Thércio Henrique De Carvalho; Sousa, Rômulo Ribeiro Magalhães De; Feitor, Michelle Cequeira; Filho, Edgley De Almeida Rocha; Souza, Ivan Alves De</i>	
MAGNESIUM FOAM: EVALUATION OF RELATIVE DENSITY OF COMPACT SPECIMENS OBTAINED FROM UNIAXIAL PRESSURE OF AZ91 MAGNESIUM ALLOY POWDERS MIXED WITH TITANIUM HYDRIDE	2466
<i>Souza, Lucas Xavier Soares De; Esteves, Cristina Aparecida; Silva, Sidney Nicodemos Da; Pinheiro, Ivete Peixoto</i>	
STRUCTURAL AND THERMOPHYSICAL CHARACTERIZATION OF NITI SHAPE MEMORY ALLOYS WIRES	2477
<i>Gurgel, Mônica Aline Magalhães; Pelegrini, Paulo Vinicius; Asakawa, Guilherme Nagatoshi; Paula, Andersan Dos Santos; Gomes, Alaelson Viera; Rodrigues, Patrícia Freitas; Fernandes, Francisco Manuel Braz; Ribeiro, Shimeni Baptista; Teixeira, Edir Neves</i>	
STUDY OF THE VARIATION OF THE CTWD AND WELDING ANGLE IN PULSED CURRENT, CONVENTIONAL SHORT CIRCUIT AND CONTROLLED SHORT CIRCUIT IN MIG / MAG WELDING	2489
<i>Castro, Jamil Nobre De; Pinheiro, Bruno Ribeiro; Motta, Marcelo Ferreira</i>	
IZOD IMPACT TESTS IN EPOXI MATRIX COMPOSITES REINFORCED WITH FIQUE FABRIC	2501
<i>Ferreira, Marcos Vinicius Fonseca; Teles, Maria Carolina Andrade; Fernandes, Gilson Vieira; Margem, Frederico Muylaert; Monteiro, Sergio Neves; Lopes, Felipe Perissé Duarte</i>	
THERMODYNAMIC AND EXPERIMENTAL ANALYSIS OF THE SIGMA PHASE TRAINING IN A STAINLESS STEEL DUPLEX SAF 2205	2508
<i>Silva, Ana Carolina Martins; Fonseca, Gláucio Soares Da; Silva, Fabiane Roberta Freitas Da; Assis, Wesley Luiz Da Silva</i>	
THERMAL RESIDUAL STRESS RELAXATION ANALYSIS OF SAE 4140 STEEL BY FAST IN-SITU X-RAY DIFFRACTION	2517
<i>Bielefeldt, Rayane Sonda Cassel; Diehl, Igor Luis; Clarke, Thomas Gabriel Rosauro</i>	
MECHANICAL BEHAVIOR OF PRECIPITATES IN HIP IMPLANTS MANUFACTURED IN UNS S31675 STAINLESS STEEL	2531
<i>Santos, Claudio Teodoro Dos; Abud, Ibrahim De Cerqueira; Monteiro, Maurício De Jesus; Medina, Jorge Arturo Himostroza; Fernandes, Wellington Gilbert; Caminha, Ieda Maria Vieira</i>	
IMPACT RESISTANCE OF EPOXYDIC COMPOSITES REINFORCED WITH RAMI FABRIC UNDER VACUUM	2541
<i>Oliveira, Caroline Gomes De; Deus, Janine Feitosa De; Lopes, Felipe Perissé Duarte; Margem, Frederico Muylaert; Monteiro, Sérgio Neves; Pontes, Lucas De Almeida</i>	
IMPLEMENTATION OF THE RELIABILITY MANAGEMENT SYSTEM - FBOX	2548
<i>Oliveira, Breno Carvalho De; Almeida, Clayton Guimarães De; Santos, Jesus Jonatan Souza; Castro, Gustavo Barros; Lima, Gustavo Elói De Sá; Silva, Breno Delgado; Costa, Marx Mendes Da</i>	
WORK HARDENING MECHANISM OF DUPLEX STAINLESS STEEL UNS S32205 SUBMITTED TO WARM ROLLING AND ANNEALING	2558
<i>Dias, Carolina Arriel Pedroso; Ferreira, Aline Oliveira Vasconcelos; Alves, Davi Silva; Carvalho, Marcela Romano Ramos De; Faria, João Paulo Salles Gouvêa; Santos, Dagoberto Brandão</i>	
STUDY OF THE PHYSICAL-MECHANICAL PROPERTIES OF CERAMIC MASS INCORPORATED WITH GROG	2570
<i>Oliveira, Alexandre Magno Alves De; Pessanha, Luis Sergio Peixoto; Fernandes Junior, Wellington; Nunes, Israel Nelo; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez De; Monteiro, Sergio Neves</i>	
COMPUTATIONAL SIMULATION OF PHASE TRANSFORMATION FROM REAL MICROGRAPHS	2580
<i>Moreira Junior, Eneas Pacheco; Santos, Júlia Mendes Dos; Assis, Wesley Luiz Da Silva; Schwan, Yuri Duarte; Santos, Vanessa Aparecida De Toledo; Siqueira, Felipe Da Silva; Costa, Marcos Felipe Braga Da; Fonseca, Guilherme Dias Da</i>	
AUSTEMPERING PROCESS DEVELOPED FROM CSN 22MNB5 STEEL	2590
<i>Almeida, Bruna Silva De; Silva, Melina Gamis Da; Focosi, Thiago; Gianini Junior, Carlos Roberto; Carvalho, Carlos Roberto Guinancio; Santos Jr, Barlan Antônio Dos; Donato, Marcos Fernando Affonso De</i>	
EVALUATION OF SPECTROSCOPIC CHARACTERISTICS OF BAMBOO FIBERS AFTER SUPERFICIAL MODIFICATION	2602
<i>Lima, Eric Fortunato Soares; Costa, Milene Muniz Eloy Da; Melo, Santino Loruan Silvestre De; Deus, Enio Pontes De</i>	
CHARACTERIZATION OF A POLYCRISTALINE MICROSTRUCTURE VIA MICROSTRUCTURAL DESCRIPTORS OBTAINED BY SIMULATION	2607
<i>Fonseca, Guilherme Dias Da; Siqueira, Felipe Da Silva; Clemente, Beatriz Lemos; Costa, Marcos Felipe Braga Da; Alves, André Luis Moraes; Assis, Wesley Luiz Da Silva; Rios, Paulo Rangel; Santos, Júlia Mendes Dos; Moreira Junior, Eneas Pacheco</i>	

INFLUENCE OF SALT TYPE AND CONCENTRATION ON CORROSIVE PROPERTIES OF COMPLETING FLUIDS.....	2618
<i>Costa, Ycaro Jorge Maia Da; Barbosa, Guilherme Maciel; Fagundes, Keila Regina Santana; Santiago, Rodrigo Cesar; Cunha, Jardel Dantas Da; Silva, Geclio Pereira Da</i>	
CORROSION EVALUATION ALLOY TI-35NB-XTA IN SBF SOLUTION BEFORE AND AFTER ANODIZATION	2626
<i>Lima, Thamyres Moura; Matos, Gustavo Reis Leite; Macedo, Michelle Cardinale Souza Silva; Souza, Sandra Andreia Stewart De Araujo; Fernandes, Reinan Tiago</i>	
BENDING RESISTANCE OF EPOXY COMPOSITES REINFORCED WITH RAMI FABRIC UNDER VACUUM CONDITIONS	2632
<i>Deus, Janine Feitosa De; Oliveira, Caroline Gomes De; Pontes, Lucas De Almeida; Rodriguez, Rubén Jesus Sanchez; Margem, Frederico Mulyaert; Monteiro, Sérgio Neves; Lopes, Felipe Perissé Duarte;</i>	
SEMIPOROUS CERAMIC COATINGS OBTAINED WITH ADDITION OF PHONOLITES IN CAULINIQUE ARGYLUS PASTS	2640
<i>Marvila, Markssuel Teixeira; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Zanelato, Euzébio Bernabé; Monteiro, Sergio Neves; Xavier, Gustavo Castro; Rangel, Greisson Peixoto</i>	
TENSILE PROPERTIES OF POLYESTER COMPOSITES REINFORCED WITH CONTINUOUS SISAL, BAMBOO AND MALVA FIBERS	2648
<i>Margem, Jean Igor; Margem, Marina Rangel; Moraes, Ygor Macabu De; Margem, Frederico Mulyaert; Monteiro, Sergio Neves</i>	
WEIBULL STATISTICAL DISTRIBUTION APPLIED TO COMPOSITES OF RECYCLED POLYETHYLENE AND SISAL FIBER.....	2656
<i>Andrade, Leonardo Carneiro; Melo, Santino Loruán Silvestre De; Amorim, Laudenor; Deus, Enio Pontes De</i>	
MAGNETIC CHARACTERIZATION FROM THE EFFECTS OF DEFORMATION ON STRUCTURAL STEELS USING THE MODIFIED TECHNIQUE BITTER.....	2664
<i>Silva, Lucas Kling E; Pereira, Gabriela Ribeiro; Jardim, Paula Mendes; Sonntag, Nadja; Skrotzki, Birgit</i>	
MECHANICAL BEHAVIOR OF PORTLAND CEMENT MORTARS WITH CHEMICALLY MODIFIED SISAL FIBERS IN THEIR COMPOSITIONS.....	2675
<i>Tolentino, Evandro; Campos, Lucas Almeida; Oliveira, Fernando Castro De</i>	
EFFECT OF DIFFERENTS WELDINGS PROCESS IN API X52 STEEL MICROSTRUCTURE.....	2683
<i>Barros, Rômulo Mendes De; Vasconcellos, Maurício Dos Santos; Osório, Monique; Fonseca, Leonardo Bruno Da; Santana, Ana Isabel De Carvalho; Pinto, Wilma Clemente De Lima</i>	
COMPARISON BETWEEN CERAMIC BLOCKS PRODUCED IN HOFFMAN AND CAIEIRA OVENS.....	2688
<i>Zanelato, Euzébio Bernabé; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Cerqueira, Niander Aguiar; Xavier, Gustavo De Castro</i>	
COST ANALYSIS USING NON-STANDARDIZED CERAMIC BLOCKS	2695
<i>Azevedo, Afonso Rangel Garcez De; Alexandre, Jonas; Zanelato, Euzébio Bernabé; Marvila, Markssuel Texeira; Monteiro, Sergio Neves; Xavier, Gustavo De Castro; Antunes, Maria Lúcia Pereira; França, Bruno Rangel; Fernandes Junior, Wellington</i>	
ANALYSIS OF THE EFFECT OF TEMPERATURE ON HOT TENSILE TESTING IN NITI ALLOY	2701
<i>Santos, Luiz Alberto Dos; Reis, Danieli Aparecida Pereira; Otubo, Jorge</i>	
APPLICATION OF STEEL IN BUILDINGS IN ARCELORMITTAL TUBARÃO - MAIN ADVANTAGES IN RELATION REINFORCED CONCRETE.....	2710
<i>Curcio, Fernanda Simões Ribeiro; Pereira, Luiz Claudio Thiebaut; Pinto, Salustiano</i>	
PULLOUT TESTS IN POLYESTER MATRIX COMPOSITES WITH PALF FIBER	2715
<i>Glória, Gabriel Oliveira; Teles, Maria Carolina Andrade; Lopes, Felipe Perissé Duarte; Gomes, Maycon De Almeida; Margem, Frederico Mulyaert; Vieira, Carlos Maurício Fontes; Monteiro, Sergio Neves; Margem, Jean Igor</i>	
COMPARISON OF HV PROPERTY BETWEEN CONVENTIONAL ROLLING SAMPLES AND ASYMMETRICAL ROLLING	2720
<i>Casanova, Andrey De Moraes Barcelos; Diniz, Saulo Brinco; Silva, Carolline Serafim Da; Souza, Talita Gama De; Brandão, Luiz Paulo Mendonça; Paula, Andersan Dos Santos</i>	
STUDY OF ANISOTROPY OF 718 NICKEL-BASED SUPERALLOY	2729
<i>Terra, Bráulio Pinto; Oliveira, Renata Nunes; Mendes, Matheus Campolina; Araújo, Leonardo Sales</i>	
EVALUATION OF THE INCORPORATION OF PAPER RESIDUE IN CERAMIC TILES	2739
<i>Zanelato, Euzébio Bernabé; Alexandre, Jonas; Azevedo, Afonso Rangel Garcez; Marvila, Markssuel Teixeira; Monteiro, Sergio Neves; Xavier, Gustavo De Castro; Petrucci, Lúcio José Terra</i>	
PLAN OF RELUBRICATION OF A LINE OF COLD LAMINATION	2746
<i>Sousa, Alan De; Ataíde, Antônio Carlos; Marques, Alysson Patrick Menezes</i>	
EFFECT OF MULTIPLE CICLES OF SUB-SOLVUS DELTA SOLUTION ANNEALING AND AGING ON THE MICROSTRUCTURE AND MECHANICAL PROPERTIES OF ALLOY 718	2757
<i>Guimarães, Alessandra Vieira; Medeiros, Melânea Almeida Ramalho; Oliveira, Alexandre De; Junior, Adeir; Mendes, Matheus Campolina; Araujo, Leonardo Sales</i>	
EVALUATION OF IZOD IMPACT RESISTANCE OF EPOXY COMPOSITES REINFORCED WITH HYBRID BLANKET OF MALVA AND JUTE.....	2765
<i>Vieira, Janaina Da Silva; Moraes, Ygor Macabú De; Barcelos, Mariana; Lopes, Felipe Perissé Duarte; Souza, Djalma; Glória, Gabriel; Monteiro, Sergio Neves; Ribeiro, Edson; Margem, Jean Igor</i>	
COMPOSITES REINFORCED WITH LONG BAMBOO FIBERS: SUPERFICIAL MODIFICATION AND MECHANICAL ANALYSIS	2770
<i>Sousa, Ana Beatriz Ferreira; Melo, Santido Loruán Silvestre; Amorim, Laudenor; Deus, Enio Pontes De</i>	
INFLUENCE OF CHROMIUM AND NIOBIUM IN PERFORMANCE ON ABRASIVE WEAR IN HARD COATINGS.....	2779
<i>Santana, Bráulio Campagnaro</i>	

MICROSTRUCTURAL CHARACTERIZATION OF THE OXIDE LAYER PRESENT ON EXTERNAL SURFACE FROM REFORMER TUBES IN FUNCTION OF THE AGING STATE	2791
<i>Silveira, Rosa Maria Sales Da; Almeida, Luiz Henrique De; Rocha, Adriana Da Cunha; Araujo, Leonardo Sales; Eckstein, Carlos Bruno; Nogueira Júnior, Laudemiro</i>	
STRUCTURAL CHARACTERIZATION OF AUSTENITIC STAINLESS STEEL SUSCEPTIBLE TO TRIP EFFECT WHEN SUBJECT TO SMALL DEGREES OF REDUCTION VIA ASYMMETRIC ROLLING	2800
<i>Gurgel, Mônica Aline Magalhães; Balthazar, Lucas Barbosa; Silva, Carolline Serafim Da; Diniz, Saulo Brinco; Gomes, Alaelson Viera; Paula, Anderson Dos Santos; Brandão, Luiz Paulo Mendonça</i>	
CHARACTERIZATION OF MEMORY BOARDS OF OBSOLETE COMPUTERS FOR THE RECOVERY OF SILVER BY MEANS OF NANOPARTICLES	2813
<i>Caldas, Marcos Paulo Kohler; Carvalho, Mariana Alves De; Moraes, Viviane Tavares De; Tenório, Jorge Alberto Soares; Espinosa, Denise Croce Romano</i>	
CHARACTERIZATION OF FILM AFTER IMMERSION TEST IN INDUSTRIAL WHITE LIQUOR	2821
<i>Esteves, Luiza; Garcia, João Henrique Nery; Gastelois, Pedro Lana; Macedo, Waldemar Augusto De Almeida; Campos, Wagner Reis Da Costa; Lins, Vanessa Freitas Cunha</i>	
ELECTRICAL, MECHANICAL AND THERMORESISTIVE CHARACTERIZATION OF A AL-0,05%CU-0,40%FE-0,30%SI-0,22%ZR	2831
<i>Sousa, Carlos Alexandre Cavalcante De; Miranda, Gregory De Oliveira; Rebelo, Gustavo Neves; Melor, Victor Lima; Conceição, Daniel Cavalcante Da; Quaresma, José Maria Do Vale</i>	

VOLUME 5

STUDY OF THE EFFECT OF HEAT TREATMENT IN MICROSTRUCTURE AND MICROHADENESS A MICROALLOYED STEEL	2841
<i>Loiola, Bruna Helena Malovini; Fortunato, Luciano Venturini; Brites, Joelma Krugel; Martins, João Batista Ribeiro; Filho, André Itman</i>	
UTILIZATION OF QUALITY TOOLS TO CONTROL IN THE PRE-TREATMENT AND ANTIOXIDATION PROCESS AUTOMOTIVE BODY	2848
<i>Garcia, Thaís Da Silva Leite; Amorim, Amanda Miller; Batista, Mariana Gomes; Coelho, Thaiza Regina Ferreira</i>	
IMPACT CHARPY TEST IN EPOXY MATRIX REINFORCED WITH FIQUE FABRIC	2859
<i>Teles, Maria Carolina Andrade; Monteiro, Sérgio Neves; Lopes, Felipe Perissé Duarte; Souza, Djalma; Ferreira, Marcos Vinícius Fonseca</i>	
MECHANICAL PROPERTIES AND MICROSTRUCTURE OF A HSLA-80 STEEL WELDED BY SMAW AND HEAT TREATED	2866
<i>Jorge, Leandro De Jesus; Cândido, Verônica Scarpini; Luz, Fernanda Santos Da; Monteiro, Sergio Neves; Silva, Alisson Clay Rios Da</i>	
HOMOGENIZATION ANALYSIS FROM NIOBIUM IN THE ALUMINIUM ALLOY THROUGH THE FORGING CAUSED FOR THE FRICTION STIR WELDING PROCESS	2875
<i>Boas, Gabriel Pessoa Vilas; Assunção, Paulo D'Angelo Costa; Cardoso, Ivone Thatianne De Abreu Dos Passos; Portal, Paulo Sérgio Da Silva; Silva, Elenildo Barros Da</i>	
MECHANICAL AND MICROSTRUCTURAL CHARACTERIZATION OF GEOPOLYMERIC CONCRETE SUBJECTED TO FATIGUE	2886
<i>Cândido, Verônica Scarpini; Silva, Alisson Clay Rios Da; Luz, Fernanda Santos Da; Monteiro, Sergio Neves</i>	
EVALUATION OF THE COOLING SPEED ON THE MICROSTRUCTURE AND CORROSION RESISTANCE OF A DUPLEX STEEL	2895
<i>Vasconcelos, Maurício Dos Santos; Barros, Rômulo Mendes De; Marinho, Gabrielle Laut Lopes; Osório, Monique; Freire, Mônica Silva Araújo; Pinto, Wilma Clemente De Lima; Santana, Ana Isabel De Carvalho</i>	
STUDY ON THE EFFECTS OF TiO₂ NANOMATERIALS WITH 1D MORPHOLOGY ON THE HYDROGEN SORPTION KINETICS OF MGH₂	2902
<i>Pereira, Anderson De Farias; Paciornik, Sidnei; Santos, Dilson Silva Dos; Jardim, Paula Mendes</i>	
STUDY OF THE EFFECT OF DEFORMABILITY IN THE LEAGUE AL-0.05% CU- [0.35-0.45] % FE-0.22% ZR IN PLATE FORMAT	2911
<i>Fernandes, Everaldo Afonso; Oliveira, Daniel Rodrigues; Silva, Raelly Laurinda Araújo Da; Santos, Carlos Vinícius De Paes; Silva, Fabrício Paiva Da; Quaresma, José Maria Do Vale</i>	
ABSORPTION CAPACITY OF PB²⁺ IN CHITOSAN COATED CLAY MINERAL FROM PARÁ SOUTHWESTERN REGION	2921
<i>Lima, Ana Carolina Dos Reis; Reis, Aristides Anderson Pereira; Toro2, Maricely Janette Uria; Lopes, Jéssica Sobrinho</i>	
EVALUATION OF STRENGTH MECHANICAL COMPRESSION OF COKE	2929
<i>Oliveira, Iara Patricia Vieira De; Silva, Guilherme Liziero Ruggio Da; Moura, Lorena Cristina Amorim; Assis, Paulo Santos</i>	
SOAKING CONDITION EFFECT ON THE ANNEALING OF A 7475-T7351 ALUMINUM ALLOY ROLLED AT ROOM TEMPERATURE	2941
<i>Diniz, Saulo Brinco; Casanova, Andrey De Moraes Barcelos; Paula, Anderson Dos Santos; Brandão, Luiz Paulo Mendonça</i>	
SEALED SPHERICAL ROLLER BEARINGS SHOWS EXCELLENT RESULTS WHEN APPLIED IN CONVEYORS	2950
<i>Martelli, Rogerio; Martinez, Roberto</i>	
REFRACTORY FOR STEEL LADLE: A HOLISTIC VIEW	2962
<i>Magalhães, Roselaine Gonçalves; Quintela, Marco Antônio; Caldeira, João Augusto Dolabela; Rodrigues, José De Anchieta; Pandolfelli, Victor Carlos</i>	

IZOD IMPACT TESTS OF POLYESTER MATRIX COMPOSITES REFORCED WITH HEMP FIBERS	2977
<i>Mantovani, Dhyemila De Paula; Vieira, Janaina Da Silva; Neves, Anna Carolina Cerqueira; Pontes, Lucas De Almeida; Rohen, Lázaro Araújo; Margem, Frederico Muylaert; Lopes, Felipe Perissé Duarte; Vieira, Carlos Mauricio Fontes; Monteiro, Sergio Neves</i>	
DETERMINATION OF KINETIC PARAMETERS OF EPOXY COMPOSITE REINFORCED WITH 20% VOL. OF MALVA FIBERS	2985
<i>Nascimento, Lucio Fabio Cassiano; Louro, Luis Henrique Leme; Monteiro, Sérgio Neves; Santos, Jheison Lopes Dos; Júnior, Édio Pereira Lima; Luz, Fernanda Santos Da</i>	
RECOVERY OF DRILL PIPE THROUGH WELDING PROCESS	2993
<i>Jardim, Marcus Vinícius Da Silva; Macedo, Marciano Quites; Araújo, Fernando Gabriel Da Silva</i>	
MICROSTRUCTURE AND HARDNESS BEHAVIOR TI35NB2,5SN	3003
<i>Santos, Silvano Vieira Dos; Lima, Tiago Nunes; Fontes, Lucas Silva; Jesus, Ihana Gabriela Conceição De; Griza, Sandro</i>	
SELECTING MATERIALS FOR THE NEXT GENERATIONS	3017
<i>Naville, William; Lima, Felipe Beluche; Vieira, Jéssica Willveit Ferezin</i>	
NOVEL INSULATION MATERIAL FOR HIGH TEMPERATURE CONDITION	3029
<i>Tomanik, Tiago Fernando De Abreu E Silva; Galesi, Douglas Fernando; Frasson, Silvio Cassavia; Fernandes, José Ricardo; Soeiro, Denilson Roberto; Moreira, Angelo Campos; Novais, Eduardo Judice De; Ferreira, Horácio</i>	
EXPERIMENTAL CHARACTERIZATION OF CARBON-EPOXY COMPOSITE MATERIAL FLEXURAL RIGIDITY	3035
<i>Salerno, Gigliola; Araujo, Gabriel P. De</i>	
KINETIC REGIME OF AN NI/AL₂O₃ CATALYST IN PARTIAL METHANE OXIDATION REACTIONS	3044
<i>Baltazar, Marcela Dos Passos Galluzzi; Tavares, Marcio De Moraes; Roseno, Karina Tamão Campos; Alves, Rita Maria De Brito; Schmal, Martin; Tenório, Jorge Alberto Soares</i>	
IMPROVEMENT WATER QUALITY IN COOLING TOWERS WITHOUT ADDING CHEMICAL PRODUCTS	3056
<i>Nicoli, Eduardo Piassi; Noronha, Fábio Libardi</i>	
PERFORMANCE ANALYSIS OF A WELDING JOINT OF A PIPELINE ON AN OFFSHORE PLATFORM	3066
<i>Morais, Willy Ank De; Sampaio, Guilherme Geadá; Sampaio, Rodrigo Antunes; Souza, Leonardo Peres De</i>	
ADEQUACY OF ALUMINIUM PLATFORMS FOR WORK AT HEIGHTS	3076
<i>Morais, Willy Ank De; Tavares, Marcio De Moraes; Sampaio Junior, Heretiano Dalmacio; Lima, Luiz Claudio Ramos</i>	
INCREASE OF PRODUCTIVITY ON EXECUTION OF DEEP FOUNDATIONS BY THE INTRODUCTION OF INNOVATIONS – INO//FAST CASE ®	3088
<i>Morais, Willy Ank De; Sampaio, Guilherme Geadá; Sampaio, Rodrigo Antunes; Bueno, Fabio Pirillo</i>	
CHARACTERIZATION OF “PÓ DE BALÃO” FOR APLICATION IN RED CERAMICS FOR THE PRODUCTION OF BRICKS	3099
<i>Candido, Verônica Scarpini; Gomes, César Augusto De Oliveira; Lira, Rodolfo Augusto Do Rosário; Monteiro, Sérgio Neves; Silva, Alisson Clay Rios Da; Palheta, Alan Rodrigo</i>	
SOIL EVALUATION OF ARVOREDOS ISLAND, SP - BRAZIL	3104
<i>Morais, Willy Ank De; Tavares, Marcio De Moraes; Kuo, Erika Elis; Arouca, Aldo</i>	
CHARACTERIZATION OF BLAST FURNACE SLAG FOR PRODUCTION OF TILES	3115
<i>Candido, Verônica Scarpini; Silva, Maria Célis Pinheiro Da; Silva, Clara Giovana Souza; Silva, Alisson Clay Rios Da; Monteiro, Sérgio Neves</i>	
ANALYSIS AND SIMULATION OF THE COOLING INFLUENCE DURING STACK DRIVING ON A WELDED CONNECTION OF ASTM A572 GR. 50 STEEL BEAMS	3120
<i>Morais, Willy Ank De; Tavares, Marcio De Moraes; Gomes, Leandro Ferreira; Santos, Roberto</i>	
MICROSTRUCTURAL ANALYSIS BETWEEN THE GEOPOLYMERIC CONCRETE AND PORTLAND CONCRETE	3131
<i>Candido, Verônica Scarpini; Pereira, Diegles Simões De Toledo; Silva, Felipe José Da; Porto, Ana Beatriz Rodrigues; Monteiro, Sergio Neves; Silva, Alisson Clay Rios Da</i>	
EFFECT OF PRE-COATING OF DIAMOND MICROPARTICLES IN ADHESION AND DISPERSION OF FILLER IN EPOXY/POLYAMIDE MATRIX COMPOSITE FORMULATION	3143
<i>Bessa, Magno Luiz Tavares; Rodriguez, Rubén Jesus Sánchez; Júnior, Ricardo Abrahão</i>	
PHYSICAL AND MECHANICAL EVALUATION OF ARTIFICIAL MARBLE PRODUCED WITH DOLOMITIC MARBLE WASTE BENEFITED BY LOOMS OF DIAMOND BLADES	3152
<i>Demartini, Tcharllis João Da Cunha; Rodriguez, Rubén Jesus Sánchez</i>	
SYNTHESIS OF ALNBO₄ AND ITS BEHAVIOR AS AN ALUMINA SINTERING ADDITIVE	3163
<i>Marçal, Rubens Lincoln Santana Blazutti; Santos, Jheison Lopes Dos; Louro, Luis Henrique Leme</i>	
COMPARATIVE STUDY OF THE GRANULOMETRY OF THE BAUXITE RED LAMA LOOKING FOR THE APPLICATION IN POLYMERIC MATRIX COMPOSITES	3173
<i>Candido, Verônica Scarpini; Souza, Paulo Victor Campos; Santos, Lesley Glenda Sales Dos; Cunha, Edinaldo José De Sousa</i>	
ADSORCING OF THE METHYLENE BLUE BY REJECTING CAULIMUM CHEMICALLY TREATED BY LOOKING FOR ITS USE IN THE REMOVAL OF AQUOSA SOLUTION	3179
<i>Candido, Verônica Scarpini; Matos, Cintia Da Silva; Hildebrando, Edmarino Araújo</i>	
STEEL SLAG MICROSTRUCTURAL CHARACTERIZATION FOR PRODUCTION OF RED CERAMICS	3185
<i>Candido, Verônica Scarpini; Silva, Clara Giovana Souza; Bezerra, Kate Thayane Santos; Jesus, Geyna Evellyn Silva De; Monteiro, Sérgio Neves; Silva, Alisson Clay Rios Da</i>	
MICROSSILICA EVALUATION IN RESISTANCE TO ALUMINUM THERMAL SHOCK WITH 5% OF ZIRCONIA	3190
<i>Portilho, Camila Valentina Ribeiro; Pereira, Elton Douglas Heriger; Silva, Adrieli Oliveira Da; Silva, Thales Lima Da; Neto, Elias Fagury; Rabelo, Adriano Alves</i>	

EVALUATION OF THE ADDITION OF NB₂O₅ AS A VITREA PHASE FORMER IN HIGH ALUMINA REFRACTORY	3202
<i>Pereira, Elton Douglas Heriger; Portilho, Camila Valentina Ribeiro; Oliveira, José Charles Moraes De; Fagury-Neto, Elias; Rabelo, Adriano Alves</i>	
CORROSION ANALYSIS IN WELDS WELDED BY THE SMAW PROCESS IN API 5L X70 STEEL IN SALINE	3211
<i>Almeida, Matheus Jorge De; Chilque, Angel Rafael Arce; Silva, Letícia Barbosa; Souza, Franciele Vieira De; Freitas, Filipe Menezes De; Camilo, Carla De Araújo</i>	
STUDY OF THE ADDITION OF NIHOBIA IN MATRIX ALUMINA COMPOSED WITH DISPERSION OF ZIRCONIA	3222
<i>Silva, Thales Lima Da; Silva, Adrieli Oliveira Da; Heringer, Elton Douglas; Portilho, Camila Valentina Ribeiro; Fagury-Neto, Elias; Rabelo, Adriano Alves</i>	
INCORPORATION BLAST FURNACE SLUDGE RED CERAMICS FOR TILES PRODUCTION	3231
<i>Candido, Verônica Scarpini; Costa, Roberta Lima De Souza; Jesus, Geyna Evelyn Silva De; Silva, Alisson Clay Rios Da; Monteiro, Sergio Neves</i>	
CHARACTERIZATION OF UNDERMATCHING WELDING ON HARDOX 450 STEEL SHEETS	3237
<i>Dias, Pablo Reis; Sousa, Livia Maria Fernandes De; Neto, Francisco De Assis Souza; Carvalho, Márcio Corrêa De; Braga, Eduardo De Magalhães</i>	
MICROSTRUCTURE OPTIMIZATION IN DELTA-TRIP STEELS THROUGH AL AND NB	3249
<i>Júnior, Eustáquio De Souza Baêta; Botelho, Ramon Alves; Araujo, Leonardo Sales; Brandão, Luiz Paulo Mendonça</i>	
CHARACTERIZATION OF CAULÍNITIC CLAY OF THE METROPOLITAN REGION OF NATAL-RN – PART 1	3257
<i>Monteiro, Flanelson Maciel; Costa, Franciné Alves; Machado, Tércio Graciano; Assis, Raimison Bezerra De</i>	
NUMERICAL EVALUATION OF THE INFLUENCE OF THE THICKNESS PARAMETER IN THE FSDT AND HSDT THEORIES APPLIED TO COMPOSITE PLATE MATERIALS	3269
<i>Silva, Cassiele Renata Da; Diacenco, Adriana Amaro</i>	
EVALUATION OF CORROSION AND MECHANICAL RESISTANCE IN VANADIUM MICROALLOYED STEEL BARS WITH DIFFERENT COOLING RATES	3278
<i>Coelho, Hana Livia Frota; Ramos, Rodrigo Alves; Araújo, Walney Silva</i>	
THE USE OF HARD CHROMIUM PLATING IN ROLLING OF COPPER FOR INCREASING CAMPAIGN LENGTH OF COLD MILL WORK ROLLS	3291
<i>Oliveira, Antonio Fabiano De; Silva, Guilherme Frederico Bernardo Lenz E; Plaut, Ronald Lesley; Oliveira, Ricardo Lívio Ferreira</i>	
TENSILE BEHAVIOR OF EPOXY MATRIX COMPOSITES REINFORCED WITH RAMIE FABRIC	3303
<i>Pereira, Artur Camposo; Filho, Fabio Da Costa Garcia; Simonassi, Noan Tonini; Monteiro, Sérgio Neves</i>	
CHARACTERIZATION OF DIFFERENT SOILS FROM BAIXADA CAMPISTA / RJ	3310
<i>Pereira, Artur Camposo; Monteiro, Sergio Neves; Filho, Fabio Da Costa Garcia; Simonassi, Noan Tonini</i>	
DEVELOPMENT OF ORNAMENTAL STONE WASTE ADDED CLAY CERAMIC FOR PAVEMENT APPLICATION	3316
<i>Pereira, Artur Camposo; Monteiro, Sergio Neves; Assis, Foluke Salgado De; Braga, Fabio Oliveira</i>	
ANALYSIS OF RESISTANCE OF CERAMIC RED BLOCKS UNDER EXPERIMENTAL CONDITIONS	3327
<i>Assis, Foluke Salgado De; Oliveira, G. R. De; Silva, J. J. N.; Fernandes, O. D. P.</i>	
EFFECT OF WELDING HEAT ON THE BALLISTIC RESISTANCE OF A HIGH HARDNESS AMOR (HHA) STEEL	3337
<i>Oliveira, Suzane De Sant' Ana; Weber, Ricardo Pondé; Suarez, João Carlos Miguez; Monteiro, Sergio Neves; Souza, Elson Renato Santos</i>	
INFLUENCE OF ADIABATIC SHEAR BANDS ON THE BALLISTIC RESISTANCE OF HIGH HARDNESS ARMOR STEEL	3343
<i>Oliveira, Suzane De Sant' Ana; Weber, Ricardo Pondé; Suarez, João Carlos Miguez; Paula, Anderson Santos De; Monteiro, Sergio Neves; Souza, Elson Renato Santos</i>	
MICROSTRUCTURAL EVALUATION OF CLAYEY CERAMIC INCORPORATED WITH SLUDGE FROM PAPER MANUFACTURING	3353
<i>Pereira, Artur Camposo; Monteiro, Sergio Neves; Filho, Fabio Da Costa Garcia; Simonassi, Noan Tonini</i>	
COMPLIANCE ANALYSIS OF ROOFING TILES IN CLAY CERAMIC IN NORTHWEST OF RIO DE JANEIRO AND THE EASTERN AREA OF “ZONA DA MATA MINEIRA”	3359
<i>Luz, Fernanda Santos Da; Cerqueira, Niander Aguiar; Souza, Victor Barbosa De; Azevedo, Afonso Rangel Garcez De; Campos, Priscila Celebrini De Oliveira; Konzen, Dienifer Daiana; Sousa, Mairyanne Silva Silveira; Monteiro, Sergio Neves; Bartolazzi, Victor Tomazinho</i>	
IMPROVED CLAY CERAMICS INCORPORATED WITH STEELMAKING SINTER PARTICLES	3367
<i>Luz, Fernanda Santos Da; Ribeiro, Mônica Manhães; Lima, Eduardo Sousa; Figueiredo, André Ben-Hur Da Silva; Candido, Verônica Scarpini; Monteiro, Sergio Neves; Vieira, Carlos Mauricio Fontes</i>	
INFLUENCE OF CITRIC ACID AS RETARDER IN CPV PORTLAND CEMENT PASTES AND MORTARS	3376
<i>Mendes, Beatriz Cardoso; Lopes, Márcia Maria Salgado; Alvarenga, Rita De Cássia Silva Sant'Anna; Fassoni, Délio Porto; Pedroti, Leonardo Gonçalves; Azevedo, Afonso Rangel Garcez De; Monteiro, Sergio Neves; Luz, Fernanda Santos Da</i>	
PERFORMANCE OF JUTE FABRIC REINFORCED POLYESTER MATRIX COMPOSITE IN MULTILAYERED BALLISTIC	3385
<i>Filho, Fabio Da Costa Garcia; Assis, Foluke Salgado De; Monteiro, Sérgio Neves; Pereira, Artur Camposo; Pereira Júnior, Édio; Ferreira, Carlos Luiz</i>	
EVALUATION OF CONCRETE BLOCKS WITH ADDITION OF GLASS RESIDUE APPLIED IN PAVING	3395
<i>Filho, Fabio Da Costa Garcia; Souza, Victor Barbosa De; Cerqueira, Niander Aguiar; Alves, André Luiz J.; Campbell, Aluísio P.; Polonine, Anderson Flores; Camerini, Amanda; Daniel, Glênio Fernando; Monteiro, Sérgio Neves</i>	

USE OF EXPERIMENTAL PLANNING IN THE STUDY OF WATER ABSORPTION IN CERAMICS PROCESSED WITH RED MUD	3403
<i>Filho, Fabio Da Costa Garcia; Babisk, Michelle Pereira; Burock, Igor Pereira; Ribeiro, Larissa Da Silva; Prado, Ulisses Soares Do; Bahiense, Alexandre Vianna; Monteiro, Sergio Neves; Vieira, Carlos Mauricio Fontes</i>	
THE INFLUENCE ON THE USE OF GLASS RESIDUE ON THE PROPERTIES OF AN ADHESIVE MORTAR	3411
<i>Filho, Fabio Da Costa Garcia; Santos, Diogo Pereira Dos; Azevedo, Afonso Rangel Garcez De; Dias, Dylmar Penteado; Alexandre, Jonas; Xavier, Gustavo De Castro; Monteiro, Sérgio Neves</i>	
PROCESSING, CHARACTERISTICS AND PROPERTIES OF CUBIC BORON NITRIDE – A UPDATED REVIEW	3417
<i>Pessanha, Luiz Antonio; Picanço, Michel; Skury, Ana Lucia; Monteiro, Sergio Neves; Silva, Luís Carlos Da</i>	
BALLISTIC PERFORMANCE OF A CERAMIC MULTILAYERED ARMOR WITH MODIFICATION IN THE IMPACT GEOMETRY	3427
<i>Braga, Fábio De Oliveira; Luz, Fernanda Santos Da; Monteiro, Sergio Neves; Lima Jr., Édio Pereira; Louro, Luis Henrique Leme; Gomes, Alaelson Vieira</i>	
WEIBULL DISTRIBUTION AND BRAZILIAN ABNT STANDARD EVALUATION OF STRUCTURAL CLAY BRICK MASONRY UNITS USED IN UP TO 5 FLOORS CONSTRUCTION	3435
<i>Azevedo, Afonso Rangel Garcez De; Monteiro, Sergio Neves; Alexandre, Jonas; Xavier, Gustavo De Castro; Pedroti, Leonardo Gonçalves; França, Fernando Cesar Coelho; Gondin, Neila Azeredo</i>	
STUDY OF THE FEASIBILITY OF PRODUCTION OF MODULAR BRICK COMPOSED OF PAPER MANUFACTURING RESIDUE AND CEMENT	3445
<i>Azevedo, Afonso Rangel Garcez De; Monteiro, Sergio Neves; Fernandes Junior, Wellington; Theophilo, Matias Da Matta Duarte; Alexandre, Jonas; França, Bruno Rangel; Zanelato, Euzébio Bernabé; Oliveira, Sergio Rafael Cortes De</i>	
VARIATION OF SINTERIZATION CONDITIONS AND ITS EFFECTS ON THE AL₂O₃-NB₂O₅-LIF SYSTEM	3456
<i>Santos, Jheison Lopes Dos; Gomes, Alaelson Vieira; Marçal, Rubens Lincoln Santana Blazutti; Rocha, Daniel Navarro Da; Lima Júnior, Édio Pereira</i>	
THE USE OF RESIDUE OF CIVIL CONSTRUCTION IN PARTIAL AND TOTAL SUBSTITUTION OF SAND IN THE PRODUCTION OF STRUCTURAL CONCRETE	3465
<i>Cerqueira, Niander Aguiar; Souza, Victor Barbosa De; Azevedo, Afonso Garcez De; Monteiro, Sérgio Neves; Santos, Jheison Lopes Dos</i>	
STUDY OF STOICHIOMETRIC BALANCING FOR OPTIMIZATION OF COATING MORTARS	3472
<i>Azevedo, Afonso Garcez De; Monteiro, Sérgio Neves; Santos, Jheison Lopes Dos;</i>	
ANALYSIS OF MORPHOLOGICAL AND THERMAL BEHAVIOR OF MINERALS OF THE MUNICIPALITY OF CAMPOS DOS GOYTACAZES	3481
<i>Azevedo, Afonso Garcez De; Monteiro, Sérgio Neves; Santos, Jheison Lopes Dos</i>	
DETERMINATION OF THE FLEXURAL STRENGTH OF REINFORCED POLYESTER MATRIX COMPOSITES WITH SUGARCANE BAGASSE FIBER	3490
<i>Candido, Verônica Scarpini; Silva, Alisson Clay Rios Da; Monteiro, Sergio Neves</i>	
CHARACTERIZATION OF TIB₂-ALN COMPOSITES FOR APPLICATION AS CUTTING TOOL	3498
<i>Simonassi, Noan Tonini; Peçanha Jr, Luiz Antônio Fonseca; Monteiro, Sergio Neves; Tomaz, Ítalo Do Vale; Oliveira, Marlon Mendes De; Ramalho, Alan Monteiro; Braga, Fabio De Oliveira</i>	
COST ANALYSIS OF BUILDINGS DUE TO THE USE OF CERAMIC NON-STANDARDIZED BLOCKS	3505
<i>Simonassi, Noan Tonini; Monteiro, Sergio Neves; Azevedo, Afonso Rangel Garcez De; Alexandre, Jonas; Xavier, Gustavo De Castro; Souza, Rodolfo Cretton; Zanelato, Euzébio Barnabé</i>	
INFLUENCE OF PROCESSING PARAMETERS IN THE MECHANICAL PROPERTIES FOR HIGH PERFORMANCE POLIÉSTER COMPOSITES REINFORCED WITH CURAUA FIBERS	3514
<i>Simonassi, Noan Tonini; Braga, Fabio De Oliveira; Monteiro, Sergio Neves</i>	
IMPLEMENTATION OF SECURITY MANAGEMENT IN CSN LONG STEEL LOGISTICS	3524
<i>Miranda, Fabíola Freitas De; Paula, Wellington Cesar De; Costa, Luiz Carlos Da; Silva, Marcus Vinícius Damacena Da; Filho, João Mário Lourenço</i>	
APPLICATION OF THE METHOD OF EVALUATION OF TECHNOLOGICAL CAPABILITIES AND LEARNING PROCESSES AS A MANAGEMENT TOOL FOR ACCUMULATION OF COMPETENCES AND IMPROVEMENT OF PERFORMANCE	3533
<i>Castro, Eduardo Côrtes De</i>	
SENSITIZATION ANALYSIS OF AISI 409 AND AISI 439 STAINLESS STEEL WELDED JOINTS FOR USE IN VEHICLE EXHAUST SYSTEM	3546
<i>Agarelli, Giovanna; Lima, William Moreira De; Colosio, Marco Antonio; Lebrao, Susana Marraccini Giampietri; Lara, José Agustín Castillo</i>	

Author Index