OFFICIAL PROGRAM - ORAL

IFHTSE

18th IFHTSE CONGRESS

International Federation for Heat Treatment and Surface Engineering

July 26th - 30th, 2010

Hotel Intercontinental | Rio de Janeiro | Brazil

July 26th - Monday

Room Quartzo A

2:00 pm	Opening Session - ABM / IFHTSE / Organizing Committee	
2:45 pm	Special Lecture	
3:20 pm	**Coffee Break + Poster Session**	
DIFFUSION PROCESSES		
4:20 pm	The beneficial effect of Aluminization on the oxidation resistance of a Ni-base alloy at high temperature	Xavier Ledoux
4:40 pm	A low temperature aluminizing treatment of hot work tool steel	BOŽIDAR MATIJEVIÆ
5:00 pm	Wear and healing behaviour of a novel low-tempertaure duplex surface treatment	Dr Daniel Fabijanic
5:20 pm	The influence of hydrogen on plasma oxidation of nitrided ferrous alloys	Carlos Alejandro Figueroa
5:40 pm	Controlled gas nitriding of alloy steels with the formation of nitrided cases with and without the surface compound layer	Piotr Wach

July 27th - Tuesday

Room Quartzo A

DIFFUSION PROCESSES		
8:30 am	Nitriding of high speed steel	Derry Doyle
SURFACE HARDENING		
8:50 am	Comparison of direct current and cathodic cage plasma nitriding techniques	Clodomiro Alves Júnior
9:10 am	Influence of surface hardening depth on the cavitation erosion resistance of a low alloy steel	Sandra Goulart-Santos
9:30 am	Controlled nitriding and gas nitrocarburizing with the ZeroFlow™ method	Maldzinski Leszek
9:50 am	Influence of Heat Treatment and Plasma Nitriding Parameters on Hardening an AISI 420 Martensitic Stainless Steel	Carlos Eduardo Pinedo
10:10 am	**Coffee Break + Poster Session**	
10:40 am	Development of a sensor system for gas carbonitriding – first results	Dipl.-Chem. Sebastian Bischoff
11:00 am	Wear performances of surface hardened PM steel from pre-alloyed powder	Barbara Rivolta
11:20 am	Surface hardening of a VC131 cold work steel using a fiber laser	Flavia Aline Goia
11:40 am	Influence of laser shock processing on surface microstructures and properties of carbon steel	Xinmin LUO
12:00 noon	Fatigue-crack propagation of laser surface remelted nodular cast iron	Roman Šturm
12:20 pm	Hybrid and duplex plasma surface alloying of ferritic-austenitic duplex stainless steel	Xiaoying Li
12:40 pm	**Lunch**	
2:00 pm	Fatigue limit prediction of surface-strengthened metallic parts surface-strengthened metallic parts	Bo Liao
2:20 pm	Liquid phase technologies for surface treatment of al and mg alloys	Prof. Dr.-Ing. habil. Rolf Zenker
2:40 pm	Surface treatment of low-cost beta titanium alloy to combat wear	Eleanor Redmore
CORROSION		
3:00 pm	New developments on gas oxi-nitrocarburizing and oxi-nitriding using corr-i-dur process	Shun Yoshida
3:20 pm	Gas nitrided stainless steel with reduced hardness gradient to high loaded and corrosive environment	André Ferrarese
3:40 pm	**Coffee Break**	

July 28th - Wednesday

Room Quartzo A

CORROSION		
8:10 am	Tribo-corrosion behaviour of S-phase against S-phase tribopairs	Joseph Buhagiar
8:30 am	Comparison of laser and electron beam welding of steel sheets treated by nitrooxidation	Milan Maronek
8:50 am	Effects of Si and Nb on oxidation behavior in high purity ferritic stainless steels	Yasushi Kato
9:10 am	Mechanical and physical properties of carbon S-phase on stainless steel, produced by carbon supersaturation	Ralph Hunger
9:30 am	Study on the corrosion resistance and electric conductivity of the SS316L by ion implantation	Xun CAI
9:50 am	Effect of aluminum coating by magnetron sputtering on corrosion resistance of magnesium alloys	Jin ZHANG
10:10 am	**Coffee Break + Poster Session**	

TRIBOLOGY		
10:40 am	The influence of the superficial deformation on the fatigue resistance of the austempered ductile iron	Francisco José Saldanha Franco
11:00 am	Influence of cutting speed on the surface integrity of AISI 304L austenitic stainless steel parts	Thompson Júnior Ávila Reis
11:20 am	Effect of grain size on machining strength in an austenitic stainless steel	Nivaldo Lemos Coppini
11:40 am	Nanofretting behavior of Si(100) and its coating	Linmao Qian
12:00 noon	Surface fatigue and wear resistance of thin and thick hard coatings	Priit Kulu
12:20 am	Wear characteristics of solid multilayer composite coatings under Sliding/rolling contact and poor grease lubrication condition	Qiang GUO
12:40 pm	**Lunch**	
2:00 pm	Special Tribute Session to Honour Professor Tom Bell - Prof. Dr. Hanshan Dong: Tom Bell Memorial & Current Status of S-phase Surface Engineering	
3:00 pm	Special Tribute Session to Honour Professor Tom Bell - Prof. Dr. Marcel A. J. Somers: Low Temperature Nitriding and Carburizing of Stainless Steels	
3:40 pm	**Coffee Break + Poster Session**	
4:20 pm	Special Tribute Session to Honour Professor Tom Bell - Prof. Dr. Allan Matthews: Duplex ans Special Engineered Coatings	
5:00 pm	Special Tribute Session to Honour Professor Tom Bell - Prof. Dr. Frank Ernst: Thermodynamics of Carbon Para-equilibrium and its Potential for Surface Engineering of Structural Alloys	

July 29th - Thursday

Room Quartzo A

PLASMA TECHNOLOGY		
9:10 am	High durability of cutting edges made of nanocrystalline cemented carbides sintered by the pulse-plasma method	Maciej Jan KUPCZYK
9:30 am	Influence of dilution level on oxidation resistance of plasma transferred arc NiCrAlC coatings	Marjorie Benegra
9:50 am	Effect of plasma nitriding on the wear and corrosion properties of Hastelloy CW2M super-alloy	Frederico Augusto Pires Fernandes
10:10 am	**Coffee Break + Poster Session**	
10:40 am	Hybrid surface treatment technology for the increase of hot forging dies	Jerzy Smolik
11:00 am	Characterization of materials submitted to plasma ion implantation	José Luiz Toledo
11:20 am	GLOBAL 21	Zoltan Kolozsvary

PVD AND CVD		
11:40 am	Cleaning prior to PVD/CVD-Coating, determination of the cleanliness and chemical decoating of PVD/CVD-Layers	Dr. Henry Percy Ederle
12:00 noon	Effect of additional elements on microstructure and properties of Cr-N based composite coatings	Mingdong Bao
12:20 pm	The deposition of Ni/Cr-Cr3C2 composite coatings by Arc-EB hybrid technology	Jerzy Smolik
12:40 pm	**Lunch**	
2:00 pm	Impact wear performance of thin hard coatings on tic cermets	Renno Veinthal
2:20 pm	Ti-Al-Si-C-N hard coatings synthesized by hybrid arc enhanced magnetron sputtering	Kewei Xu
2:40 pm	Influence of the Nitriding and TiAlN/TiN Coating Thickness in The Mechanical Properties of a Duplex Treated H13 Steel	Ricardo D. Torres
3:00 pm	PVD and Duplex Solutions for Die Casting Moulds	Marcelo Dornelles Pimenta
3:20 pm	PVD Coatings for Presshardening applications	Andreas Reiter
3:40 pm	**Coffee Break + Poster Session**	
4:20 pm	Microstructure and micromechanical characterization of a duplex multilayer coated H13 tool steel	Abel André Cândido Recco
4:40 pm	Non-destructive Evaluation of Residual Stress of Brush Electro-Plating Nickel Coating by Surface Acoustic Wave	Liu Bin

July 26th - Monday

Room Quartzo B

3:20 pm	**Coffee Break + Poster Session**	
EQUIPMENTS		
4:20 pm	Control strategies for inline heat treatments in hot strip processing of innovative steel materials	Thomas Rieger
4:40 pm	Equipments failures and its effects on heat treated parts	Antonio Carlos Gomes Junior
5:00 pm	Development of a High-Performance Gas Carburizing Furnace	Kazuki Kawata
5:20 pm	New generation of technological hybrid devices for advanced surface treatment processes	Adam Mazurkiewicz
5:40 pm	Heat Treatment of Micro-Components in a Drop-Down Tube Furnace	Hans-Werner Zoch

July 27th - Tuesday

Room Quartzo B

MATERIALS CHARACTERIZATION		
8:30 am	Synthesis of Au and Au/ Cu alloy nanoparticles on multiwalled carbon nanotube by using microwave irradiation	Vijaya K rangari
8:50 am	Advanced Material Characterization of Formed Metastable Austenitic Steels to Analyse the Phase Transformation	Kathrin Voges-Schwieger
9:10 am	The effect of Si on the precipitates for Nb bearing high-purity ferritic stainless steel	Masatoshi Ito
9:30 am	Creep property of austenitic stainless steel with lath structure formed by displacive reversion	Nobuo Nakada
9:50 am	A preliminary study of thermo-mechanical stability of carbon S-phase formed in austenitic stainless steel	Wei LI
10:10 am	**Coffee Break + Poster Session**	
10:40 am	Morphology of y' precipitates after Simple Aging in First Stage Low Pressure Turbine Blade of Ni-based Superalloy after Serviced	Nobuhiro Miura
11:00 am	In-situ aging of b Ti-Nb-Sn alloys through synchrotron radiation1	Conrado R. M. Afonso
11:20 am	Impact Properties of Vacuum Heat Treated AISI D2 and 8%Cr Cold Work Tool Steels	Francisco Arieta
11:40 am	Effects of austenitising temperatures on primary structures transformation in cast high-speed steel of M2 type	Alexander S. Chaus
12:00 noon	Effect of multiple dispersion of hard VC and soft Cu particles on mechanical properties in ferritic steel	Masahiro Murakami
12:20 pm	A Complete Model for the Effect of Si on the Secondary Hardening and Mechanical Properties of Hot Work Tool Steels	Rafael Agnelli Mesquita
12:40 pm	**Lunch**	
2:00 pm	Metallurgical analysis of controlled cooling of a component after hot forging	Pedro Henrique Costa Pereira da Cunha
2:20 pm	Experimental investigation of microstructural and mechanical properties of new steels for large blooms	Barbara Rivolta
2:40 pm	Influence of alloying elements Cu-Ni-Mo on the mechanical properties and austemperability of the ADI	Stênio Cristaldo Heck
MODELING AND SIMULATION		
3:00 pm	Process Design and Prediction of Mechanical Properties of DP Steels with Prepositional UFC Technology	Xiaohui Cai
3:20 pm	Mathematical Modelling and Computer Simulation of Fatigue Properties of Quenched and Tempered Steel	Božo Smoljan
3:40 pm	**Coffee Break + Poster Session**	

July 28th - Wednesday

Room Quartzo B

MODELING AND SIMULATION		
8:30 am	Finite Element Analysis of the Phase Transformation during a Hot Stamping Process	Philipp Olle
8:50 am	Modeling of tempering curves of alloy steels by means of neural networks	Renata Neves Penha
9:10 am	Strip temperature control model and application of continuous heating furnace	He Jianfeng
9:30 am	Simulation of Austenitization Processes in Fe-C Steels by Coupled Cellular Automaton and Finite Difference Methods	András Roósz
9:50 am	Effect of the hydrodynamic conditions on the vapor film during forced convective quenching	Hector Vergara-Hernández
10:10 am	**Coffee Break + Poster Session**	

ATMOSPHERES		
10:40 am	Heat treatment in an environmentally-friendly gas atmosphere	Mladen Stupnišek
11:00 am	High speed gases in heat treatment furnaces	Christoph laumen
11:20 am	Atmosphere control systems - for higher quality and consistency	Christoph laumen

NEW MATERIALS		
11:40 am	Determination of the priority research directions and key advanced technologies in the field of surface engineering with the use of foresight methods	Adam Mazurkiewicz
12:00 noon	Surface-layer microstructure control by high-frequency induction heating in metastable austenitic stainless stee	Toshihiro Tsuchiyama
12:20 pm	New cast iron alloys with high wear resistance at elevated temperatures	Gerhard Gevelmann
12:40 pm	**Lunch**	

July 29th - Thursday

Room Quartzo B

QUENCHANTS AND QUENCHING TECHNOLOGY		
8:50 am	Dependence of the heat transfer coefficient at quenching on diameter of cylindrical workpieces	Bozidar Liscic
9:10 am	Innovative hot dip galvanizing process using Zinquench for processing advanced high strength steels	Frédéric Huber
9:30 am	Modeling Steel Transformation Behavior from Cooling Behavior by the Kuyucak Method	Gustavo Sánchez Sarmiento
9:50 am	Influencing Factors of Heat Transfer Coefficient in Air and Gas Quenching	Bowang Xiao
10:10 am	**Coffee Break + Poster Session**	
10:40 am	New technological pathways for universal vacuum furnaces	Robert Pietrasik
11:00 am	Effect of Quench Rate on the Precipitation Sequence in 7XXX Series Aluminum Alloys	D. Scott MacKenzie
11:20 am	Effect of cooling rate during quenching on the toughness of high speed steels	Cristiane Sales Gonçalves
11:40 am	Application of Computational Flid Dynamics to Understand Quenching Problems	D. Scott MacKenzie
12:00 noon	Inverse Hardness Distribution in Spring Steel	George Edward Totten
12:20 pm	Care and Maintenance of Polymer Quenchants for Induction Hardening	D. Scott MacKenzie
12:40 pm	**Lunch**	
2:00 pm	Paper to confirm	Mr. Ovídio

CRYOGENICS		
2:20 pm	Effect of cold treatment or deep cryogenic treatment on selected properties of case-carburized 18CrNiMo7-6 steel	Tomasz Babul
2:40 pm	Deep cryogenic treatment of P/M S390MC high speed steel	Vojteh Leskovsek
3:00 pm	Isothermal martensite formation at sub-zero temperatures	Marcel A.J. Somers
3:20 pm	The effect of prior tempering on cryogenic treatment to reduce retained austenite	Paul Stratton
3:40 pm	**Coffee Break + Poster Session**	
4:20 pm	Study of influence of cryogenic bath in the AISI H13 steels properties	Sandra dos Santos Vales
4:40 pm	Effect of austenıtızıng temperature and cryogenic process parameters to structural properties of cold work tool steels	Yiðit Kurttepeli
5:00 pm	Cryogenic treatment of cold work tool steels – A review	Vasile Bulancea
5:20 pm	Microstructural characterization of an AISI D2 tool steel submitted do cryogenic treatment	Paula Fernanda da Silva Farina