

Preliminary PROGRAM of the Sessions

Wednesday, 6 July 2016	
8⁰⁰ ÷ 8⁴⁵	Registration and coffee
8 ⁴⁵ ÷ 9 ⁰⁰	Opening: <u>Jarosław Mizera</u> - Dean of the Faculty of Materials Science and Engineering and <u>Andrzej Kolasa</u> - Dean of the Faculty of Production Engineering, Warsaw University of Technology
Session I: Nanostructured Cast Iron Alloys Chairman: professor Dawid Myszka	
9 ⁰⁰ ÷ 9 ⁴⁰	Keynote lecture: <u>Susil K. Putatunda</u> , Saranya Panneerselvam and Mohamed Alshwigi: <i>Processing of a Nanostructured Austempered Ductile Cast Iron (ADI)</i>
9 ⁴⁰ ÷ 10 ¹⁰	<u>Adel Nofal</u> : <i>ADI -The Material Revolution and its Applications at CMRDI</i>
10 ¹⁰ ÷ 10 ³⁵	<u>E. Skołek</u> , K. Wasiluk, D. Myszka, W. Świątnicki: <i>The microstructure of the ductile iron after various austempering heat treatments - the time effect</i>
10 ³⁵ ÷ 11 ⁰⁰	<u>K. Wasiluk</u> , <u>E. Skołek</u> , D. Myszka, W. Świątnicki: <i>Nanostructured ductile iron for waste grinders</i>
11 ⁰⁰ ÷ 11 ²⁰	Coffee break
Session II: Nanostructuring of Steels by Heat Treatment Process Chairman: dr Carlos Garcia Mateo	
11 ²⁰ ÷ 11 ⁵⁵	Invited lecture: <u>Behzad Avishan</u> , Mitra Abdolalipour, Sasan Yazdani: <i>Austemperability of large chunk nanostructured steel designed based on thermodynamic model</i>
11 ⁵⁵ ÷ 12 ²⁰	<u>W. Świątnicki</u> : <i>Nanostructuring of commercial steels by heat treatment</i>
12 ²⁰ ÷ 12 ⁴⁵	<u>Jarosław Marcisz</u> , <u>Wojciech Burian</u> and <u>Jacek Janiszewski</u> : <i>Microstructural changes of the nanostructured bainitic steel induced by quasi-static and dynamic deformation</i>
12⁴⁵ ÷ 14¹⁰	Lunch and coffee
Session III: Stability and Optimisation on Nanocrystalline Structure in Steels Chairman: dr Behzad Avishan	
14 ¹⁰ ÷ 14 ⁴⁵	Invited lecture: <u>Miguel A. Santajuana</u> , <u>Rosalía Rementeria</u> , <u>Matthias Kuntz</u> , <u>Francisca G. Caballero</u> , <u>José A. Jimenez</u> and <u>Carlos Garcia-Mateo</u> : <i>Understanding the tempering process of nanocrystalline bainite</i>
14 ⁴⁵ ÷ 15 ¹⁰	<u>S. Marciniak</u> , <u>E. Skołek</u> , <u>W. Świątnicki</u> : <i>Controlling the phase composition of X37CrMoV5-1 steel with a nanobainitic structure by means of custom-designed heat treatments</i>
Session IV: Cast Iron Alloys: Heat Treatment, Microstructure And Properties Chairman: professor Susil K. Putatunda	
15 ¹⁰ ÷ 15 ⁴⁰	Invited lecture: <u>Mohamed Soliman</u> , <u>Heinz Palkowski</u> , <u>Adel Nofal</u> : <i>Multiphase Ausformed Austempered Ductile Iron</i>
15 ⁴⁰ ÷ 16 ⁰⁵	<u>T. Giętka</u> , <u>K. Ciechacki</u> : <i>Influence of chemical composition and heat treatment on charpy impact resilience of ADI</i>
16 ⁰⁵ ÷ 16 ³⁰	<u>D. Myszka</u> , <u>E. Skołek</u> , <u>A. N. Wiczorek</u> , <u>T. Giętka</u> : <i>Wear properties of low temperature NiCu ausferritic ductile iron</i>
16 ³⁰ ÷ 16 ⁵⁵	<u>G. Gumienny</u> , <u>B. Kurowska</u> , <u>T. Szymczak</u> : <i>Effect of nickel on the crystallization and microstructure of compacted graphite cast iron</i>
16⁵⁵ ÷ 17²⁰	Coffee break
17⁰⁰ ÷ 19⁰⁰	Poster session

	Thursday, 7 July 2016
8¹⁵ ÷ 9⁰⁰	Registration and coffee
	Session V: Durability and Degradation Processes of Steel And Cast Iron in Extreme Conditions Chairman: professor Adel Nofal
9⁰⁰ ÷ 9⁴⁰	Invited lecture: <u>Andrej Atrens</u> : <i>Review of hydrogen effects in some martensitic steels</i>
9⁴⁰ ÷ 10⁰⁵	<u>Janusz Krawczyk</u> , Edyta Roźniata, Sławomir Zimowski, Marcin Kot, Robert Dądrowski, Rafał Dziurka, Łukasz Frocisz: <i>The role of microstructure in high temperature tribology of iron alloys</i>
10⁰⁵ ÷ 10³⁰	<u>J. Dworecka</u> , W. Piekoszewski, K. Roźniatowski, E. Jezierska, W. Świątnicki: <i>Heat treatment effect on resistance to wear and rolling contact fatigue of 100CrMnSi6-4 steel</i>
10³⁰ ÷ 10⁵⁰	Coffee break
	Session VI: Phase Transformations in Steels Chairperson: professor Ludmila Kučerová
10⁵⁰ ÷ 11²⁵	Invited lecture: <u>M. Gouné</u> , F. Danoix, X. Sauvage, D. Huin, S. Allain: <i>Phase transformations in modern steels: interaction of alloying elements with transformation interface</i>
11²⁵ ÷ 12⁰⁰	Invited lecture: <u>Jerzy Pacyna</u> : <i>The principle of a sufficient hardenability in the light of CCT diagrams</i>
12⁰⁰ ÷ 12³⁵	Invited lecture: <u>Adam Grajcar</u> : <i>Thermodynamic analysis of phase transitions in advanced multiphase steel showing the transformation-induced plasticity effect</i>
12³⁵ ÷ 13⁰⁰	<u>Kawulok Rostislav</u> , Schindler Ivo, Kawulok Petr, Rusz Stanislav, Opěla Petr, Podolínský Petr, Čmiel Karel Milan, Mališ Michael: <i>Transformation diagrams of selected steel grades with consideration of deformation effect</i>
13⁰⁰ ÷ 14²⁵	Lunch and coffee
	Session VII: New Heat Treatment and Thermo-Mechanical Processes Chairman: professor Adam Grajcar
14²⁵ ÷ 15⁰⁰	Invited lecture: R.Parthiban, <u>Sandip Ghosh Chowdhury</u> , K.C. Harikumar and S.Sankaran: <i>Evolution of microstructure and its influence on tensile properties in thermo-mechanically controlled processed (TMCP) quench and partition (Q&P) steel</i>
15⁰⁰ ÷ 15²⁵	<u>David Aišman</u> , Andrea Ronešová, Štěpán Jeníček: <i>Different routes for forming high-aluminium steel</i>
15²⁵ ÷ 15⁵⁰	<u>Bogdan Garbarz</u> , Mariusz Adamczyk, Barbara Niżnik-Harańczyk: <i>Development of structural steel containing 3÷5 wt%Al with microlaminated microstructure</i>
15⁵⁰ ÷ 16¹⁵	<u>Hauserova D.</u> , Dlouhy J., Motycka P: <i>Structure Refinement of Spring Steel 51CrV4 after Accelerated Spheroidisation</i>
16¹⁵ ÷ 16³⁵	Coffee break
	Session VIII: Modern AHS Steels: TRIP, DP, CP Chairman: professor Sandip Ghosh Chowdhury
16³⁵ ÷ 17⁰⁰	<u>Adam Gołaszewski</u> , Jerzy Szawłowski, Wiesław Świątnicki: <i>The microstructure evolution in the heat treatment process of UFG-TRIP steel</i>
17⁰⁰ ÷ 17²⁵	<u>Aleksandra Kozłowska</u> , <u>Adam Grajcar</u> , <u>Władysław Zalecki</u> , <u>Wojciech Burian</u> : <i>Effect of strain on phase transformations of recrystallized and non-recrystallized austenite in TRIP-aided steels</i>
17²⁵ ÷ 17⁵⁰	L. Kučerová, <u>J. Procházka</u> , J. Káňa, H. Jirková: <i>High versatility of niobium alloyed AHSS</i>
17⁵⁰ ÷ 18¹⁵	<u>Adam Kokosza</u> : <i>Study of relationships between parameters of holding in bainitic range and microstructural components in medium carbon TRIP steel</i>
18¹⁵ ÷ 19¹⁵	Poster session
18²⁰ ÷ 18⁵⁰	Meeting of the Scientific Committee
20⁰⁰	Conference Dinner

Friday, 8 July 2016	
8³⁰ ÷ 9¹⁵	Coffee and Registration
Session IX: Optimisation of Microstructure and Mechanical Properties of Steels <i>Chairman: professor Jerzy Pacyna</i>	
9 ¹⁵ ÷ 9 ⁴⁰	<u>Antti Kaijalainen</u> , Niko Vähäkuopus, Mahesh Somani, Saara Mehtonen, David Porter and Jukka Kömi: <i>The effects of finish rolling temperature and niobium microalloying on the microstructure and properties of a direct quenched high-strength steel</i>
9 ⁴⁰ ÷ 10 ⁰⁵	A. Morri, L. Ceschini, <u>M. Pellizzari</u> , C. Menapace, F. Vettore, E. Veneri: <i>Effect of austempering process on microstructure and mechanical properties of 27MnCrB5-2 steel</i>
10 ⁰⁵ ÷ 10 ³⁰	<u>Petr Kawulok</u> , Ivo Schindler, Rostislav Kawulok, Stanislav Rusz, Petr Opěla, Radek Olszar, Martin Olszar, Karel Milan Čmiel: <i>The influence of a cooling rate on evolution of microstructure and hardness of 27MnCrB5 steel</i>
10 ³⁰ ÷ 10 ⁵⁵	<u>K. Wasiak</u> , E. Skołek, W. Świątnicki: <i>Microstructure, wear resistance and mechanical properties of 35CrSiMn5-5-4 steel after Quenching and Partitioning processes.</i>
10⁵⁵ ÷ 11¹⁵	Coffee break
Session Xa: Industrial Processes and Applications <i>Chairman: professor Janusz Krawczyk</i>	
11 ¹⁵ ÷ 11 ⁴⁰	Radhakanta Rana, Shangping Chen and Sourav Das, and Arunansu Haldar: <i>Mechanical Properties of a Bainitic Steel Producing by Hot Rolling</i>
11 ⁴⁰ ÷ 12 ⁰⁵	<u>Sylvia Wiewiórowska</u> , Zbigniew Muskalski: <i>Carrying out the hot drawing process of TRIP steel wires at different initial temperatures</i>
12 ⁰⁵ ÷ 12 ³⁰	<u>Kamil Dychton</u> , Pawel Rokicki, Bartek Wierzba, Krzysztof Raga, Jan Sieniawski: <i>Experimental verification of carburizing-quenching process of AISI 9310 steel gear shaft</i>
12 ³⁰ ÷ 12 ⁵⁵	<u>Pawel Rokicki</u> : <i>Induction hardening of tool steel for heavily loaded aircraft engine components</i>
12⁵⁵ ÷ 14²⁰	Lunch and coffee
Session Xb: Industrial Processes and Applications <i>Chairman: professor Wiesław Świątnicki</i>	
14 ²⁰ ÷ 14 ⁴⁵	<u>M. Sut</u> : <i>Low Pressure Carburizing of Pyrowear® Alloy 53</i>
14 ⁴⁵ ÷ 15 ¹⁰	Aleksander Ciski: <i>Deep cryogenic treatment and tempering at different temperatures of HS6-5-2 high speed steel</i>
Session XI: Welding of High Strength Steels <i>Chairman: professor Bogdan Garbarz</i>	
15 ¹⁰ ÷ 15 ⁴⁵	<i>Invited lecture:</i> <u>H. Dawson, M. Serrano, S. Cater, E. Jimenez-Melero</u> : <i>Friction Stir Welding of ODS steel: processing, characterization and stability</i>
15 ⁴⁵ ÷ 16 ¹⁰	<u>Mateusz Morawiec</u> , Adam Grajcar, Maciej Różański, Sebastian Stano: <i>Modified twin spot laser welding of complex phase steel</i>
16 ¹⁰ ÷ 16 ³⁵	Błacha S., Węglowski M.St., Dymek S., Kopyściański M.: <i>Comparison of microstructural characterization and mechanical properties of electron beam welded joints of high strength steel grade S960Q and Weldox 1300</i>
16 ³⁵ ÷ 17 ⁰⁰	<u>Janusz Piłkuła</u> , Mirosław Łomozik, Tomasz Pfeifer: <i>The Influence of Manual Metal Arc Multiple Repair Welding of Long Operated Waterwall on the Structure and Hardness of the Heat Affected Zone of Welded Joints</i>
17⁰⁰ ÷ 17¹⁰	Closing Ceremony

POSTER SESSION - registered posters

P1	A. Ciski, <u>P. Wach</u> , A. Kapuścińska, <i>Nitrided layers on X153CrMoV12 steel formed in a process combining gas nitriding with deep cryogenic treatment</i>
P2	<u>J. Górka</u> : <i>Welding thermal cycle-triggered precipitation processes in steel S700MC subjected to the thermo-mechanical control processing</i>
P3	<u>J. Górka</u> , A. Czupryński, M. Adamiak: <i>Properties and structure of nanocrystalline layers obtained by manual metal arc welding (MMA)</i>
P4	A. Grajcar, <u>B. Grzegorzczuk</u> , M. Różański, S. Stano, M. Morawiec: <i>Microstructural aspects of bifocal laser welding of TRIP steel</i>
P5	<u>M. B. Jabłońska</u> , J. Tomczak, A. Śmiglewicz: <i>Numerical analysis of the process of dynamic tensile test of high manganese TWIP steel</i>
P6	<u>D. Janicki</u> : <i>Microstructural evolution during laser surface alloying of ductile cast iron with titanium</i>
P7	<u>D. Janicki</u> , J. Górka, W. Kwaśny, K. Gołombek, M. Kondracki, M. Żuk: <i>Diode laser surface alloying of armor steel with tungsten carbide</i>
P8	<u>L. Kučerová</u> , H. Jirková, B. Mašek: <i>The influence of chromium addition on microstructure development of TRIP steel</i>
P9	<u>L. Kučerová</u> , K. Opatová, I. Zetková: <i>Microstructure analysis of tool powder steels produced by additive manufacturing</i>
P10	<u>S. Lesz</u> , P. Skupień: <i>Preparation and magnetic properties of Fe-based metallic glass</i>
P11	<u>M. Łazarska</u> , T. Z. Woźniak, Z. Ranachowski, P. Ranachowski, A. Trafarski: <i>Application of acoustic emission and artificial neural networks for analysis kinetics transition at isothermal austempering of tool steel</i>
P12	B. Mašek, <u>O. Khalaj</u> , H. Jirkova, J. Svoboda: <i>Processing of new ODS alloys with Fe-Al matrix and Al₂O₃ particles</i>
P13	R. Michalczewski, W. Piekoszewski, M. Szczerek, <u>W. Tuszyński</u> , <i>Surface fatigue life investigation of friction couples with nanocoatings</i>
P14	<u>M. Opiela</u> : <i>Thermodynamic and kinetic analysis of precipitation processes of MX-type phases in microalloyed steels</i>
P15	<u>M. Popławski</u> , A. Bartkowska, A. Piasecki: <i>Results of the research into the oxidation process of 100Cr6 steel during continuous and isothermal heating</i>
P16	<u>C. Rapiejko</u> , B. Pisarek, T. Pacyniak: <i>Effect of intensive cooling of alloy AM60 with chromium and vanadium additions on cast microstructure and mechanical properties</i>
P17	<u>P. Rokicki</u> , R. Chrupcala, K. Dychton: <i>Acetylene flow rate as a crucial parameter of vacuum carburizing process of modern tool steels</i>
P18	E. Skołek, <u>M. Rodakowski</u> , W. Świątnicki: <i>Hydrogen embrittlement of the nanocrystalline 67SiMnCr6-6-4 steel</i>
P19	<u>E. Skołek</u> , W. A. Świątnicki: <i>Nanocrystalline Upper Bainite</i>
P20	A. Śmiglewicz, G. Niewielski, <u>M. B. Jabłońska</u> : <i>Evaluation of the ability of deformation energy absorption of an Mn-Al-Si high-carbon steel</i>
P21	<u>J. Tuleja</u> , Z. Zatorski: <i>Numerical modelling of micro-stresses in carbonised austenitic cast steel under rapid cooling conditions</i>
P22	<u>K. Uściński</u> , S. Marciniak, W. Świątnicki: <i>Influence of various heat treatments on distortion of X37CrMoV5-1 steel</i>
P23	<u>P. Wach</u> , J. Michalski, <i>Nitrided layers with high corrosion resistance</i>
P24	<u>M. Wasiluk</u> , W. Świątnicki: <i>Simulations of carbides precipitation in selected steels destined for nanostructurization</i>
P25	<u>A.N. Wieczorek</u> : <i>Experimental studies on the abrasive wear of hard-wearing steels in the presence of diverse abrasive materials</i>
P26	<u>A.N. Wieczorek</u> : <i>Experimental study on the impact of dynamic loads on the wear surface-hardened</i>

	<i>chain wheels produced from the alloy cast steel</i>
P27	<i><u>A. N. Wieczorek</u>: Influence of shot peening on abrasion wear in real conditions of Ni-Cu-ausferritic ductile iron</i>
P28	<i><u>A. N. Wieczorek</u>: Operationally oriented studies on the resistance to abrasive wear of components of armoured face conveyors</i>
P29	<i><u>A. N. Wieczorek</u>: Operation-oriented identification of the tribocorrosion properties of steel and steel cast for mining applications</i>
P30	<i><u>A. N. Wieczorek</u>, A. Stachowiak, Forecasting the tribocorrosive wear of ADI cast iron containing Ni and Cu</i>
P31	<i><u>D. Wilk-Kołodziejczyk</u>: Supporting the manufacturing process of metal products with the methods of artificial intelligence</i>
P32	<i><u>R. Władysław</u>, A. Kozuń, T. Pacyniak: The effect of water mist cooling of casting die on the solidification, microstructure and properties of AlSi20 Alloy</i>
P33	<i><u>K. Zadrozna</u>, K. Wasiluk, W. Świątnicki: Formation of a nanocrystalline structure in the ADI through designed heat treatment</i>