

# 12<sup>th</sup> International Conference on Shot Peening, ICSP-12

Goslar, Germany, September 15-18, 2014



Sponsored by



Monday, 15.09.2014

Time	Room	Moderator	Presenter	Event / Title
08:00 - 16:00	Registration office			Registration and Information*
10:30 - 10:45	Großer Saal		Prof. L. Wagner	Opening
10:45 - 11:45		Prof. L. Wagner	Prof. H. Wohlfahrt <i>TU Braunschweig, Germany</i>	Plenary Lecture: History of Shot Peening in Germany
11:45 - 12:30	Foyer			Welcome Snack
13:30 - 16:00				Goslar Historic City Tour: Goslar Highlights
17:30 - 19:00				Welcome Reception in Butterhanne

\* The registration office is open daily from 08:00 to 16:00

Session	Time	Room	Moderator	Presenter	Co-authors	Title
<b>Keynote Lecture</b>	09:00 - 09:45	Großer Saal	L. Wagner	V. Schulze <i>Karlsruhe Institute of Technology, Germany</i>	A. Klumpp, J. Hoffmeister	Mechanical Surface Treatments
1A	09:50 - 10:15	Großer Saal	M. Wollmann	A. Zammit <i>University of Malta, Malta</i>	S. Abela, R. Michalczewski, M. Kalbarczyk, L. Wagner, M. Mhaede, R. Wan, M. Grech	Influence of shot peening on the rolling contact fatigue resistance of Cu-Ni austempered ductile iron
	10:15 - 10:40			M. Guagliano <i>Politecnico di Milano, Italy</i>	S. Bagherifard, M. Bandini, C. Morel, J. Samuel	Fatigue strength of a low alloy steel shot peened with ultra fine hard media
1B	09:50 - 10:15	Marmorsaal	L. Wagner	J.-C. Kim <i>Kyushu University, Japan</i>	S.-K. Cheong, H. Noguchi	Investigation of fatigue crack growth behavior on the shot-peened carbon steel by residual stress relaxation
	10:15 - 10:40			J. Hoffmeister <i>Karlsruhe Institute of Technology, Germany</i>	V. Schulze	Residual stress relaxation induced by shot peening in different materials after quasi-static loading
1C	09:50 - 10:15	Turmsaal	B. Eigenmann	H.Y. Miao <i>École Polytechnique de Montréal, Canada</i>	R. Lebon, M. Lévesque, P. Bocher	Residual stress measurement correction on shot peened AA2024 by finite element analysis
	10:15 - 10:40			C. Jiang <i>Shanghai Jiatong University, China</i>	Q. Feng, Q. Wang	X-ray Diffraction riveted analysis of shot-peened duplex stainless steel during isothermal annealing
<b>Coffee Break</b>	<b>10:40 - 11:00</b>					
2A	11:00 - 11:25	Großer Saal	J. Cammet	H. J. C. Voorwald <i>State University of São Paulo, Brazil</i>	T. A. Minto, M. Y. Pitanga, M. C. Fonseca	Influence of shot peening on the fatigue resistance of sulfuric anodized AA 7175-T74
	11:25 - 11:50			H. Soyama <i>Tohoku University, Japan</i>		Improvement of threshold stress intensity factor range of stainless steel by cavitation peening
	11:50 - 12:15			C. Müller <i>TU Darmstadt, Germany</i>	J. Schuster	Shot peening of ultrafine grained (UFG) microstructures
	12:15 - 12:40			Q. Wang <i>Shanghai Jiatong University, China</i>	Q. Feng, C. Jiang	Recrystallizations of surface deformation layer of 18CrNiMo7-6 steel after shot peening during isothermal annealing
2B	11:00 - 11:25	Marmorsaal	L. Wagner	O. Higounenc <i>Metal Improvement Company, France</i>		Laser peening vs. shot peening: engineering of residual stresses, surface roughness and cold working
	11:25 - 11:50			J. Epp <i>Stiftung Institut für Werkstofftechnik, Bremen, Germany</i>	H. W. Zoch	Comparison of water-jet peening and laser shock peening with shot peening for the improvement of fatigue properties of carburized steel gears
	11:50 - 12:15			D. Retraint <i>Université de Technologie de Troyes, France</i>	D. Gallitelli, E. Rouhaud	Comparison between conventional shot peening (SP) and surface mechanical attrition treatments (SMAT) on the induced superficial mechanical properties of Titanium alloy
	12:15 - 12:40			M. Ramulu <i>University of Washington, USA</i>		Assessment of field surface treatments for prolonging the life of steel welded joints subjected to fatigue loading
	11:00 - 11:25			U. Kletzin <i>TU Ilmenau, Germany</i>		Finite element simulation of shot peening on spring steel wire

Session	Time	Room	Moderator	Presenter	Co-authors	Title
2C	11:25 - 11:50	Turmsaal	V. Schulze	M. Lévesque <i>École Polytechnique de Montréal, Canada</i>	H. Y. Miao, A. Gariépy, A. Levers	Prediction of shot peen forming through direct finite element simulation
	11:50 - 12:15			V. Hardenacke <i>Fraunhofer IWM, Freiburg, Germany</i>	M. Farajian, D. Siegele	Simulation of the high frequency hammer peening process for improving the fatigue performance of welded joints
	12:15 - 12:40			Y. J. Wang <i>Northwestern Polytechnical University, China</i>	X. D. Xiao, J. B. Wang, W. Zhang, M. J. Qiao	Finite element simulation on shot peen forming the wing panel of commercial aircraft C919
<b>Lunch</b>	<b>12:40 - 13:40</b>	<b>Clubraum (Frühstücksrestaurant), Altdeutsche Stuben, Maximilian</b>				
3A	13:40 - 14:05	Großer Saal	E. Müller	J. Sakamoto <i>Seoul National University of Science and Technology, Korea</i>		Effect of FIB-processed sharp flaw on fatigue limit of shot peened medium carbon steel
	14:05 - 14:30			R. L. Peng <i>Linköping University, Sweden</i>	T. Vuoristo, D. Bäckström, M. Ahmad, M. Lundberg, S. Johansson	Fatigue strength of shot peened compacted graphite iron
	14:30 - 14:55			X. Chen <i>Shanghai Jiatong University, China</i>	P. Fu, C. Jiang	Microstructure changes and stress relaxation of 18CrNiMo7-6 steel after multi-step shot peening during isothermal annealing
	14:55 - 15:20			S. Ikeda <i>SINTOKOGIO,LTD., JAPAN</i>	A. Matsui, Y. Kobayashi, M. Enoki	Evaluation of shot peening by AE method
3B	13:40 - 14:05	Marmorsaal	H. Polanetzki	R. Weingärtner <i>Karlsruhe Institute of Technology, Germany</i>	J. Hoffmeister, V. Schulze	Investigation on the mechanisms improving fatigue strength in surface layers after micropeening
	14:05 - 14:30			Y. Watanabe <i>TOYO SEIKO. CO., LTD, Japan</i>	K. Hattori, M. Yamawaki, Y. Kobayashi, K. Ito	Novel system for potential non-destructive material inspection using positron annihilation lifetime spectroscopy on shot peened parts
	14:30 - 14:55			H. Pan <i>EPCO Testing Technology, China</i>	Q. Feng, C. Jiang	Effects of shot peening on surface mechanical properties of duplex stainless steel
	14:55 - 15:20			W. Hennig <i>Rolls-Royce, Deutschland</i>	T. Haubold	A shot peening method for aerofoil treatment of blisk assemblies
3C	13:40 - 14:05	Turmsaal	V. Schulze	A. Lim <i>Nanyang Technological University, Singapore</i>	S. Castagne, C. C. Wong	Effect of friction coefficient on finite element modelling of deep cold rolling
	14:05 - 14:30			A. Toufayli <i>Mines ParisTech, CEMEF, France</i>	P.-O. Bouchard, M. Bernacki	Shot peening of surface irregularities: numerical modelling and influence on fatigue properties
	14:30 - 14:55			A. Erz <i>Karlsruhe Institute of Technology, Germany</i>	J. Hoffmeister, V. Schulze	Numerical simulation of micropeening of quenched and tempered AISI 4140
	14:55 - 15:20			M. Farajian <i>Fraunhofer IWM, Freiburg, Germany</i>	V. Hardenacke, M. Klaus, W. Pfeiffer, D. Siegele	Numerical studies of shot peening of high strength steels and the related experimental investigations by means of hole drilling, X-ray and synchrotron diffraction analysis
<b>Coffee Break</b>	<b>15:20 - 15:40</b>					

Session	Time	Room	Moderator	Presenter	Co-authors	Title
4A	15:40 - 16:05	Großer Saal	M. Mhaede	K. Masaki <i>Okinawa National College of Technology, JAPAN</i>	N. Hisamori, Y. Kobayashi, D. Gowa	Effects of zirconia shot peening on high cycle fatigue properties of Ti-6Al-4V alloy
	16:05 - 16:30			Q. Liu <i>Defence Science and Technology Organisation (DSTO), Australia</i>	P. S. Baburamani, P. K. Sharp	The effect of partial and re-work peening on the fatigue life of 7050-T7451 aluminium alloy
	16:30 - 16:55			N. Tanuma <i>SINTOKOGIO,LTD., JAPAN</i>	D. Gowa, Y. Kobayashi	Low velocity shot peening condition by high hardness CCW
4B	15:40 - 16:05	Marmorsaal	M. Ramulu	K. Nambu <i>Suzuka National College of Technology, JAPAN</i>	Y. Shimizu	Clarification of the influence factor to the surface modification effect by fine particle peening
	16:05 - 16:30			S. Yang <i>TU Clausthal, Germany</i>	L. Wagner	HCF performance of the shot peened near-beta titanium alloy Ti-6246 – effects of test temperature and environment
	16:30 - 16:55			B. Eigenmann <i>X-Ray and Materials Laboratory Eigenmann, Germany</i>	A. Lau, A. Kiefer	Shot peening of high quality case hardening steel – process parameters and process limits
4C	15:40 - 16:05	Turmsaal	W. Zinn	J. Badreddine <i>University of Technology of Troyes,France</i>	M. Micoulaut, S. Remy, E. Rouhaud, P. Renaud, F. Chateau, V. Desfontaine	A model for ultrasonic shot peening: optimization of chamber design in an industrial context
	16:05 - 16:30			E. Rouhaud <i>University of Technology of Troyes, France</i>	D. Gallitelli, D. Retraint, J. Badreddine, C. Labergere, M. Francois	From process parameters to residual stress field: complete ultrasonic shot peening simulation
	16:30 - 16:55			X. D. Xiao <i>Northwestern Polytechnical University, China</i>	Y. J. Wang, J. B. Wang, S. M. Wie	An analytical approach to relate shot peen forming parameters to resulting curvature with expanding cavity model
ISCSP Meeting	18:00	Raum Mönchehaus				

Session	Time	Room	Moderator	Presenter	Co-authors	Title
5A	09:00 - 09:25	Großer Saal	H. Polanetzki	I. Altenberger <i>Wieland Werke, Germany</i>	M. Mhaede, H. A. Kuhn, L. Wagner, Y. Sano	Effect of swaging and mechanical surface treatments on the mechanical properties of the spray-formed ultra high strength copper alloy CuMn20Ni20
	09:25 - 09:50			W. Riehemann <i>TU Clausthal, Germany</i>	A. Kasakewitsch, C. Teichmann	Fatigue and damping behavior of PM produced aluminum matrix composites after shot peening
	09:50 - 10:15			S. Kikuchi <i>Ritsumeikan University, JAPAN</i>	Y. Nakamura, K. Nambu, M. Ando	Effects of ultrafine particle peening on fatigue properties of ASTM 5056 aluminium alloy
	10:15 - 10:40			H. Pan <i>EPCO Testing Technology, China</i>	Q. Feng, C. Jiang	Investigation on the transformation of sigma phase in shot peened duplex stainless steel at elevated temperature by rietveld method
5B	09:00 - 09:25	Marmorsaal	B. Eigenmann	M. Ramulu <i>University of Washington, USA</i>	H. Bae, H. Diep	Influence of shot peening coverage on residual stresses induced in aluminium alloy 7050-T745
	09:25 - 09:50			X. Xia <i>South China University of Technology, China</i>	X. Q. Cheng, X. F. Sheng, J. Wei	Effect of shot peening intensity on residual stress field of 7075 aluminium alloy
	09:50 - 10:15			C. Jiang <i>Shanghai Jiatong University, China</i>	P. Fu, X. Chen	Effects of different shot peening conditions on the distribution of residual stress and microstructure of 18CrNiMo7-6 steel
	10:15 - 10:40			H.-G. Brokmeier <i>TU Clausthal, Germany</i>	E. Mawaad, L. Wagner	Stress profile after shot peening by combined radiation methods
5C	09:00 - 09:25	Turmsaal	M. Guagliano	J. Ruiz-Hervias <i>Technical University of Madrid, Spain</i>	P. Muñoz, J. A. Porro, J. L. Ocaña	Residual stress measurements in laser shock processed materials
	09:25 - 09:50			T. Takata <i>University of Tokyo, Japan</i>	M. Enoki, A. Matsui, Y. Kobayashi	AE monitoring in water during laser shock peening process
	09:50 - 10:15			xxxxxxxxxx		xxxxxxxxxxxxxxxx
	10:15 - 10:40			xxxxxxxxxx		xxxxxxxxxxxxxxxx
<b>Coffee Break</b>	<b>10:40 - 11:00</b>					
6A	11:00 - 11:25	Großer Saal	J. Champagne	E. Daniel <i>Metal Improvement Company, France</i>	I. Huther	Improvement of the welding joints and components by shot peening for IIW
	11:25 - 11:50			J. Fuhr <i>Metal Improvement Company, Germany</i>	R. Fiebach, N. Stöcklein	The saturation point in accordance to the current SAE J443 – no problem to former processes
	11:50 - 12:15			J. Derda <i>Electronics Incorporated, USA</i>	J. Champagne	Mini-strips for limited access peening intensity measurements
	12:15 - 12:40			U. Raab <i>TU Clausthal, Germany</i>	C. Becker, L. Wagner	Influence of shot peening on the fatigue behavior of orbital friction welded titanium joints
6B	11:00 - 11:25	Marmorsaal	M. Ramulu	V. Llana <i>University of Oviedo, Spain</i>	F.J. Belzunce	Looking for the optimal shot peening treatment on quenched and tempered steels with different hardness levels
	11:25 - 11:50			Y. Aiba <i>Keio University, Japan</i>	K. Murai, M. Ohmiya, J. Komotori	Observation of particle behavior in fine particle peening process
	11:50 - 12:15			C. Teichmann <i>TU Clausthal, Germany</i>	B. Eigenmann, M. Mhaede, L. Wagner	Fatigue performance of shot peened cp-Ti: effect of prior severe plastic deformation

Session	Time	Room	Moderator	Presenter	Co-authors	Title
	12:15 - 12:40			Y. Kameyama <i>Tokyo City University, Japan</i>	R. Takahashi, Y. Owaku, H. Sato, R. Shimpō	Effect of shot particle conditions on the transfer of copper induced by fine particle peening
6C	11:00 - 11:25	Turmsaal	I. Altenberger	E. Müller <i>University of Applied Sciences Bochum, Germany</i>	G. Feldmann	Deep cold rolling of Almen strips for process monitoring
	11:25 - 11:50			S. Fricke <i>ECOROLL AG Werkzeugtechnik, Germany</i>	K. Röttger	Deep rolling of bore holes with a diameter of 3 mm with a hydrostatic tool
	11:50 - 12:15			Q. Liu <i>Defence Science and Technology Organisation (DSTO), Australia</i>	W. Zhuang, P. K. Sharp	Deep surface rolling to improve fatigue performance of laser cladding of aluminium alloy 7075-T65
	12:15 - 12:40			W. Zinn <i>University of Kassel, Germany</i>	A. Cherif, I. Nikitin, B. Scholtes	Deep rolling at lower and elevated temperatures – effects and consequences on fatigue behavior
<b>Lunch</b>	<b>12:40 - 13:40</b>	<b>Clubraum (Frühstücksrestaurant), Altdeutsche Stuben, Maximilian</b>				
7A	13:40 - 14:05	Großer Saal	S. K. Cheong	H. Usami <i>Meijo university, JAPAN</i>	Y. Takizawa, C. Keju, Y. Yamada, M. Ando	Applicability of micro shot peening as surface modification for rolling sliding interface
	14:05 - 14:30			L. Trško <i>University of Žilina, Slovak Republic</i>	M. Guagliano, O. Bokuvka, F. Novy, M. Bandini	Influence of severe shot peening on high and ultra-high cycle fatigue life of 50CrMo4 steel
	14:30 - 14:55			K. McClurg <i>Avion Solutions Inc., USA</i>	Randy Buckner	Measuring intensity in small areas with complex geometry using mini Almen strips
	14:55 - 15:20			M. Guagliano <i>Politecnico di Milano, Italy</i>	S. Bagherifard, M. Bandini	Experimental analysis of the role of surface roughness on the fatigue behaviour of a shot peened low alloy steel
7B	13:40 - 14:05	Marmorsaal	H. Diep	Y. Harada <i>University of Hyogo, Japan</i>	K. Takahashi, Y. Sakamoto	Formation of Fe-Al intermetallic compound film on hot work tool steel by shot lining and heat treatment
	14:05 - 14:30			H. Mohassel <i>Charkheshgar Co., Tabriz, Iran</i>	M. Zehsaz, H. Vafadar, S. E. Saei, H. Zare	An experimental investigation on the effect of shot peening on the sound intensity level, profile and tooth alignment of spur gear
	14:30 - 14:55			K. Ono <i>Kanazawa Institute of Technology, Japan</i>	Y. Koiso, K. Oguri, Y. Watanabe, K. Hattori	Evaluation of shot peened aluminium by Doppler broadening of positron annihilation radiation technique
	14:55 - 15:20			T. Maaser <i>Rösler Oberflächentechnik GmbH, Germany</i>		Shot peening of landing gear component
7C	13:40 - 14:05	Turmsaal	J. Cammet	K. Treutler <i>TU Clausthal, Germany</i>	V. Wesling, A. Schram	Mechanical treatment of welded and brazed joints
	14:05 - 14:30			T. Nitschke-Pagel <i>TU Braunschweig, Germany</i>	H. Eslami-Chalandar, K. Dilger	Influence of the deformation intensity of different mechanical surface treatments on the fatigue strength of welded aluminium joints
	14:30 - 14:55			H. Polanetzki <i>MTU Aero Engines, Germany</i>	N. Huber, S. Forgues, M. Wollmann, C. Becker, L. Wagner	The comparison of a new needle peening process with conventional shot peening and rotary flap peening
	14:55 - 15:20			xxxxxxxxxx		xxxxxxxxxxxxxx

Coffee Break 15:20 - 15:40

Session	Time	Room	Moderator	Presenter	Co-authors	Title
8A	15:40 - 16:05	Marmorsaal	S. K. Cheong	J. Kritzler <i>Metal Improvement Company, Germany</i>		Increasing the flank load capacity by combination of shot peening and superfinishing
	16:05 - 16:30			P. Edwards <i>Airbus Operations Limited, UK</i>		The effect of shot peening on fatigue performance of anodised aluminium 7010T7651
	16:30 - 16:55			B. Gerin <i>LAMPA, Arts et Métiers Paristech Angers, France</i>	E. Pessard, F. Morel, C. Verdu	Characterising the impact of surface integrity on the fatigue behaviour of a shot-peened connecting rod
	16:55 - 17:20			xxxxxxxxxx		xxxxxxxxxxxxxx
8B	15:40 - 16:05	Turmsaal	M. Wollmann	N. Kawagoishi <i>Dai-ichi Institute of Technology, Japan</i>	Q. Chen, K. Kariya, T. Nagano, Y. Kobayashi, T. Tsuji	Effect of humidity on fatigue properties of shot-peened High Strength Al Alloy
	16:05 - 16:30			F. Pastorek <i>University of Žilina, Slovak Republic</i>	B. Hadzima, M. Mhaede, M. Wollmann, L. Wagner	Corrosion behaviour of shot peened AZ31 Mg alloy
	16:30 - 16:55			A. Ahmed <i>TU Clausthal, Germany</i>	M. Mhaede, M. Wollmann, L. Wagner	Effects of shot peening on the corrosion behavior of coated AISI 316
	16:55 - 17:20			Y. Kobayashi <i>SINTOKOGIO, LTD, Japan</i>	A. Matsui	Shot peening to prevent cracking in the water cooling hole of die-casting die
Poster	17:20 - 18:00	Marmorsaal				
Banquet	19:00	Großer Saal	Dr. Niku-Lari, Dinner Speech " From Las Vegas to Goslar"			

Session	Time	Room	Moderator	Presenter	Co-authors	Title
9A	09:00 - 09:25	Großer Saal	W. Zinn	X. Huang <i>Aeronautical Manufacturing Research Institute, China</i>	Y. Zeng	Investigation on pre-stress shot peen forming process of aluminium 2024 T351
	09:25 - 09:50			M. Gottschalk <i>RWTH Aachen, Germany</i>	C. Russig, M. Bambach, G. Hirt	Recent investigations on shot peen forming of glare sheets and rotary peen forming
	09:50 - 10:15			D. H. S. Costa <i>College of Engineering, Guaratinguetá/SP, Brazil</i>	M. A. S. Torres, C. A. R. P. Baptista	Behavior of the rate of fatigue crack propagation after shot peening in aluminium alloy 2024 T3
	10:15 - 10:40			X. Bai <i>Aeronautical Manufacturing Research Institute, China</i>	Y. Zeng, Q. Meng, E. He	Experiments on shot peen forming of 2198 Al-Li alloy plate
9B	09:00 - 09:25	Marmorsaal	I. Altenberger	J. Scheil <i>TU Darmstadt, Germany</i>	L. Ahmels, C. Müller	Machine hammer peening of austempered ductile iron: microstructural investigation, surface roughness and mechanical properties
	09:25 - 09:50			F. Lienert <i>Karlsruhe Institute of Technology, Germany</i>	J. Hoffmeister, V. Schulze	Changes in surface layer after piezo peening of quenched and tempered AISI 4140
	09:50 - 10:15			M. Gholami <i>TU Clausthal, Germany</i>	I. Altenberger, L. Wagner	Mechanical surface treatments to improve fatigue performance of pure Cu
	10:15 - 10:40			M. Wollmann <i>TU Clausthal, Germany</i>	L. Wagner	Fatigue performance of mechanically surface treated cast irons: lamellar vs. ductile alloys
<b>Coffee Break 10:40 - 11:00</b>						
10A	11:00 - 11:25	Großer Saal	J. Champaigne	L. Hackel <i>Metal Improvement Company, USA</i>	T. Heidenberger, J. Rankin, J. Campbell, T. Mills	Laser peening for improved fatigue strength and lifetime for a wing attachment shear-tie
	11:25 - 11:50			H. Mohassel <i>Charkheshgar Co., Tabriz, Iran</i>	M. Zehsaz, H. Vafadar, S. E. Saei, H. Zare	An experimental investigation on the effect of post-shot peening on tribological behavior of mo-thermal spray coating in synchronizer rings
	11:50 -12:15			T. Bahn <i>Sincotech, Germany</i>	J. Hug	Innovative fatigue test procedures and equipment for shot peening specimens and components
	12:15 - 12:40			S. Baumann <i>Rösler Oberflächentechnik GmbH, Germany</i>		Spring time
10B	11:00 - 11:25	Marmorsaal	Y. Watanabe	G. Feldmann <i>Rolls-Royce, Deutschland</i>	T. Haubold, C. C. Wong, W. Wie	Application of vibropeening on aero-engine components
	11:25 - 11:50			E. Nordin <i>Scania CV AB, Sweden</i>		Experimental investigation of the strain rate dependence of the SS 2506 gear steel
	11:50 -12:15			F. Lienert <i>Karlsruhe Institute of Technology, Germany</i>	A. Erz, J. Hoffmeister, V. Schulze	Influence of piezo peening on the fatigue strength of quenched and tempered AISI 4140
	12:15 - 12:40			S. Ramati <i>Israel Aerospace Industries, Israel</i>		Fatigue justification for straightening parts with flapper peening
<b>Lunch</b>	<b>12:40 - 13:40</b>	<b>Clubraum (Frühstücksrestaurant), Altdeutsche Stuben, Maximilian</b>				
	<b>14:0 - 18:00</b>	<b>WORLD CULTURAL HERITAGE RAMMELSBURG</b>				
	<b>18:00</b>	<b>Closing Ceremony</b>				

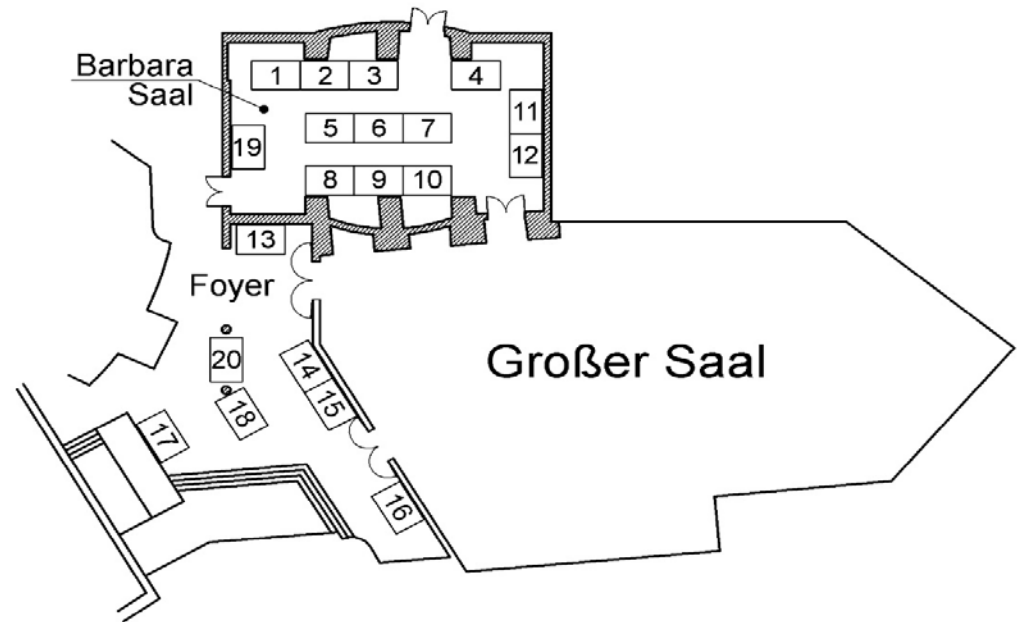


Poster Session, Wednesday, 17.09.2014, 17:20 - 18:00

Time	Room	Presenter	Co-authors	Title
Wednesday 17.09.2015 17:20 - 18:00	Marmorsaal	N. Kulkarni <i>University of Washington, Seattle, WA, USA</i>	H. Bae, R. Mamidala	A three-dimensional single and multiple shot simulation of shot peening for steel, aluminium and titanium alloys
		E. W. Qin <i>Suzhou Nuclear Power Research Institute, Suzhou, China</i>	G. X. Chen, J. L. Li, Huang, S. H. Wu	Q. The shot peening parameters on mechanical properties in AISI403 stainless steel
		M. Gholami <i>TU Clausthal, Germany</i>	I. Altenberger, Y. Sano, Wagner	L. Mechanical surface treatments to improve fatigue performance of high-strength Cu alloy K55
		M. Abdulstaar <i>TU Clausthal, Germany</i>	M. Mhaede, M. Wollmann, L. Wagner	Effects of shot peening and ball-burnishing on the fatigue performance of AA 6082
		H. Alkhazraji <i>TU Clausthal, Germany</i>	M. Mhaede, M. Wollmann, L. Wagner	Shot peening and ball-burnishing effects in Cp-Ti grade 1
		M. Abdulstaar <i>TU Clausthal, Germany</i>	M. Mhaede, M. Wollmann, L. Wagner	Enhancement of fatigue performance of commercially pure aluminium 1050 by shot peening and ball-burnishing
		C. Teichmann <i>TU Clausthal, Germany</i>		Shot peening of TWIP steel – influence on mechanical properties
		H. Alkhazraji <i>TU Clausthal, Germany</i>	M. Mhaede, M. Wollmann, L. Wagner	Shot peening and ball-burnishing effect in TIMETAL (Ti-54M)
		M. Gholami <i>TU Clausthal, Germany</i>	M. Mhaede, B. Hadzima, F. Pastorek, I. Altenberger, M. Wollmann, L. Wagner	Corrosion performance of the shot peened high strength Cu- alloy CuNiSiMg (K55)
		S. Slawik <i>Universität des Saarlandes, Germany</i>	P. Leibenguth, D. Rathmann, C. Gachot, F. Mücklich	Microstructural analysis of shot and laser shock peened grey iron for increased fatigue strength

### Exhibitor List

Booth Number	Company
1	Metal Improvement Company/CWST, Germany
2	SINTOKOGIO,LTD, Japan
3	Sinco Tec Group, Germany
4	TOYO SEIKO.CO.,LTD, Japan
5	Frohn GmbH, Germany
6	MFN, Switzerland
7	Rösler Oberflächentechnik GmbH, Germany
8	Roxor Maschinen AG, Switzerland
9	TBM Automation AG, Switzerland
10	Wheelabrator Group GmbH, Germany
11	Winoa Group, France
12	SONATS - Europe Technologies, France
13	Stresstech GmbH, Germany
14	Shot Peener Magazine, USA
15	Sentenso GmbH, Germany
16	Pulstec Industrial Co., Ltd., Japan
17	OSK Kiefer GmbH, Germany
18	Straaltechniek International BV, Netherlands
19	The NanoSteel Company, USA
20	KrampeHarex GmbH & Co. KG, Germany



**Exhibition Plan**

Exhibition start: Monday, September 15, 2014 at 08:00 am  
 Exhibition end: Thursday September 18, 2014 at 02:00 pm