

Conference Schedule

	Name	Affiliation	Country	Title	Paper No.	Speaker	Remarks	
15th Mon	Technological Aspect 10:40 - 12:00							
	Keynote	Jack Champaigne	Electronics Inc.	U.S.A.	Aerospace Shot Peening Practices and Nadcap Audits	62	Jack Champaigne	
	(2)	Peter Baily	Electronics Inc.	U.S.A.	Ricochet Peening	6	Jack Champaigne	
	(3)	Thomas Nitschke-Pagel	University of Braunschweig	Germany	Residual Stress and near surface material condition of welded high strength steels after different mechanical post-weld treatments	80	Thomas Nitschke-Pagel	
	(4)	Thomas Nitschke-Pagel	University of Braunschweig	Germany	Residual stress determination in mechanically treated weldments with help of different measurement methods	81	Thomas Nitschke-Pagel	
	Application 13:30 - 14:50							
	Keynote	Yoshihiro Watanabe	TOYO SEIKO Co., Ltd.	Japan	Effect of Shot peening on Casting Shape Memory alloy	7	Yoshihiro Watanabe	
	(2)	Yasunori HARADA	University of Hyogo	Japan	Butt Joining of sheet by shot peening	35	Yasunori HARADA	
	(3)	Laurent Waltz	University of Technology of Troyes	France	Combination of the SMA-Treatment and the co-rolling process for the production of a nanostructured composite structure	40	Delphine Reira	
	(4)	Linda Suzanne Clitheroe	University of Manchester	UK	Comparison of peening techniques in stainless steel	43	Linda Suzanne Clitheroe	
	Modeling and Simulation 15:00 - 17:00							
	Keynote	Volker Schulze	Universitaet Karlsruhe	Germany	State of the Art in Shot Peening Simulation	22	M Zimmermann	
	(2)	Volker Schulze	Universitaet Karlsruhe	Germany	A Novel 3D Finite Element Simulation Model for the Prediction of the Residual Stress State after Shot Peening	24	M Zimmermann	
	(3)	Fumio TAKAHASHI	NHK Spring Co., Ltd	Japan	Development of fatigue limit analysis diagram	54	Fumio TAKAHASHI	
	(4)	Kim, Taehyung	Sogang University	Korea	Multi-impact FE Solution for Peening Residual Stress in SCM420H Gear Steel	60	Kim, Taehyung	
	(5)	Potdar, Yogesh	GE Research	U.S.A.	Shot peening process modeling by combining DEM and FEM	64	Potdar, Yogesh	
	(6)	Hong Yan Miao	Ecole Polytechnique de Montreal	Canada	Finite Element Simulation of Stress Peen Forming Process the foundation of a Local-Global approach	66	Hong Yan Miao	
	Cavitation Peening 17:10 - 18:50							
	Keynote	Hitoshi SOYAMA	TOHOKU University	Japan	Singularity of Cavitation Shotless Peening Compared with Shot Peening	29	Hitoshi SOYAMA	
	(2)	Masanori Seki	Okayama University	Japan	Effect of Cavitation Shotless Peening on Fatigue Strength of Steel Gear	19	Masanori Seki	
	(3)	Kiyotaka MASAKI	Okinawa National College of Technology	Japan	Fatigue Property Improvement of Type 316L steel by Cavitation Shotless Peening	21	Kiyotaka MASAKI	
	(4)	Yuichi SEKINE	TOHOKU University	Japan	Improvement of Fatigue Strength of Light Metallic Materials by Cavitation Shotless Peening	26	Yuichi SEKINE	
	(5)	Shinsaku FUKUDA	ISUZU MOTORS LIMITED	Japan	Improvement of bending fatigue limit by cavitation peening for carbon steel specimens containing an artificial surface defect	59	Shinsaku FUKUDA	

16th
Tue**Surface Characteristics 8:30 - 9:50**

Keynote	Katsuji Tosha	Meiji University	Japan	Effect of Shot Peening on Surface Integrity	72	Katsuji Tosha	
(2)	Baskaran Bhuvanaraghan	GE Aviation Bangalore	India	Study of the effects of surface enhancement processes on plastic strain, work hardening and residual stresses- An Overview	1	Potdar, Yogesh	
(3)	Huang YUAN	Bergische Universitat Wuppertal	Germany	Shot-Peening Induced Anisotropy and Characterization of Residual Stresses under Cyclic Loading	13	Huang YUAN	
(4)	ALEKSANDER Nakonieczny	INSTITUTE OF PRECISION MECHANICS	POLAND	Shot Peening of Nitrided Layers	97	I Pokorska	

Surface Characteristics 10:00 - 12:00

(5)	Volker Schulze	Universitaet Karlsruhe	Germany	Thermal Relaxation of Residual Stresses induced by Shot Peening in Inconel 718	23	J Hoffmeister	
(6)	Hatsuhiko USAMI	Meijo University	Japan	Tribological properties of Au film plated on the modified surface by shot peening in boundary lubricated condition	39	Hatsuhiko USAMI	
(7)	Sangbong Yi	Institute of Materials Science and Engineering at TU Clausthal	Germany	Analyzing the Near-Surface Deformation Gradients due to Shot Peening and Ball-Burnishing of Alpha Brass and Stainless Steel	48	M Wollmann	
(8)	Atsushi Yamamoto	University of Hyogo	Japan	Thermal Stability of residual stress induced by heavy deformation on SUS316L Stainless Steel	52	Atsushi Yamamoto	
(9)	Anatoli Frishman	Center for NDE, Iowa State University	U.S.A.	A scaling law in shot peening induced surface material property deviations	68	Anatoli Frishman	
(10)	Yuji Kobayashi	Sinto Kogio Ltd	Japan	Effect of Shot Peening on Temper Hardness	83	Yuji Kobayashi	

Fine Particle Peening 13:30 - 15:30

Keynote	Chuji Kagaya	Chubu University	Japan	Fine Particle Bombardment Technology and Functional Development of Metal Surface	38	Yohiro Yamada	
(2)	Masatoshi Yoshizaki	HINO MOTORS	Japan	Improvement in Tooth Surface Strength of Carburized Transmission Gears by Fine Particle Bombarding Process	17	Masatoshi Yoshizaki	
(3)	Volker Schulze	Universitaet Karlsruhe	Germany	Quality improvement of micro moulds by micro peening and ultrasonic wet peening	25	J Hoffmeister	
(4)	Tatsuro MORITA	Graduate School, Kyoto Institute of Technology	Japan	Improvement of Corrosion Resistance of High-Strength Aluminum Alloy by Fine-Particle Bombarding Treatment	36	Tatsuro MORITA	
(5)	Yuji Ohue	Kagawa University	Japan	Influence of Fine Particle Bombarding on Surface Durability of Carburized Steel under Sliding-Rolling Contact Condition	41	Yuji Ohue	
(6)	Masafumi ANDO	IKK SHOT CO., LTD	Japan	Applicability of fine steel particle peening on steel interface for surface modification	42	Masafumi ANDO	

Fine Particle Peening 15:40 - 17:20

(7)	Yoji Miyachi	Meijo University	Japan	Uniform formation of lamellar structure by Fine Particle Bombarding treatment on Surface Origination of Materials	53	Yoji Miyachi	
(8)	Akiko Inoue	Mitsubishi Heavy Industries, Ltd	Japan	Fatigue property enhancement by Fine Particle Shot Peening for Aircraft Aluminum parts	56	Akiko Inoue	
(9)	Shinichi Takagi	Kanagawa Industrial Technology Center	Japan	Effect of Fine Particle Bombarding on Thermal Fatigue Property of Tool Steel for Die Casting	75	Shinichi Takagi	
(10)	Ryouhei Ishikura	Daido Steel	Japan	Influence of shot peening condition on residual stress of high-strength steels	84	Ryouhei Ishikura	
(11)	Kiyoshi Okumura	Sintobrotator, Ltd	Japan	Development of Fe-Based Metallic Glass Shot "AMO-beads" for Peening with High Strength and Long Life	89	Kiyoshi Okumura	

Peen Forming 17:30 - 18:10

(1)	Abadie, Francois-Xavier	Saint-Gobain	France	Experimental demonstration of intelligent peen forming on aluminium alloy with ceramic shot	4	Abadie, Francois-Xavier	
(2)	Harald Dackweiler	RWTH Aachen University	Germany	Application of the Shot Peen Forming Process to Sandwich and Laminate structures	61	Harald Dackweiler	

17th
Wed**Fatigue and Fracture of Steel 8:30 - 9:50**

Keynote	Akira Tange	NHK Spring Co. Ltd.	Japan	Fatigue Strength and Shot-peening	90	Akira Tange
(2)	Birger Karlsson	Chalmers University of Technology	Sweden	Influence of decarburisation on the fatigue behaviour of shot peened spring steel	2	Kamellia Dalaei
(3)	Abadie, Francois-Xavier	Saint-Gobain	France	Application of ceramic shot for peening of automotive suspension coil springs	3	Abadie, Francois-Xavier
(4)	Anna Medvedeva	Uddeholm Tooling AB	Sweden	Stress relaxation resistance for improved fatigue performance of shot peened tool components	5	Anna Medvedeva

Fatigue and Fracture of Steel 10:00 - 12:00

(5)	Berthold. Scholtes	University of Kassel	Germany	Thermomechanical Surface Treatment of Quenched and Tempered Steel SAE 1045 - a Method to Improve Fatigue Life and Strength	9	W Zinn, K Timmermann, A Cherif
(6)	Kotoji Ando(Koji Takahashi)	Yokohama National Univ.	Japan	Improvement of bending fatigue strength by shot peening for spring steel specimens containing an artificial surface defect	11	Kotoji Ando
(7)	Mario Guagliano	Politecnico di Milano	Italy	Short crack fatigue behaviour of a nitrided and shot peened steel	12	Mario Guagliano
(8)	Sunil Mahagaonkar	Ambedkar Technological University	India	PARAMETRIC STUDIES ON THE FATIGUE PERFORMANCE OF SHOT PEENED AISI 316L MATERIAL	14	P K Brahmankar
(9)	SeongKyun Cheong	Seoul National University of Technology	Korea	A LIFE PREDICTION AND FATIGUE CHARACTERISTICS OF DIFFERENTIAL GEAR APPLIED BY OPTIMAL PEENING CONDITION	32	SeongKyun Cheong
(10)	Koji Takahashi	Yokohama National University	Japan	Effects of shot peening on torsional fatigue limit for spring steel specimens containing an artificial surface defect	34	Koji Takahashi

Fatigue and Fracture of Steel 13:30 - 14:50

(11)	Alexandre Goloborodko	NISSAN MOTOR Co, LTD	Japan	Effect of Shot Peening after Carbonitriding on Contact Fatigue Strength of Chromium Containing Steel	55	Alexandre Goloborodko
(12)	Hideki OKADA	NHK Spring Co. Ltd	Japan	Effects of shot peening on bending fatigue limit for spring steel specimens containing an artificial surface defect	69	Hideki OKADA
(13)	Masami WAKITA	Chuo Spring	Japan	Effects of Shot Peening on Torsional Fatigue Strength of High Strength Spring Steel in Air and Corrosive Environment	78	Masami WAKITA
(14)	Hiroaki Suzuki	Sinto Kogio Ltd	Japan	Influence of shot peening on fatigue strength of welded structure	87	Hiroaki Suzuki

Fatigue and Fracture of Other material 15:00 - 17:20

Keynote	Lothar Wagner	Institute of Materials Science and Engineering	Germany	Shot Peening of Non-Ferrous alloys to Enhance Fatigue Performance	47	Lothar Wagner
(2)	Berthold. Scholtes	University of Kassel	Germany	Corrosion Fatigue of Al-alloy AA7020 in Different Surface Treatment States	10	W Zinn, K Timmermann, A Cherif
(3)	ali akbar ziaei moayed	Sharif University of Technology	Iran	Influence of Shot Peening Treatment On The Fatigue Life of Ti6Al4V ELI Biomedical Alloy	37	ali akbar ziaei moayed
(4)	Tomasz Ludian	Institute of Materials Science and Engineering at TU Clausthal	Germany	Influence of Shot Peening and Ball-Burnishing on Smooth and Notched Fatigue Strength of Titanium Alloys	45	Lothar Wagner
(5)	Doug Hornbach	Lambda Technologies	U.S.A.	The influence of Surface Enhancement by Low Plasticity Burnishing on the Corrosion Fatigue Performance of AA7475-T7351 and AA2024-T351	67	Doug Hornbach
(6)	Bernd Oberwinkler	University of Leoben	Austria	Influence of Shot Peening on the Fatigue Behavior of Ti-6Al-4V under Multiaxial Loading	92	H Leitner
(7)	M. Ramulu	University of Washington	U.S.A.	EFFECT OF PEENING ON FATIGUE PERFORMANCE OF TWO TITANIUM ALLOYS	99	Hali Diep

Alternative Process (Ultrasonic Peening) 17:30 - 18:30

(1)	Jean-Michel Duchazeaubeneix	SONATS	France	On-Aircraft Shot Peening Application using the Stressonic Process	94	Jean-Michel Duchazeaubeneix
(2)	Roland Hessert	MTU Aero Engines GmbH	Germany	Ultrasonic Impact Treatment for Surface Hardening of Aero-Engine Materials	65	Holger Polantzki
(3)	Y.S. Pyoun	Sun Moon University	Korea	The Ultrasonic Nano-Crystalline Surface Modification Technology And It's Application To Improve The Fatigue Strength, The Wear Resistance, And The Service Life & Energy Efficiency of Bearings	95	Y.S. Pyoun

18th Thr	Alternative Process (Laser) 8:30 - 9:50							
	Keynote	Yuji SANO	Toshiba Corporation	Japan	Laser Peening without Coating: Process, Effects and Applications	31	Yuji SANO	
	(2)	Christophe CELLARD	Universite de technologie de Troyes	France	LASER SHOCK PEENING ON TITANIUM ALLOYS: INFLUENCE OF PARAMETERS	44	Christophe CELLARD	
	(3)	Manabu Heya	Creation of New Photonics Industries	Japan	Observation of expansion velocity of laser plasmas using a streak camera	91	Manabu Heya	
	(4)	Takafumi Adachi	Fuji Heavy Industries Ltd.	Japan	Effect of fatigue properties by laser peening for aircraft structure parts	96	Takafumi Adachi	
	Machinery & Process Control 10:00 - 11:40							
	(1)	Eckehard Muller	University of Applied Science Bochum	Germany	Stress Peening of Minibloc-Springs, the most Sophisticated Coil Springs	30	Eckehard Muller	
	(2)	Norihiko HASEGAWA	GIFU University	Japan	Effect of New Peening Treatment on Fatigue Property of Cast Aluminum alloy	51	M Kakizaki	
	(3)	Tadanobu Ouyama	Sinto Kogio Ltd	Japan	The Trend of Shot Peening Machine in Japanese Automobile Industry	82	Tadanobu Ouyama	
	(4)	Mikitoshi Hiraga	Sintobrotor, Ltd	Japan	The Shot Peening Technique for aero space parts	88	Mikitoshi Hiraga	
(5)	Hali Diep	Boeing Company	U.S.A.	CHARACTERIZATION OF MANUAL SHOT PEENING PROCESS: PRELIMINARY RESULTS	98	Hali Diep		
16th Tue	Poster Session 18:10 - 19:00							
	(1)	Philipp Thuemmler	MTU Aero Engines GmbH	Germany	Simulation of the Ultrasonic Shot Peening Process	8		
	(2)	Katsuhiro Seki	Kanazawa Univ.	Japan	EFFECT OF SHOT PEENING ON FINE GRAIN STEEL	16		
	(3)	Hajime Saitoh	Nippon Steel Corporation	Japan	FORMATION OF SURFACE NANOCRYSTALLINE STRUCTURE IN STEELS BY AIR BLAST SHOT PEENING	18		
	(4)	SeongKyun Cheong	Seoul National University of Technology	Korea	EFFECT OF ULTRASONIC SHOT PEENING ON THE FATIGUE CHARACTERISTICS OF WELDED STS304 FOR ROLLING STOCK	33		
	(5)	Tomasz Ludian	Institute of Materials Science and Engineering at TU Clausthal	Germany	Residual Stress-Induced Subsurface Fatigue Crack Nucleation in Shot Peened titanium Alloys	46		
	(6)	Mansour Mhaede	Institute of Materials Science and Engineering at TU Clausthal	Germany	INFLUENCE OF BALL-BURNISHING ON STRESS CORROSION CRACKING, FATIGUE AND CORROSION FATIGUE OF AI 2024 AND AI 6082	49		
	(7)	Yasunori HARADA	University of Hyogo	Japan	INFLUENCE OF MICROSOT PEENING ON SURFACE CHARACTERISTIC OF HIGH-SPEED TOOL STEEL	57		
	(8)	Yasunori HARADA	University of Hyogo	Japan	SURFACE MODIFICATION OF CARBON STEEL BY SHOT LINING	58		
	(9)	Keesam Shin	Changwon National University	Korea	MICROSTRUCTURE EVOLUTION AND MECHANICAL PROPERTIES OF SUS304 BY ULTRASONIC AND AIR BLAST SHOT PEENING	71		
	(10)	Katsuji Tosha	Meiji University	Japan	Finite Element Analysis of Shot Peening On the profile of a single dent	73		
	(11)	Katsuji Tosha	Meiji University	Japan	Effect of Peened Surface Characteristics on Flow Resistance	74		
	(12)	Hiroaki Suzuki	Sinto Kogio Ltd	Japan	INFLUENCE OF SHOT PEENING ON FATIGUE STRENGTH OF ALUMINUM-ALLOY PARTS	85		
	(13)	Hiroaki Suzuki	Sinto Kogio Ltd	Japan	Influence of shot peening on fatigue strength of friction welded joint	86		
	(14)	Jine-Sung Jung	Power Generation Laboratory	Korea	THE INVESTIGATION ON THE PEENING TREATED TURBINE BLADE IN LONG-TERM USE	93		
	(15)	Igor Altenberger	German University in Cairo	Egypt	Effect of deep rolling on the cyclic deformation behavior of magnesium and aluminium alloys in the temperature range 20-250°C	76		