Michael Rethmeier

List of Publications by Year in Descending Order

218 papers	3,276 citations	30 h-index	46 g-index
223 ext. papers	3,874 ext. citations	2.6 avg, IF	5.92 L-index

#	Paper	IF	Citations
218	Hybrid laser-arc welding of laser- and plasma-cut 20-mm-thick structural steels. *Welding in the World, Le Soudage Dans Le Monde*, **2022**, 66, 507	1.9	0
217	Study on the transition behavior of the bulging effect during deep penetration laser beam welding. *International Journal of Heat and Mass Transfer*, **2022**, 184, 122171	4.9	2
216	Improvement of the mechanical properties and corrosion resistance of laser welds on thick duplex plates by laser cladded buttering. *The Paton Welding Journal*, **2022**, 2022, 18-21	0.3	
215	Quality Prediction in Directed Energy Deposition Using Artificial Neural Networks Based on Process Signals. *Applied Sciences (Switzerland)*, **2022**, 12, 3955	2.6	0
214	The detrimental molten pool narrowing phenomenon in wire feed laser beam welding and its suppression by magnetohydrodynamic technique. *International Journal of Heat and Mass Transfer*, **2022**, 193, 122913	4.9	2
213	Investigation of the gap bridgeability at high-power laser hybrid welding of plasma-cut thick mild steels with AC magnetic support. *Journal of Physics: Conference Series*, **2021**, 2077, 012007	0.3	
212	Investigation of the Extrapolation Capability of an Artificial Neural Network Algorithm in Combination with Process Signals in Resistance Spot Welding of Advanced High-Strength Steels. *Metals*, **2021**, 11, 1874	2.3	0
211	The bulging effect and its relevance in high power laser beam welding. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1135, 012003	0.4	1
210	Influence of an external applied AC magnetic field on the melt pool dynamics at high-power laser beam welding. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1135, 012017	0.4	
209	Effects on crack formation of additive manufactured Inconel 939 sheets during electron beam welding. *Vacuum*, **2021**, 110649	3.7	0
208	The Effects of HLAW Parameters for One Side T-Joints in 15 mm Thickness Naval Steel. *Metals*, **2021**, 11, 600	2.3	
207	Recommendations for an Open Science approach to welding process research data. *Welding in the World, Le Soudage Dans Le Monde*, **2021**, 65, 1661-1669	1.9	
206	Influence of oscillating magnetic field on the keyhole stability in deep penetration laser beam welding. *Optics and Laser Technology*, **2021**, 135, 106715	4.2	8
205	Shielded metal arc welding of 9%Ni steel using matching ferritic filler metal. *Science and Technology of Welding and Joining*, **2021**, 26, 116-122	3.7	5
204	Effects on the distortion of Inconel 718 components along a hybrid laser-based additive manufacturing process chain using laser powder bed fusion and laser metal deposition. *Progress in Additive Manufacturing*, **2021**, 6, 385-394	5	2
203	Wire Arc Additive Manufacturing with Novel Al-Mg-Si Filler Wire□Assessment of Weld Quality and Mechanical Properties. *Metals*, **2021**, 11, 1243	2.3	4
202	The influence of magnetic field orientation on metal mixing in electromagnetic stirring enhanced wire feed laser beam welding. *Journal of Materials Processing Technology*, **2021**, 294, 117135	5.3	12

201	Numerical Analysis of the Partial Penetration High Power Laser Beam Welding of Thick Sheets at High Process Speeds. *Metals*, **2021**, 11, 1319	2.3	2
200	Improved mechanical properties of cast Mg alloy welds via texture weakening by differential rotation refill friction stir spot welding. *Scripta Materialia*, **2021**, 203, 114113	5.6	6
199	Revealing joining mechanism in refill friction stir spot welding of AZ31 magnesium alloy to galvanized DP600 steel. *Materials and Design*, **2021**, 209, 109997	8.1	3
198	Improvements of hybrid laser arc welding for shipbuilding T-joints with 2F position of 8´mm thick steel. *Optics and Laser Technology*, **2021**, 143, 107284	4.2	3
197	LMD coatings as filler material for laser beam welded 30 mm thick plates. *Procedia CIRP*, **2020**, 94, 293-297	1.8	
196	Hybrid laser-arc welding of thick-walled pipe segments with optimization of the end crater. *Procedia CIRP*, **2020**, 94, 676-679	1.8	2
195	Numerical study of additional element transport in wire feed laser beam welding. *Procedia CIRP*, **2020**, 94, 722-725	1.8	5
194	Experimental investigations on the fatigue resistance of automatically welded tubular X-joints for jacket support structures. *Journal of Physics: Conference Series*, **2020**, 1669, 012022	0.3	1
193	Notch impact toughness of laser beam welded thick sheets of cryogenic nickel alloyed steel X8Ni9. *Procedia CIRP*, **2020**, 94, 627-631	1.8	2
192	Automated Tool-Path Generation for Rapid Manufacturing of Additive Manufacturing Directed Energy Deposition Geometries. *Steel Research International*, **2020**, 91, 2000017	1.6	2
191	Lam□urve approximation for the assessment of the 3D temperature distribution in keyhole mode welding processes. *Journal of Laser Applications*, **2020**, 32, 022042	2.1	1
190	Mathematical modeling of the geometrical differences between the weld end crater and the steady-state weld pool. *Journal of Laser Applications*, **2020**, 32, 022024	2.1	5
189	Theoretical study of influence of electromagnetic stirring on transport phenomena in wire feed laser beam welding. *Journal of Laser Applications*, **2020**, 32, 022026	2.1	13
188	Influence of welding parameters on electromagnetic supported degassing of die-casted and wrought aluminum. *Journal of Laser Applications*, **2020**, 32, 022031	2.1	1
187	Quantifying Mechanical Properties of Automotive Steels with Deep Learning Based Computer Vision Algorithms. *Metals*, **2020**, 10, 163	2.3	6
186	Geometric distortion-compensation via transient numerical simulation for directed energy deposition additive manufacturing. *Science and Technology of Welding and Joining*, **2020**, 25, 468-475	3.7	11
185	Experimental and numerical study on the influence of the laser hybrid parameters in partial penetration welding on the solidification cracking in the weld root. *Welding in the World, Le Soudage Dans Le Monde*, **2020**, 64, 501-511	1.9	5
184	Investigation of the Application of a C-ring Geometry to validate the Stress Relief Heat Treatment Simulation of Additive Manufactured Austenitic Stainless Steel Parts via Displacement. *HTM - Journal of Heat Treatment and Materials*, **2020**, 75, 248-259	0.7	

183	Influence of electron beam welding parameters on the weld seam geometry of Inconel 718 at low feed rates. *Materialpruefung/Materials Testing*, **2020**, 62, 1221-1227	1.9	3
182	Mechanical Properties Characterization of Welded Automotive Steels. *Metals*, **2020**, 10, 1	2.3	73
181	Avoidance of end crater imperfections at high-power laser beam welding of closed circumferential welds. *Welding in the World, Le Soudage Dans Le Monde*, **2020**, 64, 407-417	1.9	6
180	Prevention of liquid metal embrittlement cracks in resistance spot welds by adaption of electrode geometry. *Science and Technology of Welding and Joining*, **2020**, 25, 303-310	3.7	13
179	In situ determination of the critical straining condition for solidification cracking during laser beam welding. *Procedia CIRP*, **2020**, 94, 666-670	1.8	0
178	Distortion-based validation of the heat treatment simulation of Directed Energy Deposition additive manufactured parts. *Procedia CIRP*, **2020**, 94, 362-366	1.8	2
177	Avoidance of liquid metal embrittlement during resistance spot welding by heat input dependent hold time adaption. *Science and Technology of Welding and Joining*, **2020**, 25, 617-624	3.7	8
176	On the relationship between the bulge effect and the hot cracking formation during deep penetration laser beam welding. *Procedia CIRP*, **2020**, 94, 5-10	1.8	7
175	Hybrid laser arc welding of thick high-strength pipeline steels of grade X120 with adapted heat input. *Journal of Materials Processing Technology*, **2020**, 275, 116358	5.3	18
174	Mechanical Properties of Single-pass Hybrid Laser Arc Welded 25 mm Thick-walled Structures Made of Fine-grained Structural Steel. *Procedia Manufacturing*, **2019**, 36, 112-120	1.5	9
173	Microstructure of Inconel 718 parts with constant mass energy input manufactured with direct energy deposition. *Procedia Manufacturing*, **2019**, 36, 256-266	1.5	9
172	Numerical and experimental investigation of thermo-fluid flow and element transport in electromagnetic stirring enhanced wire feed laser beam welding. *International Journal of Heat and Mass Transfer*, **2019**, 144, 118663	4.9	16
171	Improvement of Filler Wire Dilution Using External Oscillating Magnetic Field at Full Penetration Hybrid Laser-Arc Welding of Thick Materials. *Metals*, **2019**, 9, 594	2.3	17
170	On the search for the origin of the bulge effect in high power laser beam welding. *Journal of Laser Applications*, **2019**, 31, 022413	2.1	14
169	Highspeed-plasma-laser-cladding of thin wear resistance coatings: A process approach as a hybrid metal deposition-technology. *Vacuum*, **2019**, 166, 123-126	3.7	4
168	Investigation of liquid metal embrittlement of dual phase steel joints by electro-thermomechanical spot-welding simulation. *Science and Technology of Welding and Joining*, **2019**, 24, 624-633	3.7	15
167	Assessment of thermal cycles by combining thermo-fluid dynamics and heat conduction in keyhole mode welding processes. *International Journal of Thermal Sciences*, **2019**, 145, 105981	4.1	6
166	Experimental and numerical assessment of weld pool behavior and final microstructure in wire feed laser beam welding with electromagnetic stirring. *Journal of Manufacturing Processes*, **2019**, 45, 408-418	5	21

165	Laser Welding of SLM-Manufactured Tubes Made of IN625 and IN718. *Materials*, **2019**, 12,	3.5	11
164	Automatically Welded Tubular X-Joints for Jacket Substructures: Prediction of the Technical Fatigue Crack Location. *Ce/Papers*, **2019**, 3, 823-828	0.3	1
163	Prediction of the initial fatigue crack location of automatically welded tubular joints for jacket support structures **2019**, 575-580		1
162	Mechanical properties characterization of resistance spot welded DP1000 steel under uniaxial tensile tests. *Materialpruefung/Materials Testing*, **2019**, 61, 527-532	1.9	7
161	Measurement of Thermal Cycle at Multi-Pass Layer Build-Up with Different Travel Path Strategies during DLMD Process. *Key Engineering Materials*, **2019**, 822, 396-403	0.4	2
160	Development of a novel optical measurement technique to investigate the hot cracking susceptibility during laser beam welding. *Welding in the World, Le Soudage Dans Le Monde*, **2019**, 63, 435-441	1.9	15
159	Low heat input gas metal arc welding for dissimilar metal weld overlays part III: hydrogen-assisted cracking susceptibility. *Welding in the World, Le Soudage Dans Le Monde*, **2019**, 63, 591-598	1.9	5
158	Equivalent heat source approach in a 3D transient heat transfer simulation of full-penetration high power laser beam welding of thick metal plates. *International Journal of Heat and Mass Transfer*, **2018**, 122, 1003-1013	4.9	27
157	Study on the role of recondensation flux in high power laser welding by computational fluid dynamics simulations. *Journal of Laser Applications*, **2018**, 30, 012013	2.1	19
156	In-situ distortions in LMD additive manufacturing walls can be measured with digital image correlation and predicted using numerical simulations. *Additive Manufacturing*, **2018**, 20, 101-110	6.1	52
155	Low heat input gas metal arc welding for dissimilar metal weld overlays part II: the transition zone. *Welding in the World, Le Soudage Dans Le Monde*, **2018**, 62, 317-324	1.9	14
154	Build-up strategies for additive manufacturing of three dimensional Ti-6Al-4V-parts produced by laser metal deposition. *Journal of Laser Applications*, **2018**, 30, 022001	2.1	15
153	Investigation of solidification cracking susceptibility during laser beam welding using an in-situ observation technique. *Science and Technology of Welding and Joining*, **2018**, 23, 234-240	3.7	17
152	Susceptibility of electrolytically galvanized dual-phase steel sheets to liquid metal embrittlement during resistance spot welding. *Welding in the World, Le Soudage Dans Le Monde*, **2018**, 62, 1031-1037	1.9	23
151	Numerical Simulation on the Origin of Solidification Cracking in Laser Welded Thick-Walled Structures. *Metals*, **2018**, 8, 406	2.3	9
150	Hybrid laser-arc welding of thick-walled ferromagnetic steels with electromagnetic weld pool support. *Welding in the World, Le Soudage Dans Le Monde*, **2018**, 62, 767-774	1.9	11
149	Design of neural network arc sensor for gap width detection in automated narrow gap GMAW. *Welding in the World, Le Soudage Dans Le Monde*, **2018**, 62, 819-830	1.9	6
148	3D laser metal deposition: process steps for additive manufacturing. *Welding in the World, Le Soudage Dans Le Monde*, **2018**, 62, 877-883	1.9	12

147	Strain-rate controlled Gleeble experiments to determine the stress-strain behavior of HSLA steel S960QL. *Materialpruefung/Materials Testing*, **2018**, 60, 733-748	1.9	1
146	Application of multi-phase viscoplastic material modelling to computational welding mechanics of grade-s960ql steel. *Comptes Rendus - Mecanique*, **2018**, 346, 1018-1032	2.1	1
145	Laser beam oscillation welding for automotive applications. *Welding in the World, Le Soudage Dans Le Monde*, **2018**, 62, 1039-1047	1.9	8
144	Comparison between GTA and laser beam welding of 9%Ni steel for critical cryogenic applications. *Journal of Materials Processing Technology*, **2018**, 261, 193-201	5.3	12
143	Porosity of LMD manufactured parts analyzed by Archimedes method and CT. *Materialpruefung/Materials Testing*, **2018**, 60, 1055-1060	1.9	4
142	Orbital Hybrid Laser-arc Welding Using a High-power Fibre Laser for Pipeline Construction. *Global Nuclear Safety*, **2018**, 13, 47-57	0.2	
141	Improved degassing in laser beam welding of aluminum die casting by an electromagnetic field. *Journal of Materials Processing Technology*, **2018**, 253, 51-56	5.3	30
140	Study of gap and misalignment tolerances at hybrid laser arc welding of thick-walled steel with electromagnetic weld pool support system. *Procedia CIRP*, **2018**, 74, 757-760	1.8	7
139	Influence of heat input and preheating on the cooling rate, microstructure and mechanical properties at the hybrid laser-arc welding of API 5L X80 steel. *Procedia CIRP*, **2018**, 74, 748-751	1.8	20
138	Laser-plasma-cladding as a hybrid metal deposition-technology applying a SLM-produced copper plasma nozzle. *Procedia CIRP*, **2018**, 74, 738-742	1.8	1
137	Weld pool shape observation in high power laser beam welding. *Procedia CIRP*, **2018**, 74, 683-686	1.8	11
136	Assessing the predictive capability of numerical additive manufacturing simulations via in-situ distortion measurements on a LMD component during build-up. *Procedia CIRP*, **2018**, 74, 158-162	1.8	5
135	Embedding electronics into additive manufactured components using laser metal deposition and selective laser melting. *Procedia CIRP*, **2018**, 74, 168-171	1.8	9
134	Numerical simulation of the weld pool dynamics during pulsed laser welding using adapted heat source models. *Procedia CIRP*, **2018**, 74, 679-682	1.8	5
133	Novel metrology to determine the critical strain conditions required for solidification cracking during laser welding of thin sheets. *Journal of Physics: Conference Series*, **2018**, 1109, 012047	0.3	4
132	Full penetration hybrid laser arc welding of up to 28 mm thick S355 plates using electromagnetic weld pool support. *Journal of Physics: Conference Series*, **2018**, 1109, 012015	0.3	9
131	Finite element analysis of in-situ distortion and bulging for an arbitrarily curved additive manufacturing directed energy deposition geometry. *Additive Manufacturing*, **2018**, 24, 264-272	6.1	18
130	Automatisierte Fertigung von Hohlprofilknoten f□ Jacket-Gr□dungsstrukturen. *Stahlbau*, **2018**, 87, 897-909	0.6	4

129	Build-up strategies for temperature control using laser metal deposition for additive manufacturing. *Welding in the World, Le Soudage Dans Le Monde*, **2018**, 62, 1073-1081	1.9	7
128	Assessing carbon dioxide emission reduction potentials of improved manufacturing processes using multiregional input output frameworks. *Journal of Cleaner Production*, **2017**, 163, 154-165	10.3	15
127	Energy efficiency and environmental impacts of high power gas metal arc welding. *International Journal of Advanced Manufacturing Technology*, **2017**, 91, 3503-3513	3.2	10
126	Environmental energy efficiency of single wire and tandem gas metal arc welding. *Welding in the World, Le Soudage Dans Le Monde*, **2017**, 61, 733-743	1.9	16
125	Numerical simulation of thermally induced residual stresses in friction stir welding of aluminum alloy 2024-T3 at different welding speeds. *International Journal of Advanced Manufacturing Technology*, **2017**, 91, 1443-1452	3.2	14
124	Influence of non-uniform martensitic transformation on residual stresses and distortion of GMA-welding. *Journal of Constructional Steel Research*, **2017**, 128, 193-200	3.8	17
123	Build-up strategies for additive manufacturing of three dimensional Ti-6Al-4V-parts produced by laser metal deposition **2017**,		1
122	Statistical analysis of weld bead geometry in Ti6Al4V laser cladding. *Materialpruefung/Materials Testing*, **2017**, 59, 837-843	1.9	6
121	Sustainable Technologies for Thick Metal Plate Welding. *Sustainable Production, Life Cycle Engineering and Management*, **2017**, 71-84	0.4	4
120	Application of D-optimum Experimental Designs in Consideration of Restrictions for Laser Metal Deposition. *Global Nuclear Safety*, **2017**, 11, 46-60	0.2	
119	Surface Structuring by Pulsed Laser Implantation. *Materials Science Forum*, **2016**, 879, 750-755	0.4	2
118	Numerical simulation of solidification crack formation during laser beam welding of austenitic stainless steels under external load. *Welding in the World, Le Soudage Dans Le Monde*, **2016**, 60, 1001-1008	1.9	11
117	Increasing Performance and Energy Efficiency of Gas Metal Arc Welding by a High Power Tandem Process. *Procedia CIRP*, **2016**, 40, 642-647	1.8	18
116	Numerical sensitivity analysis of TRIP-parameter K on weld residual stresses for steel S355J2+ N. *Journal of Thermal Stresses*, **2016**, 39, 201-219	2.2	6
115	Numerical assessment and experimental verification of the influence of the Hartmann effect in laser beam welding processes by steady magnetic fields. *International Journal of Thermal Sciences*, **2016**, 101, 24-34	4.1	40
114	Sensitivity analysis of the residual stress state in friction stir welding of high strength aluminum alloy. *Materialpruefung/Materials Testing*, **2016**, 58, 20-26	1.9	3
113	Bestimmung der Rissanf□ligkeit von hochfesten St□hlen beim Widerstandspunktschwei□n. *Materialpruefung/Materials Testing*, **2016**, 58, 612-616	1.9	3
112	Finite element modeling of an alternating current electromagnetic weld pool support in full penetration laser beam welding of thick duplex stainless steel plates. *Journal of Laser Applications*, **2016**, 28, 022404	2.1	18

111	Laser based spot weld characterization **2016**,		1
110	Full penetration laser beam welding of thick duplex steel plates with electromagnetic weld pool support. *Journal of Laser Applications*, **2016**, 28, 022420	2.1	23
109	Experimental determination of TRIP-parameter K for mild- and high-strength low-alloy steels and a super martensitic filler material. *SpringerPlus*, **2016**, 5, 754		7
108	Sustainable Welding Process Selection Based on Weight Space Partitions. *Procedia CIRP*, **2016**, 40, 127-132	1.8	9
107	Low heat input gas metal arc welding for dissimilar metal weld overlays part I: the heat-affected zone. *Welding in the World, Le Soudage Dans Le Monde*, **2016**, 60, 459-473	1.9	14
106	Welding with High-power Lasers: Trends and Developments. *Physics Procedia*, **2016**, 83, 15-25		30
105	High Power Laser Beam Welding of Thick-walled Ferromagnetic Steels with Electromagnetic Weld Pool Support. *Physics Procedia*, **2016**, 83, 362-372		15
104	Laser Metal Deposition as Repair Technology for a Gas Turbine Burner Made of Inconel 718. *Physics Procedia*, **2016**, 83, 761-768		64
103	Possibilities for compensating a higher heat input, in particular by the torch offset relative to the top sheet at the fillet weld on a lap joint. *Welding in the World, Le Soudage Dans Le Monde*, **2015**, 59, 443-453	1.9	5
102	Life Cycle Assessment of welding technologies for thick metal plate welds. *Journal of Cleaner Production*, **2015**, 108, 46-53	10.3	36
101	Numerical investigation of energy input characteristics for high-power fiber laser welding at different positions. *International Journal of Advanced Manufacturing Technology*, **2015**, 80, 931-946	3.2	33
100	Reconstruction of 3D transient temperature field for fusion welding processes on basis of discrete experimental data. *Welding in the World, Le Soudage Dans Le Monde*, **2015**, 59, 497-512	1.9	9
99	Environmental and Social Life Cycle Assessment of Welding Technologies. *Procedia CIRP*, **2015**, 26, 293-298		53
98	Numerical modeling for the effect of pin profiles on thermal and material flow characteristics in friction stir welding. *Materials & Design*, **2015**, 77, 114-125		112
97	Study on fatigue behavior of dissimilar materials and different methods of friction-welded joints for drive pinion in trucks. *Welding in the World, Le Soudage Dans Le Monde*, **2015**, 59, 917-926	1.9	4
96	Mobile Vacuum in Pocket Format. *Laser Technik Journal*, **2015**, 12, 43-46		5
95	Welding Simulation in Car Body Construction. *Laser Technik Journal*, **2015**, 12, 33-37		4
94	Understanding grain refinement in aluminium welding. *Welding in the World, Le Soudage Dans Le Monde*, **2015**, 59, 767-784	1.9	30

93	Microcrack Formation During Gas Metal Arc Welding of High-Strength Fine-Grained Structural Steel. *Acta Metallurgica Sinica (English Letters)*, **2014**, 27, 140-148	2.5	2
92	Characteristics of weld pool behavior in laser welding with various power inputs. *Welding in the World, Le Soudage Dans Le Monde*, **2014**, 58, 269-277	1.9	17
91	Numerical simulation of full penetration laser welding of thick steel plate with high power high brightness laser. *Journal of Materials Processing Technology*, **2014**, 214, 1710-1720	5.3	84
90	Experimental and numerical investigation of an electromagnetic weld pool support system for high power laser beam welding of austenitic stainless steel. *Journal of Materials Processing Technology*, **2014**, 214, 578-591	5.3	85
89	Thermal energy generation and distribution in friction stir welding of aluminum alloys. *Energy*, **2014** , 77, 720-731	7.9	108
88	Laser Beam Welding of Thick Titanium Sheets in the Field of Marine Technology. *Physics Procedia*, **2014**, 56, 582-590		19
87	Efficient gap filling in MAG welding using optical sensors. *Welding in the World, Le Soudage Dans Le Monde*, **2014**, 58, 637-647	1.9	5
86	Laser beam oscillation for fillet welding. *Welding in the World, Le Soudage Dans Le Monde*, **2014**, 58, 865-872	1.9	3
85	Joint-site structure friction welding method as a tool for drive pinion light weighting in heavy-duty trucks. *Journal of Materials Processing Technology*, **2014**, 214, 1921-1927	5.3	5
84	Hybrid laser arc welding of X80 and X120 steel grade. *Science and Technology of Welding and Joining*, **2014**, 19, 15-24	3.7	48
83	Solidification cracking in laser GMA hybrid welding of thick-walled parts. *Science and Technology of Welding and Joining*, **2014**, 19, 209-213	3.7	12
82	Influence of Weld Imperfections on the Fatigue Behaviour of Resistance Spot Welded Advanced High Strength Steels. *Advanced Materials Research*, **2014**, 891-892, 1445-1450	0.5	1
81	Experimental and Numerical Investigation of an Electromagnetic Weld Pool Control for Laser Beam Welding. *Physics Procedia*, **2014**, 56, 515-524		33
80	Informationsgehalt des schweißpunktabhängigen Emissionsgrades. *Materialpruefung/Materials Testing*, **2014**, 56, 96-103	1.9	
79	Laser Beam Oscillation Strategies for Fillet Welds in Lap Joints. *Physics Procedia*, **2014**, 56, 458-466		21
78	Quantitative evaluation of ultrasonic C-scan image in acoustically homogeneous and layered anisotropic materials using three dimensional ray tracing method. *Ultrasonics*, **2014**, 54, 551-62	3.5	19
77	High-power laser welding of austenitic stainless steel with electromagnetic control of weld pool. *The Paton Welding Journal*, **2014**, 2014, 21-24	0.3	2
76	Spectral diagnostics of a vapor-plasma plume produced during welding with a high-power ytterbium fiber laser. *Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)*, **2013**, 115, 140-146	0.7	12

75	Influence of grain size on mechanical properties of aluminium GTA weld metal. *Welding in the World, Le Soudage Dans Le Monde*, **2013**, 57, 293	1.9	16
74	Dependency of martensite start temperature on prior austenite grain size and its influence on welding-induced residual stresses. *Computational Materials Science*, **2013**, 69, 251-260	3.2	40
73	Influence of Solute Content and Solidification Parameters on Grain Refinement of Aluminum Weld Metal. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2013**, 44, 3198-3210	2.3	15
72	Simultaneous measurement of tool torque, traverse force and axial force in friction stir welding. *Journal of Manufacturing Processes*, **2013**, 15, 495-500	5	80
71	About the influence of a steady magnetic field on weld pool dynamics in partial penetration high power laser beam welding of thick aluminium parts. *International Journal of Heat and Mass Transfer*, **2013**, 60, 309-321	4.9	104
70	Laser Beam Welding of Aluminum Alloys Under the Influence of an Electromagnetic Field. *Physics Procedia*, **2013**, 41, 4-11		30
69	Additive Prozesskette zur Instandsetzung von Bauteilen. *Laser Technik Journal*, **2013**, 10, 31-35		4
68	Ultrasonic field profile evaluation in acoustically inhomogeneous anisotropic materials using 2D ray tracing model: Numerical and experimental comparison. *Ultrasonics*, **2013**, 53, 396-411	3.5	16
67	Design of Experiments for Laser Metal Deposition in Maintenance, Repair and Overhaul Applications. *Procedia CIRP*, **2013**, 11, 245-248	1.8	61
66	Numerical Analysis of Hot Cracking in Laser-Hybrid Welded Tubes. *Advances in Materials Science and Engineering*, **2013**, 2013, 1-8	1.5	15
65	Developments in hybrid laser-arc welding technology **2013**, 505-521		11
64	Thermal Stability of Retained Austenite in Low Alloyed TRIP-Steel Determined by High Energy Synchrotron Radiation. *Materials Science Forum*, **2013**, 772, 129-133	0.4	
63	Vapor□plasma plume investigation during high-power fiber laser welding. *Laser Physics*, **2013**, 23, 016001	1.2	48
62	Modeling of Gas Metal Arc Welding Process Using an Analytically Determined Volumetric Heat Source. *ISIJ International*, **2013**, 53, 698-703	1.7	8
61	Numerical simulation of electromagnetic melt control systems in high power laser beam welding **2013**,		2
60	Numerical calculation of residual stress development of multi-pass gas metal arc welding under high restraint conditions. *Materials & Design*, **2012**, 35, 201-209		29
59	Effect of heat source configuration on the result quality of numerical calculation of welding-induced distortion. *Simulation Modelling Practice and Theory*, **2012**, 20, 112-123	3.9	24
58	Thermographic testing of spot welds. *NDT and E International*, **2012**, 48, 23-29	4.1	28

57	Numerical calculation of residual stress development of multi-pass gas metal arc welding. *Journal of Constructional Steel Research*, **2012**, 72, 12-19	3.8	51
56	Welding residual stress reduction by scanning of a defocused beam. *Journal of Materials Processing Technology*, **2012**, 212, 19-26	5.3	11
55	The effect of tack welding on numerically calculated welding-induced distortion. *Journal of Materials Processing Technology*, **2012**, 212, 308-314	5.3	13
54	Determination of local stress–strain properties of resistance spot-welded joints of advanced high-strength steels using the instrumented indentation test. *Journal of Materials Science*, **2012**, 47, 1504-1513	4.3	14
53	Characterization of microstructure and deformation behaviour of resistance spot welded AZ31 magnesium alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 549, 149-156	5.3	20
52	Numerical simulation of full-penetration laser beam welding of thick aluminium plates with inductive support. *Journal Physics D: Applied Physics*, **2012**, 45, 035201	3	66
51	Study of Fatigue Behavior for Spot Welded Tensile Shear Specimens of Advanced High Strength Steels. *Steel Research International*, **2012**, 83, 988-994	1.6	3
50	Laser Metal Deposition as Repair Technology for Stainless Steel and Titanium Alloys. *Physics Procedia*, **2012**, 39, 376-381		129
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