

INDEX OF ARTICLES FOR TPWJ'2010, Nos. 1–12

Boris Paton — Laureate of the Global Energy Prize	7	Consumable electrode pulsed argon-arc welding of sheet aluminium alloys (Mashin V.S., Pashulya M.P., Shonin V.A. and Klochkov I.N.)	5
Contribution of welders into Great Victory	5	Determination of additional resistances to sheet panel displacement over dead roller table of assembly and welding lines (Royanov V.A. and Korostashevsky P.V.)	2
E.O. Paton — outstanding scientist, teacher and organiser of science and manufacturing (140th anniversary of the birthday)	3	Energy characteristics of the processes of flash-butt welding at alternating and direct currents (Kuchuk-Yatsenko S.I., Rudenko P.M., Gavrich V.S., Krivonos V.P., Sidorenko V.M., Nejlo Yu.S. and Gushchin K.V.)	12
BRIEF INFORMATION		Features of consumable electrode pulsed-arc welding of aluminium alloys without application of forming backing elements (Mashin V.S. and Pashulya M.P.)	3
Application of pulse electromagnetic effects to control the process of electrode metal transfer in arc welding (Sidorenko P.Yu. and Ryzhov R.N.)	6	Friction stir welding as an effective method to improve structure performance (Poklyatsky A.A., Ishchenko A.Ya., Chajka A.A. and Labor T.M.)	4
Deposition of TiO ₂ coatings by high-velocity air-gas suspension plasma spraying (Borisov Yu.S., Borisova A.L., Kolomytsev M.V., Kuzmich-Yanchuk E.K., Tunik A.Yu., Kozaruk O.N. and Yaroshenko V.A.)	12	Half-century anniversary of the first exhibition of achievements of welding production (Kornienko A.N.)	11
Hydrogen distribution in flash-butt welded joints on steel 10G2FB (Kuchuk-Yatsenko S.I., Kharchenko G.K., Smiyani O.D., Falchenko Yu.V., Zagadarchuk V.F. and Butkova E.I.)	5	High-quality hose packs for underwater welding and cutting (Martinovich V.N., Martinovich N.P., Lebedev V.A., Maksimov S.Yu., Pichak V.G. and Lendel I.V.)	9
Influence of working frequency on dimensions of transformers for ac resistance welding (Lankin Yu.N.)	4	Image processing for automated robotic welding (Seyffarth P. and Gaede R.)	11
News	2–5, 10	Improvement of cyclic fatigue life of welded joints with accumulated fatigue damage by high-frequency peening (Knysh V.V., Solovej S.A. and Kuzmenko A.Z.)	10
OJSC «Mezhgospmetiz-Mtsensk» — on a way of mastering production of all welding consumables relevant in the market	5	Increase of resistance of welds to formation of crystalline cracks in repair of bands of kiln furnaces using electroslag welding (Kozulin S.M., Lychko I.I. and Kozulin M.G.)	1
Procedure of evaluation of transportation lags in weld formation ACS (Dolinenko V.V., Kolyada V.A., Skuba T.G. and Shapovalov E.V.)	1	Influence of weld metal impact treatment on welded joint strength (Pismenny A.S. and Kislitsyn V.M.)	1
Properties of Al ₂ O ₃ + Cr + TiN coatings after electron beam treatment (Bondarev A.A., Tyurin Yu.N., Duda I.M. and Pogrebnyak A.D.)	10	Japanese welding fabrication during 2009 economic crisis (Makovetskaya O.K.)	12
Selection of current sensor position in high-voltage power sources of welding guns (Nazarenko O.K. and Shevchuk S.A.)	11	Laser-arc hybrid welding processes (Review) (Kah P., Salminen A. and Martikainen J.)	6
Theses for a scientific degree	1, 11	Magnetically-impelled arc butt welding of parts of automobile range of products (Kuchuk-Yatsenko S.I., Kachinsky V.S., Ignatenko V.Yu., Goncharenko E.I. and Koval M.P.)	6
DEVELOPED at PWI	1, 2, 9	Magnetically-impelled arc butt welding of pipes of steel X70 (Kuchuk-Yatsenko S.I., Kachinsky V.S., Ignatenko V.Yu., Goncharenko E.I. and Koval M.P.)	7
INDUSTRIAL		Manufacture of drill bits for production of dispersed methane in mine working (Khorunov V.F., Maksymova S.V. and Stefaniv B.V.)	6
Advance of ferrous metallurgy and welding consumables production in PRC (Review) (Pokhodnya I.K. and Kotelchuk A.S.)	4	Modern equipment for shipbuilding (Seyffarth P.)	7
Application of method of dry underwater welding in repair of underwater passages of gas and oil pipelines in Russia (Kononenko V.Ya.)	5	Narrow-gap welding of up to 110 mm thick high-strength titanium alloys (Akhonin S.V., Belous V.Yu., Romanyuk V.S., Stesin V.V., Veliky S.I., Semenenko A.V. and Polishchuk A.K.)	5
Assessment of the effectiveness of repair technologies for power plant operation (Kravchuk L.V., Lyashenko B.A., Tsybanov G.V., Kuriat R.I., Bujskikh K.P. and Nalimov Yu.S.)	1	Optimisation of parameters of additional gas shielding in submerged arc welding and surfacing of copper and its alloys (Koleda V.N. and Ilyushenko V.M.)	11
Cleaning and activation of welded surfaces during explosion welding (Pervukhin L.B., Pervukhina O.L. and Bondarenko S.Yu.)	7		
Code designations of locally manufactured fluxes and flux + wire combinations in keeping with international standards (Zalevsky A.V., Galinich V.I., Protsenko N.A. and Kukhareno V.V.)	4		

Peculiarities of technology of welding pipelines of dissimilar steels in nuclear power engineering (Kasatkin O.G., Tsaryuk A.K., Skulsky V.Yu., Gavrik A.R. and Moravetsky S.I.)	1	Fifth International Conference «Mathematical Modelling and Information Technologies in Welding and Related Processes»	7
Portable system of monitoring and control of resistance spot welding process (Rudenko P.M. and Gavrish V.S.)	2	XIV International Specialised Exhibition «Welding-2010»	7
Prospects of application of laser and hybrid technologies of welding steels to increase service life of pipelines (Shelyagin V.D., Khaskin V.Yu., Bernatsky A.V. and Siora A.V.)	10	Forum-Seminar of Limited Liability Company «Binzel Ukraine»	1
Prospects of increasing energy characteristics of flash butt welding (Review) (Kuchuk-Yatsenko S.I., Nejlo Yu.S., Gavrish V.S. and Gushchin R.V.)	2	4th International Seminar «New Directions of Research in the Field of High-Frequency Electric Welding of Soft Live Tissues»	1
Reliability of welded structure operation. Assessment and control (Paton B.E., Lobanov L.M., Nedoseka A.Ya., Fedchun A.Yu., Yolkin A.A. and Obodovsky B.M.)	5	Guang Xiao is 75	8
Repair of ship hull structures of aluminium alloy AMg6 using electrodynamic treatment (Lobanov L.M., Pashchin N.A., Loginov V.P., Poklyatsky A.G. and Babutsky A.I.)	9	International Conference «MEE-2010»	11
Research and developments of the E.O. Paton Electric Welding Institute in the field of electric arc welding and surfacing using flux-cored wire (Review) (Pokhodnya I.K., Shlepakov V.N., Maksimov S.Yu. and Ryabtsev I.A.)	12	International Conference on Welding Consumables	9
Resistance spot welding with special edge preparation (Tsumarev Yu.A.)	3	International Conference «Titanium-2010 in CIS»	8
Resistance welding of steel reinforcement using composite insert (Kuchuk-Yatsenko V.S., Nakonechny A.A. and Sakhatsky A.G.)	4	International Exhibition «Weldex/Rossvarka-2010»	12
State-of-the-art of development and application of flux-cored wires for welding of carbon and low-alloyed steels (Shlepakov V.N., Gavrilyuk Yu.A. and Kotelchuk A.S.)	3	K.A. Yushchenko is 75	12
Technology and equipment for manufacture of high-pressure cylinder bodies of sheet rolled steel (Savitsky M.M., Pismenny A.S., Savitskaya E.M., Pritula S.I. and Babenko S.K.)	7	L.M. Lobanov is 70	9
Technology for wide-layer hard-facing of crankshafts (Zhudra A.P., Krivchikov S.Yu. and Petrov V.V.)	2	News	11
Tendencies in development of mechanized welding with controlled transfer of electrode metal (Review) (Lebedev V.A.)	10	Problems of Life and Safe Operation of Structures, Constructions and Machines (Final Scientific Conference at the E.O. Paton Electric Welding Institute of the NAS of Ukraine)	2
Trends in improvement of auxiliary equipment for welding production (Lebedev V.A., Lendel I.V., Lendel V.I. and Pichak V.G.)	11	Session of the Scientific Council on New Materials at the Natural Sciences Committee of the International Association of the Academies of Sciences	7
Ultrasonic diagnostics of service defects in structures of oil and gas industry (Troitsky V.A., Dyadin V.P. and Davydov E.A.)	9	S.I. Kuchuk-Yatsenko is 80	8
Welding fabrication in gas turbine construction (Review) (Romanov V.V. and Butenko Yu.V.)	3	Solemn Meeting dedicated to the Jubilee of Victory in the Great Patriotic War	6
INFORMATION		Specialized Forum «Paton Expo 2010»	7
Automatic machines ADTs 625, ADTs 626 and ADTs 627 for orbital welding of pipelines	6	Technical Seminar «Aircraft Construction – Technologies and Equipment for Welding»	11
Loyalty Program of Fronius Ukraina Ltd. in crisis period and its results	2	Technological Seminar of Deloro Stellite in Zaporozhie	1
News	9	10th International Conference-Exhibition «Problems of Corrosion and Anticorrosion Protection of Structural Materials. Corrosion-2010»	9
NEWS		10th International Specialized Exhibition «Welding and Cutting»	5
Decoration of Chinese scientist	12	10th Jubilee European Conference-Exhibition on Non-Destructive Testing	9
8th International Conference on Beam Technology-2010	7	XIII Republican Scientific-Technical Conference of Kazakhstan Welders	2
		Ukrainian-German Workshop «Plasma and Electron Beam Technologies for Protective Coatings»	10
		SCIENTIFIC AND TECHNICAL	
		Adequacy of thermohydrodynamic model of through penetration in TIG and A-TIG welding of Nimonic-75 nickel alloy (Kovalenko D.V., Pavlyak D.A., Sudnik V.A. and Kovalenko I.V.)	10
		Analysis of factors of subsolidus crack formation in welding metals with fcc-structure of crystalline lattice (Review) (Slivinsky A.A.)	4
		Analytical study of current controller of power source for microplasma welding (Gvozdetzky V.S.)	9

Calculation prediction of fatigue life of freight car side frame under alternating cyclic loads (Makhnenko V.I. and Romanova I.Yu.)	2	Improvement of the technology for arc spot welding of overlap joints based on the results of mathematical modelling (Makhnenko O.V., Timoshenko A.N., Muzhichenko A.F. and Goncharov P.V.)	11
Causes for crack formation in the HAZ of cast high-manganese steel in flash-butt welding (Kuchuk-Yatsenko S.I., Shvets V.I., Shvets Yu.V., Taranova T.G. and Gordan G.N.)	7	Influence of main technological parameters of the plasma cladding process on properties of composite deposited metal (Bely A.I.)	6
Comparative evaluation of methods for determination of fracture toughness of HAZ metal of low-alloy steel welded joints (But V.S.)	3	Influence of thermodeformational cycle of hardfacing on the structure and properties of railway wheels at their reconditioning (Gajvoronsky A.A., Poznyakov V.D., Sarzhevsky V.A., Vasiliev V.G. and Orlovsky V.Yu.)	5
Control of sensorless DC drives of welding machines (Lankin Yu.N., Semikin V.F. and Sushy L.F.)	3	Influence of working distance of welding electron gun on weld geometry (Nazarenko O.K. and Zagornikov V.I.)	5
Development of the technology for formation of mechanical and glued-mechanical joints by the punching method (Vasiliev Yu.S., Parshutina L.S. and Chukashkin A.N.)	1	Investigation of structure and phase composition of alloys based on the Ti-Zr-Fe system (Khorunov V.F., Maksymova S.V. and Zelinskaya G.M.)	9
Diagnostics of corrosion state of inner surface of main oil pipeline (Polyakov S.G., Nyrkova L.I., Melnichuk S.L. and Gapula N.A.)	12	Investigation of structure and service properties of deposited metal for reconditioning and strengthening of rolling rolls (Ryabtsev I.A., Kondratiev I.A., Vasiliev G.V., Zhdanov V.A. and Babinets A.A.)	7
Effect of electric pulse treatment on residual change in shape of thin-sheet welded structures (Review) (Lobanov L.M., Pashchin N.A., Loginov V.P. and Poklyatsky A.G.)	3	Kinetics of corrosion crack growth in 17G1S pipe steel (Makhnenko V.I., Markashova L.I., Berdnikova E.N., Shekera V.M. and Onoprienko E.M.)	6
Effect of nanofoil of the Ni-NbC system on structure of electron beam welds in heat-resistant alloys (Yushchenko K.A., Ustinov A.I., Zadery B.A., Savchenko V.S., Melnichenko T.V., Kurenkova V.V., Zvyagintseva A.V. and Gakh I.S.)	11	Laser welding of root welds of thick joints of heat-resistant steel (Chernaya T.I., Tsaryuk A.K., Siora A.V., Shelyagin V.D. and Khaskin V.Yu.)	2
Effect of tin additions on structure and technological properties of brazing filler metals of the Ag-Cu-Zn system (Khorunov V.F., Maksymova S.V. and Stefaniv B.V.)	7	Mechanical properties of brazed joints on dispersion-strengthened copper alloy (Maksymova S.V., Khorunov V.F. and Shonin V.A.)	10
Elimination of undercuts in EBW with complete and incomplete penetration (Kravchuk L.A.)	6	Model of the processes of heat, mass and charge transfer in the anode region and column of the welding arc with refractory cathode (Krivtsun I.V., Demchenko V.F. and Krikent I.V.)	6
Evaluation of quality of the arc self-adjustment process (Tsybulkin G.A.)	2	Modelling of the process of induction heating of pipes within the weld zone (Chernykh I.V. and Rachkov S.A.)	1
Evaluation of stress-strain state of dissimilar welded joints from 10KH13G18D + 09G2S steels (Gedrovich A.I., Tkachenko S.A. and Galtsov I.A.)	7	Numerical analysis of the processes of heating and convective evaporation of metal in pulse laser treatment (Krivtsun I.V., Semyonov I.L. and Demchenko V.F.)	1
Evaluation of temperature shift depending upon the specimen thickness by the force and deformation criteria of fracture mechanics (Dyadin V.P.)	4	Numerical calculation of thermal processes in centrifugal plasma powder cladding (Som A.I. and Zelnichenko A.T.)	6
Experimental and calculation determination of the concentration of harmful materials in the work zone air in covered-electrode welding (Levchenko O.G., Lukianenko A.O. and Polukarov Yu.O.)	1	On phase transformations in agglomerated flux of salt-oxide slag system at heating (Sokolsky V.E., Roik A.S., Davidenko A.O., Galinich V.I., Goncharov I.A., Mishchenko D.D. and Tokarev V.S.)	12
Features of damageability of steam pipeline welded joints by the creep mechanism (Dmitrik V.V. and Bartash S.N.)	6	Optimal control of formation of weld reinforcement (Dolinenko V.V., Skuba T.G., Kolyada V.A. and Shapovalov E.V.)	2
Features of weld formation and properties of aluminium and magnesium alloy joints under simulated space conditions (Bondarev A.A. and Ternovoj E.G.)	11	Optimal reduction of working pressure in pipelines for welding repair of thinning regions (Makhnenko V.I., But V.S., Kozlitina S.S., Dzyubak L.I. and Olejnik O.I.)	10
Friction stir welding of aluminum alloys of different alloying systems (Poklyatsky A.G., Chajka A.A., Klochkov I.N. and Yavorskaya M.R.)	10	Peculiarities of arc control by external magnetic field (Review) (Radkevich I.A., Shvab S.L., Prilutsky V.P. and Akhonin S.V.)	10
Improvement of cyclic fatigue life of metallic materials and welded joints by treatment by pulsed electric current (Stepanov G.V., Babutsky A.I., Mameev I.A., Chizhik A.V., Savitsky V.V., Tkachuk G.I. and Pashchin N.A.)	11	Peculiarities of flash butt welding of high-strength aluminium alloy 2219 (Kuchuk-Yatsenko S.I., Chvertko P.N., Semyonov L.A., Samotryasov S.M. and Gushchin K.V.)	3
Improvement of method for estimation of the risk of fracture within the thinning zone on walls of main pipelines (Makhnenko V.I., Velikoivanenko E.A., Rozyinka G.F. and Pivtorak N.I.)	5	Peculiarities of the process of orbital laser-arc welding of thick-walled large-diameter pipes (Gook S., Gumenyuk A., Lammers M. and Rethmeier M.)	9

Peculiarities of thermal and hydrodynamic processes occurring in TIG and A-TIG welding of stainless steel (Kovalenko D.V., Krivtsun I.V., Demchenko V.F. and Kovalenko I.V.)	12	Technological strength and analysis of causes of weldability deterioration and cracking (Derlomenko V.V., Yushchenko K.A., Savchenko V.S. and Chervyakov N.O.)	9
Plasma ZrO ₂ coatings with metallic bond coat of alloy AlCuFe (Borisova A.L., Adeeva L.I., Tunik A.Yu., Tsymbalistaya T.V. and Grishchenko A.P.)	4	Thermal-barrier multilayer plasma coatings ZrO ₂ -NiCrAlY (Borisova A.L., Tunik A.Yu., Adeeva L.I., Grishchenko A.V., Tsymbalistaya T.V. and Kolomytsev M.V.)	10
Possibilities for lowering dynamic stress in structural elements of machines using nanostructured coatings (Ustinov A.I., Zinkovsky A.P., Tokar I.G. and Skorodzievsky V.S.)	1	Treatment of the surface of aluminium-matrix composite materials by concentrated energy sources (Kobernik N.V., Chernyshov G.G., Mikheev R.S. and Chernyshova T.A.)	9
Pressure welding of micro-dispersed composite material AMg5 + 27 % Al ₂ O ₃ with application of rapidly solidified interlayer of eutectic alloy Al + 33 % Cu (Falchenko Yu.V., Muravejnik A.N., Kharchenko G.K., Fedorchuk V.E. and Gordan G.N.)	2	Wear resistance and strength of tungsten carbides WC-W ₂ C produced by different methods (Bely A.I.)	12
Probabilistic characteristics of high-cycle fatigue resistance of structural steel welded joints (Makhnenko V.I. and Romanova I.Yu.)	7	SERVICE LIFE OF WELDED STRUCTURES	
Probable mechanism of cracking of stable-austenitic welds caused by oxygen segregation (Yushchenko K.A., Savchenko V.S., Chervyakov N.O. and Zvyagintseva A.V.)	5	Development of the technology for repair microplasma powder cladding of flange platform faces of aircraft engine high-pressure turbine blades (Yushchenko K.A., Savchenko V.S., Yarovitsyn A.V., Nakonechny A.A., Nastenko G.F., Zamkovo V.E., Belozertsev O.S. and Andrejchenko N.V.)	8
Production of powder of the Ni-Cr-Al-Y system alloy doped with silicon by the powder metallurgy method (Astakhov E.A., Kud I.V., Likhoded L.S., Zyatkevich D.P., Yakovleva M.S. and Eryomenko L.I.)	3	Development of zirconium-and stainless steel-based composites for manufacture of adapters to NPP structures (Neklyudov I.M., Borts B.V., Lopata A.T., Rybalchenko N.D., Sytin V.I. and Aleksandrov V.A.)	8
Properties of the welded joints of tubular billets produced by pressure braze-welding with a forming device (Pismenny A.S., Prokofiev A.S., Pismenny A.A., Novikova D.P., Yukhimenko R.V., Polukhin V.V., Ptashinskaya I.I. and Polukhin Yu.V.)	7	Effect of yttrium on redistribution of hydrogen and structure of weld metal in arc welding of high-strength steels (Pokhodnya I.K., Paltsevich A.P., Ignatenko A.V., Solomijchuk T.G. and Sinyuk V.S.)	8
Properties of tungsten carbide powders produced by different technologies (Dzykovich V.I., Zhudra A.P. and Bely A.I.)	4	Flash-butt welding of reinforcement bars of A400S-A600S classes in construction of structures of monolithic reinforced concrete (Chvertko P.N.)	8
Repair of pipelines using orbital TIG welding inside inhabited space objects (Ternovoj E.G., Bulatsev A.R., Solomijchuk T.G. and Shulym V.F.)	4	Improvement of service life of resistance welding machine electrodes in welding galvanized steel (Anoshin V.A., Ilyushenko V.M., Minakova R.V. and Grechanyuk N.I.)	8
Risk of formation of carbides and α -phase in welding of high-alloy chrome-nickel steels (Makhnenko V.I., Kozlitina S.S., Dzyubak L.I. and Kravets V.P.)	12	Influence of getter additives on hydrogen embrittlement of welded joints of structural materials of NPP equipment (Azhazha V.M., Lavrinenko S.D., Tolstolutska G.D., Pilipenko N.N., Bobrov Yu.P., Svinarenko A.P. and Ak-senova A.N.)	8
Risk of fracture of pressurised main pipeline with defects of the type of wall thinning during repair (Makhnenko V.I., But V.S., Kozlitina S.S. and Olejnik O.I.)	1	Instruments for acoustic emission control and diagnostics of welded structures (Nedoseka A.Ya., Nedoseka S.A., Gruzd A.A., Ovsienko M.A., Yaremenko M.A. and Kharchenko L.F.)	8
Strength of brazed joints on heat-resistant nickel alloy Inconel 718 produced by using palladium brazing filler metals (Khorunov V.F., Maksymova S.V., Butenko Yu.V. and Maly A.B.)	11	New technology for repair of guide surfaces of axle box opening of side frame of the 18-100 model freight car truck (Kuzmenko G.V., Kuzmenko V.G., Galinich V.I., Lipsy V.I. and Nestykajlo V.V.)	8
Structural state of rapidly quenched Cu-Ti system brazing filler metal (Maksymova S.V., Khorunov V.F. and Zelin-skaya G.M.)	5	Properties of welded joints of rail steel in electric arc welding (Poznyakov V.D., Kiriakov V.M., Gajvoronsky A.A., Klapatyuk A.V. and Shishkevich O.S.)	8
Structure and properties of arc-welded joints on steel 10G2FB (Zhdanov S.L., Poznyakov V.D., Maksimenko A.A., Dovzhenko V.A., Vasiliev V.G., Vysokolyan N.V. and Korobka V.A.)	11	Substantiation of the system of deoxidation and microalloying of deposited metal with electrodes for welding and repair of bridge and transport structures (Pokhodnya I.K., Marchenko A.E., Yavdoshchin I.R., Skorina N.V. and Fol-bort O.I.)	8
Structure and properties of high-manganese deposited metal (Ryabtsev I.A., Kondratiev I.A., Chernyak Ya.P., Gordan G.N., Solomijchuk T.G. and Godzyra N.F.)	4	Index of articles for TPWJ'2010, Nos. 1-12	
Study of residual stress and mechanical properties of 2Cr13 stainless steel steam turbine blades by different laser surface modifications (Jianhua Yao, Liang Wang, Qunli Zhang, Zhijun Chen and Kovalenko V.S.)	3	List of authors	
			12
			12