

Editor-in-Chief B.E.Paton

Editorial board:

Yu.S.Borisov	V.F.Khorunov
A.Ya.Ishchenko	I.V.Krivtsun
B.V.Khitrovskaya	L.M.Lobanov
V.I.Kyrian	A.A.Mazur
S.I.Kuchuk	Yatsenko
Yu.N.Lankin	I.K.Pokhodnya
V.N.Lipodaev	V.D.Poznyakov
V.I.Makhnenko	K.A.Yushchenko
O.K.Nazarenko	A.T.Zelnichenko
I.A.Ryabtsev	

International editorial council:

N.P.Alyoshin	(Russia)
U.Diltey	(Germany)
Guan Qiao	(China)
D. von Hofe	(Germany)
V.I.Lysak	(Russia)
N.I.Nikiforov	(Russia)
B.E.Paton	(Ukraine)
Ya.Pilarczyk	(Poland)
G.A.Turichin	(Russia)
Zhang Yanmin	(China)
A.S.Zubchenko	(Russia)

Promotion group:

V.N.Lipodaev, V.I.Lokteva
A.T.Zelnichenko (exec. director)

Translators:

A.A.Fomin, O.S.Kurochko,
I.N.Kutianova, T.K.Vasilenko

Editor:

N.A.Dmitrieva

Electron galley:

D.I.Sereda, T.Yu.Snegiryova

Address:

E.O. Paton Electric Welding Institute,
International Association «Welding»,
11, Bozhenko str., 03680, Kyiv, Ukraine

Tel.: (38044) 200 82 77

Fax: (38044) 200 81 45

E-mail: journal@paton.kiev.ua

URL: www.rucont.ru

State Registration Certificate
KV 4790 of 09.01.2001

Subscriptions:

\$324, 12 issues per year,
postage and packaging included.
Back issues available.

All rights reserved.

This publication and each of the articles
contained herein are protected by copyright.
Permission to reproduce material contained in
this journal must be obtained in writing from
the Publisher.

Copies of individual articles may be obtained
from the Publisher.

CONTENTS

SCIENTIFIC AND TECHNICAL

- Khorunov V.F., Voronov V.V. and Maksymova S.V.* Brazing of titanium alloys by using aluminium-base filler alloys 2
- Markashova L.I., Akhonin S.V., Grigorenko G.M., Kruglenko M.G., Kushnaryova A.S. and Petrichenko I.K.* Structure and properties of welded joints on titanium alloys containing silicon additions 6
- Borisov Yu.S., Khaskin V.Yu., Vojnarovich S.G., Kislitsa A.N., Tunik A.Yu., Adeeva L.I., Kuzmich-Yanchuk E.K., Bernatsky A.V. and Siora A.V.* Combined laser-microplasma cladding with powders of Ni-Cr-B-Si system alloys 16
- Zhdanov L.A., Duchenko A.N., Goncharov I.A., Galinich V.I., Zalevsky A.V. and Osipov N.Ya.* Thermodynamic analysis of slag melts in manufacture of fused welding fluxes 23

INDUSTRIAL

- Lobanov L.M., Pashchin N.A., Cherkashin A.V., Tkachuk G.I., Savitsky V.V., Mikhoduj O.L., Shiyan K.V., Levchuk V.K., Zhyginas V.V. and Lyashchenko A.P.* Repair welding of intermediate cases of aircraft engines from high-temperature magnesium alloy ML10 with application of electrodynamic treatment 28
- Belokon V.M. and Koroteev A.O.* Procedure for calculation of dimensions of nozzles in welding using two separate gas jets 33
- Pismenny A.S., Pentegov I.V., Kislitsyn V.M., Stemkovsky E.P. and Shejkovsky D.A.* Braze-welding with weld metal peening during its solidification 37
- Yakushin B.F.* Comparative analysis of ISO 18841:2005 standard and RF 26389-84 standard on evaluation to hot crack resistance in welding 41
- Dolinenko V.V., Skuba T.G., Vashchenko O.Yu. and Lutsenko N.F.* Multichannel microprocessor controller for data collection from thermocouples 45
- Makovetskaya O.K.* Technological innovations — basis for increase of competitiveness of the U.S. welding production 48

NEWS

- Ivanova O.N., Zelnichenko A.T., Kunkin D.D., Perekrest V.V. and Todorenko V.A.* Experience of application of HF electric welding apparatus EK-300M1 in surgery 53
- Scientific-Technical Conference «Modern Problems of Metallurgy Technology of Welding and Surfacing of Steels and Non-Ferrous Metals» 56