



- (51) International Patent Classification:
B23K 9/10 (2006.01)
- (21) International Application Number:
PCT/IB2013/002114
- (22) International Filing Date:
24 September 2013 (24.09.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
13/625,177 24 September 2012 (24.09.2012) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR,

KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

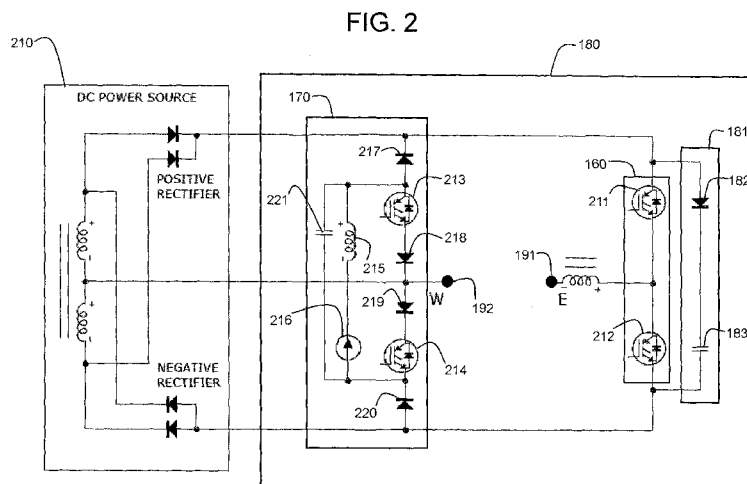
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
30 May 2014

(54) Title: SYSTEMS AND METHODS PROVIDING LOW CURRENT REGULATION FOR AC ARC WELDING PROCESSES



(57) Abstract: Systems and methods providing low current regulation for AC arc welding processes to regulate arc welding performance. In arc welding power source embodiments, configurations of bridge and arc regulation circuits allow for the directional switching of the welding output current through the welding output circuit path and induce a voltage between the electrode and the work-piece of the welding output circuit path that is sufficient to re-ignite the arc during polarity transition of the output current. The arc regulation circuit provides a high inductance level for storing energy, in both polarities, which induces the voltage level for re-igniting the arc during the zero crossing of the output current and provides low end stabilization of arc current.

WO 2014/045112 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/002114A. CLASSIFICATION OF SUBJECT MATTER
INV. B23K9/10
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B23K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 201 14 660 U1 (MIGATRONIC SVEJSEMASK [DK]) 28 February 2002 (2002-02-28) page 5 - page 7; figures 1, 2A-2D -----	1-15
X	DE 102 45 368 A1 (CLOOS INNOVATIONS GMBH [DE]) 15 April 2004 (2004-04-15) paragraph [0032] - paragraph [0038] paragraph [0053] - paragraph [0056]; figures 1,9,10,11 -----	1-15



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

9 April 2014

Date of mailing of the international search report

16/04/2014

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De Backer, Tom

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2013/002114

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 20114660	U1	28-02-2002	NONE

DE 10245368	A1	15-04-2004	NONE
