(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 May 2003 (22.05.2003)

PCT

(10) International Publication Number
WO 03/042895 A1

(51) International Patent Classification[7]: G06F 19/00

(21) International Application Number: PCT/KR01/01970

(22) International Filing Date:
17 November 2001 (17.11.2001)

(25) Filing Language: Korean

(26) Publication Language: English

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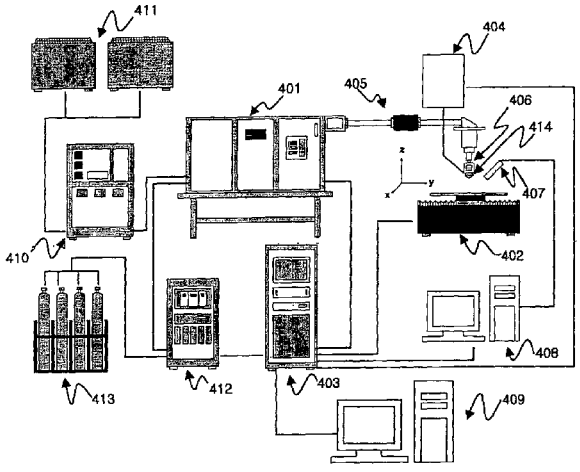
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) **Title:** METHOD AND SYSTEM FOR REAL-TIME MONITORING AND CONTROLLING HEIGHT OF DEPOSIT BY USING IMAGE PHOTOGRAPHING AND IMAGE PROCESSING TECHNOLOGY IN LASER CLADDING AND LASER-AIDED DIRECT METAL MANUFACTURING PROCESS



(57) **Abstract:** The object of this invention is to provide a method and system for real-time monitoring and controlling the height of a deposit by using image photographing and image processing technology in a laser cladding and laser-aided direct metal manufacturing process. This invention also provides a method of controlling the intensity of laser output, which is one of the most important process variables, regardless of the operational condition of a laser output unit. The method and system of this invention controls the height of a deposit by real-time monitoring the position and height of a melt pool and controlling the process variables using the image photographing and image processing technology in such a laser cladding and laser-aided direct metal manufacturing process based on a laser surface reforming technology, such as laser surface alloying and laser cladding, or a laser-aided direct metal manufacturing technology.

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