

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 May 2007 (24.05.2007)

PCT

(10) International Publication Number
WO 2007/056801 A1

(51) International Patent Classification:
B22D 11/06 (2006.01)

(21) International Application Number:
PCT/AU2006/001706

(22) International Filing Date:
16 November 2006 (16.11.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2005-331426 16 November 2005 (16.11.2005) JP

(71) Applicant (for all designated States except AU, ID, MY, NZ, PH, SG, US, VN): **NUCOR CORPORATION** [US/US]; 1915 Rexford Road, Charlotte, North Carolina 28211 (US).

(71) Applicants (for AU, ID, MY, NZ, PH, SG, VN only): **ISHIKAWA, JIMA-HARIMA HEAVY INDUSTRIES COMPANY LIMITED** [JP/JP]; 1-1, Toyosu 3-chome,

Koto-ku, Tokyo 135-8710 (JP). **BLUESCOPE STEEL LIMITED** [AU/AU]; Level 11, 120 Collins Street, Melbourne, Victoria 3000 (AU).

(72) Inventors; and

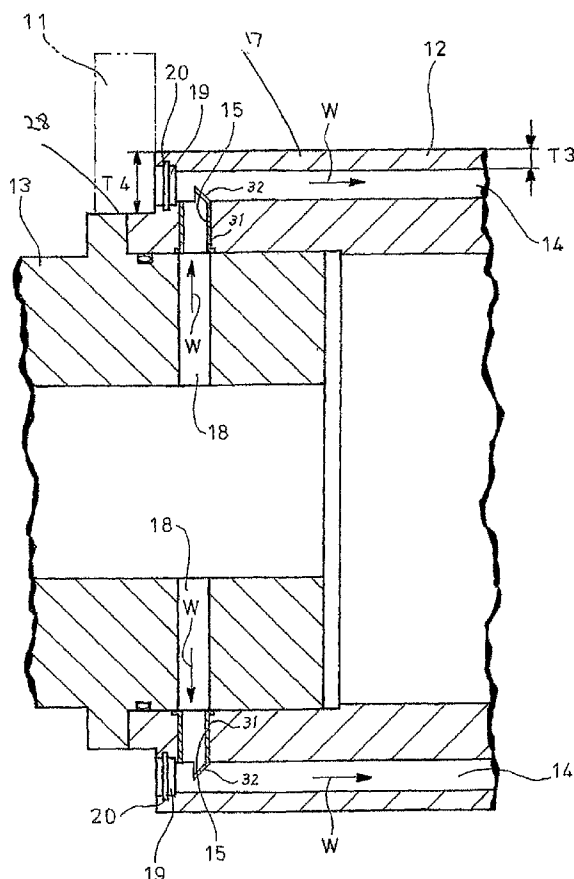
(75) Inventors/Applicants (for US only): **OTSUKA, Hiroyuki** [JP/JP]; 2-1 Otemachi, 2-chome, Chiyoda-ku, Tokyo (JP). **NAGATA, Fumio** [JP/JP]; 2-1 Otemachi, 2-chome, Chiyoda-ku, Tokyo (JP). **ISO, Yoshiyuki** [JP/JP]; 2-1 Otemachi, 2-chome, Chiyoda-ku, Tokyo (JP). **FUKASE, Hisahiko** [JP/JP]; 1-1-1-501 Meguro, Meguro-ku, Tokyo (JP).

(74) Agent: **GRIFFITH HACK**; 509 St Kilda Road, Melbourne, Victoria 3004 (AU).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,

[Continued on next page]

(54) Title: TWIN ROLL CASTER, AND EQUIPMENT AND METHOD FOR OPERATING THE SAME



(57) Abstract: Casting rolls (12) for a twin roll continuous casting machine comprise a plurality of cooling passages extending through a central portion (17). The cooling passages comprise longitudinal cooling passages (14). The cooling passages also comprise at least one bend in the cooling passages which requires cooling fluid flowing through a cooling passage to undergo a change in direction. Each casting roll also comprises a flow control member, such as baffles (32), positioned in the bend to control the flow of cooling fluid around the bend.

WO 2007/056801 A1



RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,

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.