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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
20 February 2003 (20.02.2003)

PCT

(10) International Publication Number
WO 03/014518 A1

(51) International Patent Classification[7]: E21B 33/06

(21) International Application Number: PCT/US02/23642

(22) International Filing Date: 25 July 2002 (25.07.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/923,209 6 August 2001 (06.08.2001) US

(71) Applicant: COOPER CAMERON CORPORATION [US/US]; 1333 West Loop South, Suite 1700, Houston, TX 77027 (US).

(72) Inventors: WHITBY, Melvyn, F.; 15723 Stoney Fork Drive, Houston, TX 77084 (US). TASSON, Paul, L.; 12614 Lady Jane Court, Houston, TX 77044 (US). WILLIAMS, Bolie, C.; 309 Glenwood Drive, Houston, TX 77007 (US).

(74) Agent: HARTMANN, Michael, P.; Cooper Cameron Corporation, P.O. Box 1212, Houston, TX 77251-1212 (US).

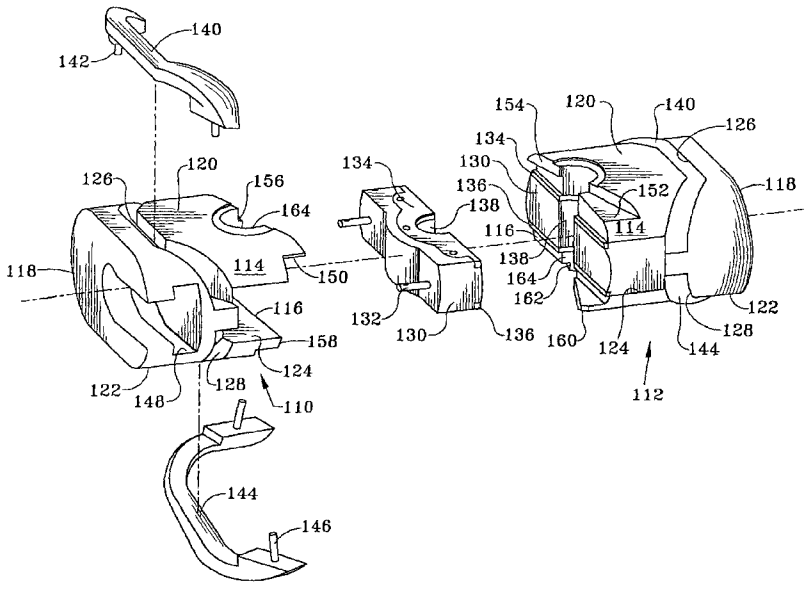
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT,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

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

Published:
— *with international search report*

[Continued on next page]

(54) Title: BIDIRECTIONAL SEALING BLOWOUT PREVENTER



(57) Abstract: Disclosed are bidirectional sealing blowout preventer (170), bidirectional sealing blowout preventer rams (222), and fluid communication systems for equalizing pressure between the backs of ram guideways in a bidirectional sealing blowout preventer and a passageway (178) through the blowout preventer. Disclosed are methods for operating a bidirectional sealing blowout preventer to seal a well around a well pipe against downhole pressure to control the well, and to seal a well around a well pipe to pressure test another blowout preventer or other apparatus in a stack.

WO 03/014518 A1

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.