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[Continued on next page]

(54) **Title:** METAL-TO-METAL ANNULUS SEAL ARRANGEMENT

(57) **Abstract:** A metal-to-metal seal is used to seal between two tubular members. In one embodiment, a metal-to-metal seal forms a seal in an annulus housing between an inner and outer diameter of tubular members of an adjustable casing sub. The seal can have an inner and an outer sealing ring, or more than one pair of inner and outer sealing rings, that can be set in place by a running tool. An energizing ring can have a tapered or bulbous surface, and can create a pre-load force against the sealing rings.

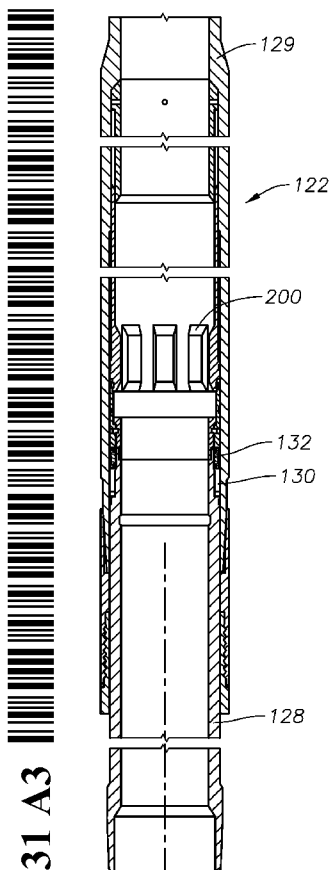


Fig. 3

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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, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, 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.

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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED
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E21B F16L
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 practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 384 726 A (MEYER DANNY S) 24 May 1983 (1983-05-24)	1
A	column 3, line 3 - column 4, line 61; figures 1,2	2-21
X	US 5 464 063 A (BOEHM JR CARL F [US]) 7 November 1995 (1995-11-07)	1
A	column 3, line 2 - column 4, line 62; figures 1,2	2-21
A	US 2008/203672 A1 (SMITH ROBERT E [US]) 28 August 2008 (2008-08-28) the whole document	1-21
A	US 2003/111799 A1 (GILMORE DAVID L [US]) 19 June 2003 (2003-06-19) the whole document	1-21
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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Date of the actual completion of the international search 9 February 2011	Date of mailing of the international search report 17/02/2011
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Morrish, Susan
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/106685 A1 (SALAMA MAMDOUH [US] ET AL SALAMA MAMDOUH M [US] ET AL) 12 June 2003 (2003-06-12) the whole document	1-21
A	----- EP 2 006 589 A1 (TENARIS CONNECTIONS AG [LI]) 24 December 2008 (2008-12-24) the whole document -----	1-21

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Information on patent family members

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