

Title: HEAVY WALL DRILL PIPE AND METHOD OF MANUFACTURE OF HEAVY WALL DRILL PIPE

Abstract: A substantially homogeneous heavy wall drill pipe and its method of manufacture are disclosed. A cylindrical ingot is placed in a multi-hammer forging press to form the ingot into a drill pipe bar having a central protector portion and upper and lower connector sections each of larger diameter than cylindrical body sections of the drill pipe. Thereafter, the bar is straightened and upper and lower end connectors are machined. Threaded end portions are machined on the connectors and a bore is drilled through the drill pipe bar.

Classifications:

International (IPC 8-9): B23P15/00 E21B17/00

E21B17/16 (Advanced/Invention);

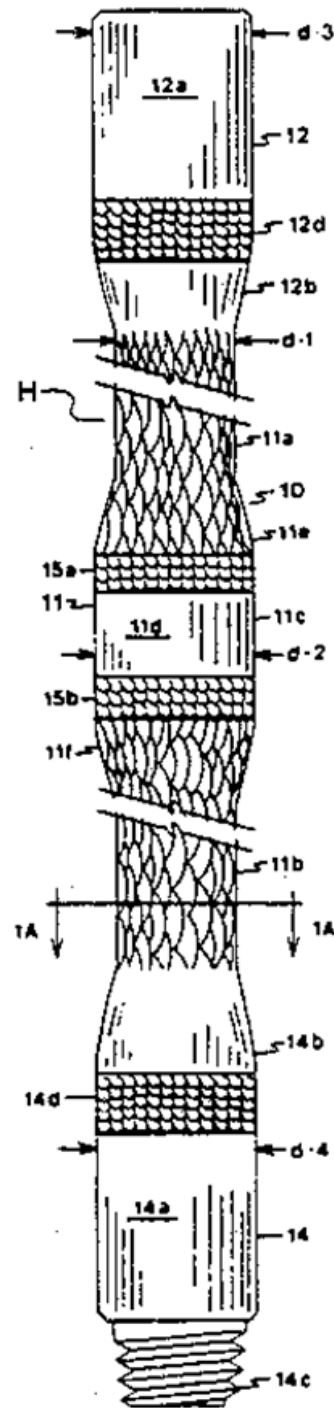
B23P15/00 E21B17/00 (Core/Invention)

International (IPC 1-7): B23P13/00 E21B17/00 F16L9/02

CPC: Y10T29/49996 E21B17/16 B23P15/00 E21B17/00

European: B23P15/00 E21B17/00 E21B17/16

US: 138/109 138/172 138/177 175/320 285/333 29/558 29/DIG.18
72/340 72/368



Family:

Publication number	Publication date	Application number	Application date
CA1317930 A1	19930518	CA19870533331	19870330

US4674171 A	19870623	US19840602385	19840420
US4771811 A	19880920	US19870031882	19870330

Priority:

US19840602385 19840420 CA19870533331 19870330 US19870031882 19870330

Probable Assignee: FIRST RESERVE ENERGY SERVICES ACQUISITION CO I

Assignee(s): (std): LOR INC

Assignee(s): TRIUMPH LOR INC LOUISIANA CORP ; PERKIN GREGG S ; TRIUMPH LOR INC ; PATARINI PETER ; LOR INC A LA CORP ; DECELL ALONZO LEWIS ; FIRST RESERVE ENERGY SERVICES ACQUISITION CO ; FIRST RESERVE ENERGY SERVICES ACQUISITION CO I ; GRANTOR AND FIRST INTERSTATE BANK OF TEXAS NA

Inventor(s): (std): PATARINI PETER ; PERKIN GREGG S ; DECELL ALONZO L

Inventor(s): DECELL ALONZO LEWIS

Agent(s): RIDOUT AND MAYBEE LLP

2) Family number: 54589517 (US2015027581A)

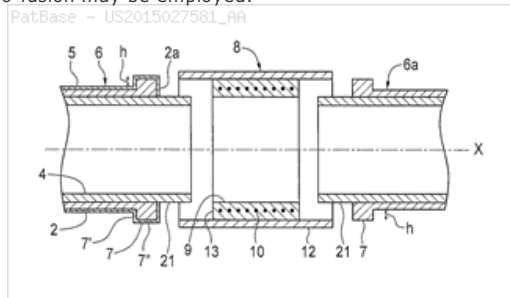
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Title: PIPE, PIPE CONNECTION AND PIPELINE SYSTEM

Abstract: A pipeline system is enclosed including unlined or plastic lined pipes. A mechanical metal to metal connection is employed that can provide a fluid tight seal. A pipe coupling may be employed to span the connection. Plastic lined pipes can have their plastic liners connected to form a fluid tight bladder. Electro-fusion may be employed.

Classifications:

International (IPC 8-9): B29C65/00 B29C65/34 B29C65/56 B29C65/72 B65B65/00 F16L13/14 F16L13/16 F16L19/08 F16L33/22 F16L39/00 F16L47/03 F16L58/10 F16L58/18 F16L9/00 F16L9/147 F16L9/22 H05B3/06 (Advanced/Invention)
CPC: B29K2023/065 B29K2077/00 B29C65/3468 F16L13/141 F16L13/146 F16L13/16 F16L19/08 F16L33/22 F16L58/1009 H05B3/06 B29C65/342 B29C65/3464 B29C65/561 B29C65/568 B29C65/72 B29C66/1122 B29C66/1222 B29C66/1224 B29C66/12821 B29C66/1284 B29C66/30321 B29C66/5221 B29C66/52292 B29C66/52295 B29C66/52297 B29C66/52298 B29C66/636 B29C66/71 B29C66/72321 B29C66/73161 F16L9/147 F16L47/03 F16L58/18 F16L58/181 Y10T29/49879
US: 1/1 138/141 219/534 285/21.2 29/455.1



Family:

Publication number	Publication date	Application number	Application date
AU2013220901 AA	20140918	AU20130220901	20130214
AU2013220901 BB	20170504	AU20130220901	20130214
CA2864762 AA	20140815	CA20132864762	20130214
CA2864762 C	20190604	CA20132864762	20130214
CA3040163 AA	20130822	CA20133040163	20130214
EP2815164 A1	20141224	EP20130748927	20130214
EP2815164 A4	20151104	EP20130748927	20130214
EP2815164 B1	20191127	EP20130748927	20130214
US2015027581 AA	20150129	US20130379245	20130214
US2018119851 AA	20180503	US20170819377	20171121
US9857003 BB	20180102	US20130379245	20130214
US10544889 BB	20200128	US20170819377	20171121
WO13120201 A1	20130822	WO2013CA50114	20130214

Priority:

US20120600392P 20120217 US20120733162P 20121204 US20120733169P 20121204
CA20132864762 20130214 US20130379245 20130214 WO2013CA50114 20130214
US20140379245 20140815 US20170819377 20171121

Probable Assignee: CORE LINEPIPE INC

Assignee(s): (std): 8193053 CANADA LTD ; CORE LINEPIPE INC

Assignee(s): CORE LINEPIPE INC210 - 308 -11 AVENUE SECALGARYA1T2G 0Y2CA ; 1626830 ALBERTA LTD ; 8193053 CANADA LTD210 - 308 -11 AVENUE SECALGARYA1T2G 0Y2CA ; BOUEY SAMUEL GLEN ; SHEEHAN DAVE ; MCLEOD DAVID

Inventor(s): (std): SHEEHAN DAVE ; BOUEY SAMUEL GLEN ; MCLEOD DAVID

Inventor(s): MCLEOD DAVIDCA ; SHEEHAN DAVECA ; BOUEY SAMUEL GLENCA

Agent(s): MCCARTHY PORT PATENT AND TRADE MARK ATTORNEYS; ELLIPTIC LEGAL AND PATENT SERVICES; BENNETT JONES LLP; PERKINS SARAH; MARLES ALAN DAVID; WILMER CUTLER PICKERING HALE AND DORR LLP; CALDWELL ROSEANN B ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 29581684 (US2005173919A)

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Title: COUPLING ASSEMBLY AND METHOD

Abstract: The liner assembly (10) is for use in a joint between two pipe segments. The assembly (10) includes a first ring member (50), a second ring member (60) and a corrosion barrier ring (70). The first ring member (50) is configured to cooperate with a first liner (30) inserted in a first pipe segment (12). The second ring member (60) is configured to cooperate with a second liner (34) inserted in a second pipe segment (14) to be joined to the first pipe segment (12). The corrosion

Classifications:

F16L15/00 F16L25/00 F16L35/00 F16L58/00 F16L9/00 (Core/Invention)

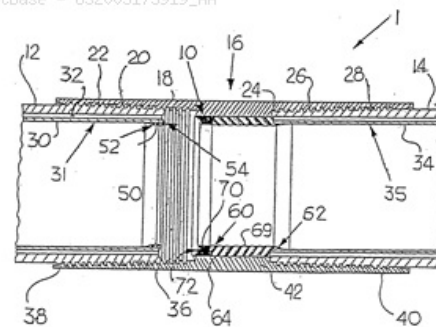
International (IPC 1-7): E15I 15/04 E16I 35/00 E16I 35/00 E16I 9/14

CPC: F16L15/08 F16L58/182 F16L58/185 Y10T29/49881

European: F16I 15/08 F16I 58/18B F16I 58/18D

European: F16L15/08 F16L58/18B F16L58/18D
US: 28E/333 28E/EE 30/4E6

US: 285/333 285/55 29/456



Publication number	Publication date	Application number	Application date
AR039538 AA	20050223	AR2003P101571	20030505
AU2003234483 AA	20031117	AU20030234483	20030505
AU2003234483 AH	20031117	AU20030234483	20030505
CN100334383 C	20070829	CN20038013129	20030505
CN1659400 A	20050824	CN20038013129	20030505
GB200424421 A0	20041208	GB20040024421	20030505
GB2403990 A1	20050119	GB20040024421	20030505
GB2403990 B2	20051012	GB20040024421	20030505
GB2403990 C	20051012	GB20040024421	20030505
GB2403990 C	20080910	GB20040024421	20030505
MY135356 A	20080331	MY20030001677	20030505
US2005173919 AA	20050811	US20030513213	20030505
US7360797 BB	20080422	US20030513213	20030505
WO03093714 A2	20031113	WO2003US14065	20030505
WO03093714 A3	20040729	WO2003US14065	20030505

US20020377742P 20020503 US20030513213 20030505 WO2003US14065 20030505
US20050513213 20050422

Assignee(s): (std): POSSON MICHAEL D ; ROBROY IND INC ; ROBROY INDUSTRIES INC

Assignee(s): ROBROY IND ; DLT ACOUSITION INC ; MAXTUBE FUNDING LUXEMBOURG SARL SECURITY AGENT AS

Inventor(s): (std): POSSON MICHAEL D ; MICHAEL D POSSON

Inventor(s): POSSON MICHAEL

Agent(s): WEBB LAW FIRM PC; THE WEBB LAW FIRM; WEBB LAW FIRM

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SF SG SI SK SL SN SZ TD TG TI TM TN TR TT TZ UA UG US UZ VV VN YU ZA ZM ZW

Abstract: Precision makeup at high speed of the most used forms of pipe and casing for production wells is assured by a novel coupling system. A pipe collar is provided with an internal precision makeup ring whose length along the pipe axis assures precise positioning and engagement. When the nose of the pipe is engaged with metal-to-metal contact against a reference shoulder on the precision ring a side surface on the nose end of the pipe engages a center seal ring disposed in the side wall of the collar between the reference shoulder and the threaded portion. This seal constitutes an effective barrier against the leakage of high internal pressures into the thread engagement region. End seals are mounted in grooves in the end recess portions of the collar, outside the threaded engagement region, to provide seals against external pressure, which can also vent internal pressures that are in excess of a predetermined threshold. With this arrangement, a modified standard collar or a manufactured collar can be placed on a pipe or casing off the drill rig floor, with the axial length of the precision ring being selected to assure makeup tightness adjusted to particular axial stress conditions. Makeup on the rig floor requires only stabbing of the next pipe section into the collar and engagement until metal-to-metal contact is achieved and seals are concurrently established. Pipes and collars can readily be prescreened to eliminate a minor proportion of elements whose thread tapers vary more than is permissible for the given conditions.

Classifications:

International (IPC 8-9): E21B17/042 E21B17/08 E21B19/16

F16L15/00 F16L15/04 (Advanced/Invention);

E21B17/042 (Advanced/Non-invention);

E21B17/02 E21B19/00 F16L15/00 (Core/Invention)

International (IPC 1-7): B21K21/16 B23P11/02 E21B17/042

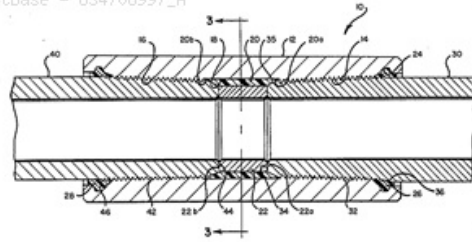
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CPC: Y10T29/49872 Y10T29/49895 Y10T29/49964 Y10T29/49716
Y10T29/49771 Y10T29/4987 Y10T29/49881 E21B17/006 F16L15/003
E21B17/042 E21B17/08 E21B19/16

European: E21B17/042 E21B17/08 E21B19/16 F16L15/00B4

P21B17/042

US: 285/13 285/332.2 285/333 285/355 285/369 285/383 285/55 29/401.1 29/407.05 29/450 29/451 29/456 29/464 29/525.1 29/525.12



Family:

Publication number	Publication date	Application number	Application date
AU198313622 A1	19831124	AU19830013622	19830418
AU581397 B2	19890223	AU19830013622	19830418
CA1216871 A1	19870120	CA19830428467	19830518
DE3372517 D1	19870820	DE19833372517	19830415
EP0094509 A2	19831123	EP19830103654	19830415
EP0094509 A3	19840328	EP19830103654	19830415
EP0094509 B1	19870715	EP19830103654	19830415
JP1925969 C3	19950425	JP19830080235	19830510
JP2125999 C3	19970128	JP19930203633	19930726
JP5065756 B4	19930920	JP19830080235	19830510
JP58203284 A2	19831126	JP19830080235	19830510
JP6213378 A2	19940802	JP19930203633	19930726
JP8030545 B4	19960327	JP19930203633	19930726
NO164500 B	19900702	NO19830001704	19830513
NO164500 C	19901010	NO19830001704	19830513
NO831704 A	19831121	NO19830001704	19830513
NO831704 L	19831121	NO19830001704	19830513
US4706997 A	19871117	US19850802943	19851127
US4878285 A	19891107	US19870117682	19871105
US5263748 A	19931123	US19920954683	19920930
US5689871 A	19971125	US19960664169	19960614

Priority:

US19820379615 19820519	JP19830080235 19830510	CA19830428467 19830518
US19850802943 19851127	US19870117682 19871105	US19890345653 19890501
US19920954683 19920930	US19930156110 19931122	US19950396078 19950228
US19960664169 19960614		

Probable Assignee: CARSTENSEN KJ

Assignee(s): (std): CARSTENSEN KENNETH J ; KENISU JEE KAASUTENSEN ; KENISU JIEE KAASUTENSEN

Assignee(s): KENNETH J CARSTENSEN ; CARSTENSEN KJ ; CARSTENSEN K J

Inventor(s): (std): CARSTENSEN KENNETH J ; KENISU JIEE KAASUTENSEN ; KENISU JEE KAASUTENSEN

Inventor(s): KENNETH J CARSTENSEN

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; SMART AND BIGGAR; KOYAMA YUU

Designated states: DE FR GB NL

5) Family number: 63039066 (US2016222740A)

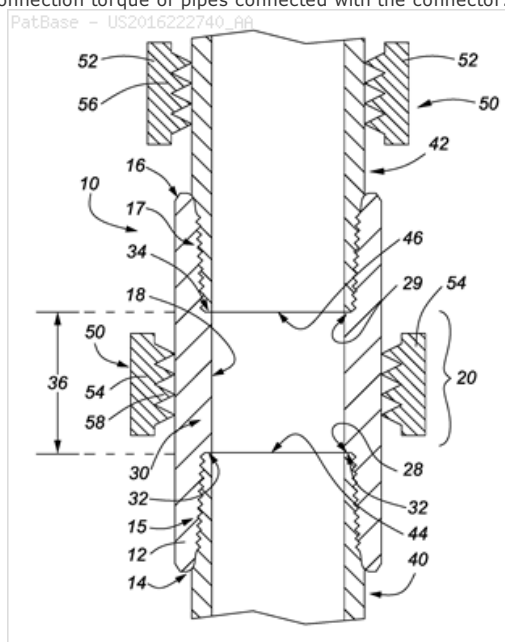
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Title: PIPE CONNECTOR

Abstract: A connector for connecting pipes and for use with power tongs have a die length. The connector includes a body with threaded connection portions at each end of the body on an inside surface of the body. The connector includes a gripping surface defined on an outside surface of the body between the threaded connection portions. The gripping surface is at least as long as the die length. The connector includes a reinforced portion of the body proximate each of the threaded connection portions for increasing resistance to deformation of the body upon being connected with a pipe. The gripping surface and the reinforced portion together facilitate an increase in connection torque of pipes connected with the connector.

Classifications:

International (IPC 8-9): E21B E21B17/042 E21B17/10 E21B19/16 F16L F16L15/00 F16L15/04 (Advanced/Invention)
CPC: E21B17/10 E21B19/16 E21B43/127 E21B17/1007 E21B17/1042 F16L15/08 E21B19/161 E21B17/042 F16L15/001 F16L15/002
US: 1/1 285/390



Family:

Publication number	Publication date	Application number	Application date
AU2016244745 AA	20171130	AU20160244745	20160411
CA2920030 AA	20160803	CA20162920030	20160203
CA2982000 AA	20171006	CA20162982000	20160411

CN107849905 A	20180327	CN201680033627	20160411
CO20170011479 A2	20180131	CO20170011479	20171108
HK1250764 A1	20190111	HK20180110064	20180806
IN201717039315 A	20171215	IN201717039315	20171103
MX2017012976 A1	20180606	MX20170012976	20160411
US2016222740 AA	20160804	US20160014941	20160203
US2016298400 AA	20161013	US20160096129	20160411
WO16161526 A1	20161013	WO2016CA50417	20160411

Priority:

US20150111345P 20150203 US20150146073P 20150410 US20160014941 20160203
US20160096129 20160411 WO2016CA50417 20160411

Probable Assignee: 925599 ALBERTA LTD

Assignee(s): (std): 925599 ALBERTA LTD

Assignee(s): SABATIER CLINT ROGER

Inventor(s): (std): CLINT ROGER SABATIER ; SABATIER CLINT ROGER

Agent(s): FPA PATENT ATTORNEYS PTY LTD; BORDEN LADNER GERVAIS LLP; MAURICIO JARAMILLO CAMPUZANO; DEQI INTELLECTUAL PROPERTY LAW HONGKONG CORP LTD; WOOD DAVID ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

6) Family number: 29362647 (US5406983A)

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Title: CORROSION-RESISTANT COMPOSITE COUPLINGS AND TUBULAR CONNECTIONS

Abstract: A corrosion-resistant connection for use with tubular members having externally threaded ends. The connection includes a stress-bearing sleeve member having an interior surface and an exterior surface; and a fiber-filled polymeric composite shell having at least one internally threaded portion therein, the composite shell molded to the sleeve so as to be coaxially aligned and in close conforming contact with at least a substantial portion of the interior surface of the sleeve member. The composite shell has a thickness of greater than about 0.04 inches.

Classifications:

International (IPC 8-9): F16L15/00 F16L15/04 F16L47/16 F16L58/10 F16L58/18 F16L9/12 F16L9/14 (Advanced/Invention);

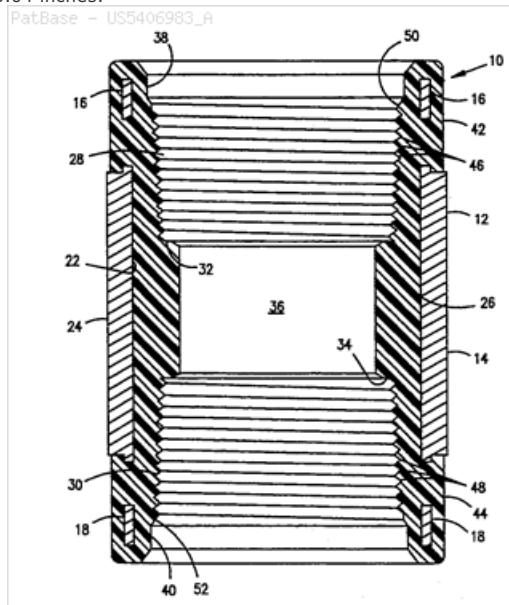
F16L15/00 F16L47/00 F16L58/00 F16L58/02 F16L9/00 (Core/Invention)

International (IPC 1-7): F16L15/00 F16L15/04 F16L47/00 F16L58/10 F16L58/18 F16L9/12 F16L9/14

CPC: Y10S138/02 F16L15/001 E21B17/042 F16L9/14 F16L47/16 F16L58/182

European: E21B17/042 F16L15/00B F16L47/16 F16L58/18B F16L9/14

US: 138/109 138/143 138/DIG.2 285/292 285/294.1 285/53



Family:

Publication number	Publication date	Application number	Application date
CA2148498 AA	19950502	CA19932148498	19931111
DE69319136 D1	19980716	DE19936019136	19931111
DE69319136 T2	19990128	DE19936019136T	19931111
EP0673484 A1	19950927	EP19940901431	19931111
EP0673484 A4	19960313	EP19940901431	19931111
EP0673484 B1	19980610	EP19940901431	19931111
JP8503289 T2	19960409	JP19940512367T	19931111
US5406983 A	19950418	US19940214086	19940316
WO9411664 A1	19940526	WO1993US10929	19931111

Priority:

US19920976595 19921113 WO1993US10929 19931111 US19940214086 19940316

Probable Assignee: MOBIL OIL CORP

Assignee(s): (std): MOBIL OIL CORP

Assignee(s): MOBIL OIL CORP FAIRFAX VA US ; MOBIL OIL FAIRFAX VA CORP ; MOBIL OIL FAIRFAX VA US CORP ; SUKUP RICHARD ANTHONY ; CHAMBERS MICHAEL ROY

Inventor(s): (std): CHAMBERS MICHAEL ROY ; SUKUP RICHARD ANTHONY ; CHAMBERS MICHAEL R ; SUKUP RICHARD A

Inventor(s): SUKUP RICHARD ANTHONY BURLESON TX 76028 US ; CHAMBERS MICHAEL ROY BEDFORD TX 76021 US

Agent(s): GOWLING LAFLEUR HENDERSON LLP

7) Family number: 30901591 (US2004174017A)

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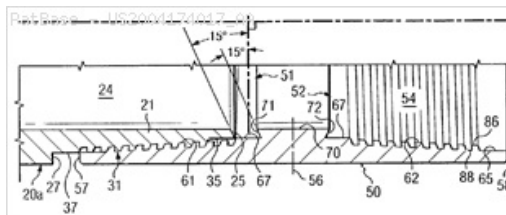
Title: TUBULAR GOODS WITH EXPANDABLE THREADED CONNECTIONS

Abstract: Oil country tubular goods and other types of tubular members are provided with threaded and coupled connections satisfactory for radial expansion within a wellbore. The tubular members may include couplings formed using electric resistant welding technology. The threaded and coupled connections may be used to join sections of casing with each other to form a casing string to complete a wellbore.

Classifications:**International (IPC 8-9):** E21B17/042 F16L15/00 F16L15/04

F16L15/06 F16L25/00 (Advanced/Invention);

E21B17/02 F16L15/00 F16L25/00 (Core/Invention)

International (IPC 1-7): B23P19/00 F16L25/00 F16L35/00**CPC:** F16L15/004 F16L15/001 E21B17/042 E21B43/106 F16L15/00 Y10T29/49881**European:** E21B17/042 E21B43/10F2 F16L15/00 F16L15/00B F16L15/00B6**US:** 285/333 285/333P 29/456 29/456P**Family:**

Publication number	Publication date	Application number	Application date
■ CN1766278 A	20060503	CN200510119937	20050916
■ US2004174017 AA	20040909	US20030382625	20030306
■ US2004194278 AA	20041007	US20040828069	20040420
■ US2006006648 AA	20060112	US20050227399	20050915
■ US2007228729 AA	20071004	US20070758342	20070605

Priority:

US20030382625 20030306 US20040828069 20040420 US20040610321P 20040916
 US20040620182P 20041019 US20050227399 20050915 US20070758342 20070605

Probable Assignee: LONE STAR STEEL CO

Assignee(s): (std): GRIMMETT HAROLD M ; LONE STAR STEEL CO ; MILLER EDMOND L ; LOWERY BLUFORD W ; MATTOX MITCHELL B ; LONI STAR STEEL INC ; URECH BOWMAN A

Assignee(s): US STEEL TUBULAR PRODUCTS INC ; CIT GROUP BUSINESS CREDIT INC ; CIT GROUP BUSINESS CREDIT INC A NEW YORK CORP ; LONE STAR STEEL COMPANY ; UNITED STATES STEEL CORP ; LONE STAR STEEL CO LP

Inventor(s): (std): MATTOX MITCHELL B ; GRIMMETT HAROLD M ; GRIMMETT HAROLD MICHAEL ; BASSHAM TRACY EUGENE ; URECH BOWMAN A ; BALL GREGORY W ; POLLAN GARY H ; MILLER EDMOND L ; LOWERY BLUFORD W ; BRILL LELAND M ; GRIMMETT HAROLD M MILLER EDMON

Inventor(s): GRIMMETT HAROLD M MILLER EDMOND L LOWERY BLUFORD W ; MATTOX MITCHELL BRYAN ; URECH BOWMAN ; GRIMMETT HAROLD ; LOWERY BLUFORD ; MATTOX MITCHELL ; MILLER EDMOND

Agent(s): BAKER BOTTS LLP PATENT DEPARTMENT

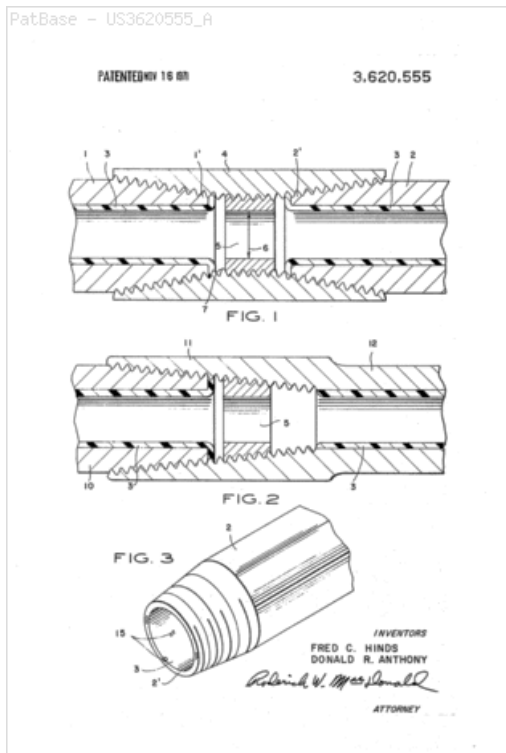
8) Family number: 978800 (US3620555A)

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Title: CORROSION RESISTANT PIPE JOINT SYSTEM

Abstract: (Claim 1) 1. A corrosion resistant pipe joint system comprising a threaded pipe coupling means, at least two sections of metal pipe joined in an end-to-end relation by said threaded coupling means, an electrically insulating coating over substantially the entire interior surface of said pipes, at least one arcuate member carried in said coupling means, said arcuate member being located in said coupling means and sized in relation to said threaded coupling and pipe sections so as to be spaced from the adjacent ends of said pipe sections so that said arcuate member is exposed to the interior of said pipe system without touching the adjacent ends of said pipe sections to avoid chipping said insulating coating yet being sufficiently close to said pipe ends to function as a sacrificial anode for any chipped portions on the interior of said pipe sections, said arcuate member being in electrical contact with said coupling means and being composed of a metal more electronegative than the metal which composes said pipes and coupling means, said arcuate member substantially conforming to the interior curvature of said coupling means and having an internal diameter not substantially smaller than the smallest internal diameter of said pipes so that said arcuate member does not extend substantially into the flow path of fluid passing through said pipes and coupling means.

Classifications:**International (IPC 1-7):** F16L15/00 F16L39/00**CPC:** F16L15/001 F16L25/021 F16L58/00**European:** F16L15/00B F16L25/02C F16L58/00**US:** 285/383 285/55

**Family:**

Publication number	Publication date	Application number	Application date
US3620555 A	19711116	US19690886064	19691218

Priority:

US19690886064 19691218

Probable Assignee:

ATLANTIC RICHFIELD CO

Assignee(s): (std):

ATLANTIC RICHFIELD CO

Inventor(s): (std):

ANTHONY DONALD R ; HINDS FRED C

Inventor(s):

FRED C HINDS ; DONALD R ANTHONY

9) Family number: 62183055 (US2016116088A)

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Title: FACE-SEALING FLUIDIC CONNECTION SYSTEM

Abstract: A tubing or fitting assembly has an inner tube layer, an outer tube layer, a sleeve, a tip portion, and can have a nut. Each of the nut, sleeve, inner and outer tubing layers, and tip portion have a passageway therethrough, with at least the passageways in the sleeve, tip portion, outer tube layer, and nut adapted to allow the inner tube layer to pass therethrough or extend over the inner layer. The tip portion can be molded over an end portion of the inner tube layer and also over a portion of the sleeve. The sleeve may include a retention feature in the form of a lip which extends into the tip portion, and also a narrower portion so that the tip portion and sleeve remain coupled together. The inner and outer tubing layers can also be retained by an interference fit. The ends of the tip portion and inner layer together define a substantially flat surface which can form a seal in a flat-bottomed port of a component such as may be found in any one of a number of components in an analytical instrument system, including for example a liquid chromatography system. The nut, tube, ferrule, and transfer tube or liner tube may comprise biocompatible materials. In addition, the nut may have a slot, such as a slot adapted to allow the tube and the nut to be easily and quickly separated or to allow a portion of the tube to be easily and quickly inserted in the nut.

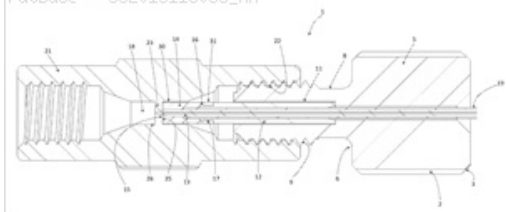
Classifications:

International (IPC 8-9): A61B10/00 A61M39/10 B01D15/10 B01D15/14 B01D15/16 B01L3/00 F16L15/04 F16L15/08 F16L19/02 F16L33/22 F16L35/00 F16L37/00 F16L37/04 F16L37/084 F16L37/098 F16L37/133 F16L59/04 G01N30/26 G01N30/32 G01N30/38 G01N30/60 (Advanced/Invention); G01N30/60 (Advanced/Non-invention)

CPC: B01D15/14 B01D15/163 G01N30/32 G01N2030/328 F16L33/227 F16L33/32 F16L37/0985 G01N30/60 B01D15/10 B01L3/563 B01L2300/0838 F16L19/0206 F16L19/0212 G01N30/6026 F16L15/08 A61M39/10

US: 1/1 285/317 285/390

PatBase - US2016116088_AA

**Family:**

Publication number	Publication date	Application number	Application date
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Priority:

US20140067739P 20141023	US20150127276P 20150302	US20150168491P 20150529
US20150922041 20151023	WO2015US57238 20151023	US20160349569P 20160613
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WO2017US36590 20170608		

Probable Assignee: IDEX HEALTH AND SCIENCE LLC

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Agent(s): JONES NICHOLAS ANDREW; VINSON AND ELKINS LLP; CORDER TIMOTHY S

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

10) Family number: 8445547 (US5752725A)

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Title: JOINT

Abstract: PCT No. PCT/GB93/02573 Sec. 371 Date Aug. 28, 1995 Sec. 102(e) Date Aug. 28, 1995 PCT Filed Dec. 16, 1993 PCT Pub. No. WO94/15137 PCT Pub. Date Jul. 7, 1994A joint between two hollow pipes is formed by inserting the pipes into a sleeve. The sleeve is made of a similar or compatible material to that of the pipes which are to be joined. The inner diameter of the sleeve increases from a middle portion outwardly to two end portions. The sleeve includes a pair of tapered collars which engage each end portion and abut the middle portion. Relative rotation of the pipes and sleeve causes melting and mixing of the pipe and sleeve surfaces. This mixing action eliminates the weld line present in known systems.

Classifications:

International (IPC 8-9): B29C65/06 B29C65/78

F16L47/02 (Advanced/Invention);

B29L23/00 (Advanced/Non-invention);

B29C65/06 B29C65/78 F16L47/02 (Core/Invention)

International (IPC 1-7): B29C65/06 B29L23/00 F16L13/02 F16L47/02

CPC: Y10S285/906 B29C66/52251 B29C65/0672 B29C65/7802

B29C65/7844 B29C66/5221 B29C66/52231 B29C66/5224

B29C66/52241 B29C66/5225 B29C66/5229 B29C66/52292

B29C66/52295 B29K2101/12 F16L47/02 B29C66/52291

B29C66/52298 B29C66/5344 B29C66/114 B29C66/1162

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B29C66/116 B29C66/93451 B29C66/939 B29C65/069

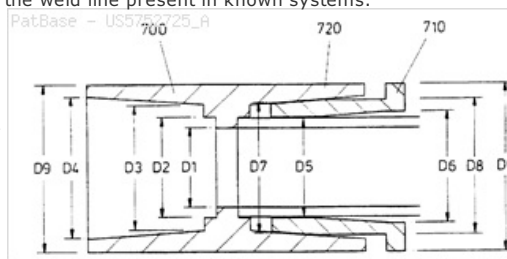
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B29C66/52241 B29C66/5225 B29C66/52251 B29C66/5229 B29C66/52292 B29C66/52295 B29C66/534 F16L47/02

L29C66/116 L29C66/5229 L29C66/52292 L29C66/52295 L29C66/939 L29K101/12

US: 228/1 228/114.5 228/2.3 285/21.1 285/288.1 285/334.4 285/423 285/906



Family:

Publication number	Publication date	Application number	Application date
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Priority:

GB19920026489 19921219	WO1993GB02573 19931216
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Inventor(s): (std): EL SOBKY HOBAB

Inventor(s): HOBAB EL SOBKY ; EL SOBKY HOBAB MANCHESTER M60 10D GB

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD

Designated states: AT AU BE CH DE DK ES FR GB GR IE IT JP LU MC NL PT SE US

Title: Plastic coating thread and coupling assembly

Abstract: A coupling assembly having an annular coupling with internal threads having a continuous plastic, corrosion-resistant coating. Opposed tubes are provided with a similar internal coating. The tubes have external threads inserted into the coupling with the internal and external threads being in threaded engagement. An annular gasket is provided of rigid material and is mounted between and in sealing engagement with opposed ends of the tubes within the coupling. The gasket has a continuous radial portion extending between the opposed ends of the tubes and in spaced apart relation thereto. O-rings are in sealing engagement with the tubing ends and the continuous radial portion of the gasket. A pair of opposed flanges extend from opposite sides of the continuous radial portion of the gasket and are in sealing contact with an interior surface portion of the tubes.

Classifications:

International (ipc 8-9): F16L15/00 F16L15/04 F16L55/00 F16L58/18 F16L59/16 F16L9/14 (Advanced/Invention);

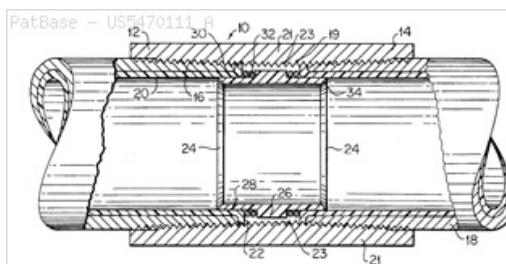
F16L55/00 F16L59/00 F16L9/00 (Core/Invention)

International (ipc 1-7): F16L15/00 F16L15/04 F16L55/00 F16L58/18 F16L59/16 F16L9/14

CPC: F16L15/001 F16L58/182

European: F16L15/00B F16L58/18B

US: 285/333 285/351 285/383 285/55



Family:

Publication number	Publication date	Application number	Application date
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CA2150435 C	20000516	CA19952150435	19950529
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EP0702190 B1	19970709	EP19950810355	19950530
SG32358 A1	19960813	SG19950000533	19950529
US5470111 A	19951128	US19940288805	19940812

Priority:

US19940288805 19940812 CA19952150435 19950529 SG19950000533 19950529

Probable Assignee: TUBOSCOPE VETCO INT INC

Assignee(s): (std): TUBOSCOPE VETCO INT

Assignee(s): TUBOSCOPE VETCO INT INC ; TUBOSCOPE VETCO INTERNATIONAL INC ; TUBOSCOPE VETCO INTERNATIONAL INC HOUSTON TEX US ; WILLIS RAY D ; NELSON JOHN M

Inventor(s): (std): WILLIS RAY D ; NELSON JOHN M

Agent(s): RICHES MCKENZIE AND HERBERT LLP

Designated states: DE FR GB