

56 Documents

Publication numbers	Title	Current assignees
EP1254333 A1	Hose and pipe reinforcement	MILLIKEN EUROPE
EP2780159 A1	Flexible reinforced pipe and reinforcement tape	SHAWCOR
WO2016133167 A1	Fiber -reinforced composite pipe and cold/warm water piping system	SEKISUI CHEMICAL
EP1066485 A1	Composite carbon fibre based armour for flexible pipe	COFLEXIP
EP2983900 A1	A flexible pipe body and method of manufacture	GE OIL & GAS
EP2983901 A1	A flexible pipe body and method of manufacture	GE OIL & GAS
WO201696906 A1	Filament -wound liner-free pipe	GLOBAL COMPOSITE PIPE SYSTEM
EP2922686 A1	Elastomeric flexible hose and method of manufacturing	GATES ENGINEERING & SERVICES
US20080006338 A1	Reinforcing Matrix for Spoolable Pipe	FIBERSPAR
EP3140584 A1	Unbonded flexible pipe for transporting an abrasive material, associated method and associated use	TECHNIP FRANCE
EP3350498 A1	High pressure pipe and method for producing such pipe	PIPELIFE
EP2823206 A1	Armour element for a flexible line intended to be placed in a stretch of water, flexible line, and corresponding method and process	TECHNIP FRANCE
EP3052847 A1	Extensible flexible hose and method for continuously manufacturing thereof	FITT
EP3042112 A1	A flexible pipe	NATIONAL OILWELL VARCO
EP2847370 A1	Textile reinforcement comprising continuous aramid yarn	TEIJIN ARAMID
EP1844258 A1	Systems and methods for making pipe liners	SMART PIPE
EP3164688 A1	Flexible pipe body and sensing method	GE OIL & GAS
EP3394145 A1	Longitudinal reinforcing profile for flexible tubular pipe	TECHNIP FRANCE, ...
EP2344798 A1	A fiber -reinforced thermoplastic pipe	DU PONT DE NEMOURS
EP1141604 A1	Hose construction	MOLNAR JR JOHN A, ...
EP2137450 A1	Flexible composite tubular assembly with high insulation properties and method for making same	DEEPFLEX
EP-843033 A1	Carbon fiber , acrylic fiber , and method of manufacturing them	TORAY INDUSTRIES
US4023834 A	Push-type coupling and conduit pipe assembly	EWING ENGINEERING
EP3227632 A1	Angular displacement of flexible pipe	GE OIL & GAS
WO2014204690 A1	Conductive mesh for composite tube for fluid delivery system	EATON
US4023835 A	Conformable thin-wall shear-resistant coupling and pipe	AMSTED INDUSTRIES

Publication numbers	Title	Current assignees
	assembly	
WO200945867 A1	Composite pipe systems and methods	SHELL
EP2824235 A1	Carbon fiber bundle and process for producing same	TEIJIN
EP3439871 A1	Submarine pipe comprising a sheath comprising a polypropylene homopolymer	TECHNIP FRANCE
EP3551916 A1	Detecting apparatus and method	GE OIL & GAS
EP3439870 A1	Submarine pipe comprising a sheath comprising a polypropylene block copolymer	TECHNIP FRANCE
EP1292790 A1	Improvements relating to hose	DUNLOP OIL & MARINE
WO2009141538 A2	Method of manufacturing a flexible tubular structure	TECHNIP FRANCE
US20120168012 A1	Composite tube for fluid delivery system	EATON INTELLIGENT POWER
WO9712166 A1	Composite spoolable tube	FIBERSPAR
EP1188010 A1	Composite tubular assembly and method of forming same	DEEPFLEX
EP3429840 A1	Fire resistant flexible hose	AFLEX HOSE
EP-853547 A1	Flat strip, in particular for reinforcing ducts, method for making same, and ducts reinforced therewith	COFLEXIP, ...
WO201749412 A1	Joint for thermoplastic pipe , assembly and method	SHAWCOR
EP-575428 A1	Flexible tubular structure	PROFLEX PIPE
EP2780619 A1	Pipe connection assembly and method	SHAWCOR
EP2879865 A2	Transfer hose, in particular for use at high temperatures	CONTITECH SCHLAUCH
FR2229538 A1	Flexible tube for oil drilling - has reinforcing winding of resin reinforced with fibres	IFP ENERGIES NOUVELLES
GB9506531 D0	Spoolable composite tubular member	FIBERSPAR
EP2019942 A1	Improvements relating to hose	DUNLOP OIL & MARINE
FR2404792 A1	Multiply, heavy-duty, hose for e.g. deep drilling - is made up of glass-fibre windings in epoxy! or phenolic matrix , at least one of which is rubber-coated (HU 28.3.78)	TAURUS GUMIIPARI VÁLLALAT
EP2061648 A2	Reinforced plastic pipe	HONEYWELL INTERNATIONAL
WO201778124 A1	Fiber composite hose	KURARAY PLASTICS
EP3551355 A1	Immobilised insert	GE OIL & GAS
EP1728016 A2	A composite pipe lining	BELLAMY NORMAN W
EP1565681 A2	Tubular polymeric composites for tubing and hose constructions	PARKER HANNIFIN
EP2836553 A2	Pipe section having bonded composite barrier layer	TICONA
EP1237710 A1	Woven composite fabric	BEKAERT
EP-821035 A1	Thermoplastic elastomer composition, process for the	YOKOHAMA RUBBER

Publication numbers	Title	Current assignees
	preparation thereof, hose made by using the composition, and process for the production thereof	
US3399979 A	Process for producing metal nitride fibers, textiles and shapes	UNION CARBIDE
US5908049 A	Spoolable composite tubular member with energy conductors	FIBERSPAR

Family 1/56 - FAMPAT - ©Questel

Title

(EP1254333)

Hose and **pipe reinforcement****Publication numbers with kind code & date**

DE60103369	T2	2005-06-02	DE60103369			
MXPA02007160	A	2004-09-06	MX2002PA007160			
DE60103369	D1	2004-06-24	DE60103369			
AT267357	T	2004-06-15	ATE267357			
EP1254333	B1	2004-05-19	EP1254333			
US20030181111	A1	2003-09-25	US20030181111			
JP2003522850	A	2003-07-29	JP2003522850			
HU0204361	A2	2003-03-28	HU200204361			
KR20030020866	A	2003-03-10	KR20030020866			
BR0108124	A	2003-02-25	BR200108124			
CN1398334	A	2003-02-19	CN1398334			
EP1254333	A1	2002-11-06	EP1254333			
AU4237701	A	2001-08-20	AU200142377			
CA2399105	A1	2001-08-16	CA2399105			
WO01/59349	A1	2001-08-16	WO200159349			
GB2359097	A	2001-08-15	GB2359097			
GB0002739	D0	2000-03-29	GB200002739			

Abstract

(EP1254333)

The invention relates to a **reinforcement** fabric for use in manufacture of hoses and pipes having a body **matrix** of polymer material, said **reinforcement** fabric comprising a collection of substantially parallel **reinforcement** yarns arranged along a longitudinal direction of the fabric and a plurality of transverse and/or bias yarns interconnecting the **reinforcement** yarns. The **reinforcement** fabric is a stable fabric for direct application to the polymer body **matrix** of a preform of the hose or **pipe** by wrapping the **reinforcement** fabric around the preform. The **reinforcement** fabric is adapted to be directly applied to the polymer body **matrix** of the preform by the transverse and/or bias yarns being substantially lighter than the **reinforcement** yarns, and by at least one surface of the **reinforcement** fabric being tackified for adhesion to the polymer body **matrix** of the preform of the hose or **pipe**.

Inventors

DE MEYER WILLY

FAKET MARK

Latest standardized assignees - inventors removed

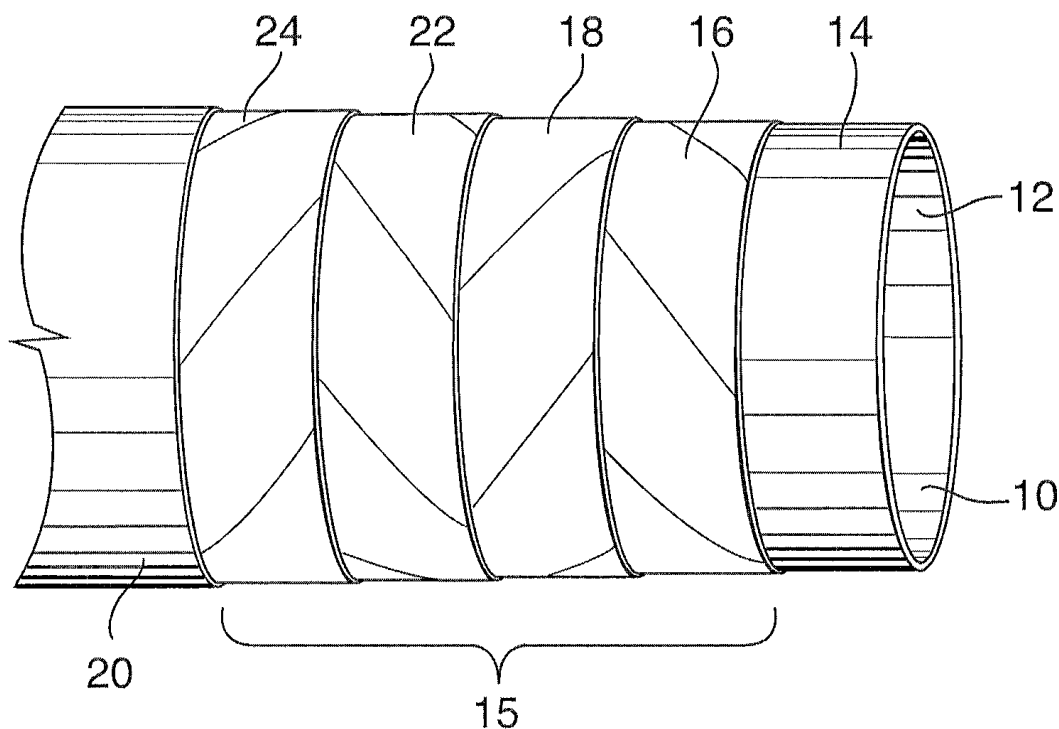
MILLIKEN EUROPE

Family 2/56 - FAMPAT - ©Questel

Title

(EP2780159)

Flexible reinforced **pipe** and **reinforcement** tape**Images**



Publication numbers with kind code & date

CA2854955	C	2019-06-11	CA2854955
DK2780159	T3	2019-04-08	DK2780159T
EP2780159	B1	2019-01-09	EP2780159
US20170299093	A1	2017-10-19	US20170299093
US9726306	B2	2017-08-08	US9726306
AU2012339553	B2	2016-05-12	AU2012339553
EP2780159	A4	2015-05-27	EP2780159
EP2780159	A1	2014-09-24	EP2780159
AR088889	A1	2014-07-16	AR--88889
AU2012339553	A1	2014-06-19	AU2012339553
US20130133775	A1	2013-05-30	US20130133775
CA2854955	A1	2013-05-23	CA2854955
WO2013/071449	A1	2013-05-23	WO201371449



Abstract

(EP2780159)

A **flexible pipe** includes: an inner liner formed as a tube and having an outer surface and an inner surface defining an inner diameter; a **reinforcement** layer bonded to the inner liner and including at least a first ply of reinforcing tape helically wrapped in a first helical direction about the inner liner and a second ply of reinforcing tape helically wrapped about the first ply of reinforcing tape, the second ply of reinforcing tape helically wrapped in a second helical direction opposite to the first helical direction; and an outer jacket applied over and bonded to the **reinforcement** layer, the outer jacket including a thermoplastic. A reinforcing tape for use in the **pipe** or other applications includes: a plurality of reinforcing fibers and a **matrix** about the plurality of reinforcing fibers to hold the reinforcing fibers in the form of a tape, the **matrix** including thermoplastic and an additive to increase the impact resistance of the thermoplastic.

Inventors

DUNCAN MARK

NIU HAO

CONLEY JEFFREY RYAN

EDMONDSON STEPHEN JAMES

HOLUB JIRI

ANDRENACCI ALFREDO

GUJARE NITIN

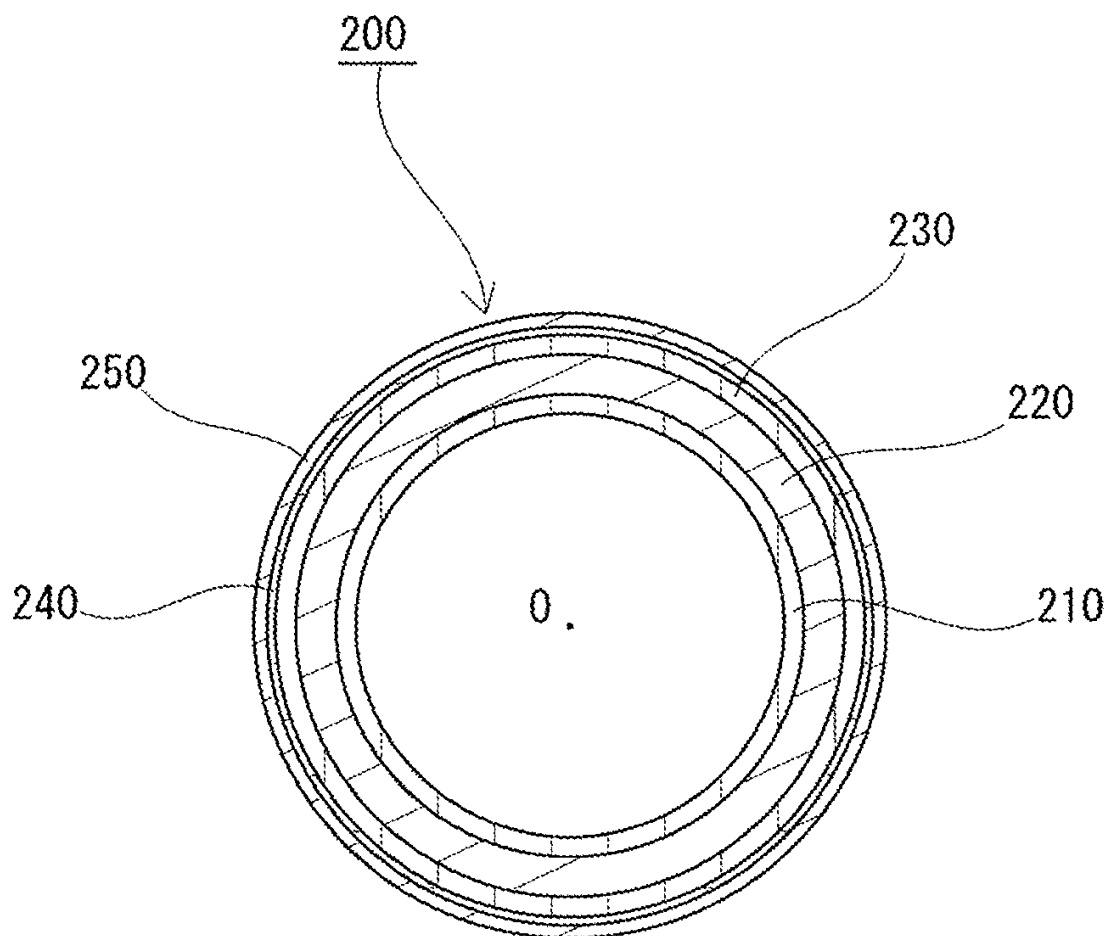
Latest standardized assignees - inventors removed

SHAWCOR

Family 3/56 - FAMPAT - ©Questel

Title

(WO2016133167)

Fiber-reinforced composite **pipe** and cold/warm water piping system**Images****Publication numbers with kind code & date**

KR10-1993147	B1	2019-09-30	KR101993147
AU2016220736	B2	2019-08-22	AU2016220736
JP6510885	B2	2019-05-08	JP6510885
US20180038522	A1	2018-02-08	US20180038522
VN54857	A	2017-11-27	VN--54857
CN107250640	A	2017-10-13	CN107250640
IN201737029365	A	2017-10-13	IN201737029365
SG11201706694T	A	2017-09-28	SG11201706694T
KR20170105579	A	2017-09-19	KR20170105579
AU2016220736	A1	2017-08-31	AU2016220736
TW201637832	A	2016-11-01	TW201637832
JP2016155363	A	2016-09-01	JP2016155363
WO2016/133167	A1	2016-08-25	WO2016133167



Abstract

(WO2016/133167)

The present invention provides: a fiber-reinforced composite pipe as a multi-layered pipe material having high strength, high dimensional stability, and excellent workability; and a cold/warm water piping system having excellent dimensional stability and improved workability. This fiber-reinforced composite pipe includes: a pipe-shaped first layer including a polyolefin-based resin; a pipe-shaped second layer including a polyolefin-based resin, glass fibers, and a compatibilizing agent; and a pipe-shaped third layer including a polyolefin-based resin; the second layer being disposed on the outer side of the first layer, the third layer being disposed on the outer side of the second layer, the ratio of the thickness of the second layer relative to the total combined thickness of the first layer, second layer, and third layer being 0.3 or more and 0.8 or less, and, within 100 wt% of the second layer, the polyolefin-based resin content being 45 wt% or more and 84 wt% or less, the glass fiber content being 15 wt% or more and 45 wt% or less, and the compatibilizing agent content being 0.5 wt% or more and 10 wt% or less.

Inventors

SANNI TOSHIFUMI

TERACHI NOBUHARU

HOSHINO YUSUKE

UMEYAMA SHINTARO

Latest standardized assignees - inventors removed

SEKISUI CHEMICAL

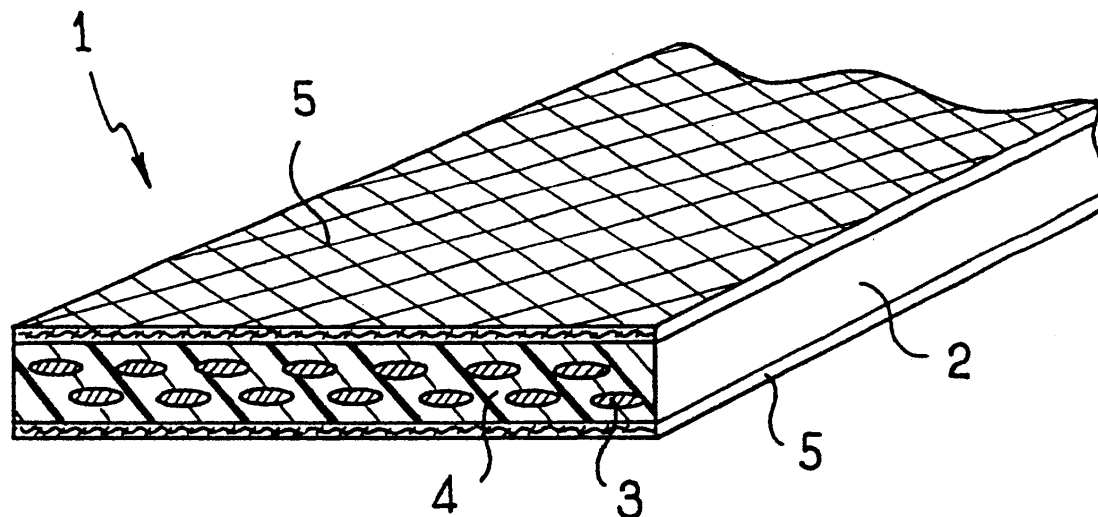
Family 4/56 - FAMPAT - ©Questel

Title

(EP1066485)

Composite carbon fibre based armour for flexible pipe

Images



Publication numbers with kind code & date

US6620471	B1	2003-09-16	US6620471
DK1066485	T3	2002-06-17	DK1066485T
AU745945	B2	2002-04-11	AU-745945
EP1066485	B1	2002-03-06	EP1066485
EP1066485	A1	2001-01-10	EP1066485
BR9908976	A	2000-12-05	BR9908976
FR2776358	B1	2000-05-05	FR2776358
AU2171599	A	1999-10-18	AU9921715
WO99/49259	A1	1999-09-30	WO9949259



[FR2776358](#)

A1 1999-09-24 FR2776358

Abstract

(EP1066485)

The invention concerns an ultra dense composite section for **flexible pipe** armouring, comprising longitudinal carbon **filament** slivers (3) provided within a thermoplastic or thermosetting **matrix** (4) in the form of a flat ribbon (2) with substantially rectangular cross-section, whereof at least one of the surfaces is reinforced with a film (5) made integral with said surface, over substantially its whole width and over substantially its whole length.

Inventors

DO ANH TUAN

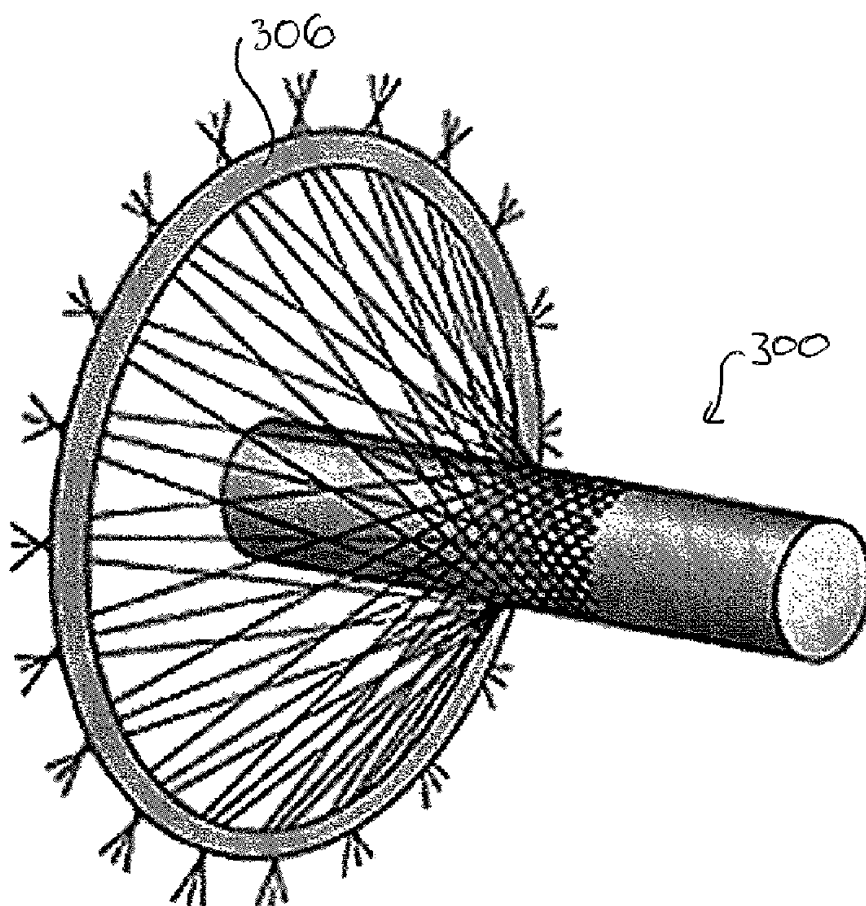
Latest standardized assignees - inventors removed

COFLEXIP

Family 5/56 - FAMPAT - ©Questel

Title

(EP2983900)

A **flexible pipe** body and method of manufacture**Images****Publication numbers with kind code & date**[CN105142883](#)

B 2019-03-22 CN105142883B

[US10221971](#)

B2 2019-03-05 US10221971



ES2685599	T3	2018-10-10	ES2685599				
DK2983900	T3	2018-09-10	DK2983900T				
EP2983900	B1	2018-08-01	EP2983900				
BR112015025809	A2	2017-07-25	BR112015025809				
US20160047499	A1	2016-02-18	US20160047499				
EP2983900	A1	2016-02-17	EP2983900				
CN105142883	A	2015-12-09	CN105142883				
BR112015025809	A1	2015-12-08	BR112015025809				
AU2014252857	A1	2015-10-15	AU2014252857				
WO2014/167279	A1	2014-10-16	WO2014167279				
GB201320444	D0	2014-01-01	GB201320444				
GB201306667	D0	2013-05-29	GB201306667				

Abstract

(EP2983900)

A **flexible pipe** body and method of producing a **flexible pipe** body are disclosed. The method includes providing one or more composite **filament** (302) as a **filament** bundle (310); applying a braid element (304) around the **filament** bundle as a braided bundle (310); helically wrapping the braided bundle (310) around a **flexible pipe** layer (502); and then curing (510) the one or more composite **filament** (302).

Inventors

JHA VINEET KUMAR

DODDS NEVILLE

LATTO JAMES ROBERT

Latest standardized assignees - inventors removed

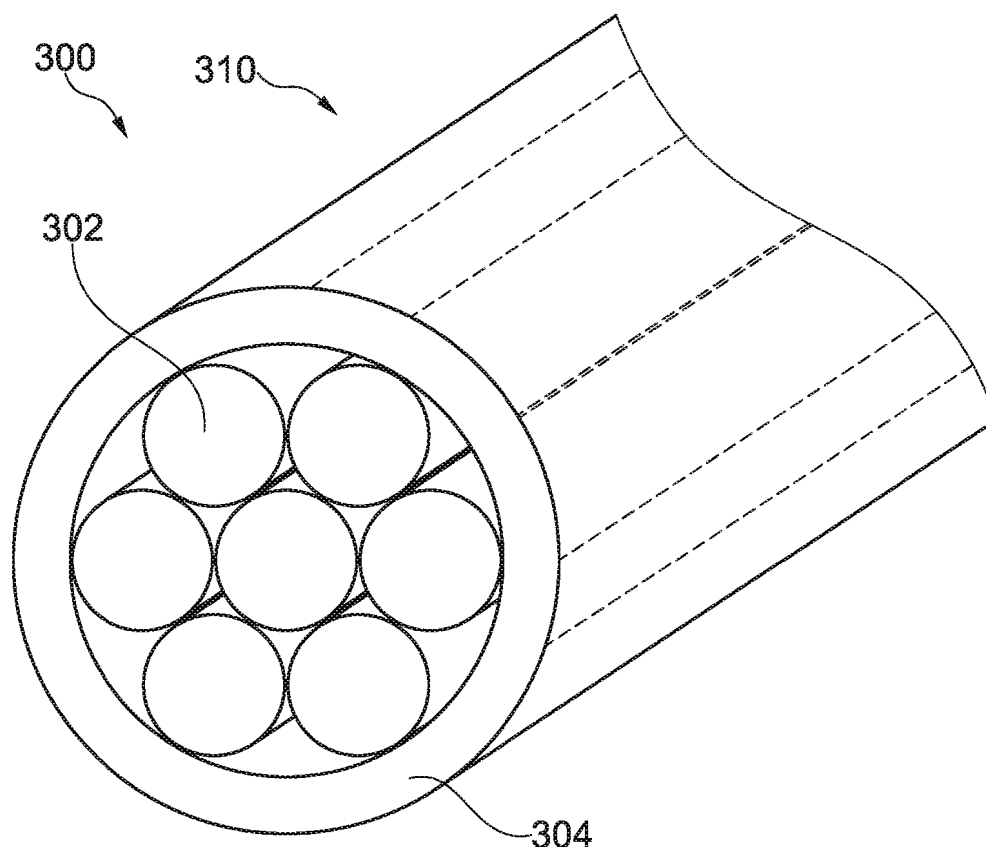
GE OIL & GAS

Family 6/56 - FAMPAT - ©Questel

Title

(EP2983901)

A **flexible pipe** body and method of manufacture**Images**



Publication numbers with kind code & date

ES2684777	T3	2018-10-04	ES2684777
DK2983901	T3	2018-09-03	DK2983901T
EP2983901	B1	2018-07-18	EP2983901
US10001229	B2	2018-06-19	US10001229
CN105163931	B	2018-05-15	CN105163931B
BR112015025903	A2	2018-02-06	BR112015025903
BR112015025922	A2	2017-07-25	BR112015025922
BR112015025903	A1	2017-06-13	BR112015025903
US20160069484	A1	2016-03-10	US20160069484
EP2983901	A1	2016-02-17	EP2983901
CN105163931	A	2015-12-16	CN105163931
BR112015025922	A1	2015-12-08	BR112015025922
AU2014252858	A1	2015-10-15	AU2014252858
WO2014/167280	A1	2014-10-16	WO2014167280



Abstract

(EP2983901)

A **flexible pipe** body and method of producing a **flexible pipe** body are disclosed. The method includes providing two or more non-bonded composite filaments (302) as a non-bonded **filament** bundle (310); applying a braid element (304) around the **filament** bundle (310) to thereby form a braided bundle (310) comprising non-bonded filaments (302); and helically wrapping the braided bundle (310) around a **flexible pipe** body layer (502).

Inventors

JHA VINEET KUMAR

DODDS NEVILLE

LATTO JAMES ROBERT

Latest standardized assignees - inventors removed

GE OIL & GAS

Family 7/56 - FAMPAT - ©Questel

Title

(WO201696906)

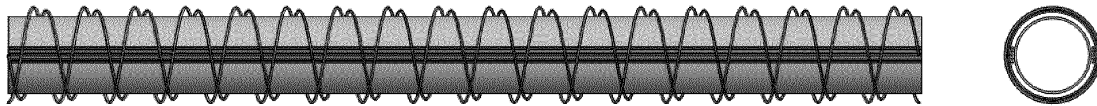
Filament-wound liner-free **pipe****Images**

FIG 4.

Publication numbers with kind code & date[NL2013981](#)

B1 2016-10-11 NL2013981

[WO2016/096906](#)

A1 2016-06-23 WO201696906

**Abstract**

(WO2016/096906)

The current invention concerns a **filament**-wound liner-free GRP **pipe**. The **reinforcement** filaments comprise one or more spiral fibre windings wrapped in a first direction, one or more spiral fibre cross windings wrapped in a second direction and one or more longitudinal fibre rovings, the longitudinal fibre rovings extending along the length of the **pipe** in the rigide sides of the pipes. It also concerns a process for manufacturing the same via a **filament** winding process. Furthermore, it concerns the production line and the mandrel and winding stations used therein. Finally, it concerns the use of the new **pipe**, for offshore and onshore applications, in particular as **flexible** riser **pipe**.

Inventors

TOLHOEK PIETER

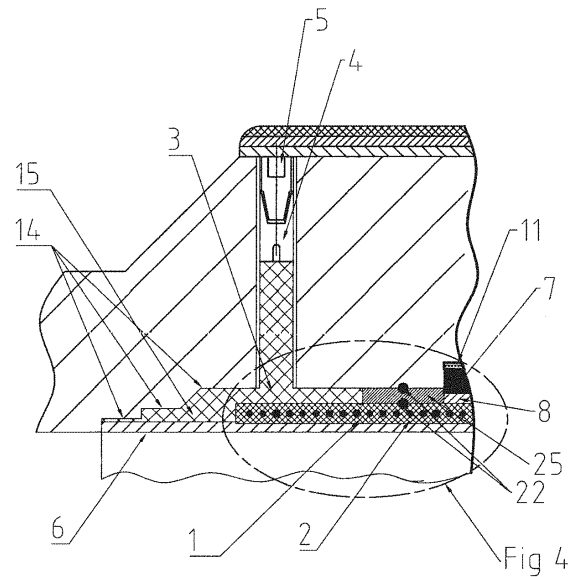
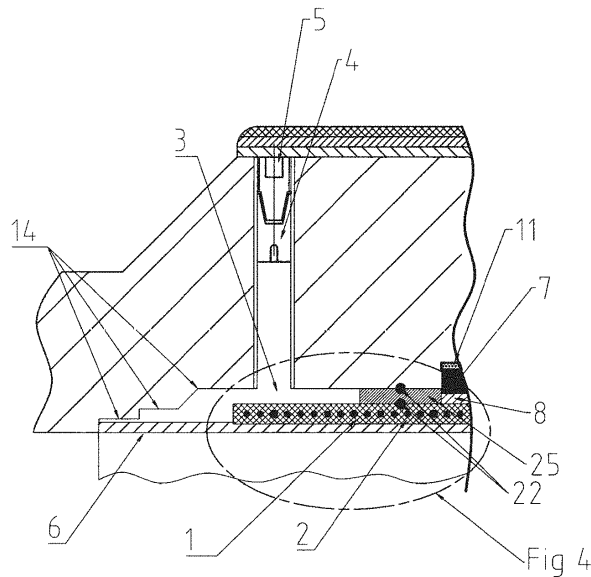
Latest standardized assignees - inventors removedGLOBAL COMPOSITE **PIPE** SYSTEM

Family 8/56 - FAMPAT - ©Questel

Title

(EP3216586)

Elastomeric **flexible** hose and method of manufacturing**Images**



Publication numbers with kind code & date

BR122016027370	A2	2019-08-27	BR122016027370
EA029802	B9	2018-12-28	EA--29802
CN106287021	B	2018-12-07	CN106287021B
US10066765	B2	2018-09-04	US10066765
AU2013349478	B2	2018-08-09	AU2013349478
AU2018203901	A1	2018-06-28	AU2018203901
EA029802	B1	2018-05-31	EA--29802
EA029803	B1	2018-05-31	EA--29803
JP6216401	B2	2017-10-18	JP6216401
CN104918769	B	2017-09-22	CN104918769B
EP3216586	A1	2017-09-13	EP3216586
BR112015011873	A2	2017-07-11	BR112015011873
US20170175940	A1	2017-06-22	US20170175940
EP2922686	B1	2017-05-17	EP2922686
US9587772	B2	2017-03-07	US9587772
CN106287021	A	2017-01-04	CN106287021
JP2016156505	A	2016-09-01	JP2016156505
KR101650734	B1	2016-08-24	KR101650734
JP5927354	B2	2016-04-28	JP5927354
JP2016505773	A	2016-02-25	JP2016505773
EA201590924	A1	2015-12-30	EA201590924
EA201590859	A1	2015-11-30	EA201590859
US20150330536	A1	2015-11-19	US20150330536
EP2922686	A1	2015-09-30	EP2922686
CN104918769	A	2015-09-16	CN104918769
US20150252929	A1	2015-09-10	US20150252929
KR20150088274	A	2015-07-31	KR20150088274
AU2013349478	A1	2015-06-04	AU2013349478
BR112015011873	A1	2015-06-02	BR112015011873
GB2510669	A	2014-08-13	GB2510669
CA2891970	A1	2014-05-30	CA2891970
WO2014/080216	A1	2014-05-30	WO201480216
GB201320681	D0	2014-01-08	GB201320681



GB201221034

D0 2013-01-09 GB201221034

Abstract

(EP3216586)

An elastomeric **flexible** hose for the transportation of high pressure and/or temperature hydrocarbon liquids or gases comprising: a semi-crystalline thermoplastic inner liner layer (1'); an armour layer (9') surrounding the inner liner layer (1') at an end of the **flexible** hose; a hose coupling (13') disposed at the end of the hose and surrounding the armour layer (9'); a sealing area defined by recessed portion (3') of the hose coupling (13'); and a semi-crystalline thermoplastic sealing material (23), or a cross-linked elastomeric sealing material, disposed in the sealing area; wherein a portion of the inner liner layer (1') at said hose end extends into the sealing area and is bonded to the sealing material (23), and wherein a **reinforcement** material (2') is provided wholly within the inner liner layer (1') and further in that the inner liner layer (1') is bonded to the inner surface of the hose coupling (13') by a tie layer (14').

Inventors

JASPEART BRUNO

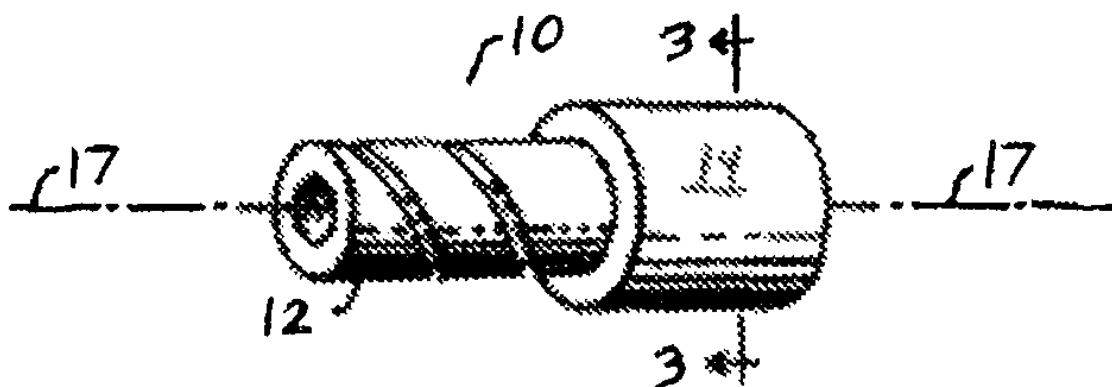
Latest standardized assignees - inventors removed

GATES ENGINEERING & SERVICES

Family 9/56 - FAMPAT - ©Questel

Title

(US20120266996)

Reinforcing **Matrix** for Spoolable **Pipe****Images****Publication numbers with kind code & date**

CA2842597	C	2016-05-24	CA2842597
CA2582355	C	2014-07-29	CA2582355
US20120266996	A1	2012-10-25	US20120266996
US8187687	B2	2012-05-29	US8187687
US20080006338	A1	2008-01-10	US20080006338
CA2582355	A1	2007-09-21	CA2582355
CA2842597	A1	2007-09-21	CA2842597

**Abstract**

(US20120266996)

A spoolable **pipe** is disclosed, the spoolable **pipe** having an internal pressure barrier formed about a longitudinal axis, and a reinforcing layer(s) enclosing the internal pressure barrier that includes a solid hydrocarbon **matrix**. The **pipe** can also include an energy conductor(s) integrated with and/or located between the internal pressure barrier and/or the reinforcing layer(s).

Inventors

WIDEMAN THOMAS W

QUIGLEY PETER A

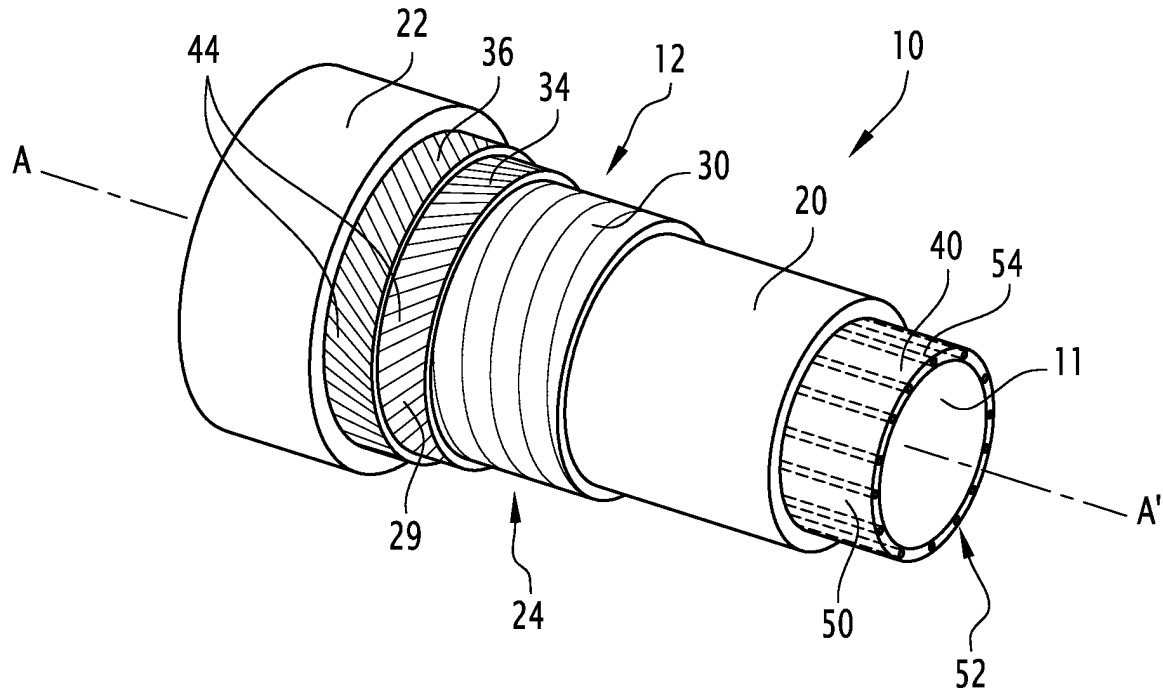
Latest standardized assignees - inventors removed

FIBERSPAR

Family 10/56 - FAMPAT - ©Questel

Title

(EP3140584)

Unbonded **flexible pipe** for transporting an abrasive material, associated method and associated use**Images****Publication numbers with kind code & date**

DK3140584	T3	2019-10-07	DK3140584T
EP3140584	B1	2019-07-03	EP3140584
AU2015257738	B2	2019-06-27	AU2015257738
US10190722	B2	2019-01-29	US10190722
RU2677015	C2	2019-01-15	RU2677015
RU2016143460	A3	2018-11-22	RU2016143460
RU2016143460	A	2018-05-04	RU2016143460
US20170184246	A1	2017-06-29	US20170184246
EP3140584	A1	2017-03-15	EP3140584
PH12016502209	A1	2017-01-09	PH12016502209
AU2015257738	A1	2016-11-24	AU2015257738
BR112016025665	A1	2016-11-16	BR112016025665
FR3020859	B1	2016-06-24	FR3020859
FR3020859	A1	2015-11-13	FR3020859
CA2947785	A1	2015-11-12	CA2947785
WO2015/169859	A1	2015-11-12	WO2015169859

**Abstract**

(EP3140584)

The **pipe** comprises: - at least one tubular sheath (20) delimiting a passage (11) for the circulation of the abrasive material; - at least one tensile armour layer (34, 36) arranged externally with respect to the tubular sheath (20), the armour layer (34, 36) comprising a plurality of filiform armour elements (44). The **pipe** also comprises an internal protective layer (40)

arranged inside the tubular sheath (20) in the circulation passage (11), the internal protective layer (40) comprising an elastomer **matrix** (50) and a longitudinal reinforcing assembly (52) embedded in the **matrix** (50).

Inventors

ESPINASSE PHILIPPE

PARENTEAU THOMAS

Latest standardized assignees - inventors removed

TECHNIP FRANCE

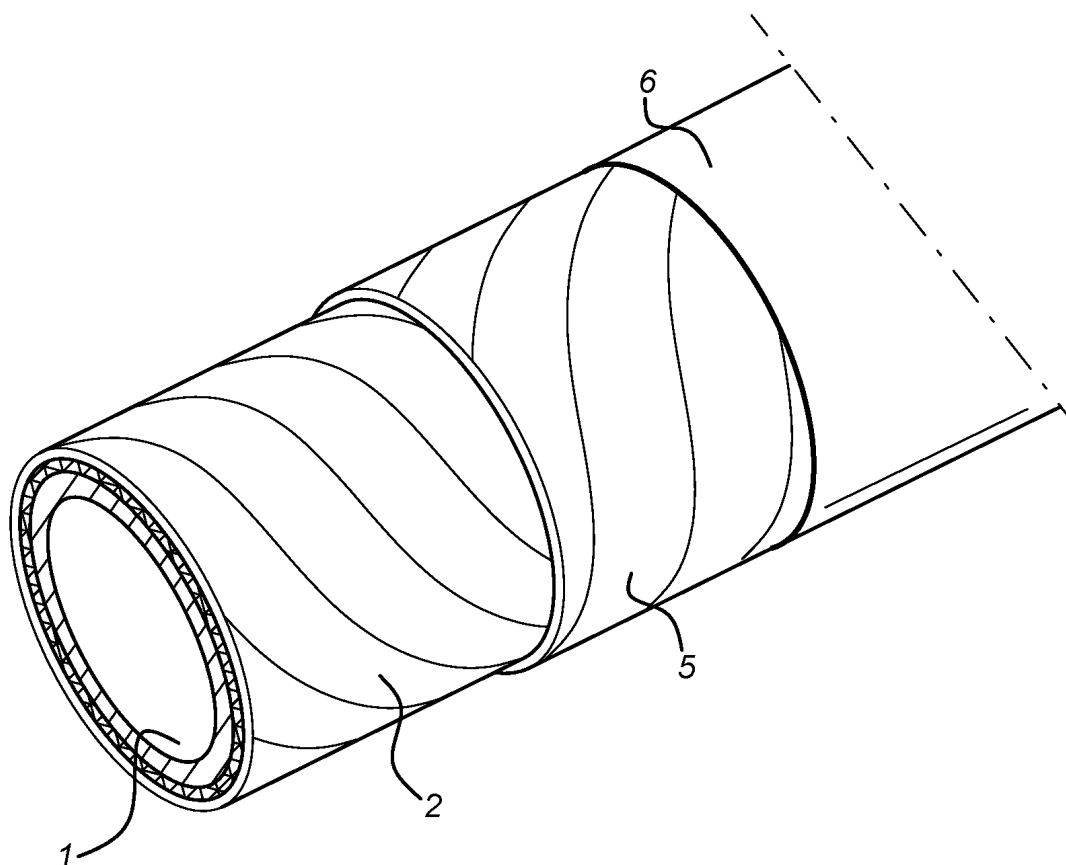
Family 11/56 - FAMPAT - ©Questel

Title

(EP3350498)

High pressure pipe and method for producing such pipe

Images



Publication numbers with kind code & date

RU2018113428	A	2019-10-16	RU2018113428
US20180252339	A1	2018-09-06	US20180252339
EP3350498	A1	2018-07-25	EP3350498
CN108291686	A	2018-07-17	CN108291686
CO2018003541	A2	2018-06-12	CO2018003541
IN201847013628	A	2018-04-13	IN201847013628
BR112018004968	A1	2018-04-03	BR112018004968
NL2015434	B1	2017-03-29	NL2015434
CA2998315	A1	2017-03-23	CA2998315
WO2017/048117	A1	2017-03-23	WO201748117



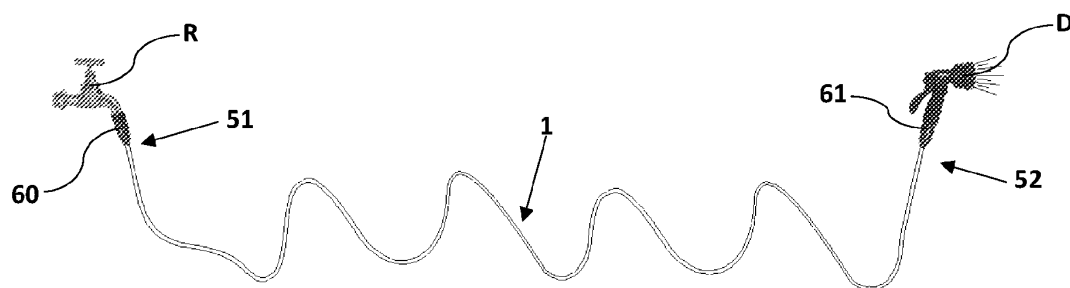
Abstract

(EP3350498)

Family 13/56 - FAMPAT - ©Questel

Title

(EP3333468)

Extensible **flexible** hose and method for continuously manufacturing thereof**Images****Publication numbers with kind code & date**

CN107107432	B	2019-08-23	CN107107432B
US10359130	B2	2019-07-23	US10359130
EA031710	B1	2019-02-28	EA--31710
IL252222	B	2018-12-31	IL-252222
JP6438582	B2	2018-12-19	JP6438582
AU2015365357	B2	2018-11-08	AU2015365357
US20180299038	A1	2018-10-18	US20180299038
PL3052847	T3	2018-09-28	PL3052847
HUE037407	T2	2018-08-28	HUE037407
NO3052847	T3	2018-07-14	NO3052847
EP3333468	A1	2018-06-13	EP3333468
ES2669349	T3	2018-05-25	ES2669349
LT3052847	T	2018-05-25	LT3052847
DK3052847	T3	2018-05-07	DK3052847T
PT3052847	T	2018-05-07	PT3052847T
ZA201701553	B	2018-04-25	ZA201701553
EP3052847	B1	2018-02-14	EP3052847
JP2018500510	A	2018-01-11	JP2018500510
BR112017006343	A2	2017-12-19	BR112017006343
EA201791408	A1	2017-11-30	EA201791408
CL2017000920	A1	2017-11-10	CL2017000920
VN53942	A	2017-09-25	VN--53942
IN201737011523	A	2017-09-01	IN201737011523
CN107107432	A	2017-08-29	CN107107432
KR20170095207	A	2017-08-22	KR20170095207
PH12017500527	A1	2017-08-07	PH12017500527
IL252222	A	2017-07-31	IL-252222
MX2017003655	A	2017-07-13	MX2017003655
AU2015365357	A1	2017-05-04	AU2015365357
BR112017006343	A1	2017-04-04	BR112017006343
EP3052847	A1	2016-08-10	EP3052847
CA2965908	A1	2016-06-23	CA2965908



WO2016/098063

A1 2016-06-23

WO201698063

**Abstract**

(EP3333468)

A **flexible** hose for transporting fluid, particularly a **flexible** garden hose for transporting water. The hose comprises: at least one inner layer (10) made of a first elastic polymeric material; at least one outer layer (20) made of a second elastic polymeric material; at least one textile **reinforcement** layer (30, 40) interposed between said at least one inner layer (10) and at least one outer layer (20). The at least one inner layer (10) and the at least one outer layer (20) are reciprocally coupled to form a unitary tubular member (50) internally to which the at least one textile **reinforcement** layer (30, 40) is embedded. The unitary tubular member (50) has an elasticity such to automatically elongate upon the working pressure given by the liquid flowing therethrough to increase its original length and such to automatically recovery once the working pressure stops for assuming again the original length. The at least one textile **reinforcement** layer (30, 40) is susceptible to move from a rest configuration that has when the working pressure stops to a working configuration that has when said unitary tubular member (50) elongates upon the working pressure and vice-versa.

Inventors

MEZZALIRA ALESSANDRO

VIGOLO VALENTINO

BATTAGLIA LUCA

PETRONILLI ANDREA

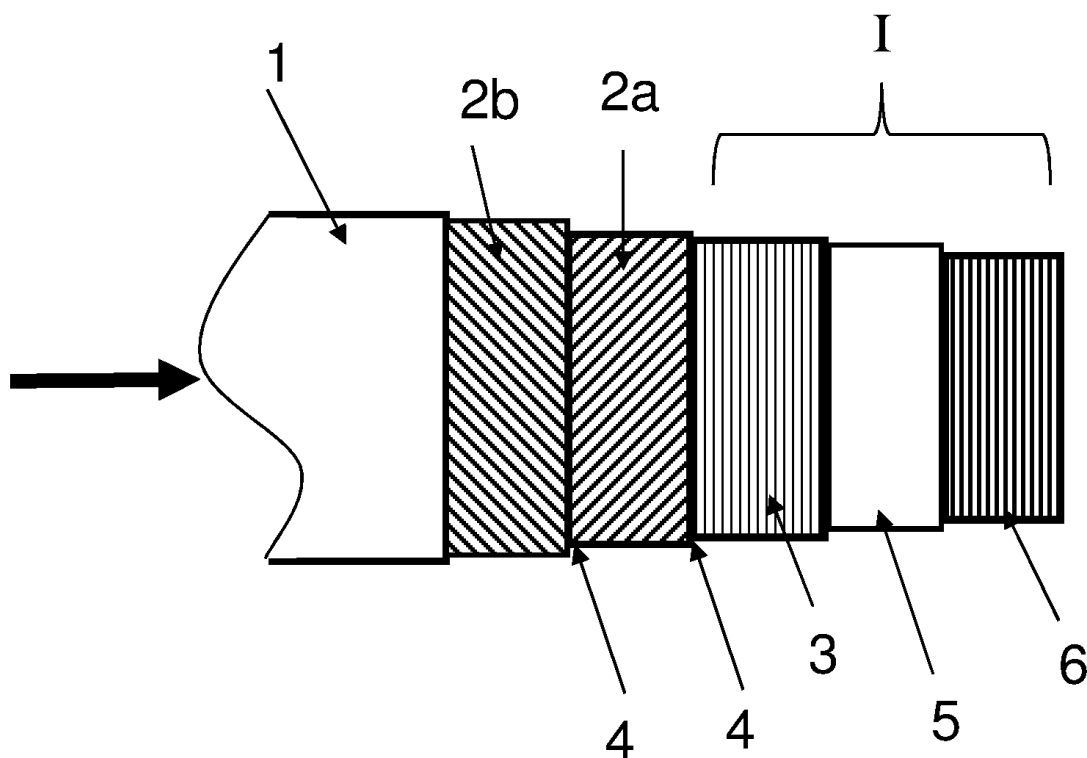
Latest standardized assignees - inventors removed

FITT

Family 14/56 - FAMPAT - ©Questel

Title

(EP3042112)

A **flexible pipe****Images****Publication numbers with kind code & date**

US20160208961

A1 2016-07-21

US20160208961



[EP3042112](#)

A1 2016-07-13 EP3042112

[BR112016004461](#)

A1 2016-03-15 BR112016004461

[WO2015/028025](#)

A1 2015-03-05 WO201528025

**Abstract**

(EP3042112)

A **flexible** offshore **pipe** for transportation of fluids is described. The **pipe** comprises a plurality of layers comprising an inner **pipe** structure. The inner **pipe** structure comprises an innermost sealing sheath defining a bore and a center axis defining a length of the **pipe**. A first and a second tensile armor layer each comprising a plurality of helically wound elongate armor elements are surrounding the inner **pipe** structure. The first and the second tensile armor layer each has a winding pitch length and the tensile armor layers are cross wound with respect to each other. The **pipe** comprises a plurality of unbonded length sections and a plurality of holding length sections. The elongate armor elements of the first tensile armor layer in the unbonded length sections are unbonded to said inner **pipe** structure and in each holding length section at least one of the elongate armor elements of the first tensile armor layer is more restricted to displacement relative to said inner **pipe** structure than the elongate armor elements of the first tensile armor layer in the unbonded length sections. The total length of a holding length section and an adjacent unbonded length section is at least about the winding pitch length of the first tensile armor layer.

Inventors

GLEJBØL KRISTIAN

RYTTER JAN

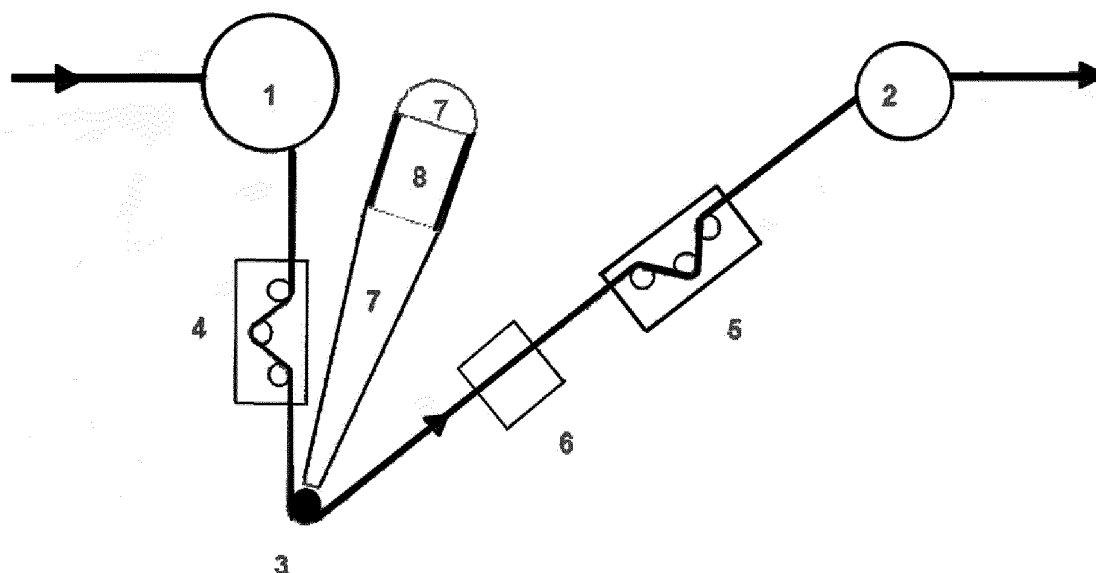
Latest standardized assignees - inventors removed

NATIONAL OILWELL VARCO

Family 15/56 - FAMPAT - ©Questel

Title

(EP2847370)

Textile **reinforcement** comprising continuous aramid yarn**Images****Publication numbers with kind code & date**[CA2872888](#)

C 2019-07-09 CA2872888

[KR10-1969702](#)

B1 2019-04-18 KR101969702

[IL235294](#)

B 2019-01-31 IL-235294

[MX355049](#)

B 2018-04-02 MX-355049



HUE031335	T2	2017-07-28	HUE031335				
BR112014027616	A2	2017-06-27	BR112014027616				
PL2847370	T3	2017-01-31	PL2847370				
ES2598285	T3	2017-01-26	ES2598285				
JP6068621	B2	2017-01-06	JP6068621				
DK2847370	T3	2016-11-14	DK2847370T				
RU2599673	C2	2016-10-10	RU2599673				
EP2847370	B1	2016-09-14	EP2847370				
IN8091/CHENP/2014	A	2016-07-01	IN2014CN08091				
RU2014149361	A	2016-06-27	RU2014149361				
CN104271820	B	2016-06-01	CN104271820B				
JP2015518530	A	2015-07-02	JP2015518530				
US20150104594	A1	2015-04-16	US20150104594				
EP2847370	A1	2015-03-18	EP2847370				
KR20150005965	A	2015-01-15	KR20150005965				
CN104271820	A	2015-01-07	CN104271820				
BR112014027616	A1	2014-12-09	BR112014027616				
MX2014013588	A	2014-12-04	MX2014013588				
CA2872888	A1	2013-06-06	CA2872888				
WO2013/079729	A1	2013-06-06	WO201379729				

Abstract

(EP2847370)

The invention pertains to a textile **reinforcement**, in particular a knitted, spiraled, stranded, braided, linear or woven textile **reinforcement** comprising aramid yarn, which yarn is continuous yarn and provided with a finish comprising mono- or dialkyl phosphate ester or a mixture thereof, which finish is free of compounds with alkoxy groups; and wherein the mono- or dialkyl phosphate ester finish has the formula (I): wherein R1 is branched or straight-chain C1-C15 alkyl, R2 is H, Li, Na, K or NH4, or branched or straight-chain C1-C-15 alkyl, and M is Li, Na, K or NH4. The textile **reinforcement** may be used for making hoses, tubes, (**flexible**) pipes, optical **fiber** cables, power cables, **fiber**-reinforced composites and ballistic resistant articles.

Inventors

KWINT HUIBERT CORNELIS

HUISKAMP JASPER JORRIT

VAN CAMPEN JAN

Latest standardized assignees - inventors removed

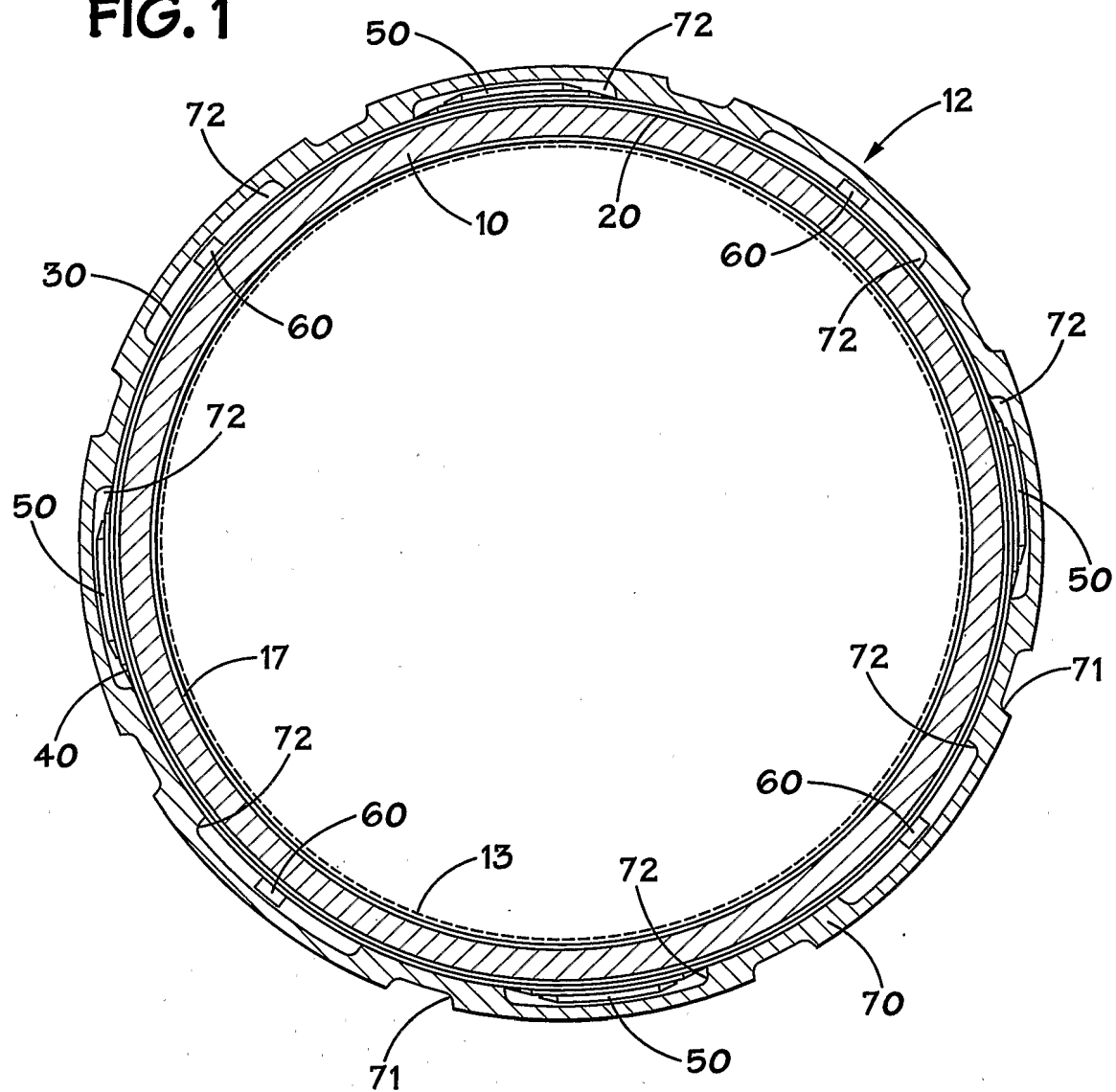
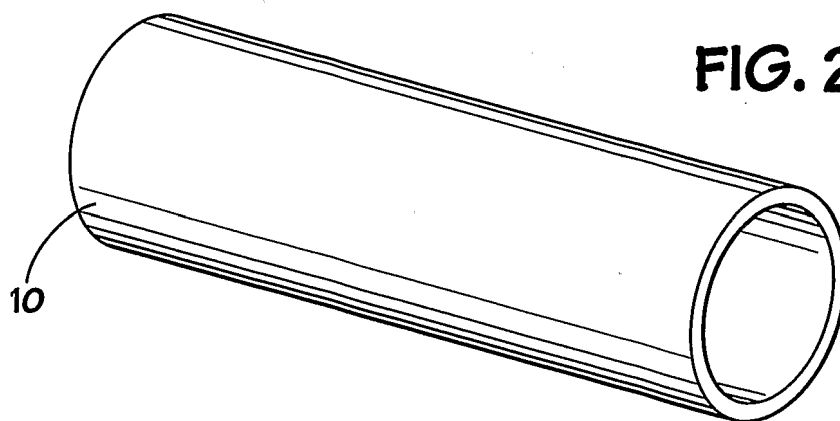
TEIJIN ARAMID

Family 16/56 - FAMPAT - ©Questel

Title

(EP1844258)

Systems and methods for making **pipe** liners**Images**

FIG. 1**FIG. 2****Publication numbers with kind code & date**

BRPI0517181	B1	2019-07-30	BR200517181
EP2273171	B1	2018-09-05	EP2273171
CA2589973	C	2014-02-04	CA2589973
CN101107471	B	2011-07-06	CN101107471B
AU2005315338	B2	2011-05-12	AU2005315338
EP2273171	A1	2011-01-12	EP2273171
BRPI0517181	A	2008-10-14	BR200517181



MX2007006917	A	2008-01-28	MX2007006917
CN101107471	A	2008-01-16	CN101107471
EP1844258	A1	2007-10-17	EP1844258
WO2006/064284	A9	2006-11-02	WO200664284
AU2005315338	A1	2006-06-22	AU2005315338
CA2589973	A1	2006-06-22	CA2589973
WO2006/064284	A1	2006-06-22	WO200664284



Abstract

(EP1844258)

A liner (12) for **pipe**, the liner comprising a first layer (10) comprising a hollow cylinder of polymeric material, a second layer (20) comprising wrap material, the wrap material wrapped around the first layer, a third layer (30) comprising wrap material wrapped around the second layer, the liner (12) having a first end spaced apart from a second end, at least one strengthener member (40) on the liner and extending from the first end to the second end of the liner, the liner (12) comprising a stand-alone structure.

Inventors

CATHA STEPHEN CROCKETT

CHARBONEAU KENNETH RAY

GALLAGHER JAMES LOUIS

MANDICH IVAN CAPISTRAN

STRINGFELLOW WILLIAM DOYLE

Latest standardized assignees - inventors removed

SMART **PIPE**

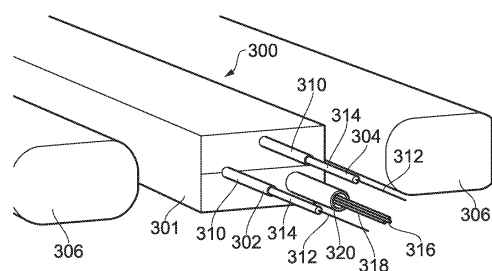
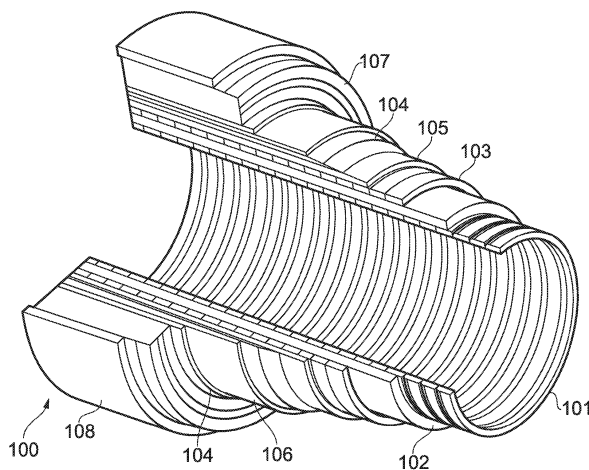
Family 17/56 - FAMPAT - ©Questel

Title

(EP3164688)

Flexible pipe body and sensing method

Images



Publication numbers with kind code & date

CN106471302	B	2019-10-18	CN106471302B
US10274396	B2	2019-04-30	US10274396
US20170199100	A1	2017-07-13	US20170199100
EP3164688	A1	2017-05-10	EP3164688
CN106471302	A	2017-03-01	CN106471302
BR112016030800	A1	2017-01-17	BR112016030800
WO2016/001617	A1	2016-01-07	WO201601617



GB201411874

D0 2014-08-20 GB201411874

Abstract

(EP3164688)

A **flexible pipe** body comprising an elongate curvature sensor and a tensile armour layer. The elongate curvature sensor incorporates a strain sensor arranged to provide an indication of bending strain applied to the curvature sensor. The tensile armour layer comprises helically wound tensile armour wires. The curvature sensor is positioned within the tensile armour layer helically wound adjacent to at least one tensile armour wire such that bending strain applied to the **flexible pipe** body is transmitted to the curvature sensor. The curvature sensor is smaller than an adjacent tensile armour wire in at least one of depth and width and arranged to slide longitudinally relative to the adjacent tensile armour wire.

Inventors

NOTT PHILIP MICHAEL HUNTER

WARNAKULASURIYA SURANJITH

MCNAB JOHN CROSS

GRAHAM GEOFFREY STEPHEN

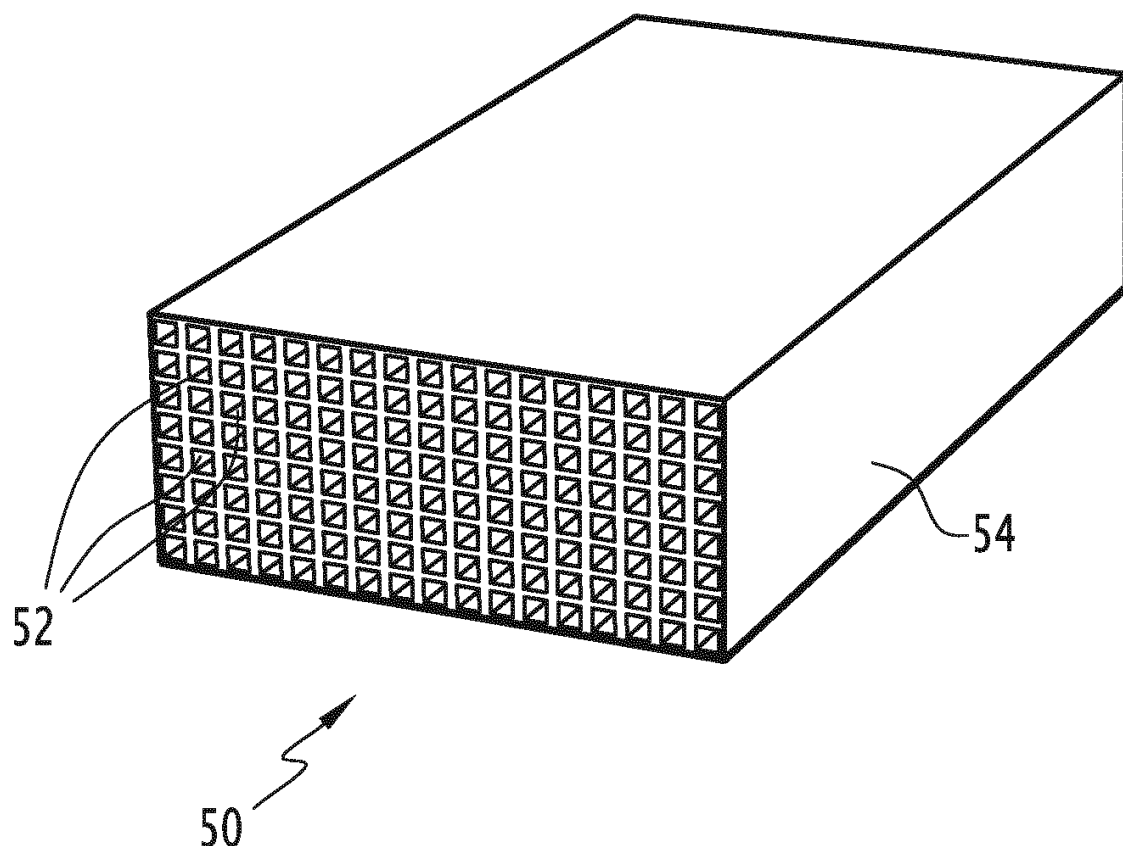
Latest standardized assignees - inventors removed

GE OIL & GAS

Family 18/56 - FAMPAT - ©Questel

Title

(EP3394145)

Longitudinal reinforcing profile for **flexible** tubular **pipe****Images****Publication numbers with kind code & date**

BR112018012948	A2	2018-12-11	BR112018012948
EP3394145	A1	2018-10-31	EP3394145
BR112018012948	A1	2018-07-03	BR112018012948



FR3046106	B1	2018-02-16	FR3046106
FR3046106	A1	2017-06-30	FR3046106
WO2017/109221	A1	2017-06-29	WO2017109221

**Abstract**

(EP3394145)

The invention relates to a composite longitudinal reinforcing profile (50) manufactured by pultrusion, comprising longitudinal carbon fibers (52) embedded in a polyepoxide resinous **matrix** (54) obtained by polymerization of a thermosetting blend comprising an epoxide prepolymer with at least one curing agent and optionally a catalyst. The epoxide prepolymer is a DiGlycidyl Ether of Bisphenol A (DGEBA) or a DiGlycidyl Ether of Bisphenol F (DGEBF) or a TetraGlycidyl Methylene DiAniline (TGMDA) and the at least one curing agent is a cycloaliphatic amine or an aromatic amine or a mixture of a cycloaliphatic amine with an aromatic amine .

Inventors

LULL STÉPHANE
 PORTOLES JOSÉ
 DO ANH TUAN

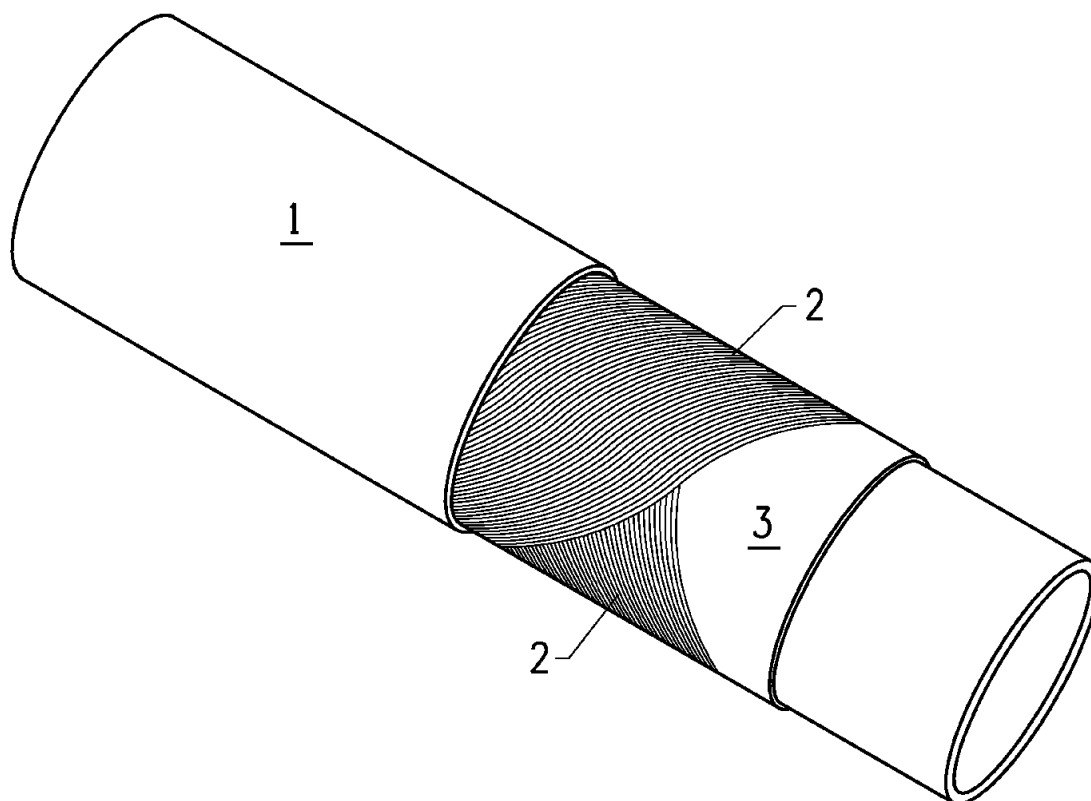
Latest standardized assignees - inventors removed

TECHNIP FRANCE
 EPSILON COMPOSITE

Family 19/56 - FAMPAT - ©Questel

Title

(EP2344798)

A **fiber**-reinforced thermoplastic **pipe****Images****Publication numbers with kind code & date**

BRPI0914483	A2	2015-10-27	BR200914483
EP2344798	B1	2014-10-22	EP2344798



CN101737571	B	2012-06-20	CN101737571B
JP2012511670	A	2012-05-24	JP2012511670
US20110174410	A1	2011-07-21	US20110174410
EP2344798	A1	2011-07-20	EP2344798
MX2011004955	A	2011-05-30	MX2011004955
CN101737571	A	2010-06-16	CN101737571
CA2738728	A1	2010-05-20	CA2738728
WO2010/056965	A1	2010-05-20	WO201056965



Abstract

(EP2344798)

Disclosed is a reinforced thermoplastic **pipe**, comprising a thermoplastic polymer inner tube, a thermoplastic polymer outer tube and a reinforcing fabric between the thermoplastic polymer inner tube and the thermoplastic polymer outer tube. The reinforcing fabric comprises thermosettable thermoplastic polymer weft yarns and unidirectionally woven warp yarns. The warp yarns are twisted into twisted cords. Disclosed is also a process of making the reinforced thermoplastic **pipe**.

Inventors

LI XUEDONG

CHANG CLIFFORD C

Latest standardized assignees - inventors removed

DU PONT DE NEMOURS

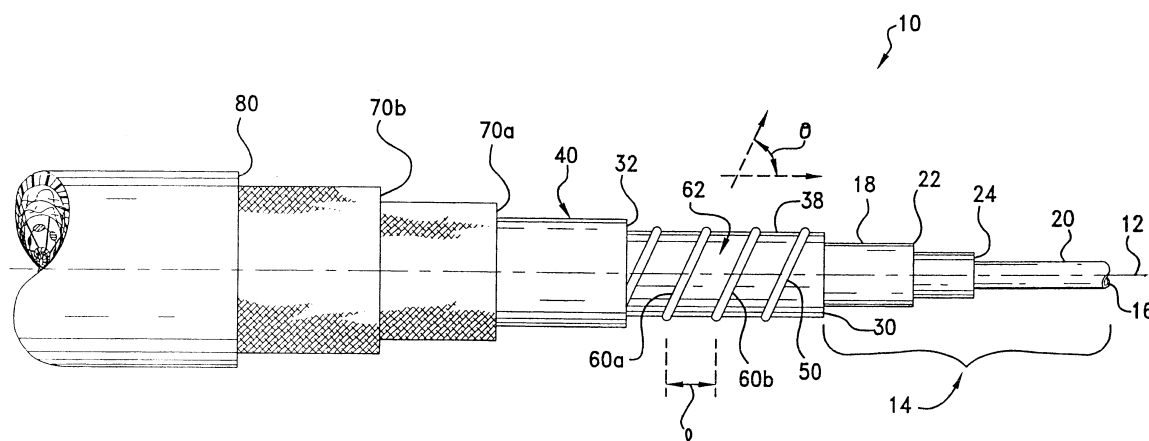
Family 20/56 - FAMPAT - ©Questel

Title

(EP1495249)

Hose construction

Images



Publication numbers with kind code & date

BRPI0309186	B1	2015-10-27	BR200309186
NO334588	B1	2014-04-14	NO-334588
CA2482785	C	2010-09-14	CA2482785
AU2003224735	B2	2008-08-21	AU2003224735
CA2352663	C	2008-07-29	CA2352663
DE69920511	T2	2005-11-17	DE69920511
BR0309186	A	2005-02-15	BR200309186
EP1495249	A1	2005-01-12	EP1495249
MXPA04008787	A	2004-11-26	MX2004PA008787
NO20044986	L	2004-11-17	NO20044986
DE69920511	D1	2004-10-28	DE69920511



EP1141604	B1	2004-09-22	EP1141604				
US6742545	B2	2004-06-01	US6742545				
AU770661	B2	2004-02-26	AU-770661				
AU2003224735	A1	2003-11-03	AU2003224735				
CA2482785	A1	2003-10-30	CA2482785				
WO03/89829	A1	2003-10-30	WO200389829				
US20020112770	A1	2002-08-22	US20020112770				
US6390141	B1	2002-05-21	US6390141				
EP1141604	A1	2001-10-10	EP1141604				
BR9916419	A	2001-10-02	BR9916419				
NO20013048	A	2001-06-19	NO200103048				
NO20013048	D0	2001-06-19	NO200103048				
NO20013048	L	2001-06-19	NO20013048				
AU2191500	A	2000-07-12	AU200021915				
CA2352663	A1	2000-06-29	CA2352663				
WO00/37841	A1	2000-06-29	WO200037841				

Abstract

(EP1495249)

A **flexible** hose (10) construction adapted for conveying fluids under pressures and capable of withstanding relatively high external pressures without collapsing. The tubular construction includes a first **reinforcement** layer (70a), an inner jacket (80<'>) surrounding the first **reinforcement** layer, a second **reinforcement** layer (70b) surrounding the inner jacket, and outer jacket (80) covering the second **reinforcement** layer.

Inventors

FISHER WILLIAM C

SWAILS MICHAEL R

Latest standardized assignees - inventors removed

MOLNAR JR JOHN A

PARKER INTANGIBLES

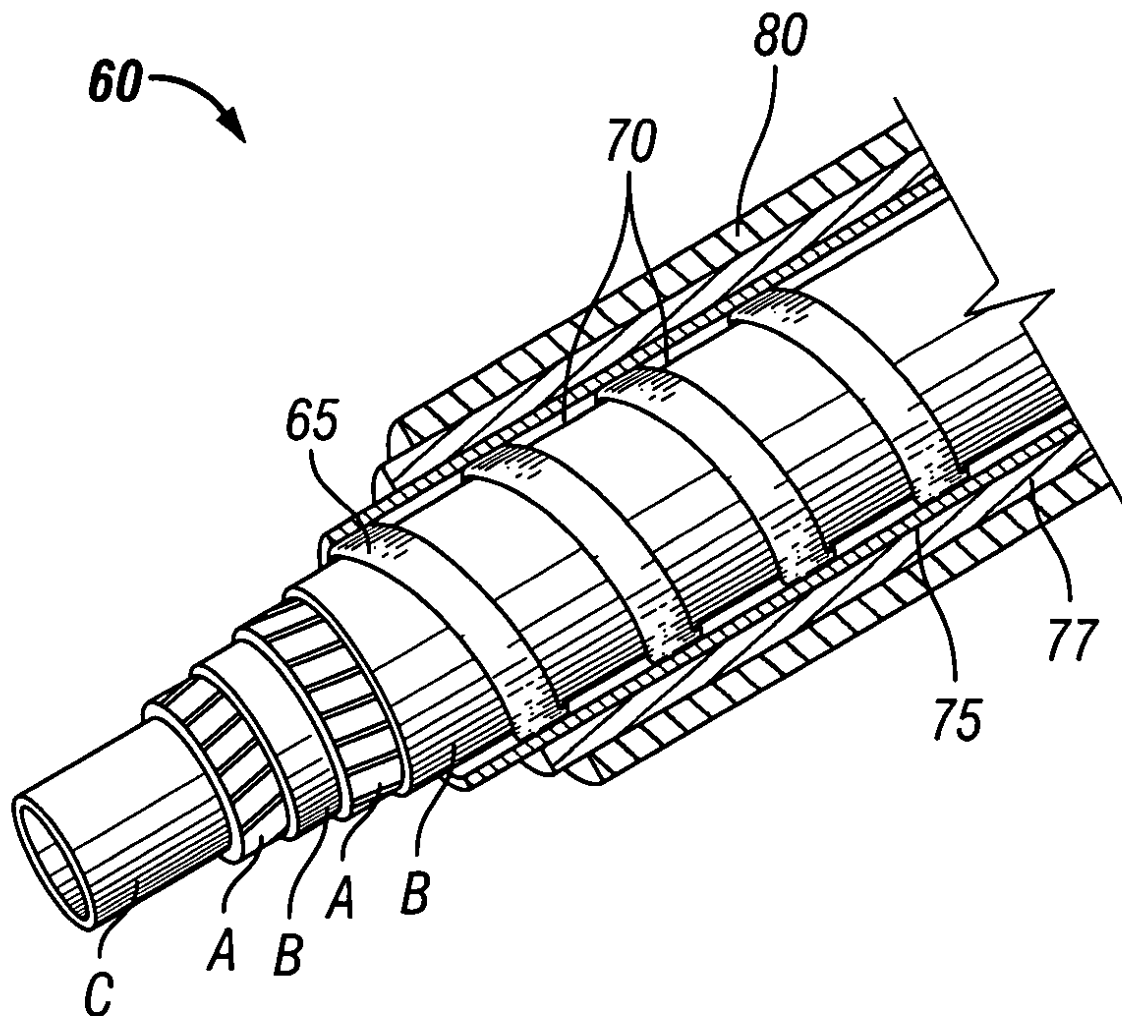
Family 21/56 - FAMPAT - ©Questel

Title

(EP2137450)

Flexible composite tubular assembly with high insulation properties and method for making same

Images



Publication numbers with kind code & date

BRPI0809236	A2	2014-09-02	BR200809236
EP2137450	A4	2013-07-31	EP2137450
MY147522	A	2012-12-31	MY-147522
US7781040	B2	2010-08-24	US7781040
CN101680594	A	2010-03-24	CN101680594
EP2137450	A1	2009-12-30	EP2137450
US20080233318	A1	2008-09-25	US20080233318
WO2008/115857	A1	2008-09-25	WO2008115857



Abstract

(EP2137450)

The present invention is directed to an improvement over the **flexible** composite tubing described in United States Patent Nos. 6,491,779, 6,804,942, and 7,073,978, wherein said improvement provides for void space or otherwise insulating region along the length of the tubing. The present invention is additionally directed to methods for implementing such improvement.

Inventors

COYLE W GEORGE

Latest standardized assignees - inventors removed

DEEPFLEX

Family 22/56 - FAMPAT - ©Questel

Title

(EP-843033)

Carbon **fiber**, acrylic **fiber**, and method of manufacturing them

Images

b

Publication numbers with kind code & date

JP4094670	B2	2008-03-14	JP4094670				
DE69720650	T3	2007-07-05	DE69720650				
EP0843033	B2	2007-02-28	EP-843033				
DE69720650	T4	2005-10-13	DE69720650				
DE69720650	T2	2003-10-30	DE69720650				
DE69720650	D1	2003-05-15	DE69720650				
EP0843033	B1	2003-04-09	EP-843033				
US6428892	B2	2002-08-06	US6428892				
US6368711	B2	2002-04-09	US6368711				
US20020009588	A1	2002-01-24	US20020009588				
KR100292843	B1	2001-10-26	KR100292843				
TW459075	B	2001-10-11	TW-459075				
US20010024722	A1	2001-09-27	US20010024722				
US6221490	B1	2001-04-24	US6221490				
US6103211	A	2000-08-15	US6103211				
KR19990035887	A	1999-05-25	KR19990035887				
EP0843033	A4	1998-10-21	EP-843033				
EP0843033	A1	1998-05-20	EP-843033				
WO97/45576	A1	1997-12-04	WO9745576				

Abstract

(EP0843033)

The object of the present invention is to provide carbon fibers with high tensile strength as a resin impregnated strand even if the single filaments constituting the carbon fibers are thick. The carbon fibers of the present invention consisting of a plurality of single filaments are characterized by satisfying the following relation: $\sigma < 100d$ where σ is the tensile strength of said carbon fibers as a resin impregnated strand (in GPa) and d is the average diameter of said single filaments (in μm). The carbon fibers can be preferably used as a material for forming energy-related apparatuses such as CNG tanks, fly wheels, wind mills and turbine blades, a material for reinforcing structural members of roads, bridge piers, etc., and also a material for forming or reinforcing architectural members such as timber and curtain walls.

Inventors

MATSUHISA YOJI

KIBAYASHI MAKOTO

YAMASAKI KATSUMI

OKUDA AKIRA

Latest standardized assignees - inventors removed

TORAY INDUSTRIES

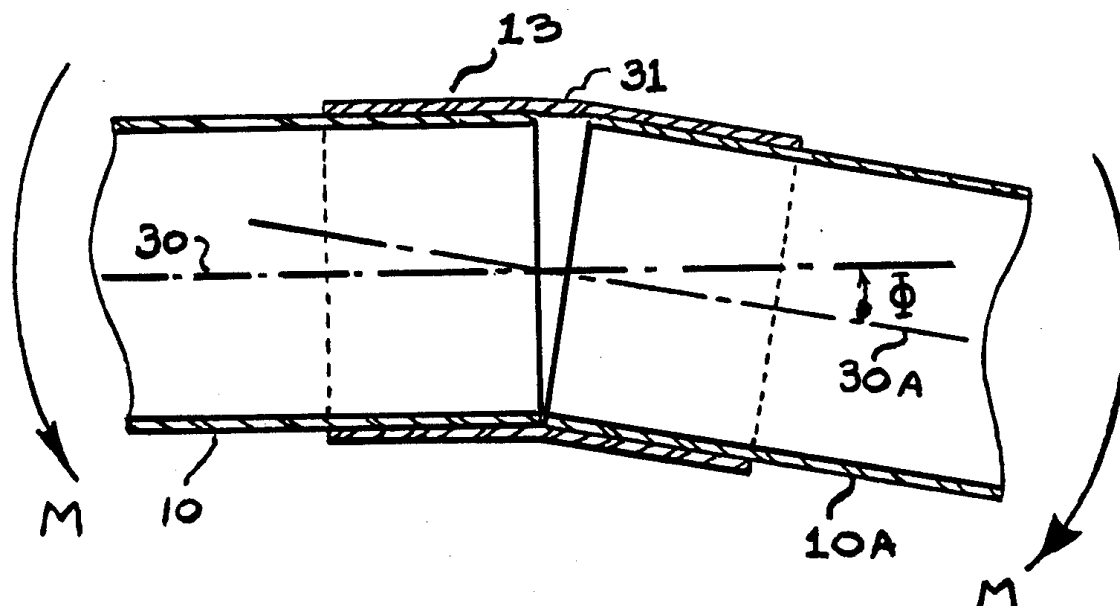
Family 23/56 - FAMPAT - ©Questel

Title

(US4023834)

Push-type coupling and conduit **pipe** assembly

Images

**Publication numbers with kind code & date**

CA1037079	A	1978-08-22	CA1037079
US4023834	A	1977-05-17	US4023834

**Abstract**

(US4023834)

Lengths of **pipe** are joined together in above- or below-ground telephone conduit systems by **flexible** sleeves having specified coefficient of friction, column expansibility and pull-out resistance and containing helically oriented high modulus **reinforcement**, bonded or encapsulated in elastomeric material. The resultant **pipe** assemblies represent a significant improvement over previously known cemented conduit-coupling arrangements. **Pipe** sections may be quickly and economically joined without field application of adhesive, to provide water-tight, pull-out-resistant joints which will accomodate significant bending moments and shearing forces.

Inventors

EWING LLOYD

BYKOWSKI MICHAEL J

Latest standardized assignees - inventors removed

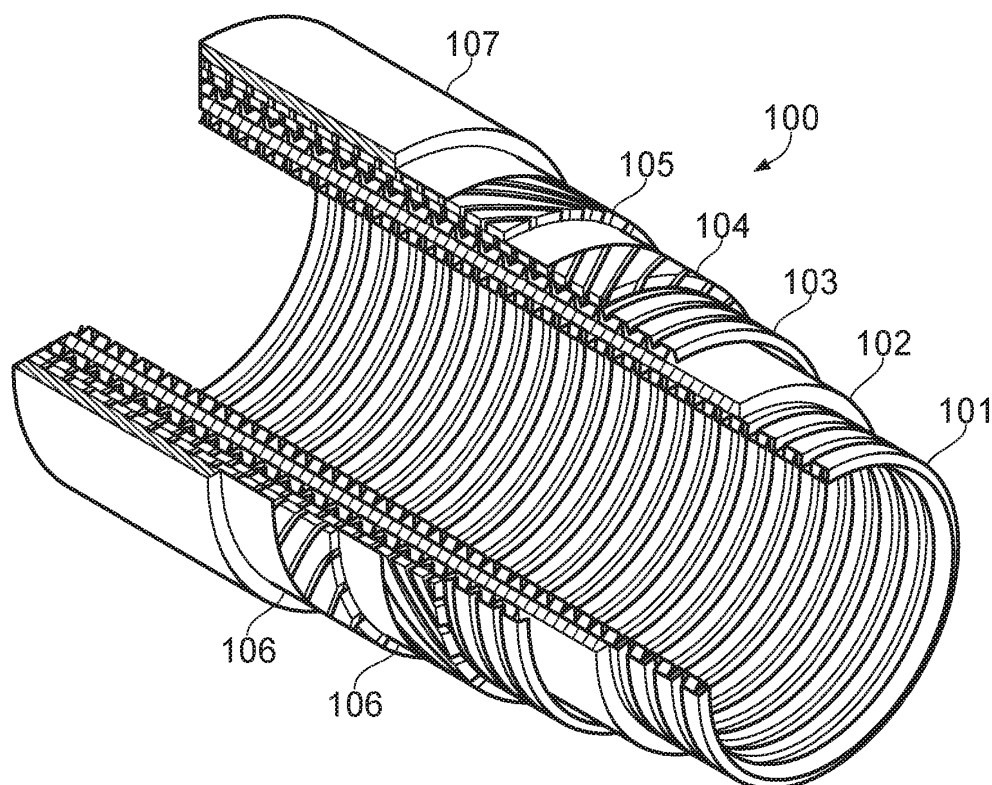
EWING ENGINEERING

Family 24/56 - FAMPAT - ©Questel

Title

(EP3227632)

Angular displacement of **flexible pipe****Images**



Publication numbers with kind code & date

DK3227632	T3	2019-03-18	DK3227632T
EP3227632	B1	2019-02-06	EP3227632
BR112017008692	A2	2017-12-26	BR112017008692
CN107407548	A	2017-11-28	CN107407548
US20170299369	A1	2017-10-19	US20170299369
EP3227632	A1	2017-10-11	EP3227632
BR112017008692	A1	2017-05-30	BR112017008692
WO2016/087836	A1	2016-06-09	WO201687836
GB201421421	D0	2015-01-14	GB201421421



Abstract

(EP3227632)

A method and apparatus are disclosed for determining a bending radius of a **flexible pipe**. The apparatus includes at least one bend sensor element comprising an elongate **flexible** substrate and at least one bend sensitive element on the substrate that has at least one electrical characteristic that is responsive to angular displacement of the substrate. The apparatus also comprises a **flexible** crush resistant elongate housing that supports and surrounds the bend sensor element.

Inventors

MCNAB JOHN

NOTT PHILIP MICHAEL

GRAHAM GEOFFREY STEPHEN

WHARTON ANDREW

Latest standardized assignees - inventors removed

GE OIL & GAS

Family 25/56 - FAMPAT - ©Questel

Title

(WO2014204690)

Conductive mesh for composite tube for fluid delivery system

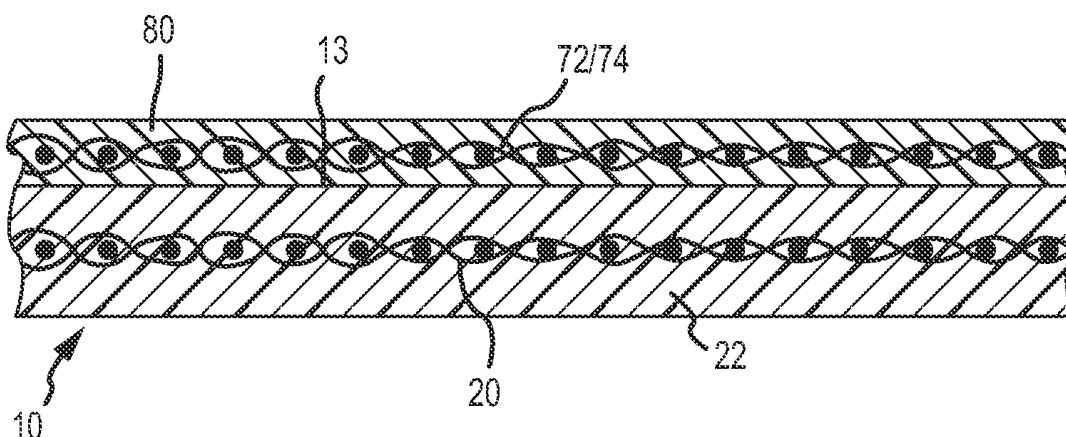
Images

FIG. 8

Publication numbers with kind code & date

[WO2014/204690](#)

A1 2014-12-24 WO2014204690

**Abstract**

(WO2014/204690)

An electrically tuned composite tube comprises a tubular arrangement of a knitted **reinforcement** layer. Selected knitted patterns provide desired density or spacing between fibers of the **reinforcement** layer. A mesh element is also incorporated in the tube construction to precisely control resistivity and conductivity performance characteristics by selecting the mesh element from one or more conductive or non-conductive fibers or wires. The mesh element may include a tubular arrangement of **fiber** or wire provided in a knitted pattern or a woven pattern. A **matrix** material is applied over the knitted **reinforcement** layer and mesh element, and is allowed to cure for a single **matrix** layer. Alternatively, a first tube can be constructed with only the knitted **reinforcement** layer and **matrix** material, and the mesh element is added afterwards with another layer of **matrix** material applied over the exterior surface of the first tube.

Inventors

GAUCKLER ANDREAS MANFRED

STATLER III RICHARD LOWELL

Latest standardized assignees - inventors removed

EATON

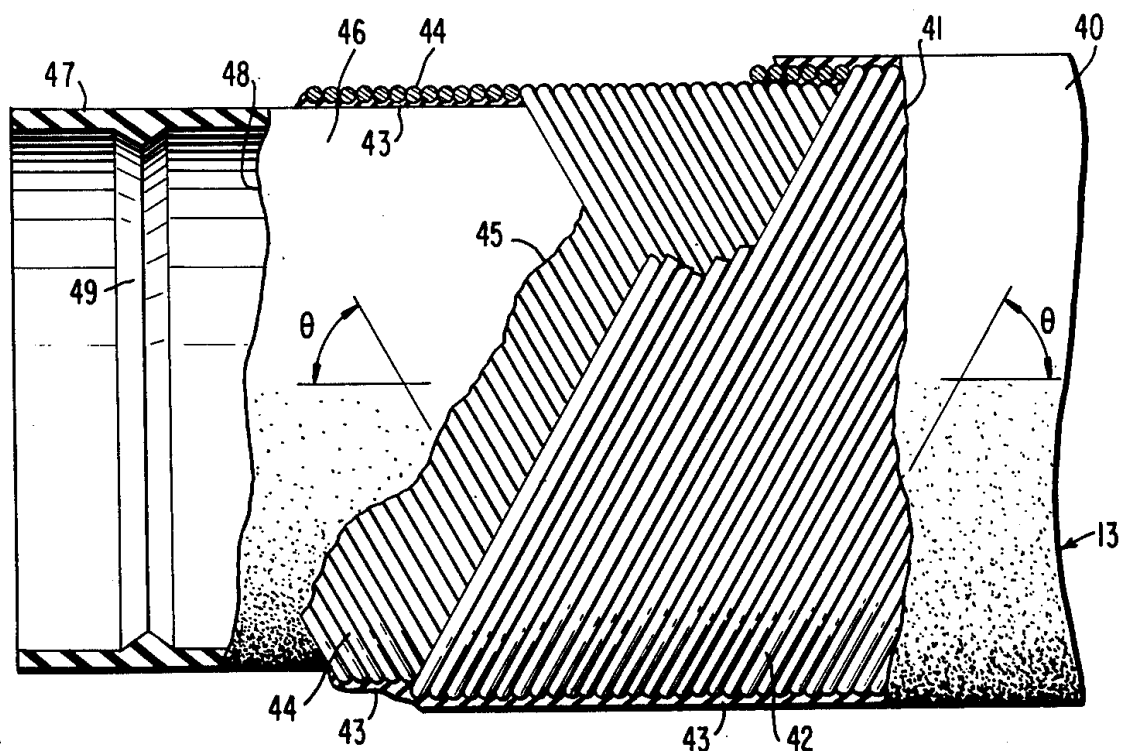
Family 26/56 - FAMPAT - ©Questel

Title

(US4023835)

Conformable thin-wall shear-resistant coupling and **pipe** assembly

Images



Publication numbers with kind code & date

GB1534579	A	1978-12-06	GB1534579
US4023835	A	1977-05-17	US4023835



Abstract

(US4023835)

Lengths of "plain-end" **pipe** are joined together in underground sewer or drainage systems by **flexible** sleeves having a specified column expansibility and shear-resistance and containing high modulus helically oriented **reinforcement**, bonded or encapsulated in elastomeric material. The resultant **pipe** assemblies represent a significant improvement over previously known "plain-end" **pipe**-coupling arrangements and bell and spigot **pipe** assemblies. **Pipe** sections may be quickly and economically joined without inserting packing, to provide a water-tight, shear-resistant joint which will accommodate significant angular misalignment and circumferential variation. Even if lubricant is placed on the inner surfaces of the **flexible** sleeves to reduce assembly forces, the resultant **pipe** assemblies still exhibit more than adequate resistance against shear loads and water infiltration.

Inventors

EWING LLOYD

BYKOWSKI MICHAEL J

Latest standardized assignees - inventors removed

AMSTED INDUSTRIES

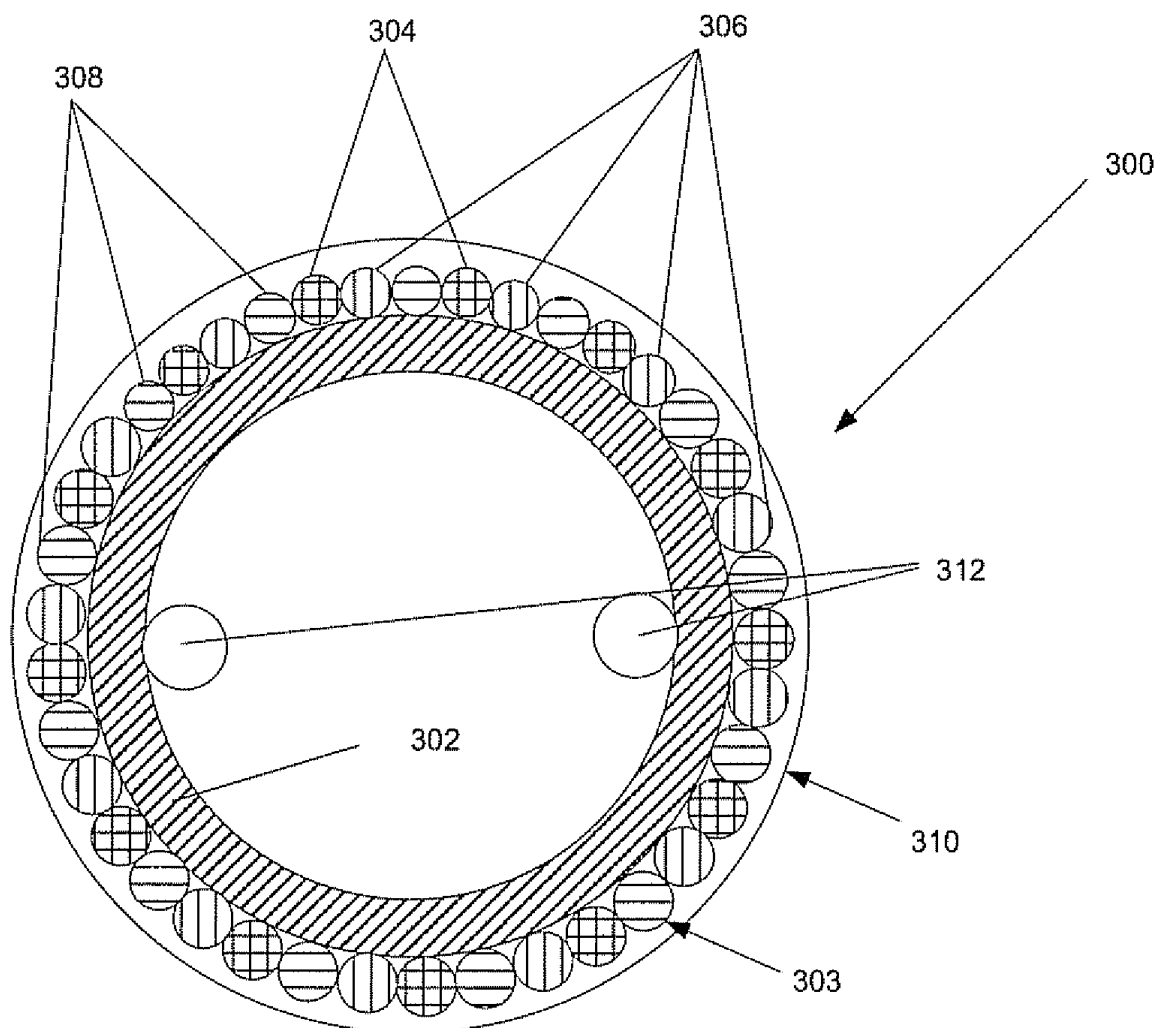
Family 27/56 - FAMPAT - ©Questel

Title

(WO200945867)

Composite **pipe** systems and methods

Images



Publication numbers with kind code & date

BRPI0817440	A2	2015-06-16	BR200817440
GB2464443	B	2012-07-18	GB2464443
US20110284117	A1	2011-11-24	US20110284117
GB2464443	A	2010-04-21	GB2464443
GB201003457	D0	2010-04-14	GB201003457
WO2009/045867	A1	2009-04-09	WO200945867



Abstract

(WO2009/045867)

A **pipe** system comprising a liner (102) at an interior of the **pipe**; at least one dry **fiber** tri-axial braid layer (103) exterior to the liner (102), the tri-axial braid layer (103) comprising a plurality of axial fibers (104), a plurality of clockwise fibers (106), and a plurality of counterclockwise fibers (108).

Inventors

LO KING HIM

YUN HEEDO

ZHANG JANE QING

Latest standardized assignees - inventors removed

SHELL

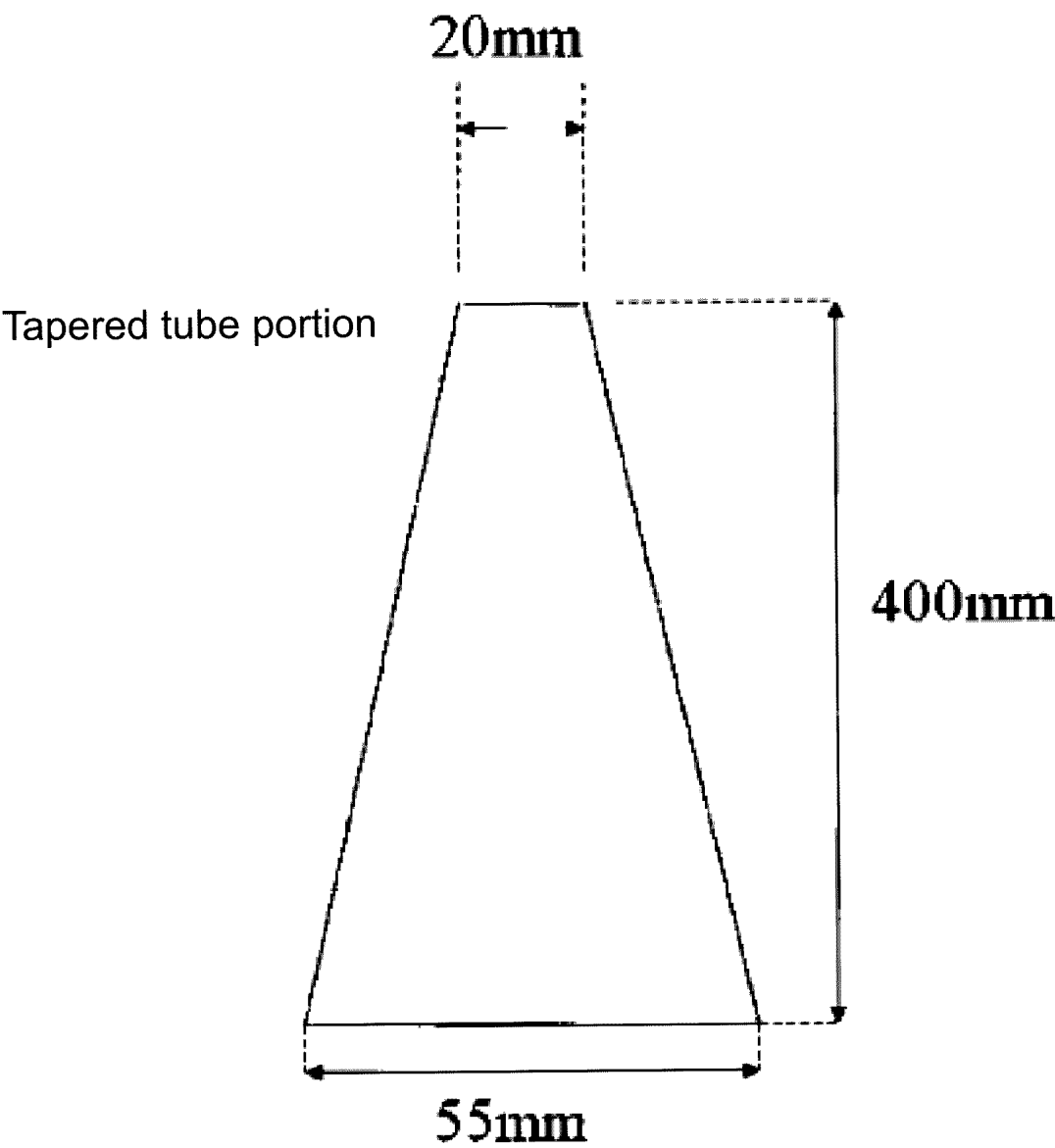
Family 28/56 - FAMPAT - ©Questel

Title

(EP2824235)

Carbon fiber bundle and process for producing same

Images



Publication numbers with kind code & date

KR10-1965470	B1	2019-04-03	KR101965470
EP2824235	B1	2018-08-01	EP2824235
JP6105332	B2	2017-03-29	JP6105332
CN104204342	B	2017-02-22	CN104204342B
US9506169	B2	2016-11-29	US9506169
JPWO2013133421	A1	2015-07-30	JP2013133421W
EP2824235	A4	2015-04-01	EP2824235
US20150025191	A1	2015-01-22	US20150025191
EP2824235	A1	2015-01-14	EP2824235
CN104204342	A	2014-12-10	CN104204342
KR20140133831	A	2014-11-20	KR20140133831
JP5606650	B2	2014-09-05	JP5606650
JP2013213209	A	2013-10-17	JP2013213209



WO2013/133421

A1 2013-09-12 WO2013133421

Abstract

(EP2824235)

The present invention relates to a carbon **fiber** bundle excellent in terms of adhesion to **matrix** resins and process handleability and less apt to suffer the shedding of the sizing agent in processing steps. The carbon **fiber** bundle of the invention is a carbon **fiber** bundle having a sizing agent adherent to the surface thereof, characterized in that the carbon **fiber** bundle includes a plurality of carbon fibers and the sizing agent includes a copolyamide resin, the copolyamide resin having both a specific polyamide component and nylon-6 and/or nylon-66 as repeating units and having a melting point of 180°C or lower. The melting point of the copolymer resin is preferably 60 to 160°C, and the glass transition temperature thereof is preferably in the range of -20 to 50°C.

Inventors

NAITO TAKESHI

ONO TSUBASA

SAKURAI HIROSHI

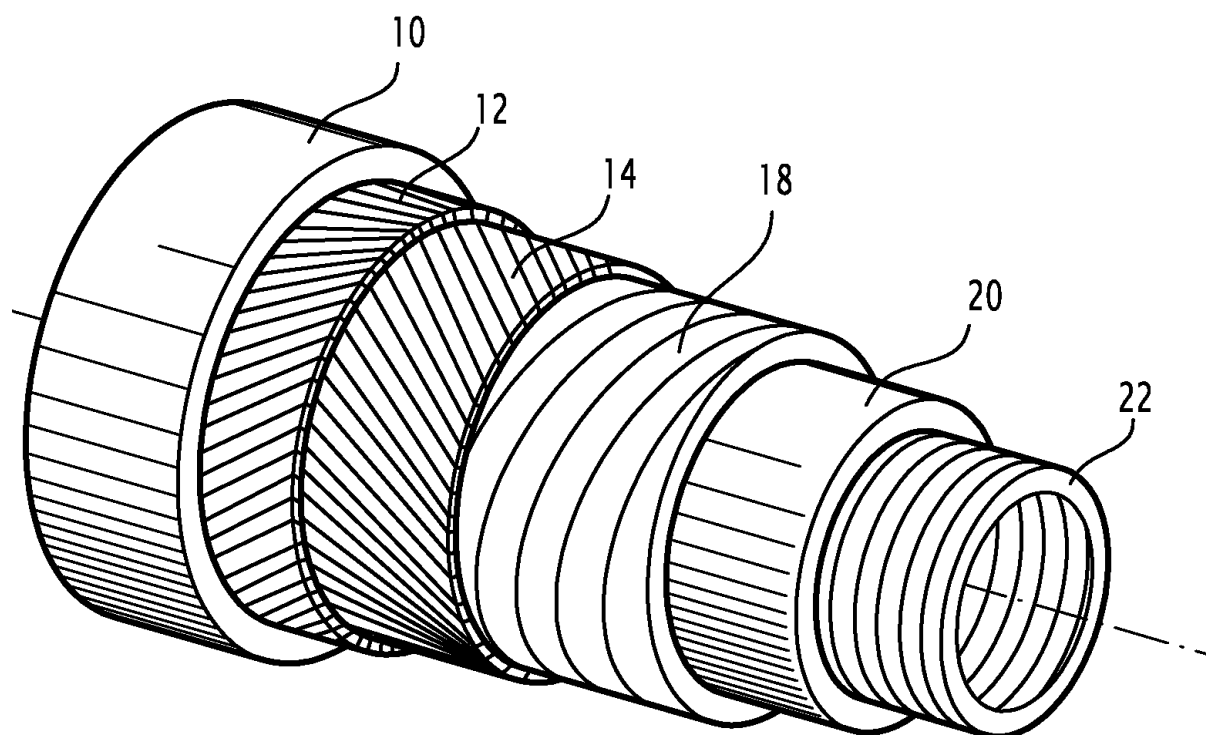
Latest standardized assignees - inventors removed

TEIJIN

Family 29/56 - FAMPAT - ©Questel

Title

(EP3439871)

Submarine **pipe** comprising a sheath comprising a polypropylene homopolymer**Images****Publication numbers with kind code & date**

EP3439871	A1	2019-02-13	EP3439871
BR112018070597	A2	2019-02-05	BR112018070597
CN109153229	A	2019-01-04	CN109153229
BR112018070597	A1	2018-10-16	BR112018070597
FR3050005	B1	2018-05-04	FR3050005
FR3050005	A1	2017-10-13	FR3050005



[WO2017/174660](#)

A1 2017-10-12 WO2017174660

Abstract

(EP3439871)

The invention relates to a submarine **pipe** comprising a metallic **reinforcement** layer around an inner sealing polymeric sheath that can be in contact with hydrocarbons, characterised in that the inner sealing polymeric sheath comprises a polypropylene homopolymer or a mixture of polypropylene homopolymers, wherein the polypropylene homopolymer or the mixture has a density of more than 0.900 g/cm³ and a fluidity index measured at 230°C under a mass of 2.16 kg of less than 10 g/10 minutes, to a method for preparing same and to the use thereof for conveying hydrocarbons. This sheath can be used in contact with hydrocarbons at a high temperature.

Inventors

DEMANZE FRÉDÉRIC

Latest standardized assignees - inventors removed

TECHNIP FRANCE

Family 30/56 - FAMPAT - ©Questel

Title

(EP3551916)

Detecting apparatus and method

Images

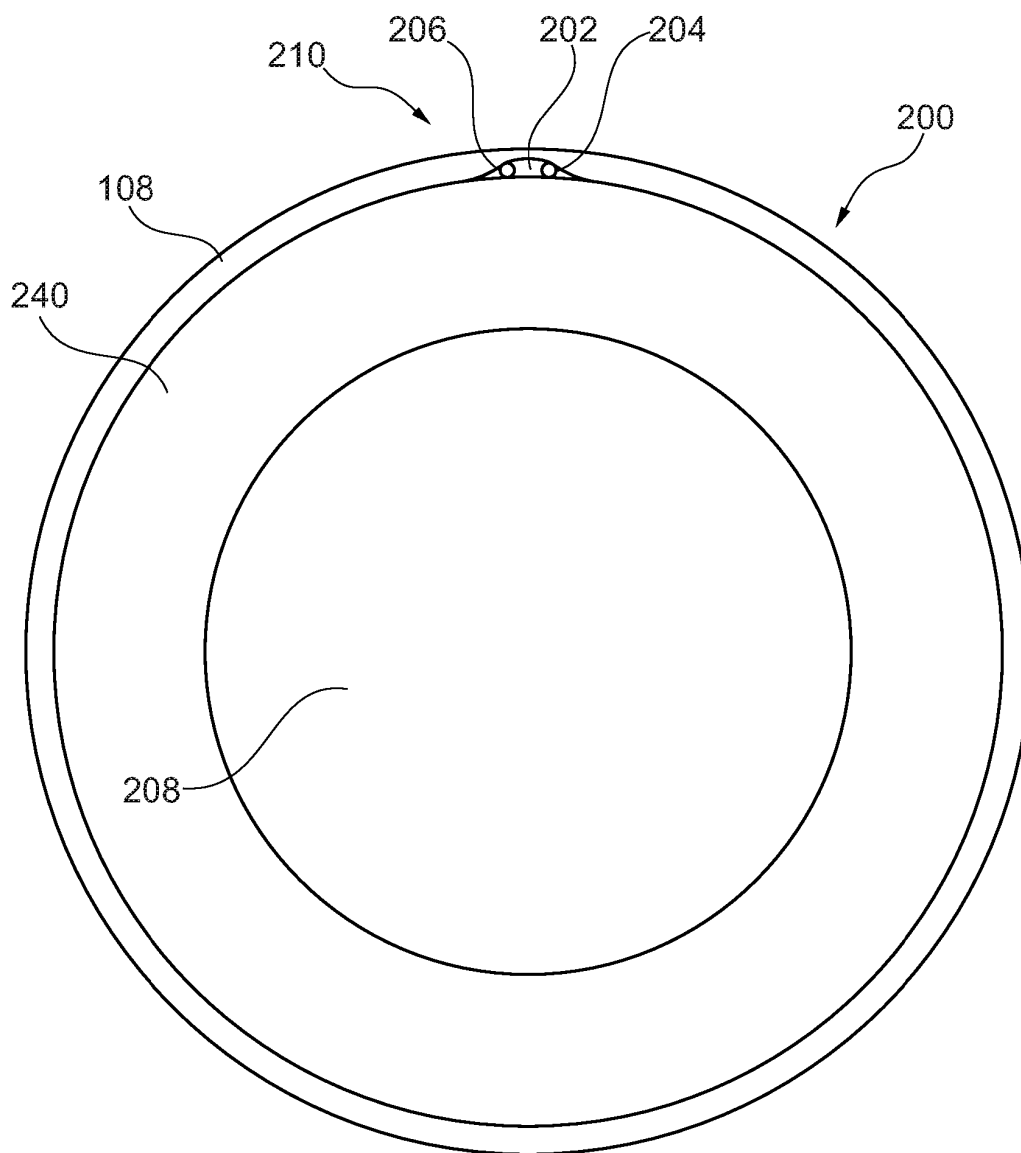


Fig. 2a

Publication numbers with kind code & date

EP3551916	A1	2019-10-16	EP3551916
CN110050151	A	2019-07-23	CN110050151
BR112019012043	A1	2019-06-25	BR112019012043
WO2018/109426	A1	2018-06-21	WO2018109426
GB201621120	D0	2017-01-25	GB201621120

**Abstract**

(EP3551916)

A method and apparatus for detecting **pipe** entrenchment or upheaval of a **flexible pipe** and/or the presence of an external feature to the **flexible pipe** are disclosed. The method includes helically winding a temperature sensing element (204) around a layer of a **flexible pipe**; helically winding a heating element (206) around a layer of a **flexible pipe**; heating the heating element to a pre-determined temperature; measuring the temperature at at least two locations along the **flexible pipe**; comparing the measured temperature response at the at least two locations; and making a determination, from the comparison of measured responses, regarding the exterior vicinity of the **pipe** at one of the at least two locations.

Inventors

MCNABB JOHN CROSS

NOTT PHILIP MICHAEL

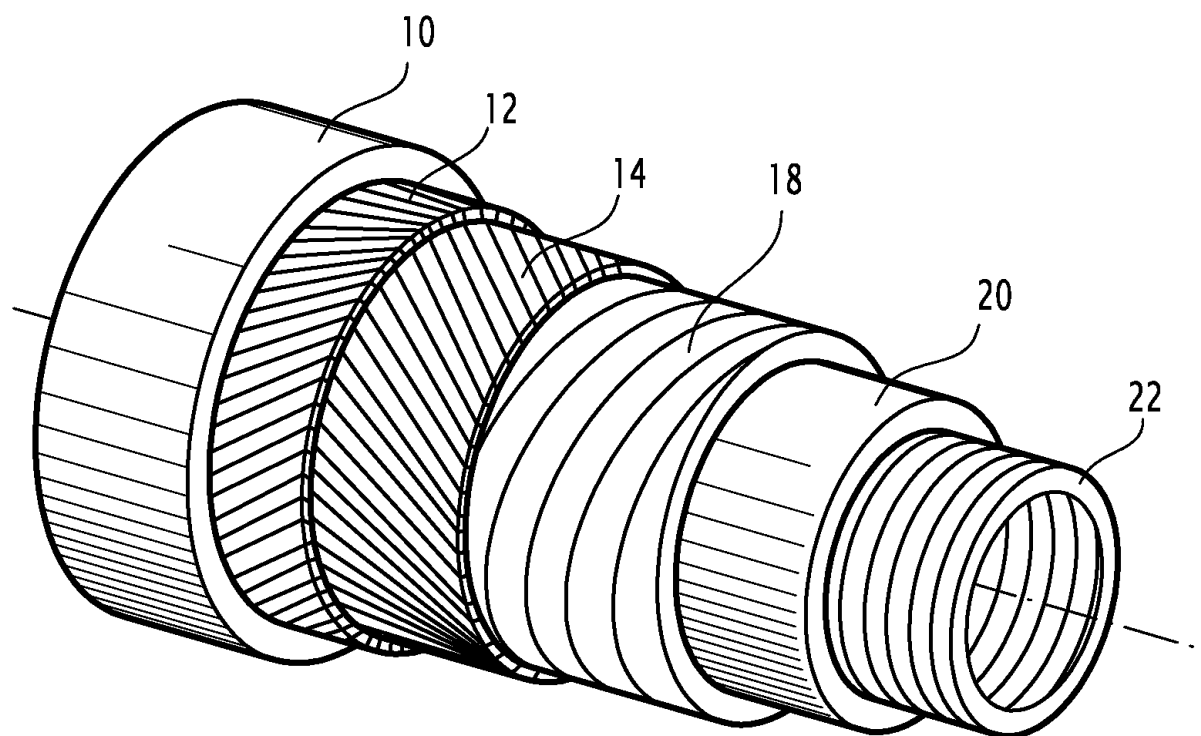
Latest standardized assignees - inventors removed

GE OIL & GAS

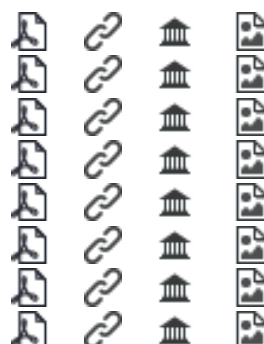
Family 31/56 - FAMPAT - ©Questel

Title

(EP3439870)

Submarine **pipe** comprising a sheath comprising a polypropylene block copolymer**Images****Publication numbers with kind code & date**

EP3439870	A1	2019-02-13	EP3439870
BR112018070590	A2	2019-02-05	BR112018070590
CN109153230	A	2019-01-04	CN109153230
AU2017247618	A1	2018-10-25	AU2017247618
BR112018070590	A1	2018-10-16	BR112018070590
FR3050004	B1	2018-05-04	FR3050004
FR3050004	A1	2017-10-13	FR3050004
WO2017/174664	A1	2017-10-12	WO2017174664

**Abstract**

(EP3439870)

The invention relates to a submarine **pipe** comprising a metallic **reinforcement** layer around an inner sealing polymeric sheath that can be in contact with hydrocarbons, characterised in that the inner sealing polymeric sheath comprises a polypropylene block copolymer or a mixture of polypropylene block copolymers, wherein the polypropylene block copolymer or the mixture has a density of more than 0.900 g/cm³ and a fluidity index measured at 230°C under a mass of 2.16 kg of less than 10 g/10 minutes, to a method for preparing same and to the use thereof for conveying hydrocarbons. This sheath can be used in contact with hydrocarbons at a high temperature.

Inventors

DEMANZE FRÉDÉRIC

Latest standardized assignees - inventors removed

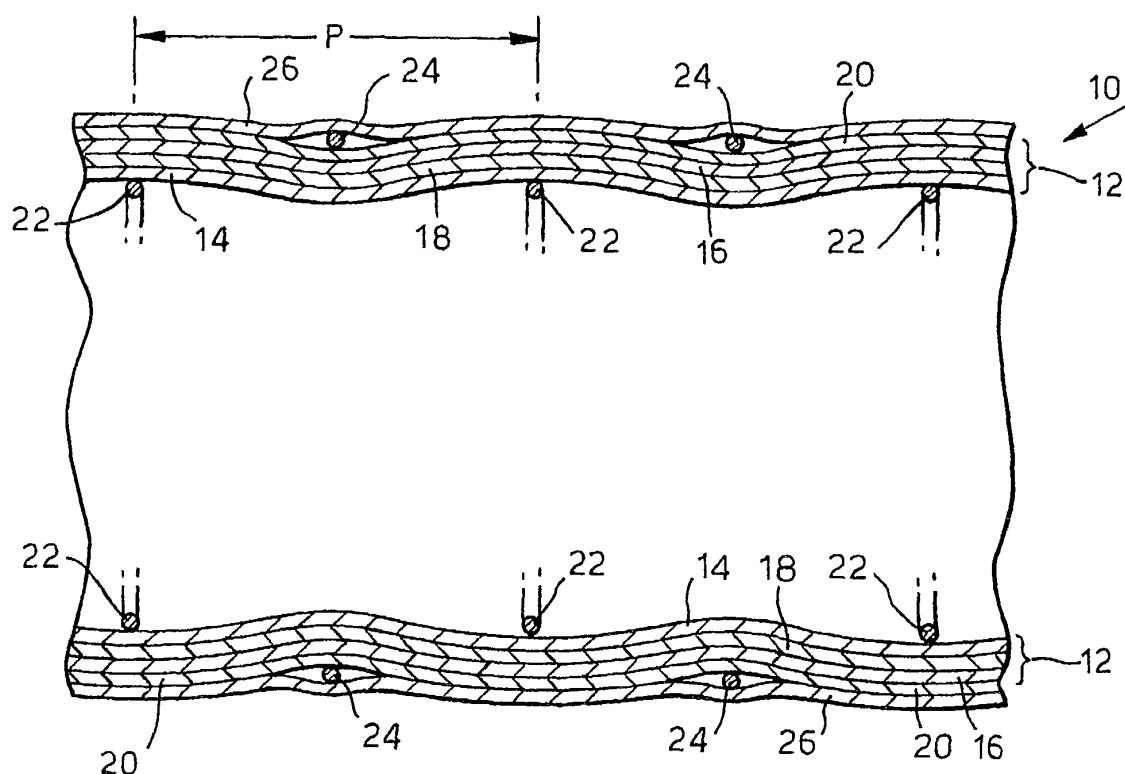
TECHNIP FRANCE

Family 32/56 - FAMPAT - ©Questel

Title

(EP1292790)

Improvements relating to hose

Images**Publication numbers with kind code & date**

NO336326	B1	2015-08-03	NO-336326
JP5744701	B2	2015-05-15	JP5744701
NO335227	B1	2014-10-27	NO-335227
CA2684456	C	2013-10-08	CA2684456
JP2012087934	A	2012-05-10	JP2012087934
JP4897182	B2	2012-01-06	JP4897182
ES2351548	T3	2011-02-07	ES2351548
BR0111629	B1	2010-12-28	BR200111629
DE60142805	D1	2010-09-23	DE60142805
AT477448	T	2010-08-15	ATE477448
EP1677040	B1	2010-08-11	EP1677040
US7743792	B2	2010-06-29	US7743792
US7712792	B2	2010-05-11	US7712792
IN1219/DELNP/2002	A	2010-02-05	IN2002DN01219
CN100585248	C	2010-01-27	CN100585248C
CA2411113	C	2010-01-19	CA2411113
SG144732	A1	2008-08-28	SG-144732
US7243686	B2	2007-07-17	US7243686
AU2007200461	A1	2007-02-22	AU2007200461
AU2001264075	B2	2006-11-02	AU2001264075
DE60116759	T2	2006-11-02	DE60116759
EP1677040	A3	2006-11-02	EP1677040



US20060232064	A1	2006-10-19	US20060232064				
US20060232065	A1	2006-10-19	US20060232065				
CN1818446	A	2006-08-16	CN1818446				
ES2257413	T3	2006-08-01	ES2257413				
EP1677040	A2	2006-07-05	EP1677040				
DE60116759	D1	2006-04-06	DE60116759				
CN1249369	C	2006-04-05	CN1249369C				
AT316220	T	2006-02-15	ATE316220				
EP1292790	B1	2006-01-18	EP1292790				
EA005484	B1	2005-02-24	EA---5484				
BR0111629	A	2004-06-22	BR200111629				
GB2368377	B	2004-04-28	GB2368377				
JP2004503732	A	2004-02-05	JP2004503732				
US20030178085	A1	2003-09-25	US20030178085				
CN1441884	A	2003-09-10	CN1441884				
EA200300016	A1	2003-06-26	EA200300016				
EP1292790	A1	2003-03-19	EP1292790				
NO20025899	A	2003-02-10	NO200205899				
NO20025899	L	2003-02-10	NO20025899				
NO20140933	L	2002-12-13	NO20140933				
NO20025899	D0	2002-12-09	NO200205899				
GB2368377	A	2002-05-01	GB2368377				
AU6407501	A	2001-12-24	AU200164075				
CA2411113	A1	2001-12-20	CA2411113				
CA2684456	A1	2001-12-20	CA2684456				
WO01/96772	A1	2001-12-20	WO200196772				
GB0111022	D0	2001-06-27	GB200111022				
GB0014354	D0	2000-08-02	GB200014354				

Abstract

(EP1292790)

A hose (10) comprising a tubular body (12) of **flexible** material arranged between an inner and an outer helically wound wire (22, 24). The hose (10) further comprises an axial strengthening means (20) adapted to reduce deformation of the tubular body (12) when the tubular body (12) is subjected to axial tension, the axial strengthening means (20) being adapted to exert a radially inward force on at least part of the tubular body (12) when axial strengthening means (20) is subjected to axial tension.

Inventors

BURKE RAYMOND NICHOLAS

DAVIS ERIC JOSEPH

HALL GERARD ANTHONY

RIDOLFI MATTHEW VERNON

THORP SIMON PETER ALEXANDER

WITZ JOEL ARON

Latest standardized assignees - inventors removed

DUNLOP OIL & MARINE

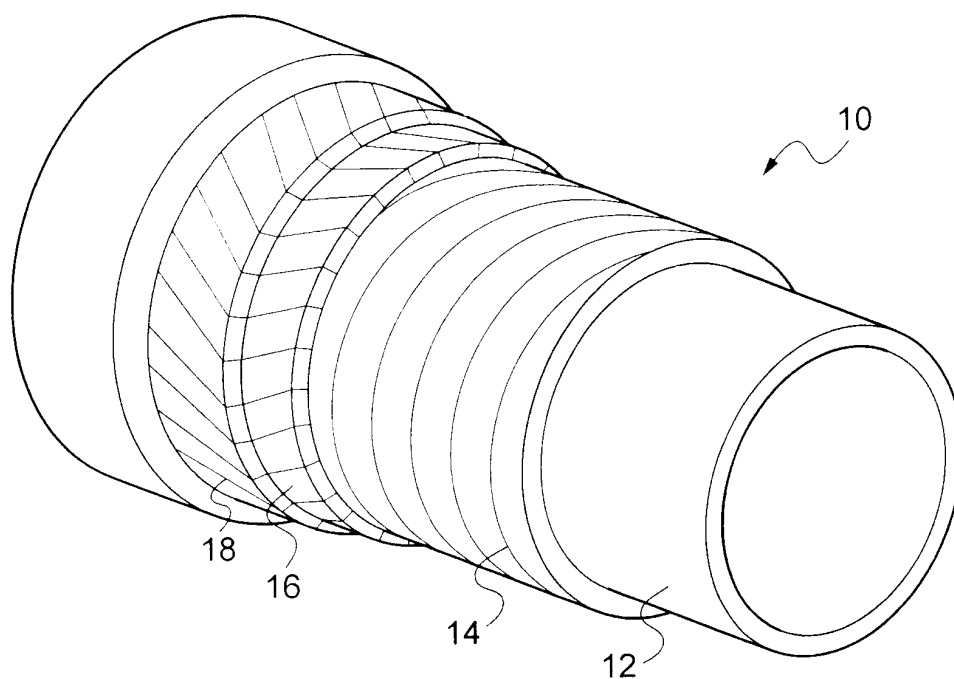
Family 33/56 - FAMPAT - ©Questel

Title

(WO2009141538)

Method of manufacturing a **flexible** tubular structure

Images



Publication numbers with kind code & date

NO342067	B1	2018-03-19	NO-342067
DK178345	B1	2015-12-21	DK-178345
BRPI0912199	A2	2015-10-06	BR200912199
MY150383	A	2013-12-31	MY-150383
AU2009248601	B2	2013-08-22	AU2009248601
GB2473357	B	2012-08-15	GB2473357
GB2473357	A	2011-03-09	GB2473357
NO20101538	A1	2011-01-27	NO20101538
GB201018411	D0	2010-12-15	GB201018411
DK201070481	A	2010-11-11	DKPA201070481
FR2931098	B1	2010-08-20	FR2931098
FR2931099	B1	2010-05-21	FR2931099
WO2009/141538	A3	2010-01-14	WO2009141538
AU2009248601	A1	2009-11-26	AU2009248601
WO2009/141538	A2	2009-11-26	WO2009141538
FR2931098	A1	2009-11-20	FR2931098
FR2931099	A1	2009-11-20	FR2931099



Abstract

(WO2009/141538)

The invention relates to a **flexible** tubular **pipe** (10) intended for offshore oil production and to its method of manufacture, said **pipe** comprising an impermeable internal duct and at least one sheet (20) made of a thermoplastic elastomer polymer

of defined thickness around said internal duct (18). According to the invention said thermoplastic elastomer polymer comprises a polypropylene-based thermoplastic polymer and an elastomer based on an ethylene-propylene-diene terpolymer and it further includes a compatibilizer for increasing the miscibility between said polypropylene-based thermoplastic polymer and said elastomer based on an ethylene-propylene-diene terpolymer.

Inventors

COUTAREL ALAIN

DEMANZE FREDERIC

HARDY JEAN

Latest standardized assignees - inventors removed

TECHNIP FRANCE

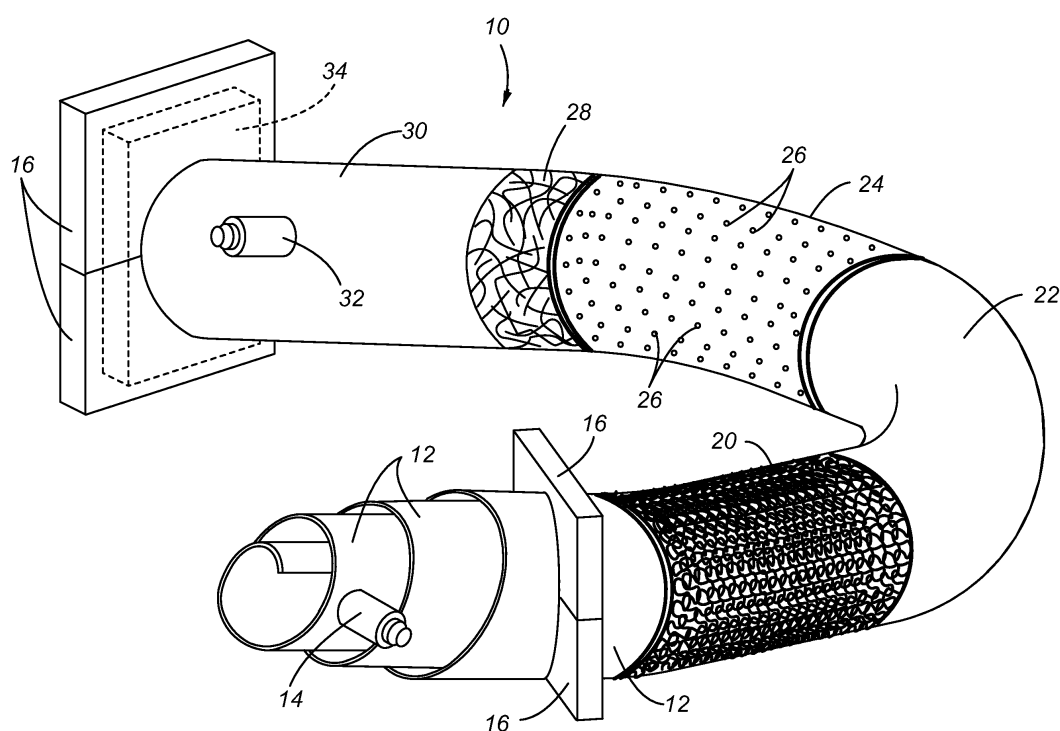
Family 34/56 - FAMPAT - ©Questel

Title

(US9022077)

Composite tube for fluid delivery system

Images



Publication numbers with kind code & date

US9791076	B2	2017-10-17	US9791076
US9470352	B2	2016-10-18	US9470352
US9366365	B2	2016-06-14	US9366365
US9111665	B2	2015-08-18	US9111665
US9022077	B2	2015-05-05	US9022077
US20130284299	A1	2013-10-31	US20130284299
US20130284303	A1	2013-10-31	US20130284303
US20130277083	A1	2013-10-24	US20130277083
US20130277960	A1	2013-10-24	US20130277960
US20120168012	A1	2012-07-05	US20120168012



Abstract

(US20120168012)

The composite tube comprises a tubular arrangement of knitted **fiber** characterized by a plurality of interlocking loops. Selected knitted patterns provide desired density or spacing between fibers. Selected fibers may include materials such as Kevlar®, carbon **fiber**, and combinations thereof. The tubular knitted pattern allows for variable electrical, mechanical and geometrical options. A **matrix** material is applied over the knitted **fiber** pattern and is allowed to cure. The **matrix** material may include a combination of resin and epoxy constituents. The **matrix** material may be applied by a vacuum bag molding process. Electrical and mechanical properties can also be controlled by selecting desired resin and epoxy constituents. The **flexible** knitted reinforcing layer allows use of an inflatable bladder to hold the reinforcing layer in the desired shape, thereby facilitating tube constructions of varying shapes and diameters. Continuous application of the **matrix** material avoids overlapping seams that are prone to delamination.

Inventors

STATLER III RICHARD L

BREAY CLIFTON P

Latest standardized assignees - inventors removed

EATON INTELLIGENT POWER

Family 35/56 - FAMPAT - ©Questel

Title

(WO9712166)

Composite spoolable tube

Images

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US20120155813	A1	2012-06-21	US20120155813
US8066033	B2	2011-11-29	US8066033
US20100212769	A1	2010-08-26	US20100212769
CA2490967	C	2010-03-02	CA2490967
US7647948	B2	2010-01-19	US7647948
NO328265	B1	2010-01-18	NO-328265
NO322592	B1	2006-10-30	NO-322592
CA2321536	C	2005-11-22	CA2321536



CA2409304	C	2005-11-22	CA2409304				
US20050121094	A1	2005-06-09	US20050121094				
US6857452	B2	2005-02-22	US6857452				
US20040031532	A1	2004-02-19	US20040031532				
GB2338736	A8	2003-10-14	GB2338736				
US6604550	B2	2003-08-12	US6604550				
CA2233295	C	2003-06-17	CA2233295				
CA2282358	C	2003-04-29	CA2282358				
US20020157720	A1	2002-10-31	US20020157720				
US6357485	B2	2002-03-19	US6357485				
US20010025664	A1	2001-10-04	US20010025664				
US6286558	B1	2001-09-11	US6286558				
JP2001512542	A	2001-08-21	JP2001512542				
GB2338736	B	2001-06-13	GB2338736				
JP2001505281	A	2001-04-17	JP2001505281				
US6148866	A	2000-11-21	US6148866				
US6024624	A	2000-02-15	US6024624				
US6016845	A	2000-01-25	US6016845				
GB2338736	A	1999-12-29	GB2338736				
GB2321292	B	1999-12-08	GB2321292				
GB2335250	B	1999-12-08	GB2335250				
GB2335251	B	1999-12-08	GB2335251				
GB9920058	D0	1999-10-27	GB9920058				
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GB2335250	A	1999-09-15	GB2335250				
GB2335251	A	1999-09-15	GB2335251				
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GB9913809	D0	1999-08-11	GB9913809				
GB9913815	D0	1999-08-11	GB9913815				
US5921285	A	1999-07-13	US5921285				
AU6179798	A	1998-09-09	AU9861797				
CA2282358	A1	1998-08-27	CA2282358				
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GB2321292	A	1998-07-22	GB2321292				
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NO981414	D0	1998-03-27	NO9801414				
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CA2409304	A1	1997-04-03	CA2409304				
CA2490967	A1	1997-04-03	CA2490967				
CA2687548	A1	1997-04-03	CA2687548				
WO97/12166	A1	1997-04-03	WO9712166				

Abstract

(WO97/12166)

A spoolable composite tube (10) capable of being spooled onto a reel for storage and for use in oil field applications. The spoolable tube exhibits unique anisotropic characteristics that provide improved burst and collapse pressures, increased tensile strength, compression strength, and load carrying capacity, while still remaining sufficiently bendable to be spooled

onto a reel in an open bore configuration. The spoolable composite tube can include an inner liner (12), an interface layer, **fiber** composite layers, a pressure barrier layer, and an outer protective layer. The **fiber** composite layers can have a unique triaxial braid structure.

Inventors

QUIGLEY PETER A

NOLET STEPHEN C

WILLIAMS JERRY G

Latest standardized assignees - inventors removed

FIBERSPAR

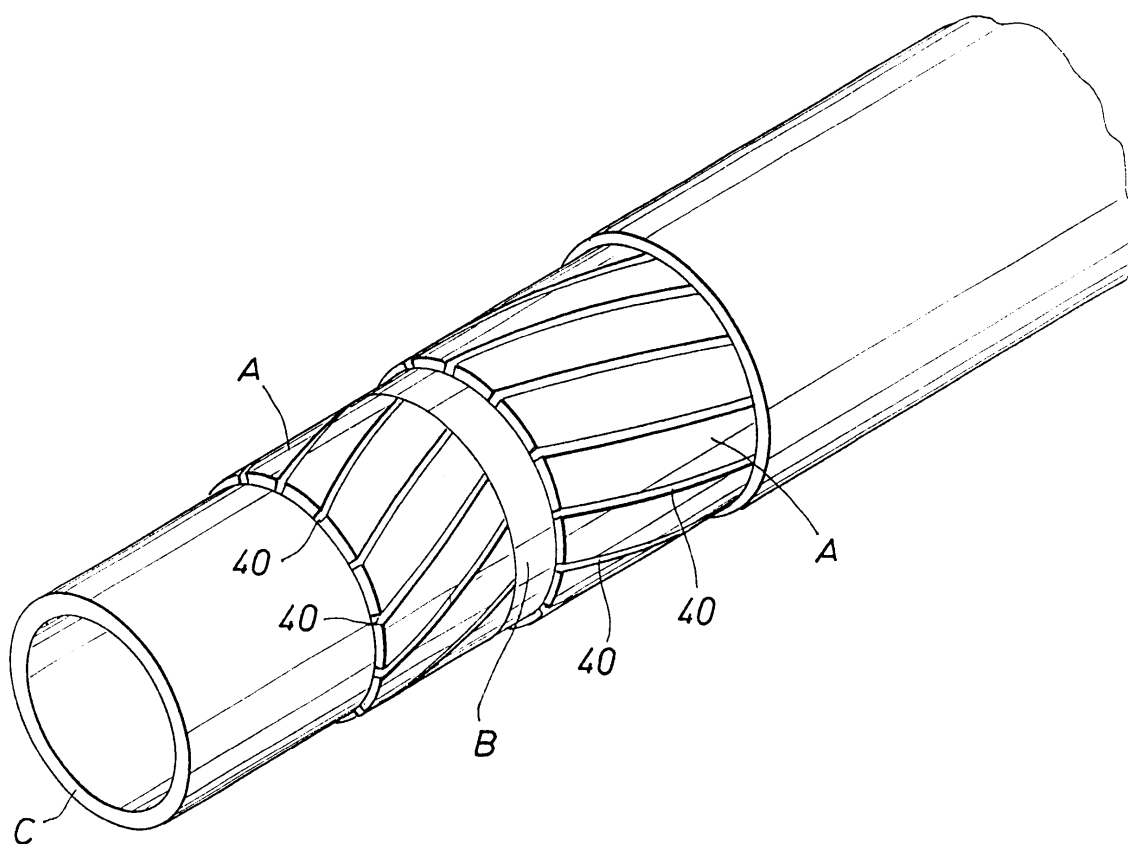
Family 36/56 - FAMPAT - ©Questel

Title

(EP1188010)

Composite tubular assembly and method of forming same

Images



Publication numbers with kind code & date

BR0010295	B1	2010-07-27	BR200010295
ES2320780	T3	2009-05-28	ES2320780
DK1559939	T3	2009-05-11	DK1559939T
DE60041422	D1	2009-03-05	DE60041422
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EP1559939	B1	2009-01-14	EP1559939
DE60021571	T2	2006-06-01	DE60021571
ES2246237	T3	2006-02-16	ES2246237
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WO00/66927	A1	2000-11-09	WO200066927				

Abstract

(EP1188010)

A composite tubular assembly formed by a core or tube which is reinforced by a multitape product which is wrapped in alternate non-bonded helical wraps (A) on the core or tube (C). Each tape (T) is first formed by impregnating a fibrous strip with a resin and then such tapes are fed from spools (37) to the core of the tube (C).

Inventors

BRYANT MICHAEL J

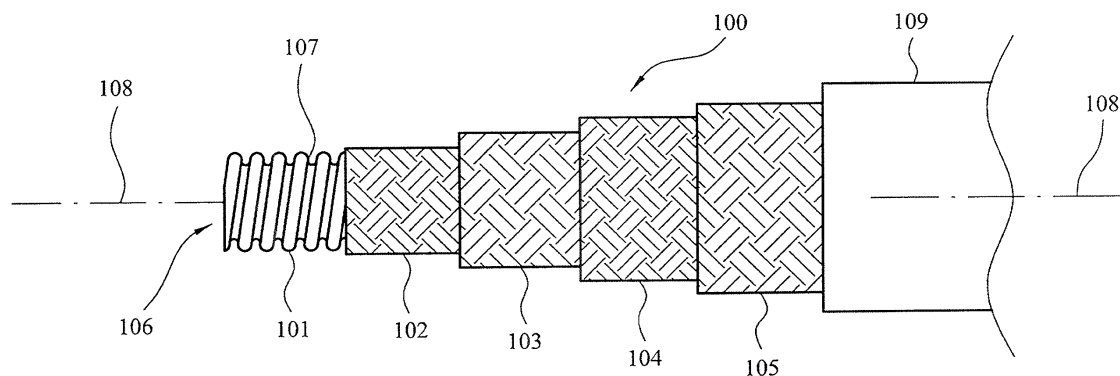
Latest standardized assignees - inventors removed

DEEPFLEX

Family 37/56 - FAMPAT - ©Questel

Title

(EP3429840)

Fire resistant **flexible** hose**Images****Publication numbers with kind code & date**

AU2017235767	B2	2019-07-25	AU2017235767				
JP2019512649	A	2019-05-16	JP2019512649				
US20190078708	A1	2019-03-14	US20190078708				
GB2548364	B	2019-03-06	GB2548364				
EP3429840	A1	2019-01-23	EP3429840				
CN109070521	A	2018-12-21	CN109070521				
SG11201807659U	A	2018-10-30	SG11201807659U				
IN201837034091	A	2018-10-19	IN201837034091				
AU2017235767	A1	2018-10-04	AU2017235767				
CA3016835	A1	2017-09-21	CA3016835				
WO2017/158316	A1	2017-09-21	WO2017158316				
GB2548364	A	2017-09-20	GB2548364				

[GB201604356](#)

D0 2016-04-27 GB201604356

Abstract

(EP3429840)

A **flexible** fire resistant hose assembly having a multilayer structure in which a radially inner fluoroplastic liner tube comprises a convolution or groove at an external facing surface. The inner liner tube is surrounded by a plurality of thermally insulating layers and a braided or woven **reinforcement** layer. Such layers are then encapsulated by at least one radially rubber cover layer. A hose assembly end fitting arrangement is also provided in which an end fitting is crimped to a hose end via a two component end fitting and a portion of the end fitting is surrounded by rubber.

Inventors

HUDSON JEREMY

Latest standardized assignees - inventors removed

AFLEX HOSE

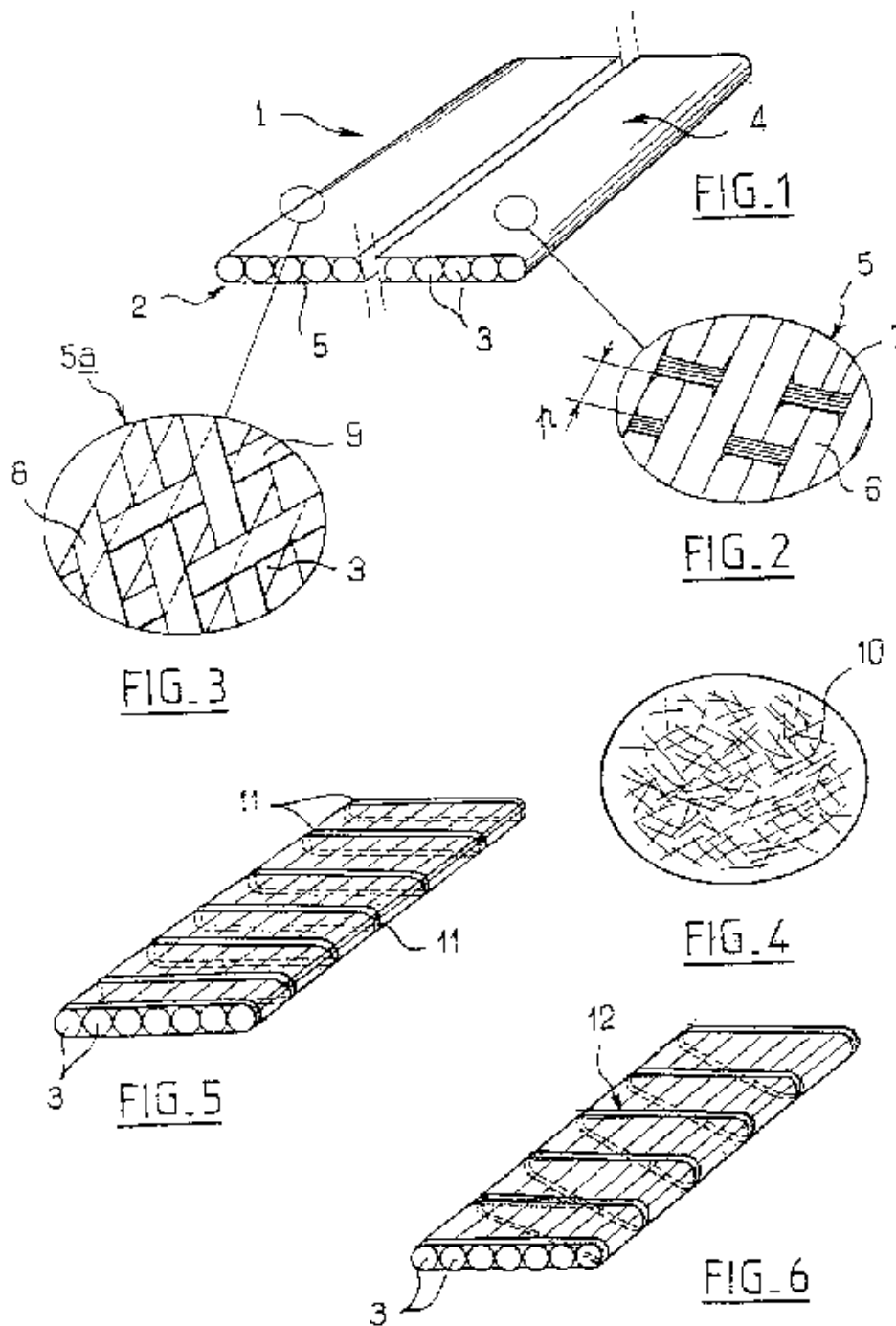
Family 38/56 - FAMPAT - ©Questel

Title

(EP-853547)

Flat strip, in particular for reinforcing ducts, method for making same, and ducts reinforced therewith

Images



Publication numbers with kind code & date

PL185825	B1	2003-08-29	PL-185825
US6165586	A	2000-12-26	US6165586
AU726081	B2	2000-11-02	AU-726081
DK853547	T3	2000-04-03	DK-853547T
DE69605562	D1	2000-01-13	DE69605562
AT187383	T	1999-12-15	ATE187383
EP0853547	B1	1999-12-08	EP-853547
PL328165	A1	1999-01-18	PL96328165
EP0853547	A1	1998-07-22	EP-853547
FR2739674	B1	1997-12-05	FR2739674



AU7088696	A	1997-04-28	AU9670886
FR2739674	A1	1997-04-11	FR2739674
CA2233968	A1	1997-04-10	CA2233968
WO97/12753	A1	1997-04-10	WO9712753



Abstract

(EP0853547)

A flat strip (1) including at least one layer (2) of longitudinal filamentary rovings (3), and means for assembling said filamentary rovings. The assembly means comprise a bonding material (5) and retaining means (4) surrounding and clamping said layer (2). The longitudinal filamentary rovings (3) are agglomerated into a relatively flat strand with a substantially rectangular cross-section, and each filamentary roving (3) has a predetermined average compactness of at least 60 %. The retaining means (4) consist of a flat tubular sheath including elements (7) extending transversely to the longitudinal direction of said filamentary rovings (3). Said strip is particularly useful for reinforcing ducts used in the oil industry.

Inventors

LE NOUVEAU JO L

DO ANH TUAN

Latest standardized assignees - inventors removed

COFLEXIP

NEC

Family 39/56 - FAMPAT - ©Questel

Title

(WO201749412)

Joint for thermoplastic **pipe**, assembly and method

Images

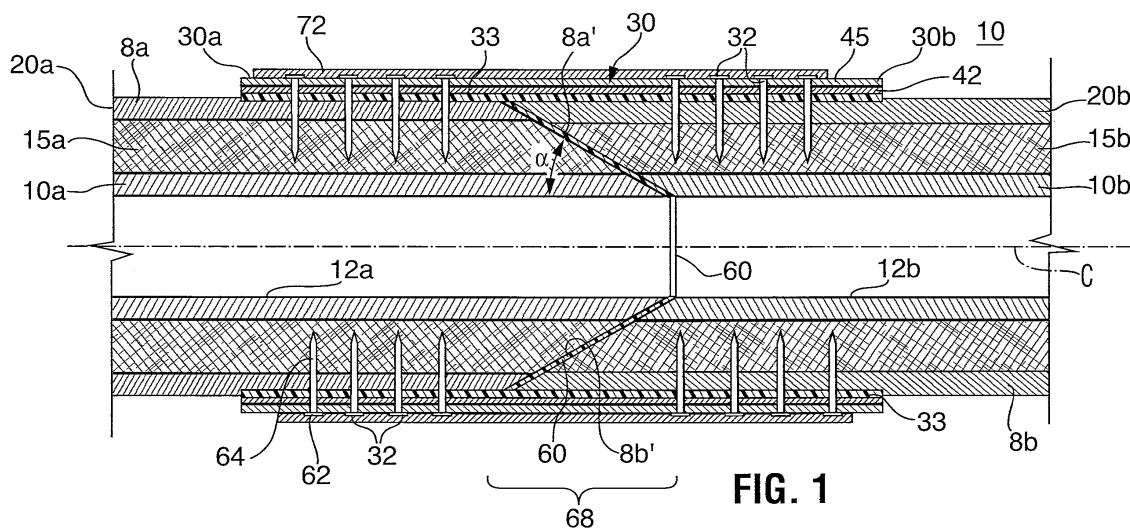


FIG. 1

Publication numbers with kind code & date

WO2017/049412	A1	2017-03-30	WO201749412
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Abstract

(WO2017/049412)

A **pipe** joint includes: a coupling including a tubular wall with an outer surface and an inner surface defining an inner diameter; an end of a first **pipe** in the inner diameter of the coupling with an outer facing surface of the first **pipe** adjacent the inner surface; an end of a second **pipe** in the inner diameter of the coupling with an outer facing surface of the second **pipe** adjacent the inner surface, the end of the first **pipe** and the end of the second **pipe** arranged in an end-to-end scarf joint configuration and a seal between the end of the first **pipe** and the end of the second **pipe**; a thermoplastic weld

between the coupling inner surface and the outer facing surface of the first pipe and the coupling inner surface and the outer facing surface of the second pipe; and a first plurality of fasteners installed substantially radially inwardly from the outer surface of the coupling and engaging the coupling and a fiber reinforced layer of the first pipe and a second plurality of fasteners installed to extend substantially radially inwardly from the outer surface of the coupling and in engagement with the coupling and a fiber reinforced layer of the second pipe.

Inventors

HAMMAMI AHMED

YAKIMOSKI TODD JAMES

RUNKA JOEL CAMERON

XU BO

Latest standardized assignees - inventors removed

SHAWCOR

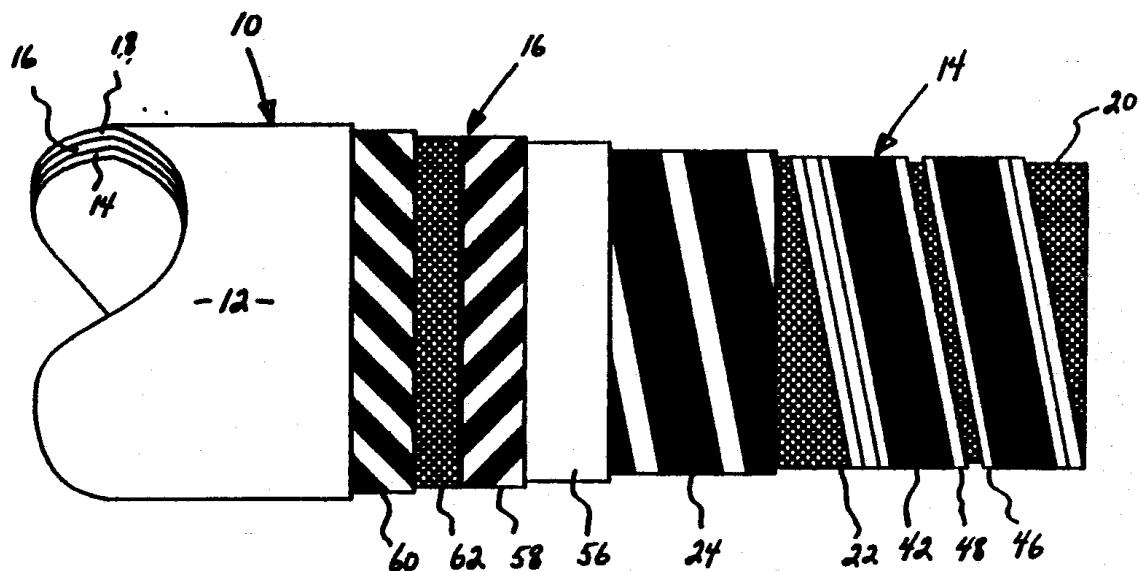
Family 40/56 - FAMPAT - ©Questel

Title

(EP-575428)

Flexible tubular structure

Images



Publication numbers with kind code & date

DE69220784	T2	1998-02-19	DE69220784
RU2104437	C1	1998-02-10	RU2104437
SU2104437	C1	1998-02-10	SU2104437
DE69220784	D1	1997-08-14	DE69220784
EP0575428	B1	1997-07-09	EP-575428
US5435867	A	1995-07-25	US5435867
AU658866	B2	1995-05-04	AU-658866
EP0575428	A1	1993-12-29	EP-575428
US5261462	A	1993-11-16	US5261462
WO92/16355	A3	1992-11-26	WO9216355
AU1373192	A	1992-10-21	AU9213731
WO92/16355	A2	1992-10-01	WO9216355
CA2106096	A1	1992-09-15	CA2106096



Abstract

(EP0575428)

A tubular structure, such as a **pipe** or pressure vessel, is provided with a wall formed from plastic, composites and elastomeric materials. The composite materials are spirally wound and are separated by elastomeric strips. The wall has an inner wall element formed by a continuous **flexible** plastic cylinder with a spiral projection on its outer surface. An outer layer is formed from alternating spirally wound strips of composite and elastomer. The composite strip has a radially inward projection axially spaced from the projection on the plastic cylinder but overlapping in the radial direction. The cylinder and layer are separated by an intermediate layer formed from composites and elastomeric strips. A composite strip is located between each pair of adjacent projections and separated from the projections by an elastomeric strip. An outer wall element is formed from alternating spirally wound composite and elastomeric strips having pitch greater than the inner wall element.

Inventors

WOLFE DONALD H

BUDNEY DAVID R

Latest standardized assignees - inventors removed

PROFLEX **PIPE**

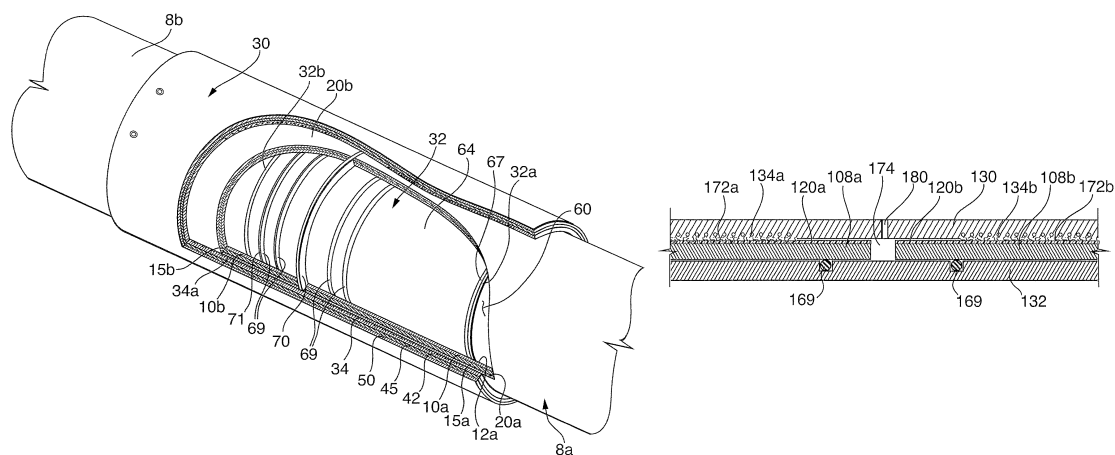
Family 41/56 - FAMPAT - ©Questel

Title

(EP2780619)

Pipe connection assembly and method

Images



Publication numbers with kind code & date

DK2780619	T3	2018-11-19	DK2780619T
EP2780619	B1	2018-09-05	EP2780619
AU2012339552	B2	2017-02-09	AU2012339552
US9322495	B2	2016-04-26	US9322495
EP2780619	A4	2015-08-12	EP2780619
EP2780619	A1	2014-09-24	EP2780619
AR088888	A1	2014-07-16	AR--88888
AU2012339552	A1	2014-06-19	AU2012339552
US20130134700	A1	2013-05-30	US20130134700
CA2854951	A1	2013-05-23	CA2854951
WO2013/071448	A1	2013-05-23	WO201371448



Abstract

(EP2780619)

A **pipe** coupling for forming a **pipe** connection includes: a wall formed as a tube and including an inner surface defining an inner diameter and an outer surface; an electrical conductor supported by the wall and extending about a circumference of the coupling; and a pair of contacts exposed on the outer surface and electrically in contact with the electrical conductor for

connecting an electrical power source to the electrical conductor.

Inventors

DUNCAN MARK

CONLEY JEFFREY RYAN

NIU HAO

BOUEY SAMUEL GLEN

Latest standardized assignees - inventors removed

SHAWCOR

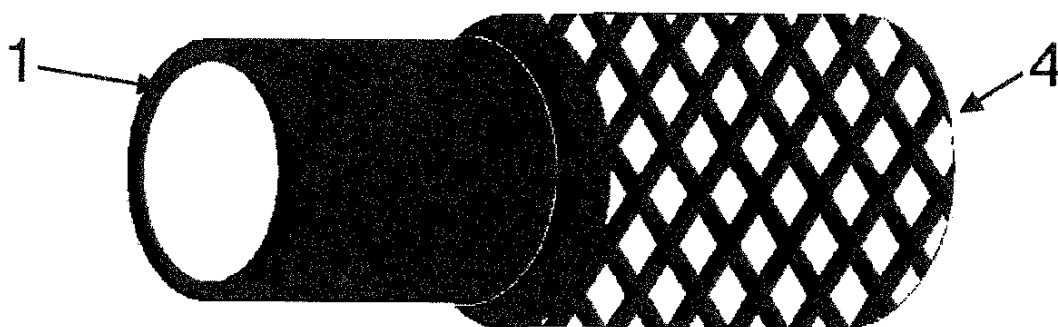
Family 42/56 - FAMPAT - ©Questel

Title

(EP2879865)

Transfer hose, in particular for use at high temperatures

Images



Publication numbers with kind code & date

CN104540667	B	2017-10-03	CN104540667B
EP2879865	A2	2015-06-10	EP2879865
US20150144219	A1	2015-05-28	US20150144219
CN104540667	A	2015-04-22	CN104540667
WO2014/019796	A3	2014-11-20	WO201419796
DE102012107095	A1	2014-02-06	DE102012107095
WO2014/019796	A2	2014-02-06	WO201419796



Abstract

(EP2879865)

The invention relates to a transfer hose which is design having multiple layers and contains at least one inner layer (1) and one transfer layer (4), wherein the transfer layer (4) is structured from at least 20 wt % of polyphenylsulfide (PPS) and/or polyoxadiazole (POD) and/or aramide (AR) and/or polyimide (PI) and/or polyether ether ketone (PEEK) and/or polyethylene-2,6-naphthalate (PEN) and/or polyphenylene (PPP) and/or polyphenylenoxide (PPO) and/or polyphenylsulfide (PPS) and/or polyphenylenether (PPE) and/or polybenzoxazole (PBO) and/or carbon fibers (CF) and/or metal fibers (MF). The hose-shaped article is in particular a turbocharger hose.

Inventors

BRÜHNE KLAUS

SCHMELTER KLAUS

TASSEKI METIN

LANGE RAINER

Latest standardized assignees - inventors removed

CONTITECH SCHLAUCH

Family 43/56 - FAMPAT - ©Questel

Title

(FR2229538)

Flexible tube for oil drilling - has reinforcing winding of resin reinforced with fibres

Publication numbers with kind code & date

[FR2229538](#) B1 1976-04-23 FR2229538

[FR2229538](#) A1 1974-12-13 FR2229538



Abstract

(FR2229538)

A reinforced **flexible** tube for use primarily in oil drilling consisting of an inner tube of an elastomer or a plastics material, reinforcing to counteract the effects of pressure, reinforcing to counteract the effects of torsion, and sealing layers, has at least one reinforcing layer made up of a reinforced resin profiled element. The reinforcing fibres, pref. of glass, carbon or metal are parallel and torsionless and make up $\geq 30\%$ of the vol. of the profiled element. The tube produced is lighter in weight than conventional constructions.

Latest standardized assignees - inventors removed

IFP ENERGIES NOUVELLES

Family 44/56 - FAMPAT - ©Questel

Title

(GB2295875)

Spoolable composite tubular member

Images

FIBERSPAR

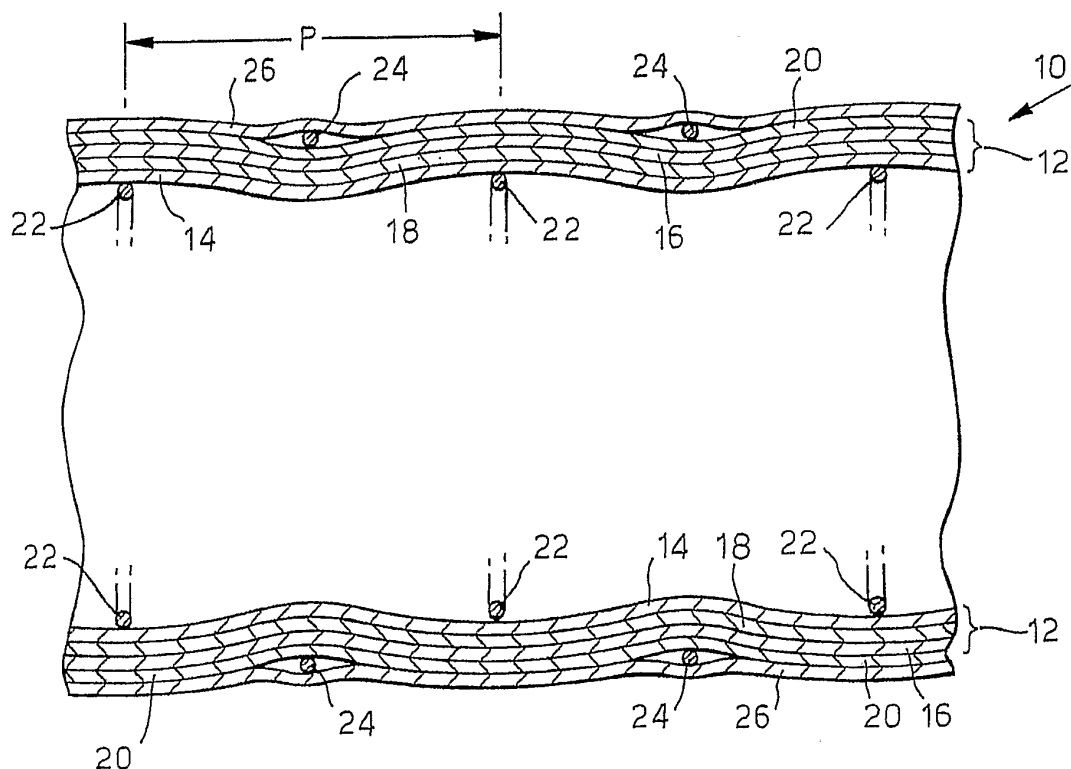
Family 45/56 - FAMPAT - ©Questel

Title

(EP2019942)

Improvements relating to hose

Images



Publication numbers with kind code & date

BRPI0710427	B1	2018-11-06	BR200710427
NO340307	B1	2017-03-27	NO-340307
MY157732	A	2016-07-15	MY-157732
CA2651575	C	2015-01-20	CA2651575
AU2007246823	B2	2013-06-20	AU2007246823
CN101517297	B	2013-03-27	CN101517297B
JP5179473	B2	2013-01-18	JP5179473
ES2391503	T3	2012-11-27	ES2391503
US8225820	B2	2012-07-24	US8225820
EP2019942	B1	2012-07-11	EP2019942
BRPI0710427	A2	2011-08-09	BR200710427
SG171660	A1	2011-06-29	SG-171660
EA014505	B1	2010-12-30	EA-14505
US20090320951	A1	2009-12-31	US20090320951
JP2009536302	A	2009-10-08	JP2009536302
EA200870509	A1	2009-08-28	EA200870509
CN101517297	A	2009-08-26	CN101517297



IN2480/MUMNP/2008	A	2009-02-27	IN2008MN02480				
EP2019942	A1	2009-02-04	EP2019942				
NO20084705	L	2009-01-16	NO20084705				
WO2007/129092	A8	2009-01-08	WO2007129092				
AU2007246823	A1	2007-11-15	AU2007246823				
CA2651575	A1	2007-11-15	CA2651575				
WO2007/129092	A1	2007-11-15	WO2007129092				
GB0609079	D0	2006-06-21	GB200609079				

Abstract

(EP2019942)

A hose (10) comprising a tubular body (12) of flexible material arranged between elongate inner and outer gripping members (22, 24), wherein the tubular body (12) comprises a sealing layer (18) arranged between inner and outer reinforcing layers (14, 16), and wherein the outer gripping member (24) is made of a flexible non-rigid material capable of being wound around the tubular body.

Inventors

WITZ JOEL ARON

COX DAVID N

Latest standardized assignees - inventors removed

DUNLOP OIL & MARINE

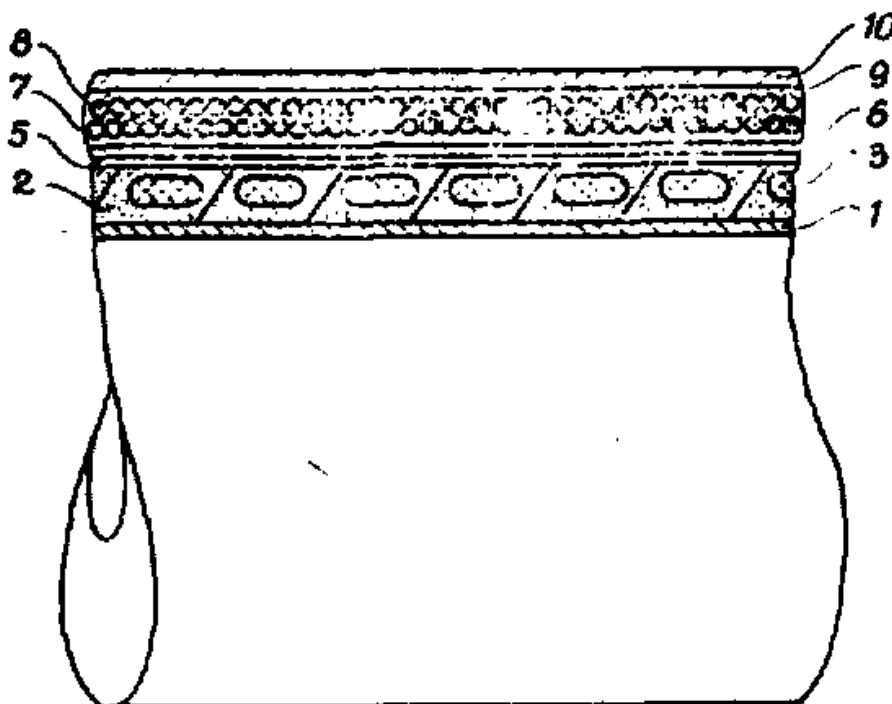
Family 46/56 - FAMPAT - ©Questel

Title

(FR2404792)

Multiply, heavy-duty, hose for e.g. deep drilling - is made up of glass-fibre windings in epoxy! or phenolic **matrix**, at least one of which is rubber-coated (HU 28.3.78)

Images



Publication numbers with kind code & date

FR2404792	B1	1983-03-25	FR2404792
FR2404792	A1	1979-04-27	FR2404792

**Abstract**

(FR2404792)

Rubber hose comprises a helical winding of resin and reinforcing threads and tubular-textile or spiral plies, and is resistant to vacuum-generated, axial tensile stresses and/or torsional forces. Beside the reinforcing plies, the hose incorporates ≥ 1 helical plie comprising rubber-coated/resin reinforced with threads. These have a stiffening and or reinforcing effect and form, together with the adjacent elastomer layer, a cured unitary system bonded to the elastomer layer. Used in seabed and other deep drilling operations, mining, pile driving. The hose has outstanding resistance to interior and exterior pressure, and to heavy tensile and torsional stresses.

Inventors

ANTAL SANDOR
ARVAI MIHALY
MEITZEN NANDOR
GORGENYI PETER
BARTHA ZOLTAN

Latest standardized assignees - inventors removed

TAURUS GUMIIPARI VÁLLALAT

Family 47/56 - FAMPAT - ©Questel

Title

(EP2061648)

Reinforced plastic pipe

Images**Publication numbers with kind code & date**

JP2010503553	A	2010-02-04	JP2010503553
RU2008114531	A	2009-10-27	RU2008114531
US7600537	B2	2009-10-13	US7600537
IL190193	A	2009-09-22	IL-190193
EP2061648	A2	2009-05-27	EP2061648
CN101309796	A	2008-11-19	CN101309796
IN2281/DELNP/2008	A	2008-05-23	IN2008DN02281
WO2008/033134	A3	2008-05-08	WO200833134
WO2008/033134	A2	2008-03-20	WO200833134
AR055170	A1	2007-08-08	AR--55170
US20070062595	A1	2007-03-22	US20070062595

**Abstract**

(EP2061648)

Plastic pipes, such as high density polyethylene plastic pipes, useful for distributing natural gas and which have improved impact resistance and burst strength. The plastic pipe has an inner and an outer surface, with the inner surface defining a channel for conveying natural gas and the like. A fabric overlies the outer surface, preferably in a helical wrap. The fabric is formed of high tenacity polyolefin fibers, preferably polyethylene and/or polypropylene fibers. The fabric provides the pipe with improved burst strength and impact resistance. The pipe can be used to transport natural gas under low pressure or higher pressures.

Inventors

BHATNAGAR ASHOK

WAGNER LORI L

ARVIDSON BRIAN D

SWINGER TIMOTHY

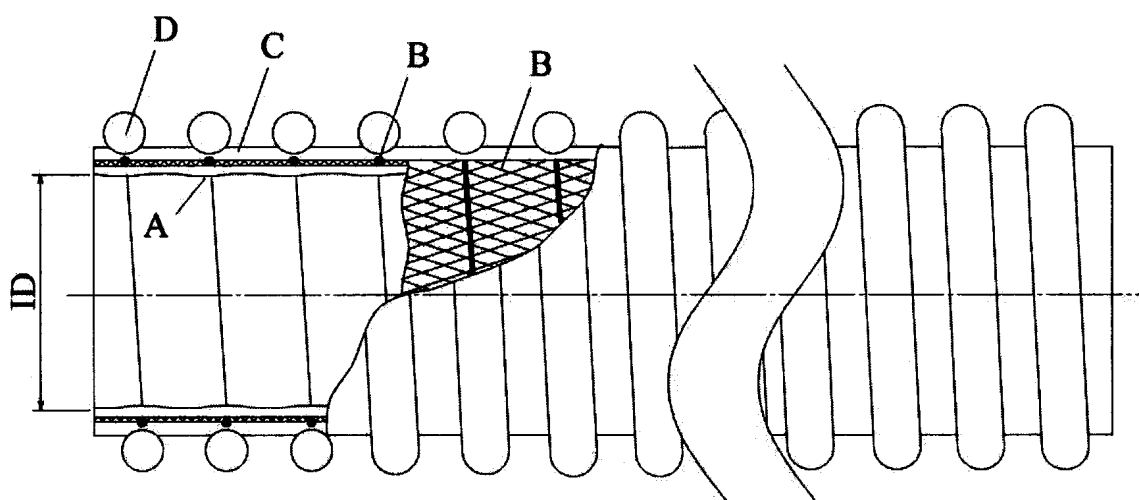
Latest standardized assignees - inventors removed

HONEYWELL INTERNATIONAL

Family 48/56 - FAMPAT - ©Questel

Title

(WO201778124)

Fiber composite hose**Images****Publication numbers with kind code & date**

[JPWO2017078124](#) A1 2018-08-23 JP2017078124W
[WO2017/078124](#) A1 2017-05-11 WO201778124

**Abstract**

(WO2017/078124)

[Problem] To decrease fluid pressure loss and decrease reduction of fluid flow by the hose inner surface having specific shapes of protrusions and recesses. Also, for weight reduction, to make the specific gravity of the thermoplastic resin configuring the hose to be 1.0 or less. To make the hose to have pressure resistance performance, abrasion resistance and durability. [Solution] A **fiber** composite hose that is obtained, in order from the hose inner circumferential surface, from a soft resin layer (A)/reinforcing **fiber** layer (B)/outer surface resin layer (C)/reinforcing hard core (D), and that satisfies all of conditions (1)-(3) below. (1) When expanded in the longitudinal direction of the hose, $5 \text{ mm} \leq X \leq 25 \text{ mm}$ when the repeating unit of the apices of the inner protrusions is X (mm). (2) When the depth of the depressions between the hose inner protrusions is Z (mm) and the hose internal diameter is ID (mm), $0.003 \leq Z/ID \leq 0.05$. (3) The specific gravity of the thermoplastic resins forming the soft resin layer (A) and the outer surface resin layer (C) is 1.0 or less.

Inventors

KIMURA, Naoya

HASEGAWA, Satoshi

FUJITA, Hiroaki

Latest standardized assignees - inventors removed

KURARAY PLASTICS

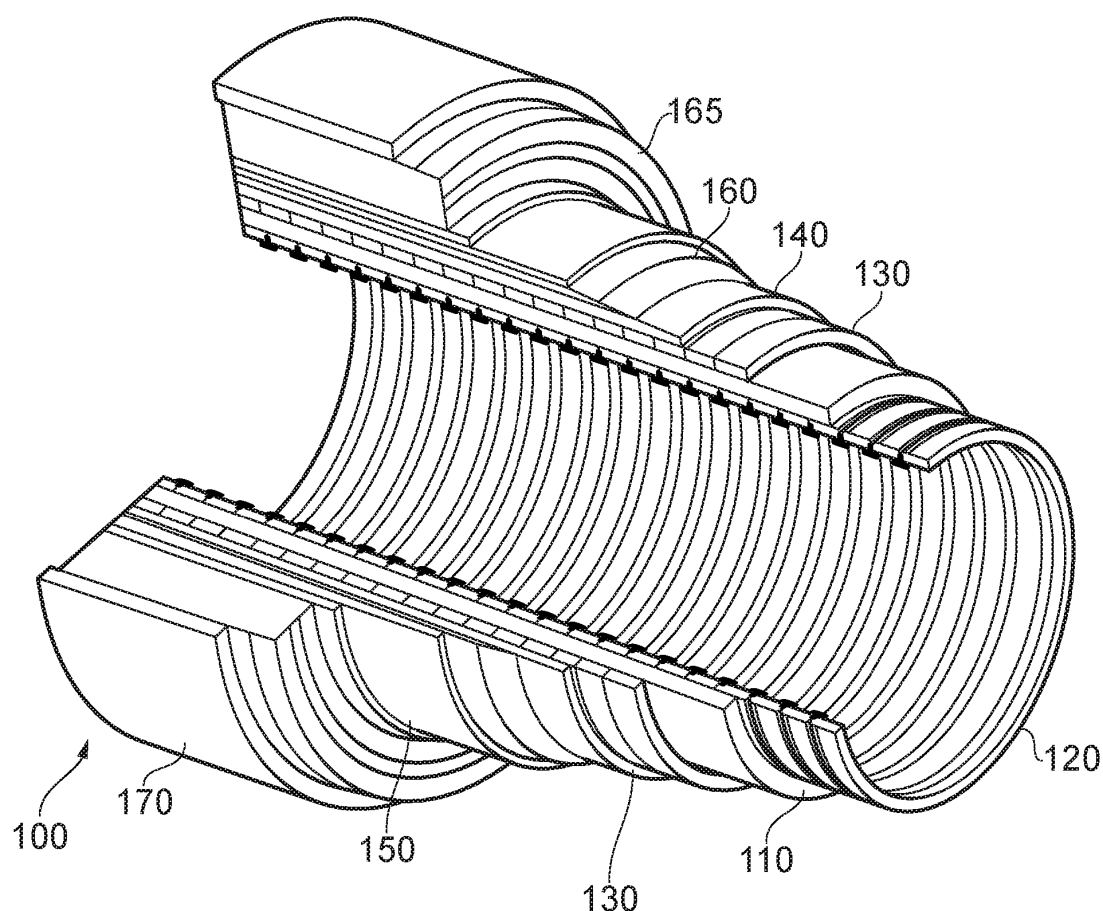
Family 49/56 - FAMPAT - ©Questel

Title

(EP3551355)

Immobilised insert

Images



Publication numbers with kind code & date

US20190316711	A1	2019-10-17	US20190316711
EP3551355	A1	2019-10-16	EP3551355
BR112019011451	A2	2019-10-15	BR112019011451
CN110035839	A	2019-07-19	CN110035839
WO2018/104707	A1	2018-06-14	WO2018104707
GB201620745	D0	2017-01-18	GB201620745



Abstract

(EP3551355)

A method and apparatus are disclosed. The method includes the steps of providing an elongate sheet having a uniform thickness and a first and further spaced apart long edge, to a first pair of a plurality of spaced apart pairs of opposed forming roller elements, and via the pairs of roller elements, progressively forming a cross-sectional profile in the sheet that comprises a body portion comprising a folded central region of the sheet and a first and further wing portion that each extend away from the body portion and terminate at a respective long edge of the sheet, and securing adjacent regions of the wing portions and/or opposed regions of the body portion together thereby providing a windable elongate tape element having laterally immobilised wing portions.

Inventors

SHIPPEN LEIGH
CLACK ASHLEY
LAMBERT DAVID
ARESH BALAJI

SNOWDON PAUL

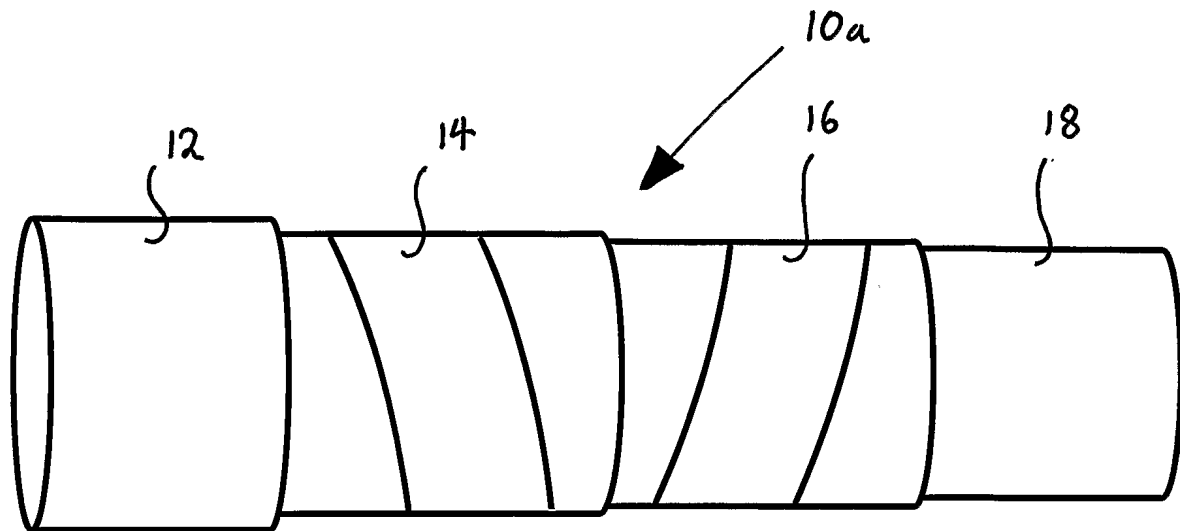
Latest standardized assignees - inventors removed

GE OIL & GAS

Family 50/56 - FAMPAT - ©Questel

Title

(EP1728016)

A composite **pipe** lining**Images****Publication numbers with kind code & date**

GB2426560	B	2009-10-14	GB2426560				
RU2367836	C2	2009-09-20	RU2367836				
KR100882495	B1	2009-02-06	KR100882495				
RU2006136785	A	2008-04-27	RU2006136785				
US20070267785	A1	2007-11-22	US20070267785				
BRPI0508885	A	2007-09-11	BR200508885				
CN1957198	A	2007-05-02	CN1957198				
GB2426560	A8	2006-12-21	GB2426560				
KR20060126621	A	2006-12-07	KR20060126621				
EP1728016	A2	2006-12-06	EP1728016				
GB2426560	A	2006-11-29	GB2426560				
GB0618710	D0	2006-11-08	GB200618710				
WO2005/090848	A3	2006-01-05	WO200590848				
AU2005224425	A1	2005-09-29	AU2005224425				
WO2005/090848	A2	2005-09-29	WO200590848				
GB0421508	D0	2004-10-27	GB200421508				
GB0418084	D0	2004-09-15	GB200418084				
GB0406084	D0	2004-04-21	GB200406084				

Abstract

(EP1728016)

A composite lining for a **pipe** comprising a structural layer for providing structural integrity and a containment layer for providing fluid impermeability. The structural layer comprising at least one strip of lining material arranged to form a substantially continuous lining within said **pipe**. A method for lining a **pipe** with said composite lining. A structure and method for testing the fluid integrity of said containment layer. Apparatus for installing said structural and containment layers in said **pipe**.

Inventors

BELLAMY NORMAN WEST

BELLAMY NEIL MICHAEL

Latest standardized assignees - inventors removed

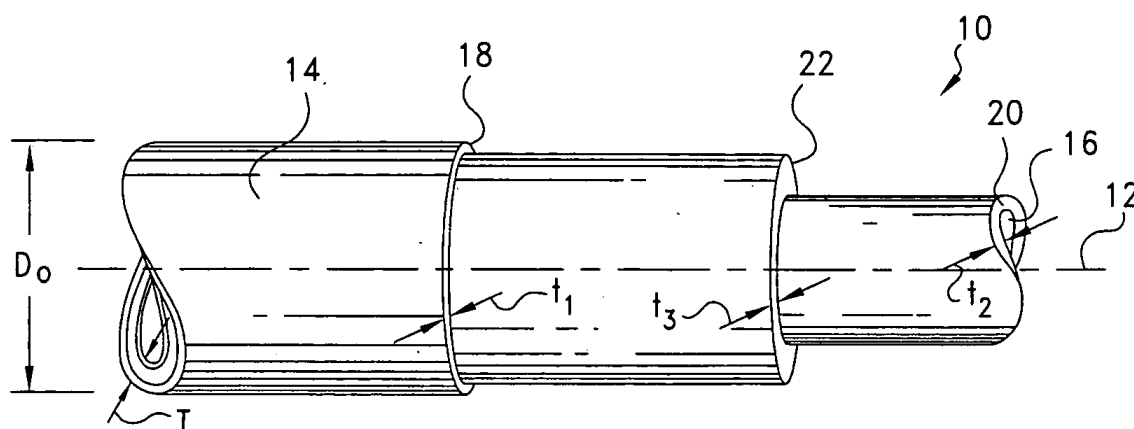
BELLAMY NORMAN W

Family 51/56 - FAMPAT - ©Questel

Title

(EP1565681)

Tubular polymeric composites for tubing and hose constructions

Images**Publication numbers with kind code & date**

DE60311592	T2	2007-11-15	DE60311592
DE60311592	D1	2007-03-22	DE60311592
EP1565681	B1	2007-01-31	EP1565681
EP1565681	A2	2005-08-24	EP1565681
WO2004/048086	A3	2004-08-26	WO200448086
US20040134555	A1	2004-07-15	US20040134555
AU2003287202	A1	2004-06-18	AU2003287202
AU2003287202	A8	2004-06-18	AU2003287202
WO2004/048086	A2	2004-06-10	WO200448086

**Abstract**

(EP1565681)

Multi-layer tubular polymeric composite for articles such as tubing and hoses. The composite may be formed of an innermost and an outermost layer, and at least one interlayer between the innermost and the outermost layer. The innermost and the outermost layer each may be bonded directly to one of the interlayers, and may be formed of a thermoplastic polymeric material which may be a polyamide. Each of the interlayers may be formed of a thermoplastic polymeric material which may be a polyester or copolyester, or a polyurethane.

Inventors

POWELL STEVEN M

MONER RONALD A

JOHNSTON JAMES L

GRECO JOHN R

MARTINO NICK A

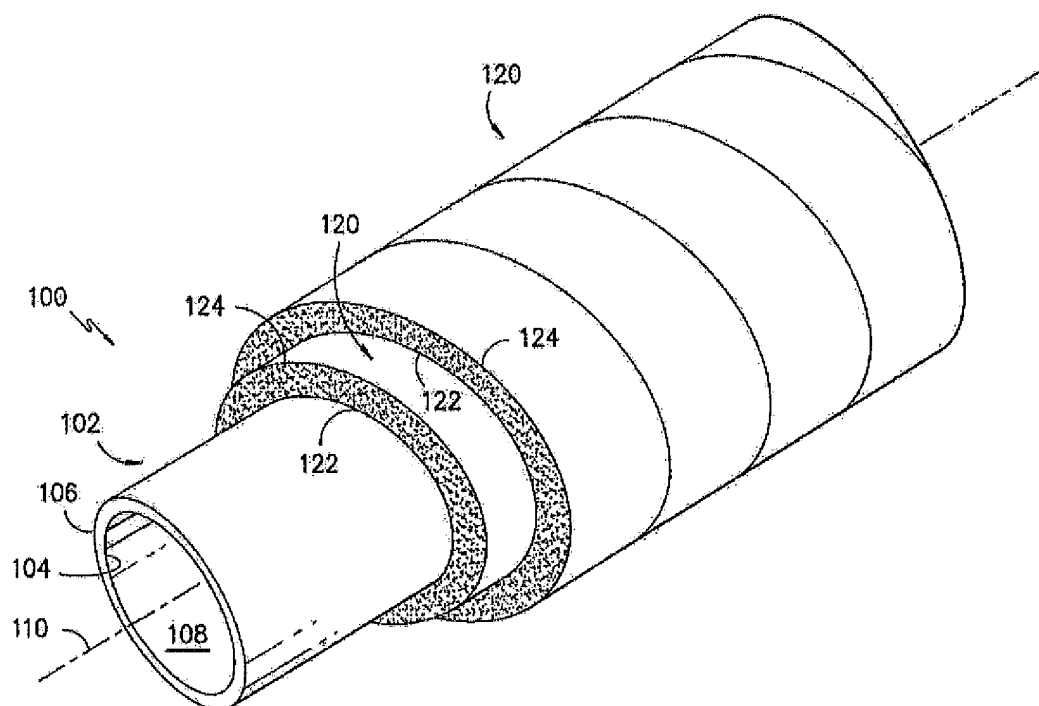
Latest standardized assignees - inventors removed

PARKER HANNIFIN

Family 52/56 - FAMPAT - ©Questel

Title

(EP2836553)

Pipe section having bonded composite barrier layer**Images****Publication numbers with kind code & date**

CN109504088	A	2019-03-22	CN109504088
JP6445424	B2	2018-12-26	JP6445424
JP2018035360	A	2018-03-08	JP2018035360
BR112014024555	A2	2017-08-08	BR112014024555
BR112014024555	A1	2017-06-06	BR112014024555
BR112014024687	A1	2017-03-07	BR112014024687
US20170058124	A1	2017-03-02	US20170058124
BR112014024691	A1	2017-01-31	BR112014024691
US9494260	B2	2016-11-15	US9494260
EP2836752	B1	2016-11-09	EP2836752
US9353893	B2	2016-05-31	US9353893
US20160109040	A1	2016-04-21	US20160109040
US9182056	B2	2015-11-10	US9182056
JP2015520826	A	2015-07-23	JP2015520826
JP2015515593	A	2015-05-28	JP2015515593
JP2015515594	A	2015-05-28	JP2015515594
JP2015514156	A	2015-05-18	JP2015514156
EP2836553	A2	2015-02-18	EP2836553
EP2836554	A2	2015-02-18	EP2836554
EP2836555	A2	2015-02-18	EP2836555
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Abstract

(EP2836553)

Pipe sections and methods for forming **pipe** sections are disclosed. A **pipe** section includes a hollow body formed from a metal material, the hollow body having an inner surface and an outer surface, the inner surface defining an interior. The **pipe** section further includes a barrier layer surrounding and bonded to the hollow body, the barrier layer having an inner surface and an outer surface. The barrier layer is formed from a continuous **fiber** reinforced thermoplastic material. Such **pipe** sections may be lightweight and **flexible** while exhibiting improved strength characteristics.

Inventors

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Latest standardized assignees - inventors removed

TICONA

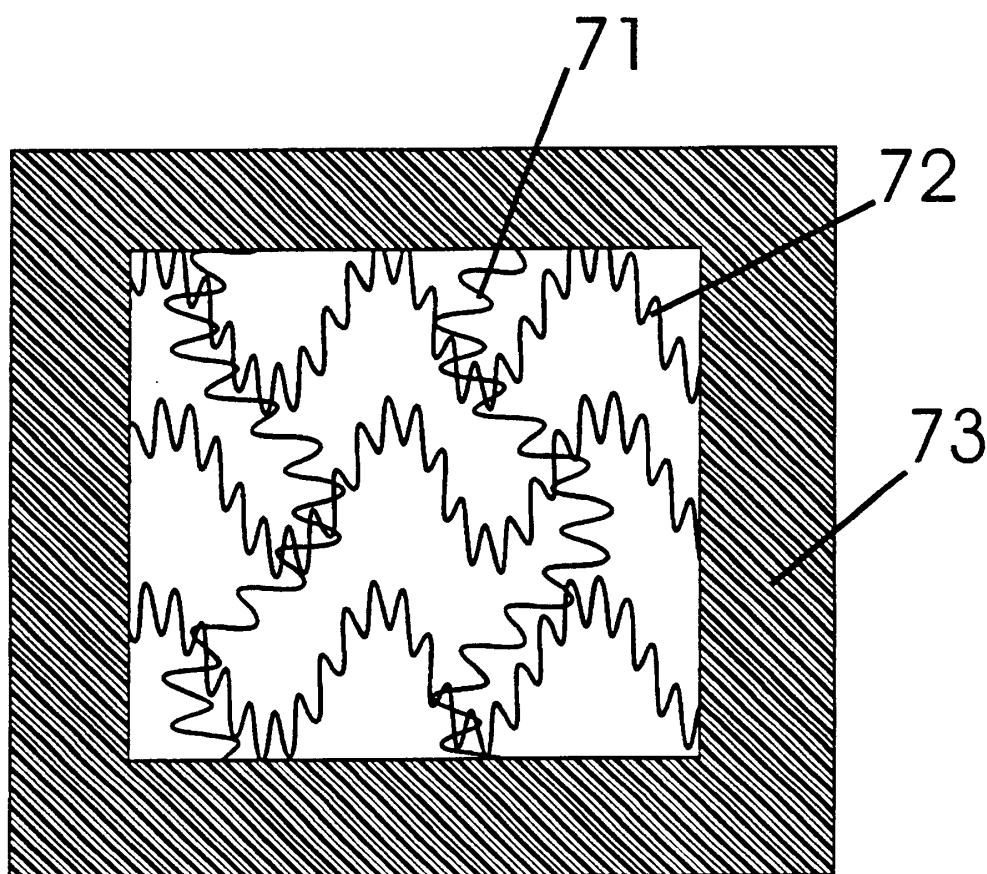
Family 53/56 - FAMPAT - ©Questel

Title

(EP1238129)

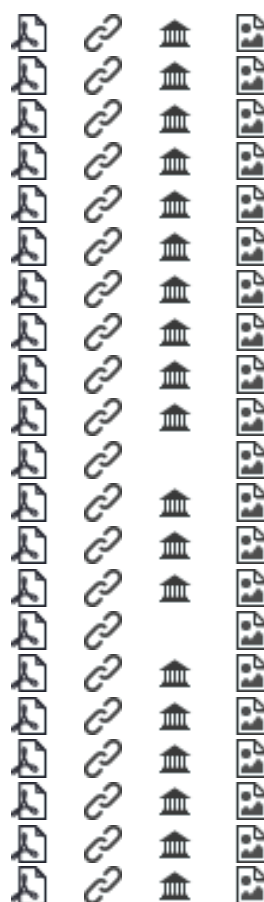
Woven composite fabric

Images



Publication numbers with kind code & date

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Abstract

(EP1238129)

As subject of the present invention, a woven composite fabric, comprising metal elements (51) and polymer elements (52) is provided. The metal elements (51) being metal wires, bundles of metal wires, metal strands or metal cords. According to the invention, the polymer elements (52) are polymer tapes, having a substantially rectangular cross-section.

Inventors

BRAEKEVELT GEERT

Latest standardized assignees - inventors removed

BEKAERT

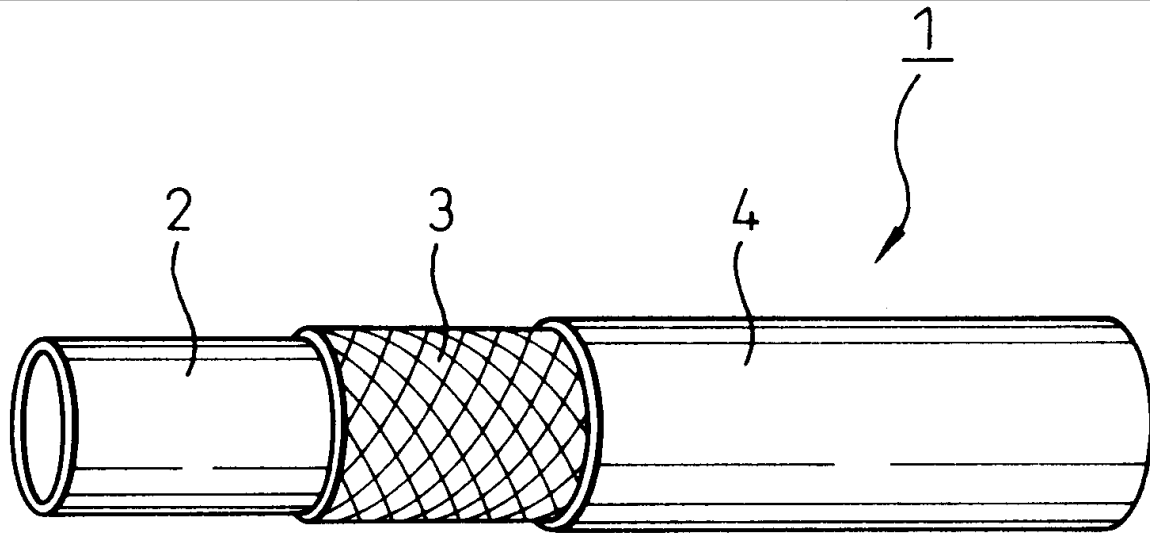
Family 54/56 - FAMPAT - ©Questel

Title

(EP-821035)

Thermoplastic elastomer composition, process for the preparation thereof, hose made by using the composition, and process for the production thereof

Images



Publication numbers with kind code & date

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Abstract

(EP0821035)

A thermoplastic elastomer composition which, when used for the inner tube and/or outer cover of a hose, can improve the hose flexibility at an ordinary temperature and low temperature, oil resistance, and cold resistance and can reduce the production costs since it does not require a vulcanization step and a hose having said properties using this elastomer composition for its inner tube and/or outer cover and a process and apparatus for the production thereof.

Inventors

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Latest standardized assignees - inventors removed

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Family 55/56 - FAMPAT - ©Questel

Title

(US3399979)

Process for producing metal nitride fibers, textiles and shapes

Publication numbers with kind code & date

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NL6701101	A	1967-07-25	NL6701101			
BE692904	A	1967-07-19	BE-692904			

Abstract

(US3399979)

1,177,782. Plutonium compounds. UNION CARBIDE CORP. 19 Jan., 1967 [24 Jan., 1966; 28 Jan., 1966; 19 Dec., 1966], No. 2870/67. Heading G6R. [Also in Division C1] Plutonium carbide fibres, textiles and shaped articles are obtained by (a) providing a preformed polymeric material; (b) swelling and opening the polymeric interstices of the material and introducing a plutonium compound therein; (c) drying the polymer; (d) heating at at least 250° C. so that the polymer is decomposed but retains its shape to obtain a carbonaceous relic containing plutonium or plutonium compound or intermediate compound; and (d) heating at 1000° to 2400° C. in a non-oxidizing atmosphere to form a plutonium carbide in the shape of the original polymer. The polymer may be immersed in a solution of the plutonium compound in a solvent, or solvent may be absorbed into the polymer before introducing the plutonium compound; water may be absorbed into the polymer and the polymer then immersed in a hydrolysable liquid plutonium compound. Water may be the solvent for cellulosic materials, e.g. rayon, regenerated cellulose film, cellulose acetate, cotton, wood and ramie, and for protein materials, e.g. wool and silk; esters and ketones may be used for polyvinyl and polyurethane polymers, aromatic alcohols and amines, nitrophenol, meta-cresol and paraphenyl phenol may be used for acrylic and polyester polymers.

(From GB1177782 A)

Inventors

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Latest standardized assignees - inventors removed

UNION CARBIDE

Family 56/56 - FAMPAT - ©Questel

Title

(US5908049)

Spoolable composite tubular member with energy conductors

Images

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Publication numbers with kind code & date

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US5908049	A	1999-06-01	US5908049



Abstract

(US5908049)

A composite tubular member having an outer generally cylindrical member containing fibers oriented to resist internal and external pressure and provide low bending stiffness, and two inner areas of axial **reinforcement** located near the neutral axis of the composite tubular members containing fibers oriented to provide high axial stiffness, high tensile strength and low bending stiffness; and fibers oriented to resist shear stress, positioned opposite each other within the walls of the outer member. These inner areas define a minor moment of inertia of bending extending diametrically through said inner areas and a major moment of inertia of bending generally orthogonal to said minor moment of inertia. Energy conductors integral

to the tubular member are arranged in a plane along the minor moment of inertia formed in the tubular member.

Inventors

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Latest standardized assignees - inventors removed

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