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(12) **EX PARTE REEXAMINATION CERTIFICATE** (10626th)
United States Patent
Torrance et al.

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(45) **Certificate Issued:** **Jun. 9, 2015**

(54) **TEAR CORD FOR JACKETED TUBE**

(76) Inventors: **Roy Torrance**, Houston, TX (US); **Jody James**, Pearland, TX (US)

Reexamination Request:

No. 90/020,065, Dec. 24, 2013

Reexamination Certificate for:

Patent No.: **7,581,565**
Issued: **Sep. 1, 2009**
Appl. No.: **12/178,246**
Filed: **Jul. 23, 2008**

(51) **Int. Cl.**

F16L 11/00 (2006.01)
F16L 9/147 (2006.01)
F16L 57/06 (2006.01)
F16L 59/16 (2006.01)
F16L 13/02 (2006.01)
H01B 7/04 (2006.01)
H01B 7/38 (2006.01)
G02B 6/44 (2006.01)

(52) **U.S. Cl.**

CPC **F16L 9/147** (2013.01); **F16L 13/0272** (2013.01); **H01B 7/046** (2013.01); **F16L 57/06** (2013.01); **H01B 7/385** (2013.01); **G02B 6/4459** (2013.01); **F16L 59/16** (2013.01)

(58) **Field of Classification Search**

None
See application file for complete search history.

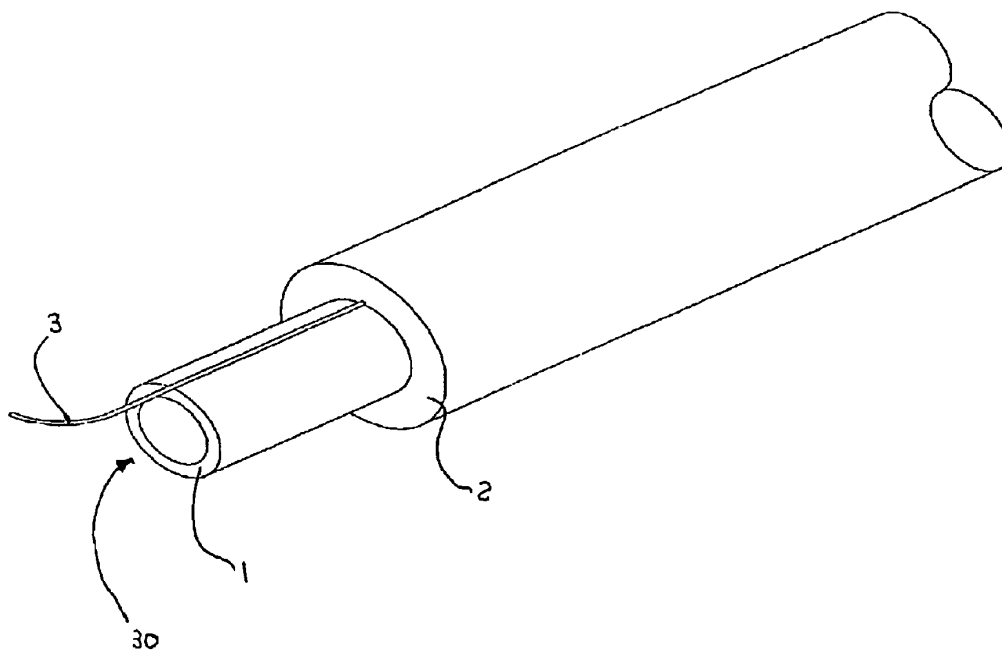
(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/020,065, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner — David O Reip

(57) **ABSTRACT**

The disclosure pertains to installing a tear cord between a metal tube and a protective jacket. The jacketed tubes may be used in a hydrocarbon production downhole well bore. The tubes may be used to furnish hydraulic fluid or chemicals into the well bore. The contents may be pressurized or under vacuum. The jacketed tubes are hermetically sealed. The tubes, which may be 1 inch in diameter, are joined using compression fittings. Tear cords are used to facilitate removal of the protective jacket without damage to the tube surface thereby facilitating the placement of compression fittings and maintaining the integrity of the tube wall.



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**EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307**

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claims 8, 16, 17, 21 and 23 are cancelled.

Claims 1-7, 9-15, 18-20 and 22 are determined to be patentable as amended.

Claim 24, dependent on an amended claim, is determined to be patentable.

New claim 25 is added and determined to be patentable.

1. A jacketed metal tube comprising a *metal tube*, a first protective jacket *adjoining and surrounding* [a smooth solid wall] *the metal tube*, [having an outer sealing surface and a tear cord between the inside diameter of said jacket and the outer surface of said tube whereby the tear cord can be] *and a tear cord positioned between the metal tube and the first protective jacket characterized wherein the protective jacketed metal tube is for use in downhole applications relating to hydrocarbon extraction, wherein the protective jacketed metal tube has a wall which is of hollow cylindrical shape and is smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids downhole, and in that the tear cord is positioned proximate to an outer surface of the metal tube and inside the diameter of the outer first protective jacket and is able to be pulled back to create a slit in the first protective jacket and to allow the first protective jacket to be separated from the metal tube without damage to the metal tube surface.*

2. A jacketed metal tube [comprising a first protective jacket surrounding a smooth solid wall metal tube, wherein the tube conveys hydraulic fluid, and a tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.] *of claim 1 wherein the tube is to convey hydraulic fluid.*

3. A jacketed metal tube [comprising a first protective jacket surrounding a smooth solid wall metal tube.] *of claim 1* wherein the tube conveys chemicals[, and a tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface].

4. The *jacketed* tube of claim 1 wherein the jacket comprises polyamide, polyethylene, ethylene chlorotrifluoroethylene or a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene.

5. The *jacketed* tube of claim 1 wherein the jacket comprises engineered thermoplastic vulcanates, perfluoroalkoxy, polyvinylidene fluoride or fluorinated ethylene propylene.

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6. The *jacketed* tube of claim 1 further comprising a tear cord made of poly-aramid fiber.

7. The *jacketed* tube of claim 1 wherein the solid wall metal tube comprises incoloy, stainless steel, carbon steel, or galvanized carbon steel.

9. The *jacketed* tube of claim 1 further comprising a tear cord made of metal.

10. [A] *The jacketed metal tube of claim 1 wherein [a first protective jacket surrounding a smooth solid wall metal tube, and a] the tear cord is helically wound around the tube [and the tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface].*

11. The *jacketed* tube claim 1 further comprising a tear cord placed at a selected location on a length of the tube.

12. A jacketed metal tube *of claim 1* further comprising one or more steel ropes within one or more protective jackets surrounding [a smooth solid wall] *the metal tube* and [a] *one or more tear [cord] cords wherein at least one tear cord is positioned next to each steel rope and metal tube wherein [the] each steel rope has the same axis of orientation as the metal tube and is positioned adjacent to the metal tube within the one or more protective [jacket] jackets whereby each tear cord can be pulled back to create a slit in the one or more protective [jacket] jackets and to allow the one or more protective [jacket] jackets to be separated from [the] each steel rope and metal tube without damage to the metal tube surface.*

13. The *jacketed metal tube* of claim 1 [further comprising a jacket of] *wherein the first protective jacket comprises one or more materials of a group consisting of polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride and fluorinated ethylene propylene, and wherein the material is extruded onto the metal tube without radiation curing.*

14. An encapsulated cable comprising a [first] protective jacket [surrounding] *in which the protective jacket surrounds a plurality of solid wall metal tubes, and [a plurality of tear cords with one tear cord located between the outside surface of each said tube and the inside diameter of said jacket whereby each tear cord is oriented longitudinally along the length of a tube,] wherein each metal tube has a parallel axis of orientation with the other tube or tubes and further [comprising] wherein the metal tubes comprise smooth metal walls [with sealing surfaces for attachment of compression fittings for performance in a negative or positive internal pressure environment] structured to be hermetically sealed, maintain a positive or negative pressure, and are structured for connection to hermetically sealing compression fittings and whereby [the] at least one tear [cord with one tear cord located] cords is positioned between the outside surface of [each said] at least one metal tube and the inside [diameter] of said protective jacket whereby [each] the at least one tear cord is oriented longitudinally along the length of [a] the at least one metal tube and whereby the at least one tear cord can be pulled back to create a slit in the protective jacket to allow the protective jacket to be separated from the at least one [or more] metal [tubes] tubes without damage to [a] the outside surface of the at least one metal tube [sealing surface].*

15. The *encapsulated cable* of claim 14 [further comprising] *wherein at least one of the metal tubes [containing] contains therein a fiber optic cable, electrical wire or data communication cable.*

18. A method of conveying [liquids] fluids into a well bore, the method comprising: i. placing [a tear cord adjacent to an

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outer sealing surface of a first spoolable,] a first outer protective jacket around a metal tube to form a jacketed tube which is spoolable, the metal tube having a wall which is of hollow cylindrical shape and is smooth, solid, [wall metal tube;] substantially straight, continuous, without break or interruption, capable of being hermetically sealed and suitable for connection to hermetically sealing compression fittings to convey fluids under positive or negative pressure downhole; ii. placing a [protective jacket around the metal tube and the] tear cord proximate to an outer surface of the metal tube and inside the first protective jacket; and iii. pulling the tear cord back to create a slit in the first protective jacket to allow the first protective jacket to be separated from the metal tube without damage to [a] the metal tube surface.

19. The method of claim 18 further comprising placing a second tear cord adjacent to the outer [diameter] surface of the first protective jacket and covering the first protective jacket with a second protective jacket.

20. The method of claim 18 [further comprising placing the tear cord on the outer surface of the tube at a selected location] wherein the first protective jacket comprises one or more materials of the group consisting of polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross link-

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ing ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride fluorinate ethylene propylene.

22. The tube of claim [8] 1 further comprising a second [inner jacket surrounding the tube and said second jacket positioned between the first protective jacket and said metal tube, and a first tear cord positioned between the inner diameter of the first jacket and the outer diameter of the second jacket and a second tear cord positioned between the inner diameter of the second jacket and the outer surface of the metal tube] protective jacket and a second tear cord, wherein the second protective jacket surrounds the first protective jacket, and the second tear cord is positioned between the outer diameter of the first protective jacket and the inner diameter of the second protective jacket.

25. The jacketed metal tube of claim 1 further comprising a plurality of substantially straight metal tubes with the same planar axis of orientation wherein at least one metal tube is surrounded by a second protective jacket, and wherein a second tear cord is located between the first protective jacket and the second protective jacket.

* * * * *



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/020,065	12/24/2013	7581565	SURP 13.01 REEX	1470
26328 7590 03/31/2015 LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270			EXAMINER REIP, DAVID OWEN	
			ART UNIT 3993	PAPER NUMBER
			MAIL DATE 03/31/2015	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/020,065.

PATENT NO. 7581565.

ART UNIT 3993.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Notice of Intent to Issue Ex Parte Reexamination Certificate	Control No. 90/020,065	Patent Under Reexamination 7581565	
	Examiner DAVID O. REIP	Art Unit 3993	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ Prosecution on the merits is (or remains) closed in this *ex parte* reexamination proceeding. This proceeding is subject to reopening at the initiative of the Office or upon petition. *Cf.* 37 CFR 1.313(a). A Certificate will be issued in view of
 - (a) ☒ Patent owner's communication(s) filed: 19 February 2015.
 - (b) ☐ Patent owner's failure to file an appropriate timely response to the Office action mailed: _____.
 - (c) ☐ Patent owner's failure to timely file an Appeal Brief (37 CFR 41.31).
 - (d) ☐ The decision on appeal by the ☐ Board of Patent Appeals and Interferences ☐ Court dated _____
 - (e) ☐ Other: _____.
2. The Reexamination Certificate will indicate the following:
 - (a) Change in the Specification: ☐ Yes ☒ No
 - (b) Change in the Drawing(s): ☐ Yes ☒ No
 - (c) Status of the Claim(s):
 - (1) Patent claim(s) confirmed: _____.
 - (2) Patent claim(s) amended (including dependent on amended claim(s)): 1-7,9-15,18-20,22 and 24
 - (3) Patent claim(s) canceled: 8,16,17,21 and 23.
 - (4) Newly presented claim(s) patentable: 25.
 - (5) Newly presented canceled claims: _____.
 - (6) Patent claim(s) ☐ previously ☐ currently disclaimed: _____
 - (7) Patent claim(s) not subject to reexamination: _____.
3. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
4. ☒ Note the attached statement of reasons for patentability and/or confirmation. Any comments considered necessary by patent owner regarding reasons for patentability and/or confirmation must be submitted promptly to avoid processing delays. Such submission(s) should be labeled: "Comments On Statement of Reasons for Patentability and/or Confirmation."
5. ☐ Note attached NOTICE OF REFERENCES CITED (PTO-892).
6. ☐ Note attached LIST OF REFERENCES CITED (PTO/SB/08 or PTO/SB/08 substitute).
7. ☐ The drawing correction request filed on _____ is: ☐ approved ☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
 - ☐ been received.
 - ☐ not been received.
 - ☐ been filed in Application No. _____.
 - ☐ been filed in reexamination Control No. _____.
 - ☐ been received by the International Bureau in PCT Application No. _____.

* Certified copies not received: _____.
9. ☒ Note attached Examiner's Amendment.
10. ☐ Note attached Interview Summary (PTO-474).
11. ☐ Other: _____.

All correspondence relating to this reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

cc: Requester (if third party requester)

The present application is being examined under the pre-AIA first to invent provisions.

Examiner's Amendment

In the claims filed by supplemental amendment on 2/19/15, the status identifier for claims 10, 19 and 22 is changed from "(Original)" to --(Amended) --.

STATEMENT OF REASONS FOR PATENTABILITY AND/OR CONFIRMATION

The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

Claim 1 as amended is patentable because the prior art of record fails to disclose or suggest a jacketed metal tube comprising, *inter alia*, a metal tube and a first protective jacket adjoining and surrounding the metal tube, and a tear cord positioned between the metal tube and the first protective jacket characterized wherein the protective jacketed metal tube is for use in downhole applications relating to hydrocarbon extraction, and wherein the metal tube is smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids. An embodiment of the separation layer 52 of Hurley '680 (applied under 102) "can be formed from [by] an armor layer, for example, a metal or dielectric layer that may be formed from one of more pieces" (col. 10, lines 47-50). Although separation layer 52 is shown in Fig. 4 as appearing to be a smooth walled, continuous and solid tube, there is

no disclosure or suggestion in Hurley '680 that separation layer 52 is structured to be "hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids" as recited in claim 1. Morgan '086 and Dupont '614 (both applied as base references under 103) are spirally wrapped tube bundles (thus not "substantially straight" as recited in claim 1 as amended). Further, as argued by patent owner, "spirally wrapping multiple tubes around a central core or axis...would require the tubes to be bent. Bending the tubes can alter or deform the tube circumference. The tubes, even if unwrapped from the spiral configuration, would likely be unsuitable for fitting the tube with a compression fitting" (PO 8/20/14 Remarks, p. 17). The examiner finds this argument persuasive.

Claims 2-7, 9-13, 22, 24 and 25 depend from claim 1 and are therefore patentable for at least the reason as discussed for claim 1.

Claim 14 as amended is patentable because the prior art of record fails to disclose or suggest an encapsulated cable comprising, *inter alia*, a protective jacket surrounding a plurality of solid wall metal tubes and at least one tear cord positioned between the outside surface of at least one metal tube and the inside of the protective jacket, and wherein each metal tube has a parallel axis of orientation with the other tube or tubes and further wherein the metal tubes comprise a smooth metal wall structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings. As discussed for claim 1, neither Hurley '680 nor Morgan '086 disclose or suggest an encapsulated cable having all the limitations as recited above.

Claim 15 depends from claim 14 and is therefore patentable for at least the reason as discussed for claim 14.

Claim 18 as amended is patentable because the prior art of record fails to disclose or suggest a method of conveying fluids into a well bore, the method comprising, inter alia: i) placing a first outer protective jacket around a metal tube to form a jacketed tube, the metal tube having a wall which of hollow cylindrical shape and is smooth, solid, substantially straight, continuous, without break or interruption, capable of being hermetically sealed and suitable for connection to hermetically sealing compression fittings to convey fluids under positive or negative pressure downhole; and ii) placing a tear cord proximate to an outer surface of the metal tube and inside the diameter of the first outer protective jacket. Applied reference Dupont '614 does not disclose or suggest a method having all the limitations as recited above.

Claims 19 and 20 depend from claim 18 and are therefore patentable for at least the reason as discussed for claim 18.

Any comments considered necessary by PATENT OWNER regarding the above statement must be submitted promptly to avoid processing delays. Such submission by the patent owner should be labeled: "Comments on Statement of Reasons for Patentability and/or Confirmation" and will be placed in the reexamination file.

Application/Control Number: 90/020,065
Art Unit: 3993

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Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Other useful telephone numbers:
Reexamination Practice

(571) 272-7703

Application/Control Number: 90/020,065

Page 6

Art Unit: 3993

Reexamination Facsimile Transmission No.

(571) 273-9900

/David O. Reip/
Patent Reexamination Specialist
Central Reexamination Unit
(571) 272-4702

Conferee /EDL/

Conferee /JGF/

Issue Classification 	Application/Control No. 90020065	Applicant(s)/Patent Under Reexamination 7581565	
	Examiner DAVID O REIP	Art Unit 3993	

CPC					
Symbol				Type	Version
F16L		9	147	F	2013-01-01
F16L		13	0272	A	2013-01-01
H01B		7	046	A	2013-01-01
F16L		57	06	I	2013-01-01
H01B		7	385	A	2013-01-01
G02B		6	4459	A	2013-01-01
F16L		59	16	I	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
		20	
(Assistant Examiner)	(Date)		
/DAVID O REIP/ Primary Examiner.Art Unit 3993	2/25/15	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 90020065	Applicant(s)/Patent Under Reexamination 7581565
	Examiner DAVID O REIP	Art Unit 3993

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION														
CLASS		SUBCLASS				CLAIMED					NON-CLAIMED									
138		110				F	1	6	L	11 / 00 (2006.01.01)										
CROSS REFERENCE(S)																				
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																			
138	127	131	139	149																
174	102R																			

NONE		Total Claims Allowed:	
		20	
(Assistant Examiner)	(Date)		
/DAVID O REIP/ Primary Examiner.Art Unit 3993	2/25/15	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Reexamination 	Application/Control No. 90/020,065	Applicant(s)/Patent Under Reexamination 7581565
	Certificate Date	Certificate Number C1

Requester Correspondence Address: ☐ Patent Owner ☒ Third Party
Haynes, Soloway P.C. 175 Canal Street Manchester, NH 03101

LITIGATION REVIEW ☒	DOR (examiner initials)	12/17/14 (date)
Case Name	Director Initials	
no litigation		

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TYPE OF PROCEEDING	NUMBER
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2.	
3.	
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BIB DATA SHEET

CONFIRMATION NO. 1470

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
90/020,065	12/24/2013	138	3993	SURP 13.01 REEX		
APPLICANTS INVENTORS 7581565, Residence Not Provided; ROY TORRANCE (INV), HOUSTON, TX; ROCKBESTOS SURPRENANT CABLE CORP. (3RD PTY REQ.), EAST GRANBY, CT; HAYNES, SOLOWAY PC, MANCHESTER, NH ** CONTINUING DATA ***** This application is a REX of 12/178,246 07/23/2008 PAT 7581565 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /DAVID OWEN REIP/ Acknowledged Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
					24	8
ADDRESS LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270 UNITED STATES						
TITLE TEAR CORD FOR JACKETED TUBE						
FILING FEE RECEIVED 12000	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees		
				☐ 1.16 Fees (Filing)		
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				☐ 1.18 Fees (Issue)		
				☐ Other _____		
				☐ Credit		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT EXAMINING OPERATION

Applicant:	§	
Roy Torrance et al.	§	Group Art Unit: 3993
	§	
Serial No. 90/020,065	§	Examiner: Reip, David
	§	
Filed: 12/24/2013	§	Dkt. No.: SURP 13.01 REEX
	§	
Confirmation No. 1470	§	

For: Tear cord for jacketed tube

INTERVIEW SUMMARY AND SUPPLEMENTAL AMENDMENT

Honorable Commissioner of Patents and Trademarks
Alexandria, Virginia

SIR:

This paper is presented in regard to the above Reexamination. This paper also contains an Interview Summary. The paper also comprises a supplemental amendment presenting amended claims.

INTERVIEW SUMMARY

An Interview was conducted in this proceeding on Monday, February 6, 2015. The Interview was conducted among David O. Reip, Eileen Lillis, USPTO Supervisory Examiner, and Jimmy Foster, all of the USPTO. Also in attendance for the Patent Owner was attorney David McEwing.

Discussed in the Interview were proposed amended claims. Claims 16, 17, 21, and 23 were cancelled. The claims (numbers 1 through 25) were deemed acceptable by the parties.

The accepted amended claims are contained within the Supplemental Amendment attached hereto at page 3.

IN THE CLAIMS

1. (Amended) A jacketed metal tube comprising a metal tube, a first protective jacket adjoining and surrounding [a smooth solid wall] the metal tube, and a tear cord positioned between the metal tube and the first protective jacket characterized wherein the protective jacketed metal tube is for use in downhole applications relating to hydrocarbon extraction, wherein the protective jacketed metal tube has a wall which is of hollow cylindrical shape and is smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids downhole, and in that the tear cord is positioned proximate to an outer surface of the metal tube and inside the diameter of the outer first protective jacket and is able to be [having an outer sealing surface and a tear cord between the inside diameter of said jacket and the outer surface of said tube whereby the tear cord can be] pulled back to create a slit in the first protective jacket and to allow the first protective jacket to be separated from the metal tube without damage to the metal tube surface.

2. (Amended) A jacketed metal tube of claim 1 wherein the tube is to convey hydraulic fluid. [comprising a first protective jacket surrounding a smooth solid wall metal tube, wherein the tube conveys hydraulic fluid, and a tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.]

3. (Amended) A jacketed metal tube of claim 1 [comprising a first protective jacket surrounding a smooth solid wall metal tube,] wherein the tube conveys chemicals. [,] [and a tear cord located between the inside diameter

of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.]

4. (Amended) The jacketed tube of claim 1 wherein the jacket comprises polyamide, polyethylene, ethylene chlorotrifluoroethylene or a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene.

5. (Amended) The jacketed tube of claim 1 wherein the jacket comprises engineered thermoplastic vulcanates, perfluoroalkoxy, polyvinylidene fluoride or fluorinated ethylene propylene.

6. (Amended) The jacketed tube of claim 1 further comprising a tear cord made of poly-aramid fiber.

7. (Amended) The jacketed tube of claim 1 wherein the solid wall metal tube comprises incoloy, stainless steel, carbon steel, or galvanized carbon steel.

8. (Cancelled without prejudice)

9. (Amended) The jacketed tube of claim 1 further comprising a tear cord made of metal.

10. (Original) The [A] jacketed metal tube of claim 1 wherein the [a first protective jacket surrounding a smooth solid wall metal tube, and a] tear cord is helically wound around the tube. [and the tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube

whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.]

11. (Amended) The jacketed tube of claim 1 further comprising a tear cord placed at a selected location on a length of the tube.

12. (Amended) A jacketed metal tube of claim 1 further comprising one or more steel ropes within one or more protective jackets surrounding the [a smooth solid wall] metal tube and one or more [a] tear cords wherein at least one tear cord is positioned next to each steel rope and metal tube wherein each steel [the] rope has the same axis of orientation as the metal tube and is positioned adjacent to the metal tube within the one or more protective jackets whereby each tear cord can be pulled back to create a slit in the one or more protective jackets and to allow the one or more protective jackets to be separated from each [the] steel rope and metal tube without damage to the metal tube surface.

13. (Amended) The jacketed metal tube of claim 1 wherein the first protective jacket comprises [further comprising a jacket of] one or more materials of a group consisting of polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride and fluorinated ethylene propylene, and wherein the material is extruded onto the metal tube without radiation curing.

14. (Amended) An encapsulated cable comprising a [first] protective jacket in which the protective jacket surrounds [surrounding] a plurality of solid wall metal tubes, and wherein [a plurality of tear cords with one tear cord located between the outside surface of each said tube and the inside

diameter of said jacket whereby each tear cord is oriented longitudinally along the length of a tube,] each metal tube has a parallel axis of orientation with the other tube or tubes and further wherein the metal tubes comprise [comprising] smooth metal walls structured to be hermetically sealed, maintain a positive or negative pressure, and are structured for connection to hermetically sealing compression fittings [with sealing surfaces for attachment of compression fittings for performance in a negative or positive internal pressure environment] and whereby at least one [the] tear cord[s] is positioned [with one tear cord located] between the outside surface of at least one [each said] metal tube and the inside [diameter] of said protective jacket whereby the at least one [each] tear cord is oriented longitudinally along the length of [a] the at least one metal tube and whereby the at least one tear cord can be pulled back to create a slit in the protective jacket to allow the protective jacket to be separated from the at least one [or more] metal tube[s] without damage to [a] the outside surface of the at least one metal tube [sealing surface].

15. (Amended) The encapsulated cable of claim 14 wherein [further comprising] at least one of the metal tubes contains therein [containing] a fiber optic cable, electrical wire or data communication cable.

16. (Cancelled without prejudice)

17. (Cancelled without prejudice)

18. (Amended) A method of conveying fluids [liquids] into a well bore, the method comprising: i. placing a first outer protective jacket around a metal tube to form a jacketed tube which is spoolable, the metal tube having a wall which is of hollow cylindrical shape and is [a tear cord adjacent to an outer sealing surface of a first spoolable,] smooth, solid, substantially

straight, continuous, without break or interruption, capable of being hermetically sealed and suitable for connection to hermetically sealing compression fittings to convey fluids under positive or negative pressure downhole; [wall metal tube;] ii. placing a [protective jacket around the metal tube and the] tear cord proximate to an outer surface of the metal tube and inside the first protective jacket; and iii. pulling the tear cord back to create a slit in the first protective jacket to allow the first protective jacket to be separated from the metal tube without damage to the [a] metal tube surface.

19. (Original) The method of claim 18 further comprising placing a second tear cord adjacent to the outer surface [diameter] of the first protective jacket and covering the first protective jacket with a second protective jacket.

20. (Amended) The method of claim 18 [further comprising] wherein the first protective jacket comprises one or more materials of the group consisting of polyethylene, ethylene chlorotrifluorethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride fluorinate ethylene propylene [placing the tear cord on the outer surface of the tube at a selected location].

21. (Cancel without prejudice)

22. (Original) The tube of claim [8] 1 further comprising a second protective jacket and a second tear cord, wherein the second protective jacket surrounds the first protective jacket, and the second tear cord is positioned between the outer diameter of the first protective jacket and the inner diameter of the second protective jacket [inner jacket surrounding the tube

and said second jacket positioned between the first protective jacket and said metal tube, and a first tear cord positioned between the inner diameter of the first jacket and the outer diameter of the second jacket and a second tear cord positioned between the inner diameter of the second jacket and the outer surface of the metal tube].

23. (Cancelled without prejudice.)

24. (Original) The jacketed metal tube of claim 1 further comprising a fiber optic cable, electrical wire or data communication cable.

25. (New) The jacketed metal tube of claim 1 further comprising a plurality of substantially straight metal tubes with the same planar axis of orientation wherein at least one metal tube is surrounded by a second protective jacket, and wherein a second tear cord is located between the first protective jacket and the second protective jacket.

90/020,065

Interview of February 6, 2015 and Supplemental Amendment to Reexamination mailed
May 21, 2014

Submitted this 19th day of February 2015

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CERTIFICATE OF TRANSMISSION

I certify under personal knowledge that the aforesaid Patent Owner's Interview Summary and Supplemental Response was submitted to the USPTO via the EFS Web system on February 19, 2015 and a copy submitted by regular United States Mail to Haynes, Soloway P.C., 175 Canal Street, Manchester, NH 03101 on February 19, 2015.

/davidmcewing/

David McEwing

Electronic Acknowledgement Receipt	
EFS ID:	21539459
Application Number:	90020065
International Application Number:	
Confirmation Number:	1470
Title of Invention:	TEAR CORD FOR JACKETED TUBE
First Named Inventor/Applicant Name:	7581565
Customer Number:	26328
Filer:	David Lee McEwing
Filer Authorized By:	
Attorney Docket Number:	SURP 13.01 REEX
Receipt Date:	19-FEB-2015
Filing Date:	24-DEC-2013
Time Stamp:	12:46:20
Application Type:	Reexam (Patent Owner)

Payment information:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Supplemental Response or Supplemental Amendment	Final_Supplemental_Amendment_02-19-15.pdf	82063 3942ac764f803719ea2167adeefade41a668ef6d	no	9

Warnings:

Information:

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/020,065	12/24/2013	7581565	SURP 13.01 REEX	1470
26328 7590 02/18/2015 LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270			EXAMINER REIP, DAVID OWEN	
			ART UNIT 3993	PAPER NUMBER
			MAIL DATE 02/18/2015	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
90/020,065	24 December, 2013	7581565	SURP 13.01 REEX

LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270		EXAMINER	
		DAVID O. REIP	
		ART UNIT	PAPER
		3993	20150206

DATE MAILED:

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Commissioner for Patents

PTO-90C (Rev.04-03)

Ex Parte Reexamination Interview Summary	Control No.	Patent Under Reexamination
	90/020,065	7581565
	Examiner	Art Unit
	DAVID O. REIP	3993
All participants (USPTO personnel, patent owner, patent owner's representative):		
(1) <u>David O. Reip - CRU</u>	(3) <u>Jimmy Foster - CRU</u>	
(2) <u>Eileen Lillis - CRU</u>	(4) <u>David McEwing - attorney for patent owner</u>	
Date of Interview: <u>06 February 2015</u> Type: a) ☒ Telephonic b) ☐ Video Conference c) ☐ Personal (copy given to: 1) ☐ patent owner 2) ☐ patent owner's representative) Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No. If Yes, brief description: _____ Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A. Any other agreement(s) are set forth below under "Description of the general nature of what was agreed to..." Claim(s) discussed: <u>1-25</u>. Identification of prior art discussed: _____. Description of the general nature of what was agreed to if an agreement was reached, or any other comments: <u>Beginning with the amendment to the claims filed 8/20/14, Examiner Reip proposed additional amendments to put the claims into patentable condition in order to move this proceeding to Reexamination Certificate. Mr. McEwing agreed with the additional amendments, and will file a supplemental amendment to incorporate the agreed to additional amendments to the claims.</u> (A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims patentable, if available, must be attached. Also, where no copy of the amendments that would render the claims patentable is available, a summary thereof must be attached.) A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION MUST INCLUDE PATENT OWNER'S STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. (See MPEP § 2281). IF A RESPONSE TO THE LAST OFFICE ACTION HAS ALREADY BEEN FILED, THEN PATENT OWNER IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO PROVIDE THE MANDATORY STATEMENT OF THE SUBSTANCE OF THE INTERVIEW (37 CFR 1.560(b)). THE REQUIREMENT FOR PATENT OWNER'S STATEMENT CAN NOT BE WAIVED. EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).		
/DOR/	/JGF/	/EDL/
cc: Requester (if third party requester)		

**REEXAMINATION TITLE REPORT (AKA PATENT ASSIGNMENT ABSTRACT
OF TITLE)**

TYPE OF REEXAMINATION: XX EX PARTE INTER PARTES

REEXAM CONTROL NO.: 90/020065

SERIAL NUMBER : 12/178246 FILING DATE: 12/24/13

PATENT NUMBER: 7,581,565 ISSUE DATE 09/01/2009

FIRST THREE INVENTORS' NAMES: Roy Torrance, Jody James

ET. AL?: XX YES NO

CONTINUITY DATA (IF ANY) :

X_ THIS IS (OR) A _CON _DIV, CIP, A _PROVISIONAL APPLICATION _ OTHER OF
SERIAL NUMBER , INTERNATIONAL FILED ON . STATUS: PATENTED WITH PATENT
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SERIAL NUMBER FILED ON STATUS: PATENTED, WITH PATENT NUMBER. AND SERIAL
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NUMBER.

ET AL

ASSIGNMENT RECORD DATA

THE ASSIGNMENT RECORDS REVEAL THAT THE TITLE REPORT APPEARS TO BE
VESTED IN:

XX INVENTOR: Houston, TX (US)

___ AS ENDORSED:

___ AS THE RECORD STANDS, THE PATENT WHEN GRANTED WILL ISSUE IN THE NAME OF THE INVENTOR(S)

___ LEGAL REPRESENTATIVE:

___ SECURITY ASSIGNMENT/LICENSEE (PLEASE NOTE THAT THE OWNERSHIP OF THE PATENT IS STILL REFLECTED IN THE ASSIGNOR. THE ASSIGNEE IN THIS CASE CANNOT OWN THE PATENT. (SEE ACCOMPANYING PAGES, IF ANY.)

___ WHEN THE ASSIGNMENT IS RECORDED, THE PATENT SHOULD BELONG TO:

___ OTHER: REEL NO: FRAME NO.: DATE RECORDED: // COMPANY NAME:
CITY AND STATE OR COUNTRY: .

___ NOTES/COMMENTS: Please see section 306 of the Manual of Patent Examining Procedure regarding the *Assignment of a Division, Continuation, Substitute, and Continuation-in-Part in Relation to Parent Application*.

EXAMINED UP TO AND INCLUDING THIS CERTIFICATE DATED AND SIGNED: **12/18/14**

LEGAL INSTRUMENTS EXMR., OFFICE OF PATENT LEGAL ADMIN., CENTRAL
REEXAMINATION UNIT

TO ANY PRINTERS: THE REEXAMINATION TITLE REPORT DOES NOT HAVE TO HAVE THE STREET ADDRESS OF THE OWNER(S). IF THERE IS ANY INQUIRY, PLEASE NOTIFY THE PERSON ABOVE.

Litigation Search Report CRU 3999

Reexam Control No. **90/020,065**

To: REIP, David
Location: Central Reexam Unit
Art Unit: 3993
Date: 12/17/14

Case Serial Number: 90/020,065

From: Monica A. Graves
Location: CRU 3999, MDE 4B31
Phone: (571) 272-7253

monica.graves@uspto.gov

Search Notes

Litigation search for U.S. Patent Number – 7,581,565

No Litigation Found

(See Attached)

- 1) I performed a KeyCite Search in Westlaw, which retrieves all history on the patent including any litigation.
- 2) I performed a search on the patent in Lexis CourtLink for any open dockets or closed cases.
- 3) I performed a search in Lexis in the Federal Courts and Administrative Materials databases for any cases found.
- 4) I performed a search in Lexis in the IP Journal and Periodicals database for any articles on the patent.
- 5) I performed a search in Lexis in the news databases for any articles about the patent or any articles about litigation on this patent.

KEYCITE**© US PAT 7581565 TEAR CORD FOR JACKETED TUBE, (Sep 01, 2009)****History****Direct History**

=> 1 **TEAR CORD FOR JACKETED TUBE**, US PAT 7581565, 2009 WL 2756635 (U.S. PTO Utility Sep 01, 2009)

Patent Family

- 2 JACKETED METAL TUBE FOR USE IN E.G. HYDROCARBON PRODUCTION DOWN-HOLE WELL BORE, HAS TEAR CORD PULLED BACK TO CREATE SLIT IN PROTECTIVE JACKET AND ALLOWING JACKET TO BE SEPARATED FROM TUBE THAT CONVEYS HYDRAULIC FLUID AND CHEMICALS, Derwent World Patents Legal 2009-N11053
- 3 METAL TUBE USED IN HYDROCARBON PRODUCTION DOWN HOLE ENVIRONMENT COMPRISES ENCAPSULATING PROTECTIVE JACKET AROUND SOLID WALL METAL TUBE AND MULTIPLE TEAR CORDS BETWEEN JACKET AND TUBE WHERE PANEL OF JACKET IS REMOVED AFTER PULLING THE CORDS, Derwent World Patents Legal 2010-B16666+

Patent Status Files

.. Request for Re-Examination, (OG DATE: Mar 11, 2014)

Prior Art (Coverage Begins 1976)

- © 5 BUFFER TUBES WITH IMPROVED FLEXIBILITY, US PAT 7346257 Assignee: Superior Essex Communications, LP, (U.S. PTO Utility 2008)
- © 6 CABLE OR CABLE COMPONENT COATED WITH A WATER SWELLABLE MATERIAL, US PAT APP 20030178222 (U.S. PTO Application 2003)
- © 7 CABLE WITH DUAL LAYER JACKET, US PAT 7276664 Assignee: Belden Technologies, Inc., (U.S. PTO Utility 2007)
- © 8 CABLE WITH DUAL LAYER JACKET, US PAT 6441308 Assignee: Cable Design Technologies, Inc., (U.S. PTO Utility 2002)
- © 9 CABLE WITH WIRE FOR SLITTING A PROTECTIVE SHEATH AND PROCESS OF MANUFACTURING SAME, US PAT 4237337 Assignee: Telefonaktiebolaget L M Ericsson, (U.S. PTO Utility 1980)
- © 10 COMPOSITE FIBER OPTIC AND ELECTRICAL CABLE AND ASSOCIATED FABRICATION METHOD, US PAT 5651081 Assignee: CommScope, Inc., (U.S. PTO Utility 1997)

- 11 COMPOSITE FIBER OPTIC AND ELECTRICAL CABLE AND ASSOCIATED FABRICATION METHOD, US PAT 5469523Assignee: CommScope, Inc., (U.S. PTO Utility 1995)
- 12 ELECTRIC CONDUCTOR ADAPTED FOR USE IN PROCESS INSTRUMENTATION, US PAT 4041237Assignee: Samuel Moore & Company, (U.S. PTO Utility 1977)
- 13 ELECTRICAL CABLE, US PAT 5481068Assignee: Raychem Limited, (U.S. PTO Utility 1996)
- 14 INSULATED CABLE WITH WIRE FOR SLITTING A PROTECTIVE SHEATH, US PAT 3748371Assignee: TELEFONAKTIEBOLAGET LM ERICSSON, (U.S. PTO Utility 1973)
- 15 MULTIPLE PARALLEL CONDUCTOR, US PAT 5962945Assignee: Alcatel, (U.S. PTO Utility 1999)
- 16 OPTICAL FIBRE CABLES, US PAT 4707074Assignee: Telephone Cables Limited, (U.S. PTO Utility 1987)
- 17 POLYPROPYLENE-POLYETHYLENE COPOLYMER BUFFER TUBES FOR OPTICAL FIBER CABLES AND METHOD FOR MAKING THE SAME, US PAT 5574816Assignee: Alcatel NA Cable Systems, Inc., (U.S. PTO Utility 1996)
- 18 RESHEATHABLE CABLE ARMOR, US PAT 6541706Assignee: Schlumberger Technology Corporation, (U.S. PTO Utility 2003)
- 19 ROBUST FIBER OPTIC CABLES, US PAT 6249629Assignee: Siecor Operations, LLC, (U.S. PTO Utility 2001)
- 20 STRENGTHENED BUFFERED OPTICAL FIBER, US PAT 4893893Assignee: American Telephone and Telegraph Co.,; AT&T Technologies, Inc., (U.S. PTO Utility 1990)
- 21 SYSTEM AND METHOD FOR IMPROVING CONNECTIVITY OF MULTIPLE PARALLEL CONNECTORS, US PAT APP 20040245010 (U.S. PTO Application 2004)
- 22 WATER-BLOCKED TELECOMMUNICATIONS CABLES, AND WATER-BLOCKING YARNS USEFULLY EMPLOYED IN SAME, US PAT 6500541Assignee: Fil-Tech, Inc., (U.S. PTO Utility 2002)
- 23 WIRE AND CABLE, US PAT 4096346Assignee: Samuel Moore and Company, (U.S. PTO Utility 1978)

90/020,065

Search Result List							
Patent	Class	Subclass	Description	Court	Docket Number	Filed	Date Retrieved

Total number of results: 0

Search Title	Patent Search 7581565 12/17/2014
Patent Number	7581565
Client Matter Code	t swann

178246 (12) 7581565 September 1, 2009

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

7581565

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September 1, 2009

Tear cord for jacketed tube

REEXAM-LITIGATE:

Reexamination requested December 24, 2013 by Rockbestos Surprenant Cable Corp., Todd A. Sullivan, Haynes Soloway, PC., Manchester, NH, Reexamination No. 90/020,065 (O.G. March 11, 2014) Ex. Gp.: 3993 December 24, 2013

INVENTOR: Torrance, Roy - 3607 Freshmeadows, Houston, Texas, United States of America (US), 77063, United States of America () ; James, Jody - 2620 Sleepy Hollow, Pearland, Texas, United States of America (US), 77581, United States of America ()

APPL-NO: 178246 (12)

FILED-DATE: July 23, 2008

GRANTED-DATE: September 1, 2009

PRIORITY: July 23, 2008 - 12178246, United States of America (US)

ASSIGNEE-AT-ISSUE:

TORRANCE ROY
JAMES JODY

LEGAL-REP: McEwing, David

PUB-TYPE: September 1, 2009 - Patent without a pre-grant publication (B1)

PUB-COUNTRY: United States of America (US)

LEGAL-STATUS:

April 15, 2013 - MAINTENANCE FEE REMINDER MAILED
April 29, 2013 - FEE PAYMENT
April 29, 2013 - SURCHARGE FOR LATE PAYMENT
April 15, 2013 - Maintenance Fee Reminder Mailed.
April 29, 2013 - Payment of Maintenance Fee, 4th Yr, Small Entity.
April 29, 2013 - Surcharge for late Payment, Small Entity.

FILING-LANG: English (EN) (ENG)

PUB-LANG: English (EN) (ENG)

US-MAIN-CL: 138# 110

US-ADDL-CL: 138#127, 138#131, 138#139, 138#149, 174#102.R

CL: 138, 174

SEARCH-FLD: 138#110, 138#149, 138#114, 138#116, 138#139, 138#131, 138#133, 138#127, 385#109, 385#108, 385#110, 174#102.R, 174#36

IPC-MAIN-CL: [8] F16L 011#00 (20060101) Advanced Inventive 20090901 (A F I B H US)

PRIM-EXMR: Brinson, Patrick F

REF-CITED:

3748371, July 24, 1973, Krook et al., United States of America (US)
4041237, August 9, 1977, Stine et al., United States of America (US)
4096346, June 20, 1978, Stine et al., United States of America (US)
4237337, December 2, 1980, Serrander, United States of America (US)
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4893893, January 16, 1990, Claxton et al., United States of America (US)
5469523, November 21, 1995, Blew et al., United States of America (US)
5481068, January 2, 1996, Norden, United States of America (US)
5574816, November 12, 1996, Yang et al., United States of America (US)
5651081, July 22, 1997, Blew et al., United States of America (US)
5962945, October 5, 1999, Krenzer et al., United States of America (US)
6249629, June 19, 2001, Bringuier, United States of America (US), 385#113
6441308, August 27, 2002, Dagnon, United States of America (US)
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7276664, October 2, 2007, Gagnon, United States of America (US)
7346257, March 18, 2008, Mumm et al., United States of America (US), 385#141
20030178222, September 25, 2003, Moore et al., United States of America (US), 174#120.R
20040245010, December 9, 2004, Bankes et al., United States of America (US)

CORE TERMS: tube, jacket, tubing, cord, tear, protective, wire, compression, disclosure, installed, fitting, cable, jacketed, fluid, steel, bore, fiber optic, downhole, encapsulating, electrical, chemicals, layer, blade, hermetically, hydrocarbon, ethylene, pertains, sealing, housing, fiber

ENGLISH-ABST:

The disclosure pertains to installing a tear cord between a metal tube and a protective jacket. The jacketed tubes may be used in a hydrocarbon production downhole well bore. The tubes may be used to furnish hydraulic fluid or chemicals into the well bore. The contents may be pressurized or under vacuum. The jacketed tubes are hermetically sealed. The tubes, which may be 1 inch in diameter, are joined using compression fittings. Tear cords are used to facilitate removal of the protective jacket without damage to the tube surface thereby facilitating the placement of compression fittings and maintaining the integrity of the tube wall.

NO-OF-CLAIMS: 24

EXMPL-CLAIM: 1

NO-OF-FIGURES: 5

NO-DRWNG-PP: 5

SUMMARY:

BACKGROUND TO THE DISCLOSURE

[0001]1. Field of Use

[0002]The disclosure pertains to tubes used in hydrocarbon production down hole environments.

[0003]2. Related Art

[0004]Tear cords incorporated with electrical wires and fiber optic cables are known. See for example U.S. Pat. No. 5,469,523.

SUMMARY OF DISCLOSURE

[0005]The disclosure pertains to installing a tear cord between a solid wall metal tube (hereinafter "tube") and a protective jacket. The jacketed tubes may be used in a hydrocarbon production downhole well bore or in gas or water injector downhole well bores.

DRWDESC:

SUMMARY OF DRAWINGS

[0006]The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate preferred embodiments of the invention. These drawings, together with the general description of the invention given above and the detailed description of the preferred embodiments given below, serve to explain the principles of the invention.

[0007]FIG. 1 illustrates a single tube with a protective jacket and tear cord.

[0008]FIG. 2 illustrates two tubes within a protective jacket.

[0009]FIG. 3 illustrates 3 tubes of two separate diameters. The two smaller diameter tubes have two separate jackets over an inner wire or fiber.

[0010]FIG. 4 illustrates a tear cord helically wound on a tube.

[0011]FIG. 5 illustrates a cable comprising twisted steel bumpers or stand protecting a jacketed tube with tear cords.

DETDESC:

DETAILED DESCRIPTION OF DISCLOSURE

[0012]The disclosure pertains to a tear cord used to conveniently and safely remove a protective jacket surrounding a solid wall metal tube. The combined jacket and tube may be used in downhole applications related to the production of hydrocarbons. This includes gas or water injector downhole well bores.

[0013]Referencing FIG. 1, the tubes **1** are jacketed in one or more layers **2** of hard thermoplastic rubber or similar toughened and inert material to protect the tube and contents from the heat and corrosive environment of a well bore. The jacket also provides protection during installation and other events that may occur during operation of the well. The tubing may be placed inside the well casing and outside the production pipe. The jacketed tubes may be spoolable.

[0014]The protective jackets are difficult and dangerous to cut or slit with a knife blade. This can also result in the outer tube sealing surface being nicked or gouged. Other methods use specialized tools such as an Encapsulation Stripping Tool manufactured by Tube Tec of Stonehaven, UK. The tool comprises rotating knife blades enclosed within a housing. The blades are mechanically controlled to not contact the metal tube. The tool may be manually operated or powered with air. Another tool for removing encapsulating protective jackets

is manufactured by AnTech of Exeter, UK. Both Tube Tec and AnTech supply tools with stands and hand cranks and are promoted as reducing injury to the operator stripping the encapsulation jacket.

[0015]The tube may comprise steel alloys such as but not limited to stainless steel, incoloy (an alloy comprising nickel-iron-chromium), duplex alloy, carbon steel, or galvanized carbon steel.

[0016]The tubing may vary in diameter from [one eighth] inch to in excess of 1 inch. The tube wall thickness may be between 0.016 inch (or smaller) to 0.083 inch. The tubing walls are smooth and solid. The tubing has an annular or duct-like structure **30** as illustrated in FIG. 1.

[0017]The tubing may be used to convey chemicals and hydraulic fluids. Examples of chemicals conveyed through the tubing include water based glycol mixture during the initial drilling phase. During the well production phase, hydrates and asphaltines are pumped to reduce paraffin build up. Other chemicals include low dosage hydrate inhibitors, methanol ethylene glycol, ethanol and propanol.

[0018]The contents of the tubing may be under pressure or vacuum. The tubing may also contain an electrical power, electronic data transmission or fiber optic lines.

[0019]The sealing surface of the tubing is of prime importance, i.e., the wall of the tubing is to be free from nicks and gouges. This type of damage can result from use of a knife or other sharp edge instrument to cut away the protective jacket. In addition, this work is frequently performed on the floor of a drill rig. There are stringent safety standards imposed in this work environment making use of a knife or other open blade tools problematic.

[0020]The outer surface of the tube is required to be free from nicks and gouges since the tube connections can be made using compression fittings. If a nick or gouge extends into the surface deeper than the compression achieved by the ferrule of the compression fitting, a leak pathway is created. Such a defect may result in the fitting being over tightened, resulting in further deformation of the tubing. For example, the tubing may pass through an equipment housing. The connection of the tubing with the housing will utilize a compression fitting. Deformation of the tubing surface may compromise the seal of the compression fitting intended to block fluids or contaminants from entering the housing even if the tubing wall is not breached.

[0021]Gouges and nicks may also penetrate the tube wall. For example, if the tube is conveying hydraulic fluid, there will be a pressure loss. If the tubing is conveying chemicals, there will be likely contamination of the product or well completion fluid.

[0022]In some applications, the encapsulating protective jacket needs to be cut away from the tubing metal surface to allow a connection to be made in the tubing. The tubing will be required to be hermetically sealed and requires the insertion of ferrules or sleeves as part of the mechanical connection hardware in direct contact with the metal tube surface. Therefore the integrity of the tubing diameter and good uniform sealing surface is important in making a hermetically sealed connection.

[0023]The proper handling and use of correct tools to remove the encapsulating jacket are important. Typically 6 to 12 inches of the jacket may be removed. However, on occasion, significantly greater lengths are removed, e.g., lengths in excess of 100 feet.

[0024]The encapsulating protective jacket may comprise polyamide (nylon) polyethylene, polypropylene, ethylene chlorotrifluoroethylene (Halar), engineering thermoplastic vulcanates (ETPV) or a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene (Santoprene). It may also comprise perfluoroalkoxy (Teflon PFA), polyvinylidene fluoride (PVDF) or fluorinated ethylene propylene (Teflon FEP) Polyetheretherketone (PEEK), or similar material.

[0025]For these and other reasons, this disclosure teaches use of a tear cord placed between the tube and the protective jacket. This allows the worker to pull back the tear cord and thereby create a slit in the jacket. With the jacket split to the desired length, i.e. for placement of a compression fitting, the worker can manually pull away the jacket. The jacket material that has been pulled off can be cut off using scissors, side cutter pliers, or other tools not containing an open blade.

[0026]Some tubing may be protected in an individual jacket and a group of such tubes then encased into a single outer jacket. This group may comprise 2 to 5 individual tubes. The group of tubes may be protected by

multiple jackets. The tubes may be of differing diameter. This outer jacket may be flat, i.e., the tubes are stacked one on top of the other, thereby minimizing the width that will be taken up in a well bore. (See for example FIG. 3.) Special tooling may be installed with the well casing or on the outer surface of the production tubing to create channels or pathways holding the tubing cable.

[0027] Referencing FIG. 1, the disclosure teaches placing a tear cord **3** adjacent to the tube **1** under the protective jacket **2**. Referencing FIG. 3, in one embodiment at least one tear cord **13**, **14**, **15** is placed between the outer flat jacket **12** and each individual tube **9**, **10**, **11**.

[0028] The tear cord (sometimes referred to as a rip cord), can be oriented along longitudinal axis of the tube or wound in a helical pattern around the tube. This helical winding pattern is illustrated in FIG. 4 and may be particularly useful for cable consisting of a single tube with a protective jacket. FIG. 4 illustrates the encapsulating protective jacket **42** surrounding the tube **43** and the tear cord **44** between the tube and the jacket. The helical pattern facilitates removal of the jacket. The angled slit created in the jacket provides an edge that can easily be pulled from the end around and away from the tubing.

[0029] The tear cord can be a metal wire or other strong material such as Kevlar, a poly-aramid synthetic fiber. A Kevlar fiber is advantageous since the multiple fiber strands compress flat against the tubing or inner jacket, thereby not distorting the circumference of the outer jacket.

[0030] An advantage of a metal wire used as a tear cord is that the wire can be heated, thereby softening the jacket material to facilitate tearing the wire through the softened jacket. It will be appreciated that the jacket material needs to plasticize so that it can be sheared with the wire at a temperature below the melting point of the metal wire. This method may advantageously use an inner jacket to shield the tubing from heat.

[0031] In another embodiment, the tear cord is installed between the tube(s) and the protective jacket in selected locations in contrast to continuously along the length of the cable. This saves the cost and weight of materials that are not needed. For example, a tear cord may be installed in the first 100 feet and last 100 feet of a length of cable installed in between the well casing and the production tubing. The manufacturing process could mark the outside of the protective jacket to indicate the presence of a tear cord. This could be as simple as a painted line.

[0032] The use of hermetically sealing compression fittings allows the interior of the tube to maintain a positive atmosphere and thereby retard the infiltration of contaminants or fluid. Such contaminants or fluid may interfere with the signal or conductivity of a fiber optic or electrical wire.

[0033] FIG. 1 illustrates a single tube **1** with a protective jacket. The jacket **2** is illustrated. Also illustrated is the tear cord **3** which is installed between the jacket and the tube.

[0034] FIG. 2 illustrates a pair of tubes **4**, **5** encased by a single jacket **6**. There are two tear cords **7**, **8**. Each tear cord is associated with a single tube.

[0035] FIG. 3 illustrates a 3 tube flat pack. The tubes **9**, **10**, **11**, are encased in a rectangular jacket **12**. There are individual tear cords **13**, **14**, **15** installed between each tube **9**, **10**, **11** and the surrounding jacket **12**. One tube **11** is protected by two separate jackets **12**, **23**. In this embodiment, separate tear cords **15**, **22** are installed for each jacket layer.

[0036] Continuing with FIG. 3, the inner coverings within the smaller diameter tubes **9**, **10** can provide mechanical support **16** and the innermost layer providing electrical insulation **18** for the wire or fiber optic cable **20**, **21**. These additional layers may be, for example, foam, or polyethylene or polypropylene. As indicated, the inner fiber may be a fiber optic cable or it may be a wire carrying electrical power or a data transmission line.

[0037] FIG. 4 illustrates a single tube **43** with a tear cord **44** wound helically beneath a protective jacket **42**. It will be appreciated that the helically wound embodiment would work with other tube and jacketing configurations, including the double tube configuration illustrated in FIG. 2 and the triple tube configuration of FIG. 3.

[0038] FIG. 5 illustrates 2 jacketed tubes **33**, **34** combined with two strands of steel rope or strand **31**, **32**. The steel rope may be dimensioned to provide protection to the tube against crushing forces as well as weight

support of the tube in a vertical downhole environment. Also illustrated are tear cords **38, 39, 40, 41** installed adjacent to the tube and to each steel rope. Also illustrated one tube **34** containing a wire or fiber optic cable surrounded by insulation **36** and structural support **35**. It will be appreciated that both layers, installed inside the tube, may act as insulators.

[0039] In addition, this specification is to be construed as illustrative only and is for the purpose of teaching those skilled in the art the manner of carrying out the invention. It is to be understood that the forms of the invention herein shown and described are to be taken as the presently preferred embodiments. As already stated, various changes may be made in the shape, size and arrangement of components or adjustments made in the steps of the method without departing from the scope of this invention. For example, equivalent elements may be substituted for those illustrated and described herein and certain features of the invention may be utilized independently of the use of other features, all as would be apparent to one skilled in the art after having the benefit of this description of the invention.

[0040] While specific embodiments have been illustrated and described, numerous modifications are possible without departing from the spirit of the invention, and the scope of protection is only limited by the scope of the accompanying claims.

ENGLISH-CLAIMS:

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The invention claimed is:

1. A jacketed metal tube comprising a first protective jacket surrounding a smooth solid wall metal tube having an outer sealing surface and a tear cord between the inside diameter of said jacket and the outer surface of said tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.
2. A jacketed metal tube comprising a first protective jacket surrounding a smooth solid wall metal tube, wherein the tube conveys hydraulic fluid, and a tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.
3. A jacketed metal tube comprising a first protective jacket surrounding a smooth solid wall metal tube, wherein the tube conveys chemicals, and a tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.
4. The tube of claim 1 wherein the jacket comprises polyamide, polyethylene, ethylene chlorotrifluoroethylene or a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene.
5. The tube of claim 1 wherein the jacket comprises engineered thermoplastic vulcanates, perfluoroalkoxy, polyvinylidene fluoride or fluorinated ethylene propylene.
6. The tube of claim 1 further comprising a tear cord made of poly-aramid fiber.
7. The tube of claim 1 wherein the solid wall metal tube comprises incoloy, stainless steel, carbon steel, or galvanized carbon steel.
8. The tube of claim 1 further comprising a second inner jacket surrounding the tube wherein the second jacket is located between the outer surface of the tube and the inner diameter of the first jacket.
9. The tube of claim 1 further comprising a tear cord made of metal.
10. A jacketed metal tube wherein a first protective jacket surrounding a smooth solid wall metal tube, and a tear cord is helically wound around the tube and the tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to

the metal tube surface.

11. The tube of claim 1 further comprising a tear cord placed at a selected location on a length of the tube.

12. A jacketed metal tube comprising one or more steel ropes within one or more protective jackets surrounding a smooth solid wall tube and a tear cord is positioned next to each steel rope and tube wherein the rope has the same axis of orientation as the tube and is positioned adjacent to the tube within the jacket whereby each tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the steel rope and metal tube without damage to the metal tube surface.

13. The tube of claim 1 further comprising a jacket of one or more materials of a group consisting of polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride and fluorinated ethylene propylene wherein the material is extruded onto the tube without radiation curing.

14. An encapsulated cable comprising a first protective jacket surrounding a plurality of solid wall metal tubes, and a plurality of tear cords with one tear cord located between the outside surface of each said tube and the inside diameter of said jacket whereby each tear cord is oriented longitudinally along the length of a tube, each tube further comprising smooth walls with sealing surfaces for attachment of compression fittings for performance in a negative or positive internal pressure environment and whereby the tear cord can be pulled back to create a slit in the protective jacket to allow the protective jacket to be separated from one or more metal tubes without damage to a metal tube sealing surface.

15. The cable of claim 14 further comprising at least one tube containing a fiber optic cable, electrical wire or data communication cable.

16. The cable of claim 14 further comprising at least one tube suitable for installation of compression fittings to convey hydraulic fluid.

17. The cable of claim 14 further comprising at least one tube suitable for installation of compression fittings to convey chemicals.

18. A method of conveying liquids into a well bore comprising:

- -
 - i. placing a tear cord adjacent to an outer sealing surface of a first spoolable, smooth, solid wall metal tube;
- -
 - ii. placing a protective jacket around the metal tube and the tear cord; and
- -
 - iii. pulling the tear cord back to create a slit in the protective jacket to allow the protective jacket to be separated from the metal tube without damage to a metal tube surface.

19. The method of claim 18 further comprising placing a second tear cord adjacent to the outer diameter of the protective jacket and covering the first jacket with a second jacket.

20. The method of claim 18 further comprising placing the tear cord on the outer surface of the tube at a selected location.

21. A cable comprising a first encapsulating protective jacket surrounding at least one solid wall metal tube, and at least one tear cord between the said tube and the jacket whereby the tear cord can be pulled back to create a slit in the protective jacket to allow the protective jacket to be separated from one or more metal tubes without damage to a metal tube surface and the cable further comprising at least one compression fitting.

22. The tube of claim 8 further comprising a second inner jacket surrounding the tube and said second jacket

positioned between the first protective jacket and said metal tube, and a first tear cord positioned between the inner diameter of the first jacket and the outer diameter of the second jacket and a second tear cord positioned between the inner diameter of the second jacket and the outer surface of the metal tube.

23. The method of claim 18 further comprising jacketing the metal tube and tear cord with polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride or fluorinated ethylene propylene.

24. The jacketed metal tube of claim 1 further comprising a fiber optic cable, electrical wire or data communication cable.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT EXAMINING OPERATION

Applicant:	§	
Roy Torrance et al.	§	Group Art Unit: 3993
	§	
Serial No. 90/020,065	§	Examiner: Reip, David
	§	
Filed: 12/24/2013	§	Dkt. No.: SURP 13.01 REEX
	§	
Confirmation No. 1470	§	

For: Tear cord for jacketed tube

RESPONSE TO FIRST OFFICE ACTION IN REEXAMINATION

Honorable Commissioner of Patents and Trademarks
Alexandria, Virginia

SIR:

This paper is presented in response to the Office Action mailed May 21, 2014. Claims 1 through 24 have been rejected. Claims 1, 4, 5, 11, 13 and 24 have been rejected as anticipated under pre-AIA 35 U.S.C. 102 by US Patent 7,113,680 issued to Hurley et al. Claims 1-5, 8, 10-17, 21 and 22 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 3,526,086 to Morgan in view of U.S. Pat. No. 5,557,698 to Gareis et al. Claims 6 and 9 are rejected under pre-AIA 35 U.S.C. 103(a) as unpatentable over Morgan '086 in view of Gareis '698 and further in view of No. 6, 236,790 to Okada et al. Further, claims 1, 7, 18-20, 23 and 24 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over 6,472,614 to Dupont et al in view of Gareis '698.

IN THE CLAIMS

1. (Amended) A jacketed metal tube comprising a metal tube, an outer first protective jacket adjoining and surrounding [a smooth solid wall] the metal tube, and a tear cord positioned between the metal tube and the outer protective jacket characterized wherein the protective jacketed metal tube is for use in downhole applications relating to hydrocarbon extraction, wherein the protective jacketed metal tube has a wall which is of hollow cylindrical shape and is smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids downhole, and in that the tear cord is positioned proximate to an outer surface of the metal tube and inside the diameter of the outer first protective jacket and is able to be [having an outer sealing surface and a tear cord between the inside diameter of said jacket and the outer surface of said tube whereby the tear cord can be] pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.

2. (Amended) A jacketed metal tube of claim 1 wherein the tube is to convey hydraulic fluid. [comprising a first protective jacket surrounding a smooth solid wall metal tube, wherein the tube conveys hydraulic fluid, and a tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.]

3. (Amended) A jacketed metal tube of claim 1 [comprising a first protective jacket surrounding a smooth solid wall metal tube,] wherein the tube conveys chemicals. [,] [and a tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to

be separated from the metal tube without damage to the metal tube surface.]

4. (Amended) The jacketed tube of claim 1 wherein the jacket comprises polyamide, polyethylene, ethylene chlorotrifluoroethylene or a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene.

5. (Amended) The jacketed tube of claim 1 wherein the jacket comprises engineered thermoplastic vulcanates, perfluoroalkoxy, polyvinylidene fluoride or fluorinated ethylene propylene.

6. (Amended) The jacketed tube of claim 1 further comprising a tear cord made of poly-aramid fiber.

7. (Amended) The jacketed tube of claim 1 wherein the solid wall metal tube comprises incoloy, stainless steel, carbon steel, or galvanized carbon steel.

8. (Cancelled without prejudice)

9. (Amended) The jacketed tube of claim 1 further comprising a tear cord made of metal.

10. (Original) A jacketed metal tube wherein a first protective jacket surrounding a smooth solid wall metal tube, and a tear cord is helically wound around the tube and the tear cord located between the inside diameter of the jacket and an outer sealing surface of the tube whereby the tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.

11. (Amended) The jacketed tube of claim 1 further comprising a tear cord placed at a selected location on a length of the tube.

12. (Amended) A jacketed metal tube of claim 1 comprising one or more steel ropes within one or more protective jackets surrounding a smooth solid wall metal tube and a tear cord wherein the tear cord is positioned next to each steel rope and metal tube wherein the rope has the same axis of orientation as the metal tube and is positioned adjacent to the metal tube within the protective jacket whereby each tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the steel rope and metal tube without damage to the metal tube surface.

13. (Amended) The jacketed tube of claim 1 further comprising a jacket of one or more materials of a group consisting of polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride and fluorinated ethylene propylene wherein the material is extruded onto the tube without radiation curing.

14. (Amended) The jacketed metal tube in which the [An encapsulated cable comprising a first] protective jacket surrounds [surrounding] a plurality of solid wall metal tubes, and wherein [a plurality of tear cords with one tear cord located between the outside surface of each said tube and the inside diameter of said jacket whereby each tear cord is oriented longitudinally along the length of a tube,] each metal tube has a parallel axis of orientation with the other tube or tubes and further wherein the metal tubes comprise [comprising] a smooth metal wall [walls] structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings [with sealing surfaces for attachment of compression fittings for performance in a negative or positive internal pressure environment] and whereby a plurality of [the] tear cords are positioned with one tear cord located between the outside surface of each said metal tube and the inside [diameter] of said protective jacket whereby each tear cord is oriented longitudinally along the

length of [a] the metal tube and whereby the tear cord can be pulled back to create a slit in the protective jacket to allow the protective jacket to be separated from one or more metal tubes without damage to [a] the outside surface of each metal tube [sealing surface].

15. (Amended) The jacketed cable of claim 14 further comprising at least one tube containing a fiber optic cable, electrical wire or data communication cable.

16. (Amended) The cable of claim 14 further comprising at least one tube suitable for installation of compression fittings [to convey hydraulic fluid].

17. (Cancelled without prejudice)

18. (Amended) A method of conveying fluids [liquids] into a well bore, the method comprising: i. placing an outer protective jacket around a metal tube to form a jacketed tube which is spoolable, the metal tube having a wall which is of hollow cylindrical shape and is [a tear cord adjacent to an outer sealing surface of a first spoolable,] smooth, solid, substantially straight, continuous, without break or interruption, capable of being hermetically sealed and suitable for connection to hermetically sealing compression fittings to convey fluids under positive or negative pressure downhole; [wall metal tube;] ii. placing a [protective jacket around the metal tube and the] tear cord proximate to an outer surface of the metal tube and inside the diameter of the outer protective jacket; and iii. pulling the tear cord back to create a slit in the outer protective jacket to allow the outer protective jacket to be separated from the metal tube without damage to a metal tube surface.

19. (Original) The method of claim 18 further comprising placing a second tear cord adjacent to the outer diameter of the protective jacket and covering the first jacket with a second jacket.

20. (Amended) The method of claim 18 further comprising jacketing the metal tube and tear cord with polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride fluorinate ethylene propylene [placing the tear cord on the outer surface of the tube at a selected location].

21. (Amended) A cable comprising a first encapsulating protective jacket surrounding at least one substantially straight solid wall metal tube, and at least one tear cord between the said tube and the jacket whereby the tear cord can be pulled back to create a slit in the protective jacket to allow the protective jacket to be separated from one or more metal tubes without damage to a metal tube surface structured to maintain a positive or negative pressure [and the cable further comprising at least one compression fitting].

22. (Original) The tube of claim [8] 1 further comprising a second inner jacket surrounding the tube and said second jacket positioned between the first protective jacket and said metal tube, and a first tear cord positioned between the inner diameter of the first jacket and the outer diameter of the second jacket and a second tear cord positioned between the inner diameter of the second jacket and the outer surface of the metal tube.

23. (Original) The method of claim 18 further comprising jacketing the metal tube and tear cord with polyethylene, ethylene chlorotrifluoroethylene, a thermoplastic elastomer cross linking ethylene propylene diene monomer rubber and polypropylene, perfluoroalkoxy, polyvinylidene fluoride or fluorinated ethylene propylene.

24. (Original) The jacketed metal tube of claim 1 further comprising a fiber optic cable, electrical wire or data communication cable.

25. (New) A jacketed metal tube of claim 1 comprising a plurality of substantially straight metal tubes with the same planar axis of orientation wherein at least 1 tube is surrounded by separate protective first jackets and a tear cord is positioned between each first metal tube and the protective first jacket and further comprising a protective second jacket surrounding the first jacketed metal tubes wherein each jacketed tube contains a second tear cord between the outer diameter of the first jacket and inside the second outer protective jacket.

REMARKS

AMENDMENT OF CLAIMS

The Patent Owner has amended claims 1 through 7, 9, 11 through 16 and 18 through 21. Claim 25 is new. Claims 8 and 17 have been cancelled without prejudice. Each amendment and its support under the original specification is discussed below.

Specifically the Patent Owner has amended claim 1. The purpose of this amendment is to clearly state the limitations of the smooth solid wall metal tube as described in the specification of Torrance '565.

The amendments, which are specified as required by 37 CFR 1.550, MPEP 2266.03, are as follows:

Claim 1, A jacketed metal tube comprising a tube, an outer jacket adjoining and surrounding metal tube Figure 1 and Figure 3. Col. 1, line 41-45. The Detailed Description of the Disclosure states at Col. 2, lines 7-8 that the "tubing walls are smooth and solid". The tube is described as having solid walls. The tubing wall is described as having a thickness that may be between 0.016 inch (or smaller) to 0.083 inch. The tubing has an annular or duct-like structure. See Col 2, lines 6-9 and Figure 1. The contents of the tubing can be under pressure or vacuum. Col. 2, line 17-18. The amendment overcomes the rejection of 35 USC §102 under Hurley 7,113,680. The tubes are described as substantially straight. This distinguishes the tubes from the 35 USC §103 references. The §103 references for metal conduits are spirally wound

Claim 2, amended to read the tubing to convey hydraulic fluid, is supported by the text in Col. 2, line 10-11.

Claim 3 has been amended to make the claim dependent upon claim 1 and now redundant text has been deleted.

Claims 4 through 7, 9, 11, 13 and 15 have been amended to claim a "jacketed" tube. This amendment is supported by the specification at Col. 1, line 40-42.

Claim 12 has been amended to make the claim dependent upon claim 1. The addition of the tear cord is supported at Col. 1, line 40-42. The addition of the word "metal" is a continuation of the existing text of the claim.

Claim 14 has been amended to claim a jacketed metal tube. This supported at Col. 1 Line 41-43. The deletion of text is consistent with the specification. The addition of text stating "each metal tube has a parallel axis of orientation with the other tube or tubes" is supported by Figures 2 and 3. It is also supported at Col. 3, line 16-18. The addition of the text "a smooth metal wall structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings" is supported at Col. 2, line 50-51. Also Col. 2, line 18-20, Col. 2, line 29-41. Also Col. 2, line 49-53. The remaining changes comprise repositioning of claim elements, i.e., a plurality of tear cords. The amendment overcomes the rejection of 35 USC §102 under Hurley 7,113,680. As amended, tube may be operated under positive or negative pressure.

Claim 16 has been amended to claim a cable of claim 14 comprising a compression fitting. This amendment is supported by the specification at Col. 2, lines 29-31, Col. 2, lines 36-37 and Col. 2, lines 49-53. As amended, this claim overcomes both the 35 USC §102 and 103 references inasmuch as compression fittings are not taught by the references.

Claim 18 has been amended to claim conveyance of fluids. This is supported by the specification at Col. 2, lines 10-11. The claim has also been amended to claim that the tubing is spoolable and has a wall that is of a hollow cylindrical shape. These elements are supported by Col. 1, line 54 and Col. 2, lines 7-9. The claim is also supported by Figure 1. The claim has been further amended to claim tubing that is substantially straight, continuous, without break or interruption, capable of being hermetically sealed and suitable for connection to hermetically sealing compression fittings to convey fluids downhole. These elements are

supported by Col. 1, lines 40-45, Col. 2, lines 5-9, Col. 2, lines 18-19, Col. 2, lines 29-31, Col. 2, lines 50-53 and Figure 1. As amended, this claim is allowable over the prior art references. The claim teaches a substantially straight jacketed tube. The references cited under 35 USC §103 are spirally wound around a core. The jacket tube of claim 18 can also be hermetically sealed. This is not possible under the 35 USC §102 reference.

Claim 18 has been further amended to add the text “placing a tear cord proximate to an outer surface of the metal tube and inside the diameter of the outer protective jacket;”. This supported at Col 3, Line 4-11.

Claim 20 has been amended to list materials suitable for jacketing the tube. This is supported by the specification Col. 2, line 62 through Col. 3, line 3.

Claim 21 has been amended to add the text “substantially straight” to describe the solid wall metal tube. This is supported by Figures 1, 2, 3, 5 and at Col. 1 Line 54. Claim 21 has been further amended to describe the metal tube surface as “structured to maintain a positive or negative pressure”. This is supported at Col. 2, line 18-20. Also Col. 3, 26-28. This claim is accordingly allowable over both the 35 USC §102 and §103 references.

Claim 25, which is new, is supported by Figures 3 and 5, and at Col. 1, line 47-54, Col. 3, line 12-19, and Col. 4, lines 4- 17. The claim is allowable for the reasons that it teaches multiple tube capable of being operated under positive or negative pressure. Further the claim teaches the multiple tubes are align in a planar axis of orientation. The tubes may have multiple layers of jacketing.

The Patent Owner's invention is a jacketed metal pressure tube containing a tear cord positioned between the outer diameter of the continuous, smooth, solid metal tube wall and the inside diameter of the jacket. The tubes are used in the downhole oil and gas industry, particularly for Intelligent Well Systems (IWS) and downhole well monitoring equipment and components. The declaration of Roy Torrance states in paragraph 5 that:

"System reliability is of critical importance to the commercial success of companies providing IWS and downhole monitoring systems. **The integrity of the seals between the tubes, which contain high pressure hydraulic fluid, and the housing of the in-well IWS control valves, is essential for system reliability.** In the case of electrical conductors that are encased in **high pressure metal tubes** (within the industry commonly referred to as TEC or Tubing Encased Conductor), the integrity of the seals between the tube and the housing for the electronic monitoring and control device are also essential to avoid the electrical system experiencing short circuit failure caused by fluid ingress. **In both cases the seals between the tube and the housings of the devices are metal to metal compression ferrule fittings that grip the tube for pressure containment. For the seal to work effectively it is paramount that the sealing surfaces are free from any scratches, scores, or gouges and that the tube is round.**" (Emphasis added)

CLAIM REJECTION – 35 USC § 102

Claims 1, 4, 5, 11, 13 and 24 have been rejected as anticipated by Hurley et al. 7,113,680. The Patent Owner traverses this rejection.

Amended claim 1 reads as follows:

1. (Currently amended) A jacketed metal tube comprising a metal tube, an outer first protective jacket adjoining and surrounding the metal tube, and a tear cord positioned between the metal tube and the outer protective jacket characterized wherein the protective jacketed metal tube is for use in downhole applications relating to hydrocarbon extraction, **wherein the protective jacketed metal tube has a wall which is of hollow cylindrical shape and is smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids downhole**, and in that the tear cord is positioned proximate to an outer surface of the metal tube and inside the diameter of the outer first protective jacket and is able to be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface. (Emphasis added)

Focusing upon the limitations pertaining to the tubing, it is the Patent Owner's position that all of the limitations enumerated in amended claim 1 are based upon the text of the Detailed Description of Disclosure of the Torrance '565 patent. Each tube is surrounded by a protective jacket. Col. 1, line 41-45. The Detailed Description of the Disclosure states at Col. 2,

lines 7-8 that the “tubing walls are smooth and solid”. The tube is described as having solid walls. The tubing wall is described as having a thickness that may be between 0.016 inch (or smaller) to 0.083 inch. **The tubing can be placed under pressure or vacuum.** Col. 2, line 17-18. The tubing has an annular or duct-like structure. See Col 2, lines 6-9 and Figure 1. It is therefore ring shaped forming an enclosed passage to convey a substance such as a liquid or a gas under pressure or vacuum. The structure is a tube, i.e., a hollow cylinder, especially one that conveys a fluid or functions as a passage. Col. 2, line 5-17.

The smooth solid metal tube wall of the Patent Owner’s disclosure is further described as forming an hermetic seal, i.e., it is impenetrable to fluids. Col. 2, line 48-56 and Col. 3, line 60-64.

“The jacketed tubes are hermetically sealed. The tubes, which may be 1 inch in diameter, are joined using compression fittings.” Abstract and Col. 2, line 50-56. Note that a “**good uniform sealing surface** is important in making an hermetically sealed connection.” (Emphasis supplied) To form an hermetic seal, the tube wall must be impenetrable to fluids.

Accordingly, the tubing subject of the Torrance ‘565 patent is a smooth, solid (i.e., continuously walled without break or interruption), cylindrical shaped tubing that can be pressurized (negatively or positively), is impenetrable to fluids and is bendable. The tube described in the original disclosure therefore meets the amended text of claim 1. See also Torrance ‘565, Figures 1 and 2 as well as Figure 3, reference 11 and Figure 5, reference 33.

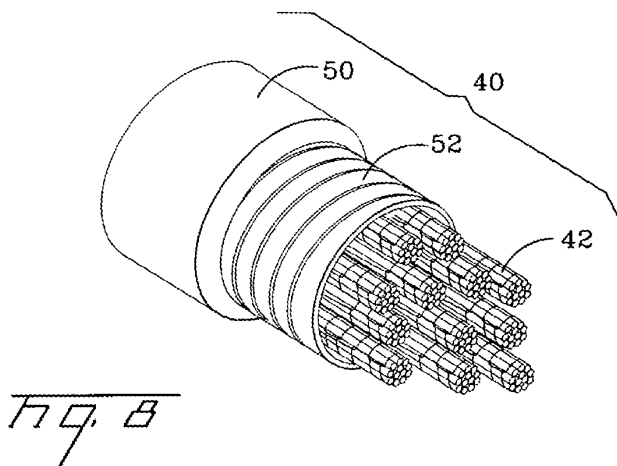
The Examiner asserts that Figure 4 of Hurley and the corresponding disclosure of Hurley ‘680 shows a jacketed metal tube device having all the limitations as recited in claims 1, 4, 5, 11, 13 and 24 of the Patent Owner’s U.S. Patent No. 7,581,565 (Torrance ‘565). The Patent Owner respectfully traverses this assertion.

It is important to identify what is illustrated in Figure 4 of Hurley. It illustrates a separation element (52). Col. 8, line 33-37. “For a cable jacket

(50) formed of PVC ..., separation element (52) can be formed of a polyester such as a MYLAR film ...” Col 8, line 45-48.

In regard to claim 1, the Examiner asserts (and using the specification of Hurley) that a first protective jacket (50); a smooth, solid wall metal tube (52) (col. 10, lines 47-50, “separation layer can be formed from an armor layer, for example, a metal or dielectric layer that may be formed as one or more pieces”) and a tear cord (54) (Col. 5, lines 1-3, “Fiber optic cable (20) also includes . . . an optional ripcord (54) for facilitating removal of cable jacket (50)”.

It is the Patent Owner’s position that Hurley ‘680 does not disclose a “smooth solid wall metal tube”. Hurley discloses an armor layer preferably possessing a smooth **interior** surface. Col. 13, line 29-31. It is true that Hurley ‘680 discloses a separation layer (52) comprising an armor layer **as of one or more pieces**. Hurley shows us the **single piece** separation layer in Figure 8.



It is an helically wound “ribbon like” single piece of metal, i.e., “**one** or more pieces”. It is not the “smooth solid wall metal tube” claimed by the Patent Owner. See claim 1. It is certainly not the metal tube described in the Patent Owner’s amended claim 1, i.e., “the metal tube has a wall which is of hollow cylindrical shape and is smooth, **solid**, substantially straight, continuous, **without break or interruption**, is **structured to be**

hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids downhole". Please note all of the above listed limitations in amended claim 1 appear in the original specification of Torrance '565.

Hurley does not teach a pressure tube, i.e., a tube that can maintain a negative or positive pressure. The tube cannot be hermetically sealed.

Hurley removes all doubt regarding the structure of the flexible armor layer, stating it "preferably includes a smooth inner surface for contacting bundles (42) and/or optical fibers (44). **For example, CPID interlock armor available from Eastern Wire & Conduit of Ontario, Canada**; however, other suitable armor may be used for separation layer (52)." Col. 13, line 32-34. (Emphasis added)

The CPID interlock armor has an outer ridged surface. It is fabricated from a single piece of metal helically wound around fiber bundles. Each winding of the armor constitutes a break or interruption in the surface. It does not contain a smooth solid outer layer. It cannot be hermetically sealed. Due to its unsealed helically wound construction, it cannot be pressurized or contain a vacuum. It possesses none of the characteristics of the Patent Owner's jacketed tubes. See paragraph 24 of the Declaration of Jody James, co-inventor of the Torrance '565 patent, and Exhibit A. Also see Exhibit A-7, comprising product literature for CPID armor jacketed cable as cited in the Hurley '680 patent.

The Jody James declaration in its relevant part (paragraph 24) states:

"This product is intended to provide physical protection from mechanical damage, **but the corrugated outer surface** (of the CPID armor jacketed cable) **is not designed to create an hermetic seal. This armor layer is unable to perform as a substantially straight, continuous, smooth wall metal tube, without break or interruption and structured to create an hermetic seal**

under positive or negative pressure.” (Emphasis added)

Hurley '680 does not teach a cable as claimed in claim 1 of Torrance '565 “wherein the protective jacketed metal tube has a wall which is of hollow cylindrical shape and is **smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings** to convey fluids downhole”.

The cable subject of the Hurley '680 patent cannot be hermetically sealed nor maintain a positive or negative pressure.

All of the claims subject of 35 USC §102 rejection are dependent upon claim 1. For the reasons stated above, claim 1 is allowable. It is respectfully requested that the §102 rejection be withdrawn.

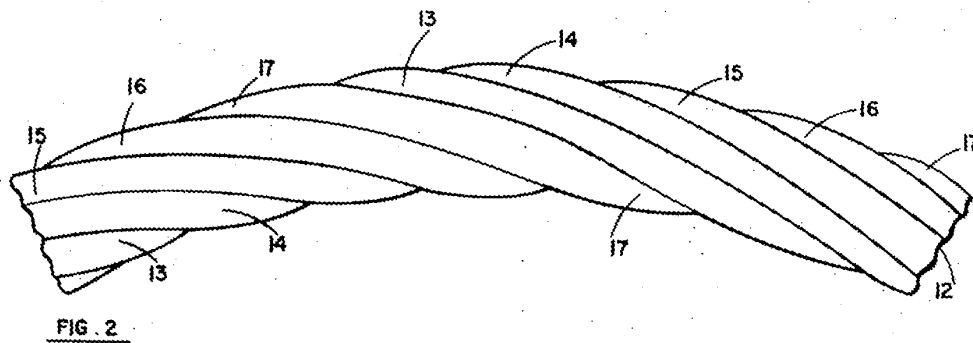
CLAIM REJECTION – 35 USC §103

The Examiner asserts claims 1-5, 8, 10-17, 21 and 22 are obvious over Morgan 3,526,086 in view of Gareis et al. 5,557,698. Claims 8 and 17 have been cancelled without prejudice. The Patent Owner vigorously traverses this rejection on several grounds.

Taking the Examiner's arguments in order, it is asserted that the helically wound device of Morgan is “basically the same” as the straight jacketed metal tube described in claims 1-5, 8, 10-17, 21 and 22. This is incorrect. The wound structure of the conduit of Morgan '086 is shown below as Figure 2. The continual twisting of the conduits subjects them to deformation. It is not possible to install compression fittings on tubing having a deformed circumference. The circumference needs to be round. See Torrance '565 at Col. 2, line 38-41, and stating “(d)eformation of the tubing surface may compromise the seal of the compression fitting

intended to block fluids or contaminants from entering the housing even if the tubing wall is not breached". Also see paragraph 4 of the declaration of Mark Watson. (Exhibit D) Mr. Watson speaks of the tube surface being unacceptably deformed by sanding the tube surface with emery paper. This sanding was conducted to remove scores and nicks in the tube surface. See also the declaration of Jody James, paragraph 25 (Exhibit A) stating:

"I am familiar with the patent of Morgan 3,526,086 and Dupont et al. 6,472,614. **Both teach spirally wrapping multiple tubes around a central core or axis. This would require the tubes to be bent. Bending the tubes can alter or deform the tube circumference.** The tubes, even if unwrapped from the spiral configuration, would likely be unsuitable for fitting the tube with a compression fitting. **A compression fitting used for creating an hermetical seal as taught by Torrance '565, requires a round, undeformed tube circumference.**"



MORGAN FIGURE 2

Figure 2 of Morgan '086 (above) illustrates the helically wound group of conduits. Compare this to Figure 5 of Torrance '565 illustrated below. The tube of Torrance '565 are straight.

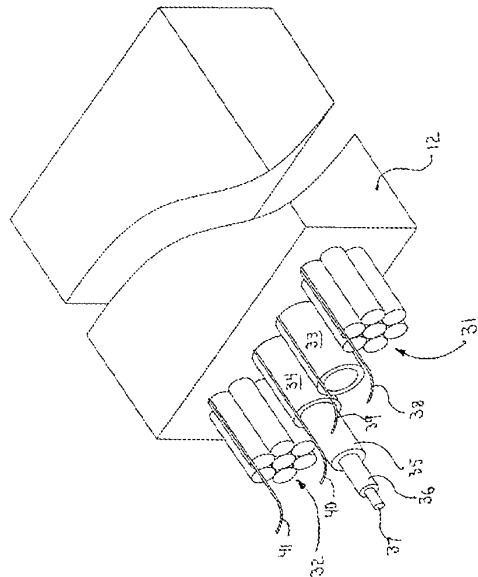


Figure 5

TORRANCE '565 FIGURE 5

An end view of the helical wound conduit shown in Morgan Figure 2 is illustrated in Figure 3 below. Reference (20) of Figure 3 represents a cross sectional view of one of the strands, e.g., reference (17), depicted in Figure 2.

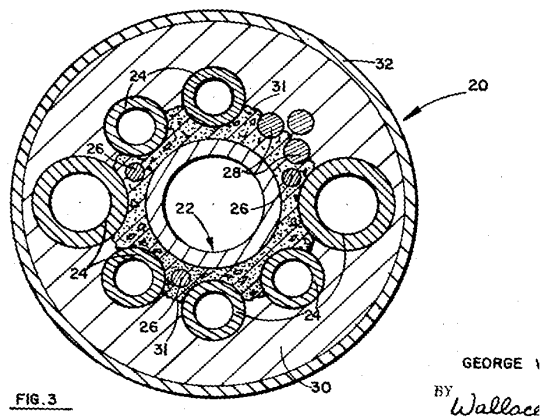


FIG. 3

MORGAN FIGURE 3

Contrast the helically wound conduit of Morgan '086 with the straight, axially aligned tubes of the Patent Owner's structure (Torrance '565) shown above in Figure 5 and on the following page in Figure 3. The

tubes of Torrance '565 are straight and not subject to deformation due to helically winding. Therefor the tubes of Torrance '565 are suitable for fitting with compression fittings. Visual observation confirms the tubes of Torrance '565 are not the same as Morgan '086. The tubes of Morgan '068 are twisted about an axis. The tubes of Torrance '565 are straight.

Twisting deforms the tube. Bending causes the tube circumference not to be round. This destroys the value of the tube. See declaration of Roy Torrance at paragraph 5 ("**it is paramount ... that the tube is round**"), declaration of Jody James at paragraph 25 ("A compression fitting used for creating an hermetical seal ... **requires a round, undeformed tube circumference.**"). See also the declaration of Mark Watson (Exhibit D) stating (a)fter removal of the outer jacket it was common practice to polish the surface of the tube with emery cloth to eliminate scoring on the sealing surface caused by the scraping of the blades along the sealing surface. **The polishing operation can compromise the sealing surface** in that the diameter of the tube is reduced and **the tube can become oval** by the sanding and polishing operation."

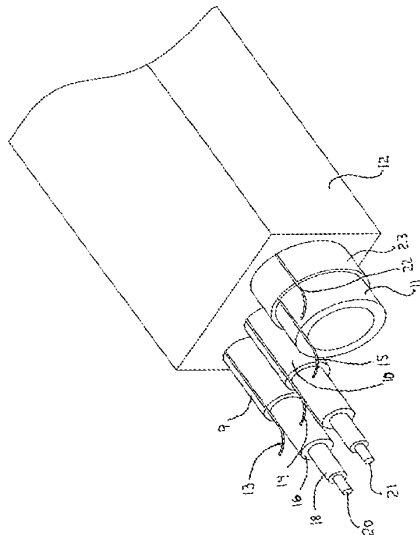


Figure 3

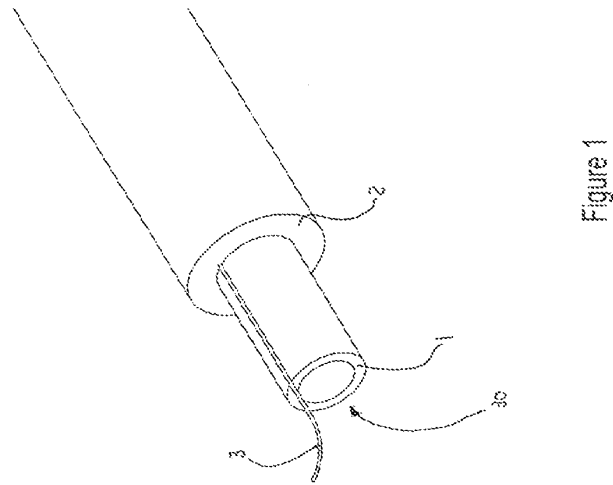
TORRANCE '565 FIGURE 3

The Examiner asserts that Morgan Figure 3 and the corresponding disclosure of patent 3,526,086 (hereinafter Morgan '086) shows a jacketed metal tube device that is basically the same as that recited in Claims 1-5, 8, 10-17, 21 and 22. The Patent Owner respectfully traverses this assertion.

The Examiner describes Morgan '086 as follows: "A flexible underwater line having a **plurality of conduits laid in a spiral configuration about a central core member**, which member may be a conduit or a high tensile strength cable. Where the central core member is conduit, high tensile strength cables may be situated axially along said conduit. **A flexible protective sheath surrounds the spiral configuration in order to bundle the structure.**" In contrast, Torrance '565 is **not** wound about a central core member. This is evident from Figures 3 and 5 (shown above) of Torrance '565.

Further, examination of the claims discloses that Morgan '086 is not the same as Torrance '565. Claim one of Torrance pertains to "a jacket adjoining and surrounding the metal tube". Morgan teaches embedding of a plurality of tube within several layers of elastomeric substance including **foamed elastomeric substances**. See Morgan '086 Abstract of Disclosure and Col. 4, lines 20-30. See references 30 and 31 of Morgan Figure 3 showing two compositions of elastomeric substance. Note also the tubes of Morgan '086 do not abut the inside surface of the outer jacket or sheath 32. It is therefore uncertain where a tear cord would be placed. (Of course, Morgan '086 does not teach using a tear cord.)

The outer sealing surface of the smooth wall metal tube is critical to the operation of patent Torrance '565. The jacket is immediately in contact with the smooth wall metal tube. See Torrance Figure 1 below. See also Morgan Figure 3 and Torrance Figure 3. Embedding the tube in an elastomeric substance illustrated in Morgan would result in the residue of the elastomeric substance clinging to the surface of the tube. It would therefore not be possible to attach a compression fitting to the tube. The whole purpose of the Patent Owner's endeavor would be frustrated.



TORRANCE '565 FIGURE 1

The above clearly shows that Morgan '086 is not the same as Torrance '565. Figure 1 of the Torrance '565 patent shows a straight tube and tear cord immediately proximate to the surrounding protective jacket.

The Examiner acknowledges that Morgan '086 does not disclose tear cords. What is important here is that, ignoring the issue of tear cords for the moment, the conduit of the Morgan '086 is not the jacketed tube subject of the Patent Owner's patent Torrance '565. They are two different objects.

Patent 7,581,565 (Torrance '565) describes a protective jacket adjoining and surrounding a smooth solid wall metal tube having an outer sealing surface. The smooth solid wall metal tube is not embedded in an elastomeric substance with an overlaying jacket. Contrast with Morgan '086. Morgan '086 describes a sheath surrounding an elastomeric substance in which one or more conduits are embedded. Note the elastomeric substances, absent from Torrance '565, are critical to Morgan '086. The elastomeric substances provide lubricity and cushioning between the conduits spirally wound around a core member. (Clearly the spirally wound tubes are moving and bending. Recall the declaration of Jody James (Exhibit A) at paragraph 25 and the admonition against bending the tubes.

Morgan teaches use of two separate elastomeric substances adjoin each tube to facilitate this movement and bending. Morgan '086 Col. 4, line 10-27. See Figure 3 of Morgan, reference items 30 and 31.

Looking at the subject differently, if you remove the protective jacket from the Torrance '565 cable, you immediately see the tube. If you remove the jacket from Morgan '086, you see a continuous surface of elastomeric foam. You must remove the foam to find the tube or conduit. This step is not required with Torrance '565.

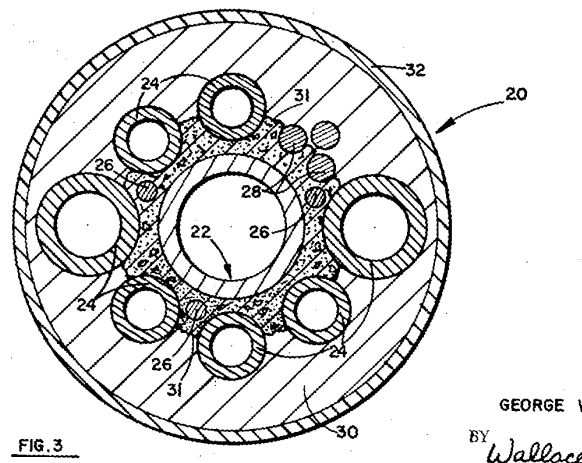
The Torrance '565 patent is described in claim 1 as

1. A jacketed metal tube comprising a metal tube, an outer first protective jacket adjoining and surrounding the metal tube, and a tear cord positioned between the metal tube and the outer protective jacket characterized wherein the protective jacketed metal tube is for use in downhole applications relating to hydrocarbon extraction, **wherein the protective jacketed metal tube has a wall which is of hollow cylindrical shape and is smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids downhole**, and in that the tear cord is positioned proximate to an outer surface of the metal tube and inside the diameter of the outer first protective jacket and is able to be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface. (Emphasis added)

Recall the tubes of Morgan '086 are spirally wound around a

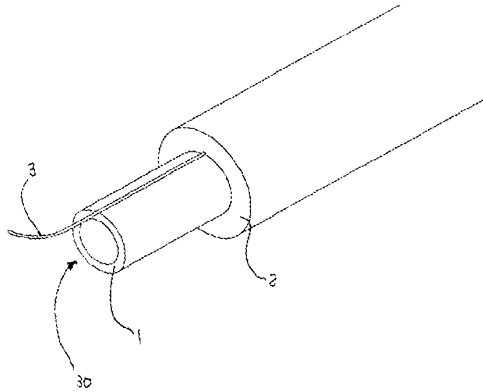
strength member. There is danger that the wound conduit will become deformed around the strength member. It may not be possible to unbend the conduit. The deformed surface may be unsuitable for an hermetical sealing surface. See paragraph 25 of Jody James' declaration (Exhibit A). The bending and distortion of the tubes is a limitation of the patent 6,472,614 issued to Dupont et al. and discussed below. (Torrance '565 also warns that deformation of the tube surface may compromise the ability to form a compression seal on the tube surface. Col. 2, line 38-41.)

Figure 3 of Morgan '086, being a cross sectional image of the conduit is reproduced below. It will be appreciated from the above description that a elastomeric substance, 30 and 31, completely surrounding the conduits.



MORGAN FIGURE 3

Contrast Figure 1 of Torrance '565.



TORRANCE '565 FIGURE 1

Torrance Figure 1 clearly shows the jacket 2, the conduit 1 and the tear cord 3. Specifically, the conduit 1 is not embedded in a foamed elastomeric substance. The tear cord is between the inside diameter of said jacket and the outer surface of said tube. Nothing hinders the operation of the tear cord cleanly pulling the jacket from metal tube. See claim 1.

The Patent Owner also believes it is clear that Morgan '086 does not make Claim 12 (as amended) obvious. Claim 12 currently states:

12. (Currently amended) A jacketed metal tube of claim 1 comprising one or more steel ropes within one or more protective jackets surrounding a smooth solid wall metal tube and a tear cord wherein the tear cord is positioned next to each steel rope and metal tube wherein **the rope has the same axis of orientation as the metal tube** and is positioned adjacent to the metal tube within the protective jacket whereby each tear cord can be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the steel rope and metal tube without damage to the metal tube surface. (Emphasis supplied)

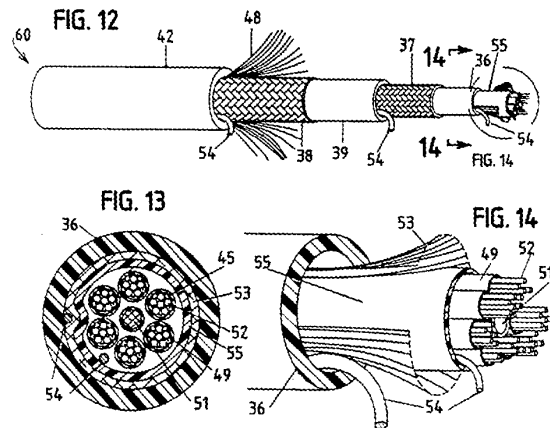
Claim 12 is illustrated by Figure 5 (see page 13 above) of Torrance '565. The planar orientation of the tubes and steel ropes is illustrated.

The Patent Owner also asserts claim 25 (new) is not made obvious by Morgan '068. Claim 25 states as follows:

25. (New) A jacketed metal tube of claim 1 comprising a **plurality of substantially straight metal tubes with the same planar axis of orientation** wherein at least one tube is surrounded by **separate protective first jackets** and a tear cord is positioned between each first metal tube and the protective first jacket and further comprising a protective second jacket surrounding the first jacketed metal tubes wherein each jacketed tube contains a second tear cord between the outer diameter of the first jacket and inside the second outer protective jacket.

Claim 25 is illustrated by Torrance '565 Figure 3 shown on page 17 above. This tubing is described at Col. 3, line 12-18 of the Specification. The Specification describes the multiple tubes as "stacked one on top of the other". This creates a flat configuration, minimizing the width that will be taken up in a well bore. This is distinct from the helically or spirally wound configuration of tubes taught by Morgan '068.

The Examiner cites Gareis for teaching the use of tear cords. Gareis '698. The Examiner states "it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate ripcords next to any of the internal structures of the Morgan '086 multi-conduit line to allow access to said internal structures through the protective layers without the use of a cutting tool, e.g., next to any of central core tube (22), tubes (24), steel cables (36) and conduits (28)." But it is the Patent Owner's position that Morgan does not disclose the structure of Torrance '565.



Gareis '698 teaches fiber optic and electrical cable. See Figures 12 through 14 above. It is teaching a fiber optic cable surrounded by two insulated braided conductors. Gareis '698 is not talking about tear cords. Their purpose and function is not disclosed. They are there as an unused appendage. They are not germane to invention of Gareis. Gareis '698 does not teach their use.

Further in Gareis, there is no solid wall metal tube which must be protected from damage from an open blade. Gareis '698 merely teaches placing a tear cord between a jacket and a coaxial (braided) conductor. (Col. 5, line 47-49) This is structurally different than the Torrence '565 patent. Torrance '565 places a tear cord immediately adjacent to a smooth wall metal tube which, in turn, is positioned immediately beneath the jacket to be removed. There is no motivation, suggestion or teaching within Gareis '698 regarding the purpose of the tear cord to protect anything. This is a critical element for an obviousness rejection. Surprisingly, Gareis '698 does not explain the purpose of the tear cord. It is certainly not to protect a smooth wall metal tube used to create an hermetical seal with a compression fitting. As already noted, the Gareis '698 structure consists of a flexible jacket over a braided electrical conductor. See Figure 1. The

strength member of the cable is centrally located. See item (51) in Figure 14. See also Col. 6, line 26-29.

It is indisputable that neither Morgan '086 nor Gareis '698 disclose anything pertaining to protecting a metal conduit or metal tube surface when removing an outer covering. The topic is not mentioned.

With due respect to the Examiner, it is the Patent Owner's position that Gareis '698 teaches or suggests nothing to the skilled practitioner relevant to the invention subject of the Torrance '565 patent, i.e. a jacketed tube comprising a metal tube, an outer jacket surrounding the metal tube. As already noted there is absolutely no teaching, suggestion or motivation to combine the references. As stated in by the Federal Circuit (post KSR) in Ortho-McNeil v. Mylan Lab, 520 F.3d 1358, 1364 (Fed. Cir. 2008) "a flexible (teaching suggestion motivation) test remains the primary guarantor against a non-statutory hindsight analysis such as occurred in this case." Looking directly at KSR, "(i)t is clear from cases such as Adams, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." KSR International Co. v. Teleflex, Inc., 550 U.S. 398, 418 (2007) and citing US v. Adams, 383 U.S. 39, 40 (1966). Further, quoting KSR "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." KSR, supra.

As disclosed in the declarations of Mark Watson at paragraph 7 (Exhibit D), Michael Bealeu at paragraph 5 (Exhibit E) and Shawn Calhoun at paragraph 5 (Exhibit F), there was obviously no teaching or suggestion to combine the references. This can be confidently asserted because there was an industry search to find a solution to the problem of removing protective jackets from pressure tubes without damaging the tubes or

injuring the workers. Until introduction of the Patent Owners trademarked product Safety-Strip, there was no solution to this industry problem. See the third and fourth paragraphs of the declaration of Michael Krejci (Exhibit H). See also paragraphs 4 and 5 of the declaration of Steve Kelly (Exhibit I).

It is the Patent Owner's position that a combination of Morgan '086 and Gareis '698 would not create the structure of Torrance '565 (Safety-Strip). It is respectfully suggested that this is obvious from a review of Figures 1, 3 and 5 of Torrance '565 in comparison to Figure 2 of Morgan. Attention is directed to pages 17, 18 and 20 above. It is urged that claims 1-5, 10-17, 21 and 22 are therefor allowable.

Claims 6 and 9 have been rejected under pre-AIA 35 U.S.C. 103(a) as unpatentable over Morgan '086 in view of Gareis '698 and further in view of Okada et al. 6,236,790.

Okada '790 et al discloses another fiber optic cable. The cable is illustrated in Figure 4 (next page). Okada does not contain a metal tube or conduit. The fibers are contained within a belt shaped material (3) that is folded into a cylindrical shape. The cylindrical shaped structure is constructed of nonwoven fabric tape or plastic tape. Col. 3, line 53-62. It is not a metal tube. Tension members (2) and rip-cords (8B) are embedded **within** a sheath that surrounds the fiber optic cable.

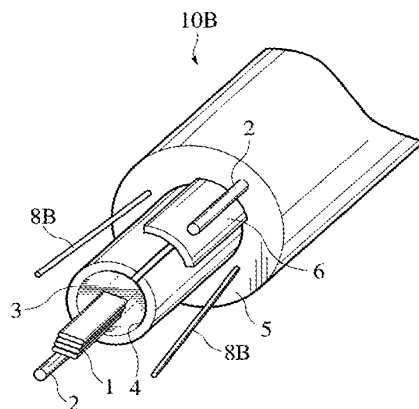
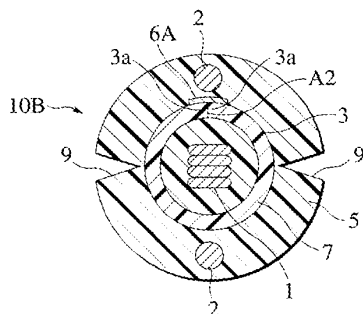


FIG. 4

As clearly illustrated in Figure 8 of Okada '790, the operation of the tear cords (8B in FIG. 4) do not cleanly remove the sheath from the fabric or plastic tape (4 in FIG.4). The tear cords are not in communication with the cylindrical shaped tape. FIG. 8 clearly shows residue of the sheath remains after the tear cords are pulled away. See Figure 8 wherein the tears (9) do not extend to the surface of the cylindrical shaped tape (7).

FIG.8



Again there is no smooth wall metal tube surrounded by a jacket. The cable of Okada '790 is structurally different from the Torrance '565 patent. These differences are not insignificant. Instead of laying proximate to the smooth wall metal tube beneath the jacket of the tube, "the two rip cords 8B are in mutually symmetrical positions with respect to the center or (sic) the fiber ribbons (1) of the cable (10B)." This means that that utilization of the rip cords does not remove all of the sheath from the cylinder containing the fiber optic cable or ribbons. This is clearly shown in Figure 8. Figure 8 shows the tears (9) in the sheath (5) from removal of the rip cords.

Note **not all of the sheath is removed from the cylinder material.** This may not be a problem for the technician working with the Okada fiber optic cable, but it would be of great concern to the worker on an oil rig platform utilizing the Torrance '565 tubing. If the cylinder was analogous to the smooth wall metal tube of the '565 patent, there would be unacceptable

residue of cable jacket that would have to be somehow removed before a compression fitting could be positioned.

Okada also does not meet the limitations of Patent Owner's claim 1, i.e. it is not "able to be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface." The jacket is only partially torn away from the tube. We cannot assume that the remainder will be simply pulled away. It may have to be cut. Cutting the jacket is the problem that the Torrance '565 patent solves.

Again, it is the Patent Owner's position that Okada fiber cable is structurally different that the Torrance '565 cable. Because of the structural differences, the Okada '790 patent is not prior art under section 103(a). Stated differently, Okada '790 does not motivate, teach or suggest anything to the person skilled in the art of jacketed smooth wall metal tubes. Okada '790 does not identify a reason that would have prompted a person of ordinary skill in the art to combine the elements the way the Torrance '565 does. It would not be common sense to utilize a component that left residue of the jacket upon the smooth wall tube or required the jacket to be cut away.

Equally important, it is respectfully noted that the Examiner has not offered any explanation why the skilled practitioner would combine Okada '790 with Morgan '086 and Gareis '698.

Further, claims 1, 7, 18-20, 23 and 24 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over 6,472,614 to Dupont et al in view of Gareis '698.

Dupont '614 teaches an umbilical comprising one or more steel rods wound helically along with **helically wound steel tubes**. See Abstract. As stated, the steel tubes 2 are helically wound around a core 1.

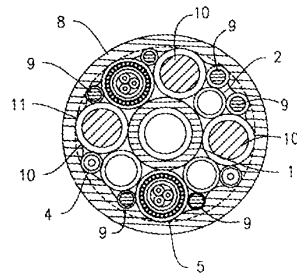


FIG. 2

DUPONT '614 FIGURE 2

Dupont discloses at Col. 1, line 49-62, that the steel tubes are plastically deformed by the winding and do not unwind. This makes Dupont structurally different that the Torrance '565 patent. As consistently shown in Figures 1, 3 and 5 of the Torrance '565 patent, the tubes are straight and not deformed.

Torrance '565 teaches that the tubes must be protected from deformation. See Torrance '565 at Col. 2, line 38-41 stating "Deformation of the tubing surface may compromise the seal of the compression fitting intended to block fluids or contaminants from entering the housing even if the tubing wall is not breached."

This structural difference is significant. In the Torrance '565 patent, the tubes must be separable as individual tubes are routed to different equipment. Further, the deformed tubes may not be fitted with compression fittings to form hermetic seals. The deformed tubes may not be suitable for use with compression fittings. It is dependent upon the radius of the bend. See the declaration of Jody James (Exhibit A) at paragraph 25. See also the declaration of Roy Torrance (Exhibit M) at paragraph 5.

Accordingly, Dupont '614 is not prior art to the Torrance '565 patent. It is structurally different.

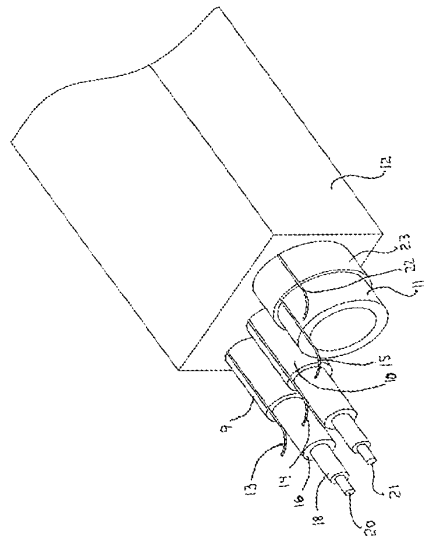


Figure 3

TORRANCE '565 FIGURE 3

See Figure 3 of the Torrance '565 patent showing tear cords (22) and (15) for removal of protective jackets (12) and (23) from tube (11). Note also that the tubes are not helically wound or deformed. A combination of Dupont '614 and Gareis '698 would clearly not create the structure of Torrance '565. Therefor claims 1, 7, 18-20, 23 and 24 are allowable.

The Patent Owner has amended the claims to add claim 25. This claim is directly supported by Figure 3 of the Patent Owner's specification. Claim 25 discloses a plurality of tubes. Unlike Morgan and Okada, the tubes are not helically wound. The tubes are shown in a single plane. The tubes are linearly aligned with each other forming a flat package or "flat pack". See Figure 3. See also the declaration of Jody James (Exhibit A) at paragraph 8.

Referencing Torrance '565 Figure 3 above, claim 25 provides that at least one tube (11) contains a first jacket (23) and a second jacket (12). A tear cord (15) is positioned in communication between the tube (11) and the first jacket (23) wherein the tear cord is located in between the outside surface of one tube and the inside diameter of the first protective jacket. The second tear cord is located between the outside diameter of the first

protective jacket and the inside diameter of the second outer jacket. **The tube package of claim 25 is not disclosed by any of the prior art cited by the Examiner.**

Further, it will be appreciated that Morgan '086 and Dupont '614 disclose a totally different structures than Torrance '565. This is evident from comparison of Torrance '565 Figure with Morgan and Dupont. Torrance Figure 3 shows multiple tubes positioned in a flat plane. At least one tube is independently jacketed. Morgan and Dupont spirally winds the tube around an axis. None of the tubes are independently jacketed. **Torrance '565 is a distinct structure from both Morgan and Dupont.**

NON-ANALOGOUS ART

It is the Patent Owner's position that Gareis '698 and Okada '790 are not proper references against the Patent Owner's invention. **A rejection under 35 U.S.C. § 103 cannot be based on non-analogous art.** Innovention Toys, LLC, v. MGA Entertainment, Inc., 637 F.3d 1314 (Fed. Cir. 2011); In re Bigio, 381 F.3d 1320 at 1325 (Fed. Cir. 2004); In re Clay, 966 F.2d 656 at 658 (Fed. Cir. 1992). The test for analogous art is very specific. Art is non-analogous unless it is: (1) from the same field of endeavor as the claimed invention; or (2) reasonably pertinent to the particular problem faced by the inventor. In re Bigio, 381 F.3d at 1325; In re Wood and Eversole, 599 F.2d 1032, 1036 (CCPA 1979).

It is the position of the Patent Owner that Gareis 5,557,698 and Okada 6,236,790 references are non-analogous art. First, Gareis '698 and Okada '790 are not in the same field of endeavor as the claimed invention.

The field of endeavor of the Patent Owner is the removal of protective jackets from hollow pressure tubes used in downhole operations while protecting the tube surface. The Abstract of Torrance '565 states:

"The disclosure pertains to installing a tear cord between a metal tube and a protective jacket. The jacketed tubes may be used in a hydrocarbon production downhole well bore. The tubes may be used to furnish hydraulic fluid or chemicals into the well bore. The contents may be pressurized or under vacuum. The jacketed tubes are hermetically sealed. The tubes, which may be 1 inch in diameter, are joined using compression fittings. Tear cords are used to facilitate removal of the protective jacket without damage to the tube surface thereby facilitating the placement of compression fittings and maintaining the integrity of the tube wall."

See also paragraph 5 of the declaration of Roy Torrance stating:

“System reliability is of critical importance to the commercial success of companies providing IWS and downhole monitoring systems. **The integrity of the seals between the tubes, which contain high pressure hydraulic fluid, and the housing of the in-well IWS control valves, is essential for system reliability.** In the case of electrical conductors that are encased in high pressure metal tubes (within the industry commonly referred to as TEC or Tubing Encased Conductor), **the integrity of the seals between the tube and the housing for the electronic monitoring and control device are also essential to avoid the electrical system experiencing short circuit failure caused by fluid ingress.** In both cases the seals between the tube and the housings of the devices are metal to metal compression ferrule fittings that grip the tube for pressure containment. For the seal to work effectively it is paramount that the sealing surfaces are free from any scratches, scores, or gouges and that the tube is round”.

Claim 1, as amended, of Torrance '565 states

1. (Currently amended) A jacketed metal tube comprising a metal tube, **an outer first protective jacket adjoining and surrounding the metal tube**, and a tear cord positioned between the metal tube and the outer protective jacket characterized wherein **the protective jacketed metal tube is for use in downhole**

applications relating to hydrocarbon extraction, wherein the protective jacketed metal tube has a wall which is of hollow cylindrical shape and is smooth walled, solid, substantially straight, continuous, without break or interruption, is structured to be hermetically sealed, maintain a positive or negative pressure, and is structured for connection to hermetically sealing compression fittings to convey fluids downhole, and in that the tear cord is positioned proximate to an outer surface of the metal tube and inside the diameter of the outer first protective jacket and is able to be pulled back to create a slit in the protective jacket and to allow the protective jacket to be separated from the metal tube without damage to the metal tube surface.

Succinctly stated, Torrance '565 is for a downhole protective jacketed metal pressure tube wherein the jacket can be safely removed from the tube without damaging the tube surface. This allows the outer wall of the metal tube (sealing surface) to be used for creating an hermetic seal. Although spoolable, the tubes are maintained substantially straight to prevent deformation from small radius bends. That is the problem that is addressed by Torrance '565.

In contrast, Gareis '698 provides a coaxial fiber optic cable within a single cable construction. The cable is for the telecommunications for combining broadband with fiber optic digital signals or fiber computer networks. Col. 3, line 1-40. The cable has particular use as an electronic news gathering camera cable extension lead with fiber video signal links and metal power links. Col. 2, line 57-62. Several embodiments are disclosed. Typical is the embodiment illustrated in Figures 9-11. The cable comprises a jacket (36) and its core (32) contains a central strength tube (51). Surrounding the strength tube are a plurality of buffer tubes (49). A

strength member (53) surrounds the buffer tubes (49) and optical fiber jacket surrounds and contact the strength member (53). The strength member is braided or served aramid yarn. The fiber optic jacket (36) is also constructed with a ripcord (54). Therefore the cable has three ripcords (54). An inner conductor (37) is placed around the jacket (36), dielectric jacket (39) surrounds the conductor (37), the outer coaxial conductor (38) surrounds the jacket (39), a ripcord (54) is between conductor (37) and jacket (39), strength member (48) surrounds the conductor (38), cable jacket (42) surrounds the conductor (38) and a ripcord (54) is between the strength member (48) and the jacket (42). The properties or composition of the jacket or rip cord are not disclosed. Gareis '698 Figures 9-11 and Col. 6, line 23-47.

To summarize, Gareis '698 pertains to coaxial fiber optic cable containing both fiber optics and electrical conductors in a single axis cable for use in the computer and telecommunication industry and specifically with video cameras.

Okada 6,236,790 pertains to an optical-fiber cable capable of being manufactured at lower cost and providing a method of manufacturing this fiber. There is provided an optical-fiber cable that comprises an optical fiber, and a cylinder body which is made from a cylindrically formed belt-shaped material and which accommodates the optical-fibers. The cable may comprise a tension member disposed at the outside of the cylinder body and a sheath which covers the outside of the cylinder body and the tension member. The cable may also comprise a rip cord which is disposed at the outside of the cylinder body within the sheath. Okada '790 at Col. 2, line 12- 46

Again to summarize, Okada '790 pertains to fiber optic cable wherein the fiber optic fiber is surrounded by a flexible cylinder formed from plastic or fabric tape material. The cylinder is surrounded by a sheath. A tension member and tear cord can be embedded in the sheath.

It is clear the USPTO bears the burden of establishing that the art is

analogous. "While the scope of any field of endeavor will vary with the factual description of each invention, that variability does not equate with ambiguity and absence of a neutral standard. To the contrary, **substantial evidence must support the PTO's factual assessment of the field of endeavor.**" In re Gartside, 203 F.3d 1308 at 1315 (Fed. Cir. 2000). In other words, the PTO must show adequate support for its findings on the scope of the field of endeavor in the application's written description and claims, including the structure and function of the invention." In re Bigio, 381 F.3d 1320, 1326 (Fed. Cir. 2004). See Application of Wood, 599 F.2d 1033 at 1036 (C.C.P.A. 1979) (confining the field of endeavor to the scope explicitly specified in the background of the invention); see also In re Deminski, 796 F.2d 437 at 442 (Fed. Cir. 1986) (determining that the cited references were within the same field of endeavor where they "have essentially the same function and structure").

In re Deminski, supra, the court upheld that references pertaining to horizontally reciprocating, double-acting piston devices for moving fluids were within the field of the inventor's endeavor, i.e., double-acting high pressure gas transmission compressors. As stated, the Federal Circuit determined the devices had essentially the same **function and structure**. Morgan '086 and Dupont '614, each being spirally wound, clearly do not have the same structure or function as Torrance '565. Morgan and Dupont are not analogous art.

In Application of Wood, supra, the Federal Circuit found the 103 reference to be within the inventor's field of endeavor after looking at the inventor's specification, particularly the Background of Invention. The specification stated the field of art to which the invention pertains includes the art of internal combustion engines and more particularly to such art as it applies to fuel and air inductions systems. A device for reducing pollution in automobile exhaust by maintaining the speed of the air-fuel mixture through the venturi throat at sonic velocity over a wide range of intake manifold conditions was deemed to be within the same area of endeavor,

i.e., control of a fuel and air induction system.

In the instant case, the Torrance '565 Summary of Disclosure states "(t)he disclosure pertains to installing a tear cord between a solid wall metal tube (hereinafter "tube") and a protective jacket. The jacketed tubes may be used in a hydrocarbon production downhole well bore or in gas or water injector downhole well bores." The Torrance claim is for a structure comprising a protective jacketed cable, tear cord and solid smooth wall cylindrical tubing and the jacketed tubes have the function of conveying fluids into downhole hydrocarbon extraction wells.

Neither Gareis '698 nor Okada '790 have this structure or function. Accordingly these 103 references are not in the same field of endeavor.

Second Gareis '698 and Okada '790 are not reasonably pertinent to the particular problem faced by the inventor. (This is the second part of the analysis of whether a reference is analogous art.)

A reference may be reasonably pertinent if, even though it may be in a different field from the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention. **Thus the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve.** In re Clay, 966 F.2d 656 (Fed. Cir. 1992). (Emphasis supplied) **"If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem,** and that fact supports use of that reference in an obviousness rejection." In re Klein, 647 F.3d 1343 (Fed. Cir. 2011) citing In re Clay, supra. (Emphasis supplied) Here, Gareis '698 and Okada '790 do not have the same purpose nor are they reasonably pertinent to the Torrance '565 invention.

The purpose of Torrance '565 is directed to solving how to remove protective jacketing from downhole pressure tubes without damaging the tube surface. The Abstract states: "(t)ear cords are used to facilitate removal of the protective jacket without damage to the tube surface thereby

facilitating the placement of compression fittings and maintaining the integrity of the tube wall.” Torrance ‘565 claim 1 (as amended) reads in its relevant part that the invention is “an outer protective jacket adjoining and surrounding a metal tube, and a tear cord characterized in that the protective jacketed tube is for use in downhole applications relating to hydrocarbon extraction, in that the metal tube has a wall which is of hollow cylindrical shape and is smooth walled, solid, substantially straight, continuous, without break or interruption is structured to be hermetically sealed and is structured for connection to hermetically sealing compression fittings to convey fluids downhole”.

Gareis ‘698 and Okada ‘790 obviously do not pertain to removing a protective jacket from a solid wall metal tube. Gareis ‘698, in fact, never discusses the purpose or function of the tear cord. The purpose of Gareis ‘698 is to combine fiber optic fibers with electrical conductors in a single cable. “The inventive cable will largely be used in telecommunications for combining broadband and fiber optic digital signals.” Col. 2, line 56-58. The purpose of Okada ‘790 is to produce a cheaper fiber optic cable. Col. 2, line 12-15. The Okada summary of invention also states “(p)referably, the optical-fiber cable further comprises a first rip cord which is disposed at the outside of the cylinder within the sheath”. Col. 2, line 44-46. Again, the cylinder is plastic or fabric. Col. 3, line 57-59.

As stated, prior art references that do not have the same function or structure as the invention can still serve as references for obviousness if they have the same purpose. In re Clay, 966 F.2d 656, 659 (Fed. Cir. 1992). In re Clay, supra is instructive. The Court determined that an invention of a gel to plug formation anomalies in a petroleum production well was different than a gel to displace liquid product from the dead volume of a petroleum storage tank. The Court looked at the physical conditions in which the products were used, i.e., in geologic formations at temperature of 115° C and elevated pressures in contrast to ambient temperatures and pressures. **Further the Court determined that the**

purpose of the invention was to recover oil from a porous, permeable rock matrix was not reasonably pertinent to the purpose of the prior art reference, i.e., preventing loss of oil product to tank dead volume while preventing contamination of the oil product thereby maximizing recovery from the storage tank. Similarly, Torrance '565 is directed to these same harsh downhole conditions. The products of Gareis and Okada can be anticipated to be used in ambient conditions.

Further, it is important to note that Clay, supra, cites In re Ellis, 476 F.2d 1370, 1372 (CCPA 1973) that "the similarities and differences in structure and function of the invention disclosed in the references . . . carry far greater weight [in determining analogy]" (punctuation in Clay).

It has already been shown above that Gareis and Okada have a drastically different structure and function than the function and structure of Torrance '565. Gareis, Okada, Morgan and Dupont are not analogous art to Torrance '565.

It is common sense that the inventors of Torrance '565 would not be drawn to Gareis and Okada because Gareis and Okada were clearly not focused on the problem faced by the inventors, i.e., maintaining a "smooth walled, solid, substantially straight, continuous, without break or interruption" tube.

OBJECTIVE EVIDENCE OF NONOBVIOUSNESS

In addition to evaluation of the prior art references cited by the Examiner, it is also relevant to consider objective evidence of nonobviousness. The evidentiary considerations are enumerated in Graham v. John Deere Co, 383 U.S. 1, 148 USPQ 459 (1966). ("Courts to date have developed nine secondary considerations: (1) long-felt need; (2) failure of others; (3) commercial success; (4) commercial acquiescence via licensing; (5) professional approval; (6) copying by and praise from infringers; (7) progress through the PTO; (8) near-simultaneous invention; and (9) unexpected results.") citing Andrew Blair-Stanek, *Increased Market*

Power as a New Secondary Consideration in Patent Law, 58. Am. U. L. Rev. 707, 712-713 (2009). The primacy of the analysis under Graham, supra, has been reaffirmed in KSR International Co. v. Teleflex, Inc. 550 U.S. 398, 82 USPQ2d 1385 (2007). See the discussion regarding Graham factors in 2141 MPEP. See also Natalie A. Thomas, *Secondary Considerations in Nonobviousness Analysis: The Use of Objective Indicia Following KSR v. Teleflex*, 86 NYU Law Review 2070 (2011)

It is clear that objective evidence of nonobviousness must be considered before making a determination of obviousness. “We have repeatedly held that evidence relating to all four Graham factors – including objective evidence of secondary considerations - **must** be considered before determining whether the claimed invention would have been obvious to one of skill in the art at the time of invention.” Apple Inc. v. International Trade Commission, 725 F.3d 1356 (Fed. Cir. 2013), citing Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA Inc., 699 F.3d 1340, 1249 (Fed. Cir. 2012). See also Ortho-McNeil v. Mylan Lab, 520 F.3d 1358, 1365 (Fed. Cir. 2008), stating “(a)s this court has repeatedly explained, this evidence (objective evidence on non-obviousness and commercial success) is not just a cumulative or confirmatory part of the obviousness calculus but constitutes **independent evidence of nonobviousness**. See also Leo Pharmaceutical Products, Ltd. V. Rea, 526 F.3d 1346 (Fed. Cir. 2013) and stating “**Objective indicia ‘can be the most probative evidence of nonobviousness in the record,** and enable the court to avert the trap of hindsight’, citing Crocs, Inc. v. Int’l Trade Comm’n, 598 F.3d 1294 1310 (Fed. Cir. 2010). Here, the objective indicia of nonobviousness are crucial in avoiding the trap of hindsight **when reviewing, what otherwise seems like, a combination of known elements.**”

Based upon comments made in the July 15, 2014 interview, it is believed the Examiners lean toward the belief that the Patent Owner’s invention, Torrance ‘565, is a mere combination of known elements. This

would be incorrect. As the following detailed declarations make clear, prior to the Patent Owner's invention, no one thought of the idea in spite of a demonstrated and known need in the oil and gas industry. The problem remained unresolved in spite, in fact, of conscious efforts by major oil companies to find a solution to the problem. The attached declarations uniformly attest to the fact that there was a long felt need in the oil and gas industry for the Torrance '565 product. In other words, the Patent Owner's invention resolved a long felt need within the oil and gas industry.

This point is worth repeating. As the Federal Circuit stated in Transocean, supra, "objective evidence of non-obviousness is an important component of the obviousness inquiry because 'evidence of secondary considerations may often be the most probative and cogent evidence in the record. **It may often establish that an invention appearing to have been obvious in light of the prior art was not**.'" Citing Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1538 (Fed. Cir. 1983)

The Examiners have cited several patents. Two patents disclose tear cords in unrelated, dissimilar cables. Two other patents cite helically wound metal tube products without tear cords. The Examiners have stated during an earlier interview that this prior art makes the Patent Owner's invention obvious. It is respectfully suggested that that determination would be impermissible under the repeated rulings of the Federal Circuit. The **facts** are presented in the multiple declarations of independent third party witnesses. (See Exhibits B through L discussed below.) These facts conclusively rebut the suggestion of obviousness.

LONG-FELT NEED

The oil and gas industry has had a long, unmet need for a product that permitted the efficient removal of protective jackets from hollow metal tubes used to convey fluids under pressure into a downhole environment. Jacketing was most often removed with bladed tools, e.g., knives. The operation was usually conducted on the deck of an offshore oil platform, or

the frequently slippery work floor of an oil rig. This often caused injuries to workers holding the cable in one hand and an open blade with the other hand while attempting to cut through the tough protective jacket. This method of stripping cable of the protective jacket also frequently damaged the surface of the hollow metal tube.

Recall that the hollow metal tube is used to convey fluids under pressure. The fluids are used in downhole equipment or instruments. The connection of the fluid conveying tube with the equipment or instrument requires the use of a compression fitting. The compression fitting maintains a pressure seal, i.e., the fluid in the tube may be at pressure higher or lower than the ambient pressure. The pressure seal of the compression fitting maintains that pressure differential. This seal, formed between the compression fitting and the tube surface, can be compromised by gouges or scrapes on the tube surface. A compression fitting may be required at the end of tubes ranging from lengths of 500 feet to lengths exceeding 30,000 feet. It is important that such a length of cable not be ruined by rough handling in the removal of the tough protective cable jacket.

This problem, lack of a safe and efficient method of removing the protective jacket from a hollow metal tube, created an industry manufacturing and marketing mechanical devices that attempted to strip away the protective jacket from the hollow tubes. Participants in this market are Antech Ltd. Unit 7, Newbery Centre, Airport Business Park, Exeter, UK and Tube-Tec Ltd. Spurryhillock Industrial Estate, Broomhill Road, Stonehaven, UK. Copies of the Antech sales information are attached as Exhibit A-3 to the declaration of Jody James. Copies of the Tube-Tec product literature are attached as Exhibit A-4. Note, given the opportunity to innovate in response to industry need, Tube-Tec developed a similar product to Antech, in contrast to developing a jacketed tube with a tear cord. Tube-Tec did not market a jacketed tube containing a tear cord until **after** the Patent Owner introduced Safety-Strip, its trademarked

product for a jacketed tube with a tear cord and subject of Torrance '565.

In approximately 2007, Roy Torrance and Jody James, both employees of the Patent Owner, conceived of the idea of using a tear cord placed on the surface of the hollow metal tube and covered by the tube jacket. The tear cord extends the length of the tube. Initially their idea was met with skepticism. See paragraphs 5 through 7 of the declaration of Bobby Field, Commercial Sales Leader at Precision-Hayes International, manufacturer of the Patent Owner's product. (Exhibit J.) Mr. Field states he did not believe the product would work. Specifically he did not think it possible to use a cord to tear through the protective jacket surrounding the hollow metal tube as used in the oil and gas industry for downhole applications.

The Patent Owner asserts that the invention is not obvious. It points to the long-felt need of the oil and gas industry for a product or method that would allow the protective jacket to be removed from hollow metal tubes. Proof of this long felt need is established by the declaration of Jody James, CEO of Gulf Coast Downhole Technologies (Exhibit A, paragraphs 9-15). Proof of this long felt need is also established by the declaration of Roy Torrance, President of Gulf Coast Downhole Technologies (Exhibit M, paragraphs 7 and 8).

This long felt industry need is also evidenced by paragraph 3 of the declaration of Amy Dargas (Exhibit B), Sales Manager at Deep Casing Tools, an oil well tool engineering and manufacturing company based in Aberdeen, Scotland and stating "Prior to the introduction of Safety-Strip, jackets were removed from the TEC and the control lines with simple hand held bladed tools that were used to scrape off the outer jacket or with complex rotating bladed devices designed specifically for this purpose.

Neither method was sufficient to meet the needs of the industry, as these blades and tools were known to scratch or gouge the smooth outer sealing surface of the high pressure tubes. The tools were also known to cause injuries to personnel responsible for working with these products. I

have known this deficiency to have existed for at least 2 years prior to the introduction of Safety-Strip in 2009.”

This industry need is also evidenced by the declaration of Casey Bechdol, Operations Manager with BMP Enterprises, a specialist in monitoring solutions for downhole oil and gas markets (Exhibit C). Mr. Bechdol states in paragraph 4 of his declaration that “Prior to the introduction of Safety-Strip, encapsulated jackets were removed from single downhole cables and single control lines using a bladed rotational cutting device, similar to a heavy duty pencil sharpener. In a flatpack configuration a mechanical device that incorporated cutting blades was used to separate the multiple tubes from the outer jacket. These mechanical devices are limited in their performance especially with harder materials. **The rotational cutting device could actually bend the tube.** The flatpack encapsulated jacket removal tool would often damage the tubing on one side if the cutting blades became misaligned. Open blade knives were also used to cut through and scrap off the encapsulated jacket. **The use of mechanical devices and knives resulted in damage, scores, nicks and gouges, to the sealing surface of the tube.”**

(The term “flatpack” is explained in paragraph 8 of Jody James’ declaration. (Exhibit A))

It will be appreciated that bending the tube can make the tube surface unsuitable for making an hermetic seal with a compression fitting. See the declaration of Roy Torrance (Exhibit M, paragraph 5 stating “it is paramount that the ... the tube is round”) and Jody James (Exhibit A at paragraph 25, stating “a compression fitting ... requires a round, undeformed tube circumference”)

Mr. Bechdol further states in paragraph 6 that “**The use of knives and cutting devices to separate the encapsulated jackets from downhole cable and control lines do not meet the needs of the intelligent well industry** as they are known to damage the sealing surface

of the tube and can injure personnel responsible for working with these products. I have known this deficiency to have existed since entering the industry 14 years ago.”

Further in paragraph 7, it is stated that “BMP has searched for alternative methods and devices to replace the knives and bladed cutting devices. **Other than Safety-Strip tear cords no tools have been found that could maintain the sealing integrity of the tube or provide an improved level of safety.**”

The long felt industry need is also documented by the declaration of Mark Watson, Regional Sales Manager for Africa, Europe, Russia and the Middle East for Packers Plus, an engineering firm concentrating in open hole, multi-stage horizontal fracturing based in Houston, Texas, (Exhibit D).

Mark Watson was formerly employed by Schlumberger, Wood Group and Weatherford.

Mark Watson states in paragraph 4 of his declaration that “**None of these tools and methods was sufficient to meet the needs of the industry**, as these blades and tools were known to scratch or gouge the smooth outer sealing surface of the high pressure tubes used in downhole cables and flatpacks.”

Further, Mark Watson states in paragraph 7 that “During my years of deploying jacketed high pressure tubes **I was frequently asked by the Oil Companies’ representatives on the oil rigs if there was a better way, other than using cutting blades and the ineffective bladed devices, to remove the protective jackets from the high pressure tubes.** The Company Representatives often expressed concern relating to safety and the potential for an injury to occur when using the knives and cutting devices. Additionally they frequently expressed concern with the effect the scoring to the sealing surface of the tube would have on the reliability of the system.”

Further, see the declaration of Michael Bealeu, (Exhibit E) a twenty year veteran of the oil and gas industry and having first hand experience with jacketed pressure tubes used in downhole cables and flatpacks. He has installed and supervised the installation of these products. See paragraph 3 of his declaration.

Mr. Bealeu's declaration further states in paragraph 5 that **"There has been a long-standing need for a better means to remove jackets from downhole cables and flatpacks.** As far back as the 1990's my customers expressed concern over the use of bladed tools to remove jackets from pressure tubes, but accepted their use in the absence of a better solution. Over the course of my career I was personally involved in management meetings in which this issue was discussed, but **before Safety-Strip no acceptable alternatives were identified."**

Further, see the declaration of Shawn Calhoun, Completion Consultant at Hess, a global independent oil and gas energy company, and possessing 22 years of experience in the oil and gas industry (Exhibit F). He attests to having installed and supervised the installation of downhole cables and flatpacks, as well as having sourced and authorized the purchase of these products. See declaration paragraph 3.

See paragraph 5 of Mr. Calhoun's declaration stating "There has been a long-standing need for a better means to remove encapsulation from downhole cables and flatpacks. **In 1999 I was tasked with replacing the bladed tools** being used on the Chevron Diana Project. **The cable and flatpack manufacturers I consulted were unable to offer any solutions, and I ultimately selected machinery from Antech Limited (from the United Kingdom) as our method for stripping the encapsulated jackets.** With certain jacket materials the Antech machines performed better than the fixed blade knives, but **they were ineffective with soft jacket materials and we were forced to revert back to blades for these products."**

See paragraph 6 stating: "I have personally seen bladed tools cause longitudinal scarring along the sealing surface of pressure tubes after they were used to remove encapsulated jackets, and this dated back to the beginning of my oilfield career in the early 1990's. Third party stripping machines (such as those provided by Antech) were invented to replace the bladed tools, but these were often unsatisfactory solutions."

Further see the declaration of Bryan Petrich, Drilling and Completion Supervisor at Hess and possessing 19 years of experience in the oil and gas industry. (Exhibit G)

See paragraphs 4 and 5 of Mr. Petrich's declaration, stating:

4. "I am familiar with many methods for removing encapsulation from downhole cables and flatpacks. These include open blades, air-driven wire abrasive wheels, hot knives, and devices with captive blades. While these devices did remove the encapsulation, each had flaws related to tube damage and personnel safety. Some were also highly inefficient and burned expensive rig time."

5. "There has been a long-standing need for a better means to remove jackets from downhole cables and flatpacks. During my employment at Wood Group production Technology (1998-99) a customer request (Shell) initiated research of alternative methods to remove encapsulation. At that time, neither cable manufacturers nor third party tool companies offered any solutions beyond the methods described above, and until Safety-Strip was available I am unaware of any other effective solution."

6. I have personally witnessed injuries experienced while removing cable jackets from high pressure tubes.

These include cuts and punctures to hands, fingers, a shoulder, ribs, and one individual's stomach.

7. I have personally witnessed the sealing surface of pressure tubes damaged when the encapsulation was removed with the various devices described in paragraph 4 above. Damage included scratches and gouges that could compromise the ability of the terminations to form effective seals on the tube.

Yet further see the declaration of Michael Krejci, Downhole Monitoring Product Line Manager for Omega Well Monitoring, a developer of well monitoring tools for the oil and gas industry headquartered in Aberdeen, Scotland, and formerly an employee of Baker Oil Tools, part of Baker Hughes, a global oil field service provider and supplier of oilfield tools. (Exhibit H)

Mr. Krejci states in the third and fourth paragraphs of his declaration that:

In the early 1990's, my coworkers and I (at Baker Oil Tools) used fixed blade knives to remove jackets from cables and flatpacks. At this time, issues that included personnel injuries and damage to the tube sealing surface caused the use of knives to be considered a hazard, but alternative jacket removal options were not available. I personally witnessed tubes being damaged when encapsulation was removed, and I also witnessed accidents including cuts, to hands, arms, and even a technician's abdomen. Over the years, my colleagues and I considered various alternatives offered by third party suppliers including covered cutting tools that eliminated open blades, and

pneumatic stripping devices that incorporated wire wheels that could tear the encapsulation from the tube. These options proved to be inefficient, especially with flatpacks, and therefore were not accepted as suitable replacements for knives.

In approximately 2004-2005 oilfield operators including Shell, Chevron, and Exxon began to demand improved options for jacket removal in response to accidents and tube damage. Open blades began being banned from use on offshore rigs, particularly in the Gulf of Mexico and the North Sea. **Our requests to cable manufacturers for better options to remove the jackets from their products were not successful, as they only recommended third-party tools that had already proven to be less desirable than knives.** The main result of the ban on knives was a compromise in which retractable blades became allowed rather than fixed blades as a means to improve safety issues. **The risk of damage to the tubes continued to lack a satisfactory resolution until Safety-Strip became available from Gulf Coast Downhole Technologies.**

Also offered is the declaration of Steve Kelly, CEO and President of SMK, (Exhibit I) Mr. Kelly possesses 24 years of experience in the oil and gas industry. Mr. Kelly was formerly employed by Baker Hughes and Halliburton, both major players in the oil and gas industry and consumers of the Patent Owner's product (Torrance '565). He states he was employed for 14 years with Halliburton as a Field Engineer, Account Manager and Operations Manager. He further declares he possesses 10

years of first-hand experience with the installation, procurement and sale of downhole metal tubed cable and metal control line tubes.

Mr. Kelly states in paragraphs 4 and 5 of his declaration that:

4. "Prior to the introduction of Safety-Strip, the encapsulated jackets were removed from the TEC and control lines by cutting and scrapping with utility knives and double handed knives. A mechanical rotating device that incorporated a cutting blade was also used to remove the encapsulated jackets from single lines. **Neither method was sufficient to meet the needs of the industry**, as these blades and tools were known to scratch or gouge the smooth outer sealing surface of the high pressure tubes used in downhole TEC and control line flatpacks. The tools were also known to cause injuries to personnel responsible for working with these products. I have known this deficiency to have existed for at least 6 years prior to the introduction of Safety-Strip in 2009."

5. "While I was employed at **Baker Hughes the local district operations actively sought alternative methods and devices to replace the knives and rotational bladed cutting devices**. Other than Safety-Strip tear cords no tools were found that could maintain the sealing integrity of the tube nor provide an improved level of safety."

It is the position of the Patent Owner that the above declarations conclusively establish a long felt unmet need within the oil and gas industry for a product from which the jacket could be safely removed without damage to the smooth wall surface of the metal tube, i.e., a sealing surface. It is worth noting that the Federal Circuit in Transocean, supra

found the testimony of two of the inventors of the patent in suit to constitute substantial evidence of long felt industry need. Here, the Patent Owner has provided the declaration of multiple declarants having substantial industry experience to assert the existence of a long unmet industry need and that the Patent Owner's product met that need. It is respectfully suggested that this evidence cannot be disputed.

Further, it must be remembered that the decision evaluating whether an invention is obvious must consider all four Graham factors, including objective evidence of non-obviousness. Objective evidence includes the evidence of long felt unmet industry need (presented above) and commercial success (presented below). This objective evidence often is the "most probative and cogent evidence of record." The decision maker cannot let its mind be "clouded by its view that the asserted claims would have been obvious over the prior art." An example would be separate prior art references, each containing part of the invention. "A patent comprised of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." KSR Int'l v. Teleflex Inc., 550 U.S. 418 (2007) "This is precisely the sort of hindsight bias that evaluation of objective evidence is intended to avoid." Transocean Offshore Deepwater v. Maersk Drilling, 699 F.3d 1340 at 1349 & 1350 (Fed. Cir. 2012)

Also offered is the declaration of Bobby Field, Commercial Sales Leader at Precision-Hayes International, a manufacturer of downhole jacketed pressure tubes. (Exhibit J) Precision Hayes International is the manufacturer of the Safety-Strip jacketed tubes. (Torrance '565).

Mr. Field states that he has 35 years of experience in the Extrusion and Cabling Industry. The jacketed tube cable subject of Torrance '565 utilizes an extrusion process for forming the protective jacket on the metal tube.

Mr. Field states in paragraph 4 of his declaration that it is necessary at times for the manufacturer to remove encapsulation (the protective jacket) from the metal pressure tube and this has been a significant problem. He states that Precision-Hayes International has used the known removal tools including pneumatic machines, slitters and cutting wheels. In spite of employing a highly trained work force, Precision-Hayes International still has experienced damaged tubes and injuries to personnel resulting from removal of the jacket from the tubes. Thus there has been a long felt need in the cable manufacturing industry as well in the downhole oil and gas industry.

Also offered for consideration is the declaration of Bradley Whitfield, Vice President of Sales and Operations at Deep Casing Tools. (Exhibit K) Mr. Whitfield is a former employee of Gulf Coast Downhole Technologies (Patent Owner) and Rockbestos-Suprenant Cable Corporation, the third party initiating the instant reexamination of Torrance '565.

Mr. Whitfield states in paragraphs 3 and 4 that he has first hand experience in the manufacture of downhole cables and flatpacks that contain pressure tube and further that he is familiar with the many methods used for removing encapsulation from downhole cables and flatpacks.

In paragraph 5, Mr. Whitfield attests to the fact that he received customer requests for better means to remove the encapsulated jacket from the downhole cables. He further states that to his knowledge, Rockbestos-Suprenant Cable Corporation, a significant competitor to the Gulf Coast Downhole Technologies (Patent Owner) never considered adding a tear cord to their product.

Like the declaration of Bobby Field, Mr. Whitfield states in paragraph 6 of his declaration that Rockbestos-Suprenant also had to remove the jackets from cable. They clearly had motivation to find an alternative.

Attention is also directed again to the declaration of Bobby Field, Commercial Sales Leader at Precision-Hayes International, a manufacturer of downhole jacketed pressure tubes. His declaration evidences skepticism of third parties that the tear cord invention subject of Torrance '565 would work. It will be appreciated that industry skepticism is also objective evidence of non-obviousness. See for example Transocean, supra. This skepticism is especially compelling in light of the fact Mr. Field had previous experience manufacturing cables for other applications that did contain tear cords.

In paragraphs 5 through 7 of his declaration, Mr. Field states:

5. "During the first 10 years of my career I had experience working with specialty products that included tearing cords. These tearing cords were incorporated into products that had thin jackets made of soft materials. In comparison, the jackets extruded over pressure tubes, e.g., Gulf Coast cables, are thick and use much harder materials. While working with pressure tubes over the last 24 years I did not consider adding tearing cords to the jackets of the type of cable sold by Gulf Coast.

6. "During the last 24 years, Hayes Industries has encapsulated pressure tubes for a variety of domestic and international customers, including oil and gas operators and service companies. Many of these customers have requested better methods to remove the jackets from pressure tubes, and our best advice was to use sharp blades and well trained personnel. We did not consider tearing cords as a solution to this long standing problem.

7. "Gulf Coast Downhole Technologies was the first customer to ask Hayes Industries to include a tearing cord as part of a jacketed pressure tube. Based on my experience in this industry, it was my opinion that the thickness and hardness of the jackets used in these products would make a tearing cord ineffective. I informed Jody James and Roy Torrance of my skepticism and I was surprised when the prototypes were successful."

It is respectfully suggested that this is conclusive proof that the incorporation of a tear cord into a downhole encapsulated pressure tube was not obvious. It has already been pointed out that Mr. Field was fully aware of the problems with safely and efficiently removing the encapsulating jacket from the pressure tube. The fact that the jacketing for downhole pressure tubes was harder or tougher than the jacketing for other tubes deterred the adoption of tear cord. It was believed that it would not be possible to pull a cord through the harder or tougher jacket of a downhole pressure tube.

The declarations of Jody James (Exhibit A, paragraph 24) and Roy Torrance (Exhibit M, paragraph 10) directly corroborate the declaration of Bobby Harris and his skepticism regarding the feasibility of Safety-Strip, the Patent Owner's trademark for a jacketed tube containing a tear cord.

It is useful to compare the Patent Owner's evidence with evidence presented in Transocean, supra. In Transocean, the Federal Circuit found the testimony of the inventors constituted substantial evidence sufficient to reasonably persuade a jury on the issue of industry skepticism. Here, the case is stronger, the skeptic himself has provided a declaration. The declaration articulates the reasons for the skepticism.

It is appropriate to consider the Patent Owner's efforts to solve the industry need for a device or system that would allow the safe and efficient

removal of protective jackets from metal tubing. Jody James worked on a device for softening the jackets with heat prior to using a cutter. These efforts were made in 1999. See paragraphs 17 and 18 of Jody James declaration (Exhibit A). Roy Torrance's efforts, detailed in paragraph 9 of his declaration (Exhibit M), were conducted in 2005 through 2008. A patent application was filed in July 2008. This demonstrates the invention was simply not the product of combining two known devices together. It was commonly assumed that the jacketing material for pressure tubes in downhole applications was too thick or tough to be cut with a tear cord. See paragraph 7 of the Bobby Field declaration, (Exhibit J).

Again the declaration Mr. Whitfield confirms Rockbestos-Suprenant Cable Corporation, a leading competitor to Gulf Coast Downhole Technologies (Patent Owner), did not consider adding a tear cord to its downhole jacketed pressure tubes. This is in spite of being aware of the industry demand for an improved product.

The Patent Owner further demonstrates the long felt and unmet need for a jacketed metal pressure tube wherein the jacketing could safely and efficiently be removed without injury to the worker or damage to the sealing surface of the metal tube. Attached as Exhibit A-1 to the declaration of Jody James is a copy of training materials from Well Dynamics. This material predates the availability of the Safety-Strip product. The training materials specify mandatory personal protective equipment (PPE) including chain mail gloves, leather aprons and knives with the sharp point ground off. There is a warning not to kink the control lines (pressure tubes). There is also a warning not to score the control line sheath (metal tube surface). See also paragraphs 11-14 of Jody James declaration, (Exhibit A).

Exhibit A-2 is a copy of a presentation from Halliburton regarding a workplace injury occurring during the removal of the protective jacket on a pressure tube. The worker was not wearing the mandatory Kevlar gloves at the time of the injury. As remedial action, the presentation states "**New**

type of Safety strip Flatpack control lines are on order and available by Q3.” See paragraph 15 of Jody James declaration.

Exhibit A-3 is a sales presentation of an Antech cable jacket stripping device predating the invention of Torrance '565 (Safety-Strip).

Exhibit A-3 is also an announcement of a new Antech device “design in response to market demand for a stripping tool that makes removing encapsulation from critical downhole cable and tubing a less complicated and time consuming task.”

Exhibit A-5 is sales literature for a Tube-Tec jacketed tube with a tear cord. This tubing, which is a duplicate of the Patent Owner’s tubing (Safety-Strip) was introduced to the market **after** Safety-Strip. It is respectfully suggested that this fact pattern is further indicia that the development of a downhole tubing with a tear cord was not obvious. After the Patent Owner’s Safety Strip product became available, Tube-Tec introduced its copy-cat product. See paragraphs 18 and 19 of the Jody James declaration (Exhibit A). It will be appreciated that copying by a competitor is an objective factor of nonobviousness.

FAILURE OF OTHERS

As stated in the attached declarations, others sought a solution to the problem of removing jacketing from metal pressure tubes.

See for example the fourth paragraph of the declaration of Michael Krejci (Exhibit H) stating “In approximately 2004-2005 oilfield operators including Shell, Chevron, and Exxon began to demand improved options for jacket removal in response to accidents and tube damage.” Mr. Krejci also states in the third paragraph of his declaration that “Over the years, my colleagues and I considered various alternatives offered by third party suppliers including covered cutting tools that eliminated open blades, and pneumatic stripping devices that incorporated wire wheels that could tear the encapsulation from the tube. These options proved to be inefficient,

especially with flatpacks, and therefore were not accepted as suitable replacements for knives.”

Steve Kelly states in paragraph 5 of his declaration (Exhibit I) that “While I was employed at Baker Hughes the local district operations actively sought alternative methods and devices to replace the knives and rotational bladed cutting devices. Other than Safety-Strip tear cords no tools were found that could maintain the sealing integrity of the tube nor provide an improved level of safety.”

Bryan Petrich states in paragraph 5 of his declaration (Exhibit G) that “(d)uring my employment at Wood Group production Technology (1998-99) a customer request (Shell) initiated research of alternative methods to remove encapsulation. At that time, neither cable manufacturers nor third party tool companies offered any solutions beyond the methods described above, and until Safety-Strip was available I am unaware of any other effective solution.”

Shawn Calhoun states in paragraph 5 of his declaration (Exhibit F) that “(i)n 1999 I was tasked with replacing the bladed tools being used on the Chevron Diana Project. The cable and flatpack manufacturers I consulted were unable to offer any solutions, and I ultimately selected machinery from Antech Limited (from the United Kingdom) as our method for stripping the encapsulated jackets. With certain jacket materials the Antech machines performed better than the fixed blade knives, but they were ineffective with soft jacket materials and we were forced to revert back to blades for these products.”

Further, see paragraph 20 of the declaration of Jody James, (Exhibit A) stating “Tube-Tec Ltd., ... is a provider of encapsulated pressure tubes in direct competition to Gulf Coast Downhole Technologies. Tube-Tec has been in business far longer than Gulf Coast, and they also recognized the need to improve the methods available for removing encapsulation from jacketed pressure tubes and flatpacks. Although skilled in the art, they did

not recognize the opportunity to add a tearing cord to their products, despite having over twenty years to do so before Gulf Coast introduced Safety-Strip. Instead, Tube-Tec designed a stripping tool similar to those marketed by Antech Exhibit A-4)."

These declarations make clear that despite of explicit requests from customers, suppliers were unable to discover a solution to the problem of efficient and safe removal of jackets from pressure tubes. It was the invention of Roy Torrance and Jody James, in the face of skepticism from Bobby Field, an industry expert, that provided the solution.

COMMERCIAL SUCCESS

As previously stated, the Safety-Strip product was introduced in 2009. (Safety-Strip is the Patent Owner's trademark for the jacketed tubes or cable subject of the Torrance '565 patent.) Sales of Safety-Strip have grown each year while sales of non Safety-Strip jacketed tubes have even declined. Safety-Strip sales currently surpass the sales of the non Safety-Strip cable, i.e., jacketed hollow metal tubes not containing a tear cord.

The growing demand for the Safety-Strip product, i.e., jacketed hollow metal tubes containing a tear cord, is directly attributable to the features of the cable subject to the claims of the patent at issue. See the declarations of Amy Dargas (Exhibit B, paragraph 7), Symond Watt (Exhibit L, paragraphs 5 & 7), Casey Bechdol (Exhibit C, paragraph 9), Mark Watson (Exhibit D, paragraph 7), Michael Bebeau (Exhibit E, paragraphs 8 & 9), Shawn Calhoun (Exhibit F, paragraph 7 & 8), Bryan Petrich (Exhibit G, paragraph 9), Michael Krejci (Exhibit H, paragraphs 6 & 7), and Steve Kelly (Exhibit I, paragraph 7)

The fact that the invention was not obvious is also demonstrated by the commercial success enjoyed by the Patent Owner since it introduced its Safety-Strip product in 2009. This commercial success is proven by the declaration of Jody James, (Exhibit A at paragraph 22), declaration of Roy

Torrance, (Exhibit M at paragraphs 11 through 15) and numerous customers attesting to their purchase of the Safety-Strip product due to it containing the tear cord subject of the patent at issue. (See Exhibits B through I) It is also proven by the demonstrated fact (see below) that the patented product (Torrance '565) commands a premium in the marketplace. See also the graphic increase in sales (by feet of cable sold) shown by Exhibit A-6.

Exhibit A-6 (attached to the Jody James declaration Exhibit A) shows annual demand of total Gulf Coast Downhole Technologies sales, i.e., both single tubes and flatpacks between 2009 and 2014. Safety-Strip was introduced in 2009. There was modest growth in sales of Safety-Strip between 2010 and 2011. There was dramatic growth (over 300 percent) between 2011 and 2012. In 2012 the sales of Safety Strip nearly outpaced the sales of the Gulf Coast established product (cables not containing a tear cord).

The sales growth continued in 2013. Sales of Safety Strip exceed sales of the established product line by approximately 75 percent. This was during a period of declining sales of the established product line. Based upon sales year to date, Safety-Strip will out pace the established product line (not containing tear cords) by over 300 percent. It should be appreciated that Exhibit A-6 illustrates the sales of product by linear feet. The results would be more dramatic if reported by dollar value since a premium is charged for the Safety-Strip cable.

It is necessary to demonstrate a nexus between the commercial success and the attributes of the patented invention. Transocean Offshore Deepwater v. Maersk Drilling, 699 F.3d 1340, 1350 (Fed. Cir. 2012), Crocs v. Int'l Trade Com'n, 598 F.3d 1294, 1310 & 1311 (Fed. Cir. 2010). In Transocean, the Federal Circuit found the nexus between the patent and the commercial success by looking at customers specifying purchase of the patented dual activity drilling rig. The Court also found the nexus by looking at the premium charged for obtaining the patented dual activity

feature. The Court also cited testimony of the patent owner (Transocean) that the dual activity rigs accounted for an increasing percentage of rig sales. In Crocs, the Federal Circuit found such nexus by evidence that the product (shoes) practiced the subject patent and that the shoes were commercially successful. Crocs at 1311.

Here, the Patent Owner offers the statements contained in third party witness declarations to confirm that the Safety-Strip product (Torrance '565) is purchased because it possesses a tear cord in conjunction with a metal pressure tube. The relevant portions of the individual declarations are outlined below.

Amy Dangas, Sales Manager with Deep Casing Tools with 7 years experience in downhole monitoring of the oil and gas industry (Exhibit B) states:

5. "While I was employed at Omega the company purchased, and to my knowledge continues to purchase, Safety-Strip products from Gulf Coast Downhole Technology, because **Safety-Strip cables and flatpacks contain one or more tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.** Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets."

The declaration of Symond Watt, General Manager for Premier Worldwide Services LLC (Exhibit L) states in paragraph 5 that:

5. "Premier Worldwide Services' customers purchase Safety-Strip products manufactured by Gulf Coast Downhole Technology because Safety-Strip cables and flatpacks contain one or more tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets."

The declaration of Casey Bechdol, Operations Manager with BMP Enterprises and having 14 years experience in the oil and gas industry, (Exhibit D) states in paragraph 8 as follows:

8. "BMP has purchased Safety-Strip products from Gulf Coast Downhole Technology because Safety-Strip downhole cables contain a tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or

other tools to cut through the jackets.”

Mark Watson, Regional Sales Manager for Africa, Europe, Russia and the Middle East for Packers Plus and formerly with Sensornet, a fiber optic sensor developer and manufacturer for the oil and gas industry located in Elstree, Hertfordshire, UK, and Mr. Watson possessing 20 years experience in the oil and gas industry confirms in paragraph 7 that the Safety-Strip product is purchased for containing the patent features claimed in Torrance ‘565. (Exhibit E)

7. “While I was employed at Sensornet the company purchased Safety-Strip products from Gulf Coast Downhole Technology because Safety-Strip downhole cables contain tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets.”

Michael Bealeu, Global Product Line Manager of Frac Systems at TAM International, an independent oilfield services company providing inflatable packers to the oil and gas industry and headquartered in Houston, Texas, and Mr. Bealeu possessing 20 years experience in the oil and gas industry, states in paragraph 9 of his declaration (Exhibit F) that:

9. “My employers have purchased Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall

metal tube substantially straight, continuous, without break or interruption and structured to create an hermetic seal and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.”

Similarly, Shawn Calhoun, Completion Consultant at Hess and possessing 22 years of experience in the oil and gas industry states in paragraph 8 of his declaration (Exhibit G) that:

8. “Hess purchases Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube, i.e., substantially straight, continuous, without break or interruption and structured to create an hermetic seal and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.”

Bryan Petrich, Drilling and Completions Supervisor at Hess, possessing 19 years of experience in the oil and gas industry, states in paragraph 9 of his declaration (Exhibit H) that:

9. “Hess purchases Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube, i.e., substantially straight, continuous, without break or interruption and structured to create an hermetic seal and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.”

Michael Krejci, Downhole Monitoring Product Line Manager for Omega Well Monitoring, states in his declaration (Exhibit I) at the fifth paragraph that:

"Omega Well Monitoring purchases Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube substantially straight, continuous, without break or interruption and structured to create an hermetic seal and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface."

Steve Kelly, CEO and President of SMK, possessing 24 years experience in the oil and gas industry, states in paragraph 7 of his declaration that:

7. "While I was employed at Baker Hughes the company purchased Safety-Strip products from Gulf Coast Downhole Technology because Safety-Strip TEC cables and flatpacks contain one or more tear cords between the smooth wall metal tube(s) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets."

Review of the attached declarations uniformly demonstrate that the Patent Owner's sales of Safety-Strip products are because the products contain the features subject of the claims of the Torrance '565 patent. It is

the Patent Owner's position that it has conclusively shown the nexus between the commercial success of the Safety-Strip product and the Torrance '565 patent.

COMMERCIAL SUCCESS-PREMIUM PRICING

Customers are willing to pay a premium for the Safety-Strip product subject of Torrance '565. This is further evidence of commercial success. Transocean Offshore Deepwater v. Masesk Drillrig, supra at 1350. This fact is confirmed by the declaration of Amy Dangas. (Exhibit B) See paragraph 7 and 8, stating:

7. "Omega paid an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable and control lines without a tear cord.

8. It is my information and belief that others purchase Safety-Strip at an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable without a tear cord, because the cables and control lines contain tear cords to safely separate the outer jacket from the metal tube without damage to the metal tube surface."

Further, see the paragraphs 9 and 10 of the declaration of Casey Bechdol (Exhibit C), stating:

9. "BMP pays an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable without a tear cord

10. It is my information and belief that others purchase Safety-Strip because the cables and flatpacks contain tear cords that address **a long standing need** to safely separate encapsulated jackets from the metal tube without damage to the metal tube surface."

Note Mr. Bechdol confirms that this premium is paid because the product of Torrance '565 (Safety-Strip) meets "a long standing need". (See paragraph 10.)

See also the declaration of Symond Watt (Exhibit L) which states in paragraph 7 in its relevant part.

"The Safety-Strip has proven to be valuable to our customers since, when given the option, many elect to buy the Safety-Strip product at a higher price than the non-Safety-Strip product, where the only difference between the two is the tear cords that facilitate the removal of the protective jacket. To date, customers have spent an additional US \$144,000 on Safety-Strip products instead of buying the equivalent non-Safety-Strip options, which equates to a premium of 3.3% for Safety-Strip."

Attention is directed to the declaration of Mark Watson, Regional Sales Manager for Africa, Europe, Russia and the Middle East of Packers Plus. (Exhibit D). Specifically he states in paragraph 8 and 10 that:

8. "While I was employed at Sensornet the company paid an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable and control lines without a tear cord."

10. "It is my information and belief that others purchase Safety-Strip at an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable without a tear cord, because the cables and flatpacks contain tear cords to safely separate the outer jacket from the metal tube without damage to the metal tube surface."

The declaration of Michael Bealeu, Global Product Line Manager of Frac Systems at TAM International (Exhibit E) states in paragraph 8 that:

8. "I am aware that products that include Safety-Strip are more expensive than identical products that do not include Safety-Strip. The extra expense is justified because Safety-Strip reduces risk of tube damage, it reduces personnel accidents, and decreases required rig-time."

The declaration of Shawn Calhoun, Completion Consultant at Hess (Exhibit F) states unequivocally in paragraph 7 that:

7. I have personally authorized the purchase of Safety-Strip products for my projects. I am aware that the Safety-Strip feature is more expensive than otherwise identical products that do not include Safety-Strip. The extra cost is acceptable because Safety-Strip reduces the risk of tube damage and increases efficiency which saves money spent on rig-time.

The declaration of Bryan Petrich, Drilling and Completion Supervisor at Hess (Exhibit G) also confirms Hess knowingly paid a premium for the Torrance '565 product (Safety-Strip).

8. "I have personally used Safety-Strip products and authorized the purchase of Safety-Strip products. **I am aware that the Safety-Strip feature is more expensive than otherwise identical products that do not include Safety-Strip. The premium paid is acceptable because it reduces risk of tube damage, it reduces personnel accidents, and increases efficiency which saves money spent on rig-time.**"

Michael Krejci, with 30 years experience in the petroleum industry acknowledges a premium is paid for the Torrance '565 product (Safety-Strip), stating in the sixth paragraph of his declaration (Exhibit H) that:

"Omega Well Monitoring is aware that the Safety-Strip products cost more than otherwise identical products that do not have the tearing cord. Omega pays the higher price because the Safety-Strip tearing cord reduces the risk of damaging the tube sealing surface and reduces the possibility of injuries during installation."

Steve Kelly, CEO and President of SMK and possessing 24 years of experience in the oil and gas industry, stated in paragraph 9 of his declaration (Exhibit I) that:

9. "While I was employed at Baker Hughes the company paid an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable and flatpacks without the tear cords."

See also the declaration of Roy Torrance (Exhibit M) at paragraph 13, stating:

"The benefits of Safety-Strip are highly valued by Gulf Coast's customers; cables and flatpacks that are identical to Safety-Strip products in all aspects other than the tearing cord are available from Gulf Coast at a lesser cost than the Safety-Strip products. Customer demand, however, is higher for Safety-Strip products, which in sales between January and August 2014 have already totaled an *additional* \$950,000 above what customers could have spent for otherwise identical products without Safety-Strip. **This amounts to an approximately**

14% premium that Gulf Coast customers elected to pay for the Safety-Strip feature.”

Gulf Coast Downhole Technologies (Patent Owner) has clearly shown that its jacketed metal tube cable containing a tear cord commands a premium price in the market. This is shown by the declarations summarized above and attached hereto. This is compelling proof under the decision of the Federal Circuit in Transocean Offshore Deepwater v. Maersk Drilling, supra at 1350, stating “Transocean presented sufficient evidence of both commercial success and nexus to the features of the claimed invention. It showed, for example, that its dual-activity drilling rigs commanded a market premium over single-activity rigs.”

Transocean presented evidence that it charged an approximate 10% premium for its product (a ship containing a dual activity string rig). Transocean presented evidence that its dual activity rigs account for an increasing percentage of the rigs sold and that they were becoming the industry standard. This evidence was held to be substantial evidence of commercial success.

Similarly, Gulf Coast Downhole Technologies, the Patent Owner, has shown it charges a premium for its cable subject of Torrance ‘565. Gulf Coast has also shown the dramatic and continued growth of its sales of cable subject of Torrance ‘565 since its introduction in 2009. See Exhibit A-5. This evidence is uncontroverted and is persuasive evidence of commercial success.

SUMMARY

The Patent Owner has amended its claims. The amendments are supported by the specification and drawings. Claims 8 and 17 have been cancelled without prejudice. Claim 25 has been added.

The claims describe a jacketed metal tube comprising a metal tube with an outer jacket surrounding the metal tube. The claims describe a tear cord. The jacketed tube is structured for use in the harsh, abrasive and high pressure environment of hydrocarbon extraction well. The jacketed tube is spoolable and the metal tube has a wall that is hollow cylindrical shaped and is smooth, solid, substantially straight, continuous, without break or interruption, maintains negative or positive pressure and is structured to be hermetically sealed. The metal tube is structured to be hermetically sealed with compression fittings to convey fluids downhole. The tear cord is positioned proximate to the outer surface of the metal tube and inside the diameter of the flexible outer jacket and is able to be pulled back to create a slit in the protective jacket and allow the protective jacket to be separated from the metal tube without damage to the tube surface.

The Examiner has cited Hurley, 7,113,680, as anticipating the Patent Owners invention. As stated above, Hurley does not teach a solid, smooth wall hollow tube. Rather it teaches spiral wound armor cable. This is clearly disclosed in FIG. 8 of Hurley and in the suggestion of a suitable supplier of the armor layer. This cable is neither solid nor smooth. It is not structurally capable of being hermetically sealed and maintain a positive or negative pressure. **Hurley '680 is structurally incapable of performing as the Torrance '565 patent.**

Therefore it is respectfully requested that the rejection under 35 U.S.C. 102 be withdrawn.

The Patent Owner has also demonstrated that the prior art patents cited in support of the obviousness rejection under 35 U.S.C. 103 do not teach the invention subject of Torrance '565. In summary, two patents teaching cables containing metal tubes have been cited. Morgan

3,526,086 and 6,472,614 issued to Dupont et al. Both references teach spirally wrapping the tubes around an axis. The Patent Owner has shown this spiral wrapping deforms the round circumference of the tube and likely makes the tube unsuitable for hermetical sealing. Also, the Patent Owner teaches a multiple tube cable which is flat, i.e., the tubes are stacked into a single plane, in contrast to being helically wound.

The Examiner has cited Morgan 3,526,086 in conjunction with Gareis et al. 5,557,698 in rejecting the Patent Owner's patent 7,581,565 (Torrance '565) as obvious. Morgan does not disclose tear cords. It does disclose a helical wound assembly of conduits completely embedded in a polymeric substance. Even if equipped with tear cords, Morgan '086 does not disclose the structure of Torrance '565. It does not disclose a metal substantially straight tube surrounded by a protective jacket. Further Morgan '086 teaches embedding the bent or twisted tubes (spirally wrapped) within a polymeric substance. The polymeric substance would contaminate the tube surface and the spirally wound tubes may be deformed such that they could not be fitted with compression fittings. If the tubes are unable to be fitted with compression fittings, the tube cannot be used to maintain a positive or negative pressure. These are structural differences with the Torrance '565 patent unrelated to the absence of tear cords. **The combination of Morgan '086 and Gareis '698 would not work in substitution of Torrance '565.**

Two referenced patents, Gareis '698 and Okada et al. 6,236,790 have been cited for teaching the use of tear cords with cables or wires. The cable of Gareis '698 and Okada '790 do not contain hollow metal continuous smooth wall metal tube. Gareis provides no teaching, suggestion or motivation for the use of the tear cords. Okada '790 does not position the tear cord adjacent to an inner cylinder. (The inner cylinder comprises plastic or fabric tape.)

Gareis '698 discloses tear cords. It does not disclose tear cords adjacent to metal tubes. Gareis '698 discloses tear cords adjacent to

braided electrical conductors. Gareis '698 does not disclose the function of the tear cords. Again, Gareis does not disclose tear cords in conjunction with a metal tube wall that is a hollow cylindrical shaped smooth, solid, substantially straight, continuous, without break or interruption and is structured to be hemetically sealed. Gareis is disclosing an entirely different structure.

Accordingly, the references provide no motivation for use in a combination. Second, even if combined, the combined product would not be the invention of Torrance '565. For this and other reasons, it is respectfully requested that the rejection under 35 U.S.C. 103 be withdrawn.

Finally, the Patent Owner has presented uncontroverted objective evidence of non-obviousness. This evidence, i.e., secondary considerations, is the most probative evidence. It is based on undisputed facts asserted by 12 individuals of a long felt, unmet need, and commercial success including premium pricing. It is supplemented with third party training materials demonstrating this need and sales records showing commercial success.

The Patent Owner has shown that its amended claim 1 is not anticipated under the prior art. The Patent Owner has shown an unmet need in the industry preceding the Patent Owner's introduction of Torrance '565 and activity industry investigative efforts to device a solution to this unmet need. The Patent Owner is entitled to ask the question, if the invention was obvious, why wasn't it invented earlier? The answer, proven by objective evidence, is that Torrance '565 is not obvious.

The Patent Owner has also filed a new claim 25. This claim is supported by the specification. A plurality of conduits are disclosed. In contrast with Morgan '086 and Dupont '614, the tubes of Torrance '565 are straight. The conduit of Morgan and Dupont are both helically wound. It is the Patent Owner's position that this makes them deformed or unsuitable for separation as would be required to attach a compression fitting.

90/020,065

Response to First Office Action on Reexamination mailed May 21, 2014

Submitted this 20th day of August, 2014

/davidmcewing/

David McEwing
PO Box 70410
Houston, Texas 77270
713-514-0137
dmcewing@houstonpatentlaw.com

CERTIFICATE OF TRANSMISSION

I certify under personal knowledge that the aforesaid Patent Owner's Response to First Office Action was submitted to the USPTO via the EFS Web system on August 20, 2014 and a copy submitted by regular United States Mail to Haynes, Soloway P.C., 175 Canal Street, Manchester, NH 03101 on August 20, 2014.

/davidmcewing/

David McEwing

EXHIBIT A

EXHIBIT A

DECLARATION OF JODY JAMES

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies LLC (Gulf Coast) in the Reexamination Serial no. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I am CEO of Gulf Coast Downhole Technologies LLC, owner of the Safety-Strip jacketed cable which is subject of patents 2721737 (Canada) 2165043 (EPO) and 7,581,565 (US).
3. As CEO, I have detailed knowledge of the sales and revenue of Gulf Coast Downhole Technologies, Inc.
4. I was previously employed as a Project Engineer for Wood Group Production Technology. In my capacity as Project Engineer, I had first-hand experience with the offshore installation of substantially straight, continuous, smooth wall metal tubes without break or interruption and structured to create an hermetic seal. The outer tube wall forms a sealing surface to be used in conjunction with compression fittings to create the hermetic seal.
5. Through my work at Wood Group Production Technology and as CEO of Gulf Coast Downhole Technologies, LLC (Gulf Coast), I also possess detailed knowledge of the downhole jacketed metal tubing (cables) market and technology.
6. I possess a Bachelor's Degree in Mechanical Engineering from Carnegie Mellon University.
7. Safety-Strip is the trademark for the jacketed metal hollow tube containing an integral tear cord (cable) that is subject of Gulf Coast Downhole Technologies patent 7,581,565.
8. Pressure tubes that contain fluids are often referred to as control lines or chemical injection lines, and pressure tubes that contain a data transmission medium (fiber or insulated conductors) are often referred to as downhole cables, tubing encased conductors, or TEC. Flatpack is a term used in the oil and gas industry for multiple pressure tubes packaged together in a protective jacket. These pressure tubes are aligned in parallel in one plane, hence the term "flat pack". The pressure tubes in the flatpack are not helically wound.
9. Jacketed pressure tubes have certain similarities to jacketed products used in other industries (i.e. telecom lines and instrumentation cables) in that all of these products can have thermoplastic protective jackets extruded over another underlying component. Jacketed pressure tubes, however, are very unique in their manufacture and in their application, and they differ significantly from typical

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telecom lines or instrumentation cables in that the jacketing materials are usually much thicker and made of harder, tougher materials to withstand the harsh conditions experienced downhole in oil wells.

10. For more than thirty years before the introduction of Safety-Strip, downhole cables and flatpacks were used in the oil and gas industry without an integrated jacket removal feature, i.e., an integral tear cord. This was problematic during installation, because jacket removal tools often damaged tube sealing surfaces and prevented formation of hermetic seals. Use of the jacket removal tools, i.e., bladed instruments such as knives, often injured installation personnel.
11. This need for an improved method of removing protective jackets from hollow metal tubes is evidenced by oilfield service company procedures that specifically address the problems encountered when removing jackets. A WellDynamics procedure (Exhibit A-1) places a particular emphasis on the need to avoid "scoring the control-line."
12. For worker safety, WellDynamics procedures require workers to wear chain-mail gloves and a butcher's or welder's leather apron when using knives to remove the jacketing from hollow metal tube cable. Specialized double handled knives were also required to be used. This shows a need for a safe and effective method to remove protective jackets from encapsulated pressure tubes.
13. WellDynamics' procedure emphasizes: **"Take great care not to kink control-lines."** "Placing the bumper bar in the centre, or not fitting a bumper bar makes these flat-packs more difficult to strip, as the lack of support means that control-lines tend to kink more easily or become scored by the stripping knife. . . . **Take great care not to score the control-line sheath."**
14. WellDynamics procedure further states "Use an assistant to restrain movement of the flat-pack (hold the section which is **NOT** to be stripped). Take the knife in a two-handed grip drag it along one of the outer control-lines . . . working backwards towards the free end of the flat-pack, to strip the encapsulation along one edge of the flat-pack. . . . **Control the angle of the knife carefully, to minimize any scoring of the control-line sheath."**
15. The need for an improved method of removing the protective jacket from hollow metal tubes is further evidenced by incident reports describing jacket-removal issues. After a technician experienced an injury from not wearing the correct Kevlar gloves while using a jacket removal tool, Halliburton published an incident report (Exhibit A-2) that proposed Safety-Strip as a means to prevent further problems. This report not only confirms that jacket-removal problems existed in the industry, it demonstrates the novelty of the product by describing Safety-Strip as a "new type" of control line. The report states: "Actions to prevent recurrence: . . . **New type of 'Safety strip' flatpack control lines are on order and available by Q3."**

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16. The industry demand for an improved method of removing the protective jackets from hollow metal tubes is further evidenced by the invention of various mechanical stripping devices by several different companies. Antech is one such company, and the very first feature their marketing material (Exhibit A-3) promote is the ability to "Prevent Line Damage." A 2001 Antech press release entitled, **"New Tool Strips Encapsulation Without Damaging Downhole Cable."** Further the press release states "The AnTech Gun Dog was designed in response to market demand for a stripping tool that makes removing encapsulation from critical downhole cable and tubing a less complicated and time-consuming task."
17. Gulf Coast's efforts to address this problem also began with experiments with various encapsulation removal tools. In 1999 I tested a process in which encapsulated lines were passed through a section of heated ducts with a fixed blade at the end, hoping that the heat would soften the material sufficiently to allow easy cutting by the blade. This proved unsuccessful because irregularities in the encapsulation thickness made precision cutting impossible, and the blade often cut into the tube itself which destroyed the test pieces.
18. In 2005, Roy Torrance began experimentation with a hand-held tool that used a steel wire to cut the encapsulation rather than a blade. This had a tendency to scratch the tube surface, so the wire was replaced with a Kevlar strand. The tool with the Kevlar would cut the encapsulation without damaging the tube, but the Kevlar tended to wear quickly and needed such frequent replacement that this solution was determined to be impractical. The hand-held device failed, but it led to the idea to embed the strand under the jacket as an integral part of the cable encapsulation.
19. As an answer to the issue of removing jackets from pressure tubes, Safety-Strip is the first solution that involves changing the product itself rather than supplying a tool such as those manufactured by Antech or Tube-Tec.
20. Tube-Tec Ltd., Spurnyhillock Industrial Estate, Broomhill Road, Stonehaven AB39 2NH, UK, is a provider of encapsulated pressure tubes in direct competition to Gulf Coast Downhole Technologies. Tube-Tec has been in business far longer than Gulf Coast, and they also recognized the need to improve the methods available for removing encapsulation from jacketed pressure tubes and flatpacks. Although skilled in the art, they did not recognize the opportunity to add a tearing cord to their products, despite having over twenty years to do so before Gulf Coast introduced Safety-Strip. Instead, Tube-Tec designed a stripping tool similar to those marketed by Antech (Exhibit A-4).
21. Shortly after Gulf Coast introduced Safety-Strip (and many years after the introduction of the Tube-Tec stripping tool), Tube-Tec introduced a product named Easy-Strip that, like the Gulf Coast product, comprised a jacketed

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pressure tube with a tear cord under the jacket. Copies of their advertising literature are attached hereto. (Exhibit A-5) Tube-Tec had supplied the same jacketed pressure tubes and cables to the oil and gas industry for over twenty years prior to the introduction of the Gulf Coast Downhole Technologies Safety-Strip, but they had never offered Easy-Strip or a similar jacket-removal feature before the introduction of Safety-Strip.

22. In the years since Safety-Strip was introduced, Gulf Coast Downhole Technologies Inc. have seen a significant impact on sales. Gulf Coast sales of products without Safety-Strip have declined, while Safety-Strip product sales have increased significantly every year since it was introduced in 2009. The attached graph (Exhibit A-6) shows trends in production quantities, and the differences in volumes of products sold with and without Safety-Strip equate to sales differences in the millions of dollars. In 2013, total sales of Safety-Strip products were approximately 178% of the non-Safety-Strip products. Year-to-date sales of Safety-Strip products in 2014 (though only through August) exceed the sales of Safety-Strip cables in all of 2013. This growth is attributed to a growing market share for Safety-Strip products since it far exceeds the rate of growth for the industry itself.
23. The information regarding commercial sales of the Safety Strip cables and flatpacks, as well as the sales information of the standard Gulf Coast products (not containing tear cords) are compiled directly from the accounting records of purchase orders received by Gulf Coast Downhole Technologies.
24. In regard to the patent granted to Hurley US Patent 7,113,680, it indicates a boundary layer that primarily exists as a separation layer and would be manufactured from polyester or aramid yarn. If the product were to be manufactured with a metal boundary layer instead of polyester or yarn, Hurley suggests that the boundary layer could be an armor material, specifically "CPID interlock armor available from Eastern Wire & Conduit of Ontario, Canada". I have knowledge of the CPID armor manufactured by Eastern Wire & Conduit; the armor is a helically wrapped metal layer with a corrugated outer surface. This product is intended to provide physical protection from mechanical damage, but the corrugated outer surface is not designed to create an hermetic seal. This armor layer is unable to perform as a substantially straight, continuous, smooth wall metal tube, without break or interruption and structured to create an hermetic seal under positive or negative pressure. Product literature is attached (Exhibit A-7). Unlike the Safety-Strip cable, the Hurley product does not contain a pressure tube.
25. I am familiar with the patent of Morgan 3,526,086 and Dupont et al. 6,472,614. Both teach spirally wrapping multiple tubes around a central core or axis. This would require the tubes to be bent. Bending the tubes can alter or deform the tube circumference. The tubes, even if unwrapped from the spiral configuration, would likely be unsuitable for fitting the tube with a compression

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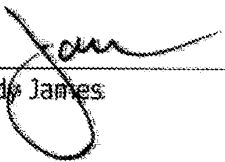
fitting. A compression fitting used for creating a hermetical seal as taught by Torrance '565, requires a round, undeformed tube circumference.

26. Precision-Hayes International (formerly Hayes Industries) is contracted by Gulf Coast to encapsulate the Safety-Strip products subject of patent 7,581,565. When Hayes was originally contracted by Gulf Coast to build prototypes of the Safety-Strip products, their management advised Gulf Coast that the jackets extruded over pressure tubes were too thick and the materials too hard to be removed with tearing cords.

27. I am aware that jacketed pressure tubes were in the public domain prior to the invention of Safety-Strip, and that tearing cords were in the public domain prior to the invention of Safety-Strip. Companies such as Draka, Tube-Tec, Hayes Industries, Mid-South Control Line, and Rockbestos-Suprenant Cable Corporation all pre-dated the existence of Gulf Coast by many years, and all pre-dated the invention of Safety-Strip by more than a decade. Each of these companies had financial incentive and practical motivation to use tearing cords in their products, and ample opportunity to introduce this feature. Their failure to do so before the product was invented by Gulf Coast indicates that the improved device was not obvious to them as a solution to their customers' needs or as a means to increase their own revenues.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.



Jody James

8/18/14

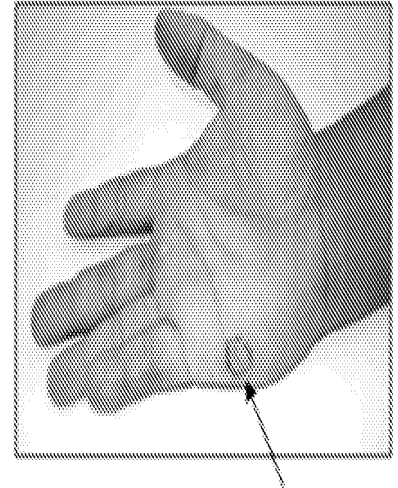
Date:

EXHIBIT A-2

EXHIBIT A-2

FAC - 24 Hr FLYER INCIDENT REPORT***DEPO Well S-902 : Personnel sustained superficial laceration on palm*****What happened:**

- While RIH completion, at about 15:00hrs on the 30.05.2011, a Halliburton employee was in the process to strip the encapsulation of the flat pack line in a restricted No-Go zone work area with proper barrier in place.
- While handling the double handle knife on the line, the knife slipped resulting a superficial laceration wound approx. 0.5 cms length, over the medial aspect of hypothenar eminence on the right palm.

*Laceration wound / paper cut***Immediate action taken:**

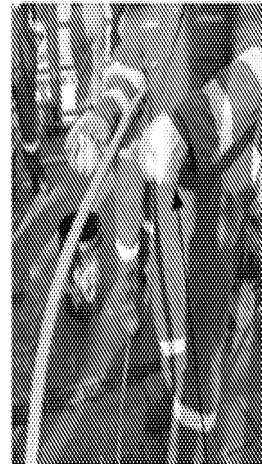
- Conducted a TOFS (Time Out for Safety) and requested the IP to visit the medic for examination.

What was the result:

- The IP was treated in the clinic with dressing only and resumed work comfortably with no pain.

What caused it:

- During the operation, the IP was not wearing the Kevlar gloves required for this operation as stated in the procedure for the job. The stripping knife being held against the palm of the hand contributed to this incident.

*Wrong gloves**Correct Gloves***Actions to prevent recurrence:**

- TOFS – Ensure personnel adheres to the procedures.
- Use supplied Kevlar hand gloves
- Modify the double handle knife with hand guard to provide additional hand protection from contacting blade surface
- Ensure all personnel is adequately trained.
- New type of "Safety strip" Flatpack control lines are on order and available by Q3

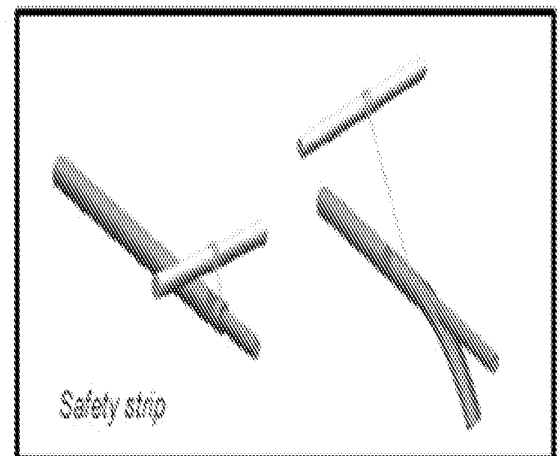
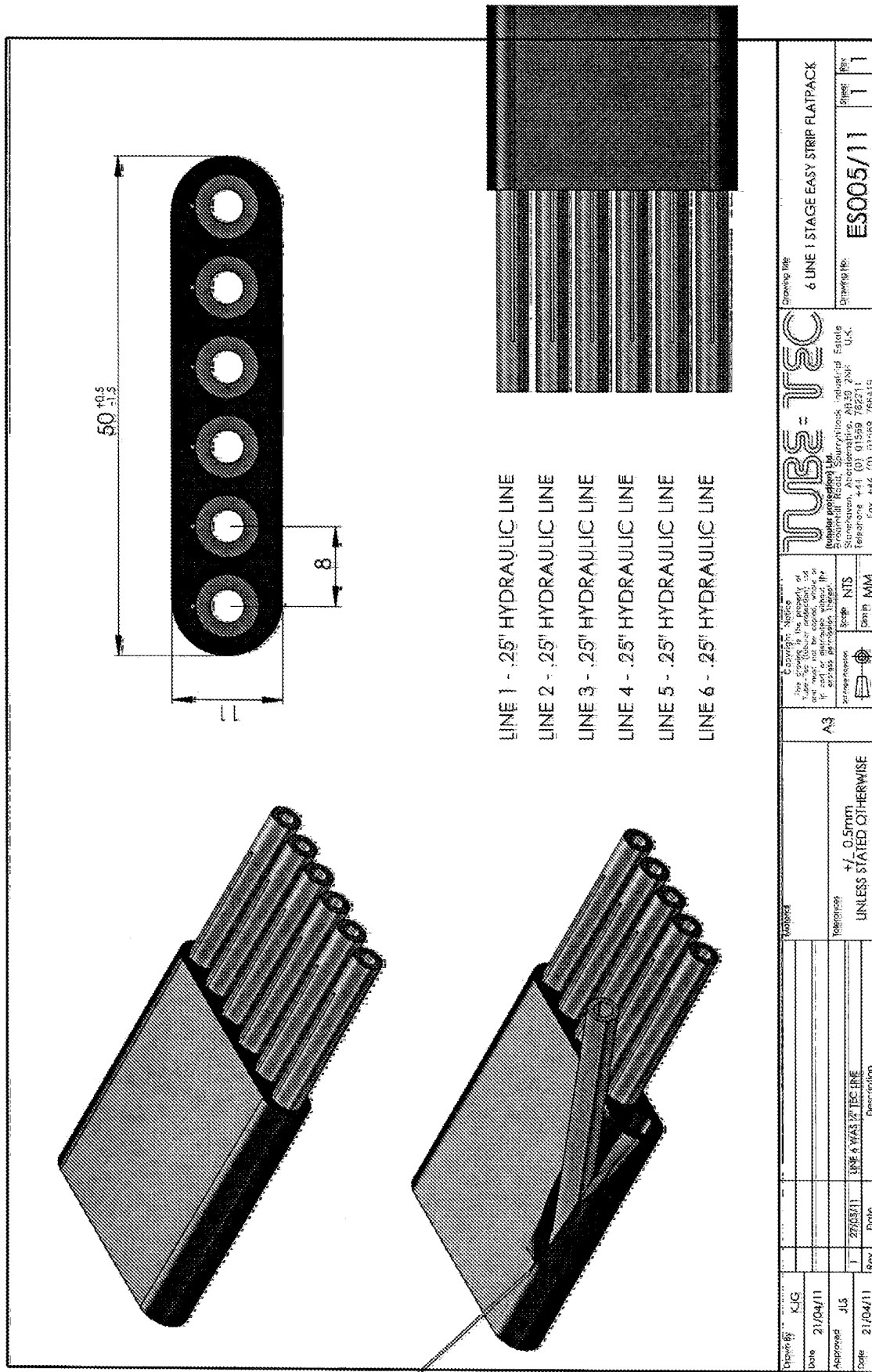
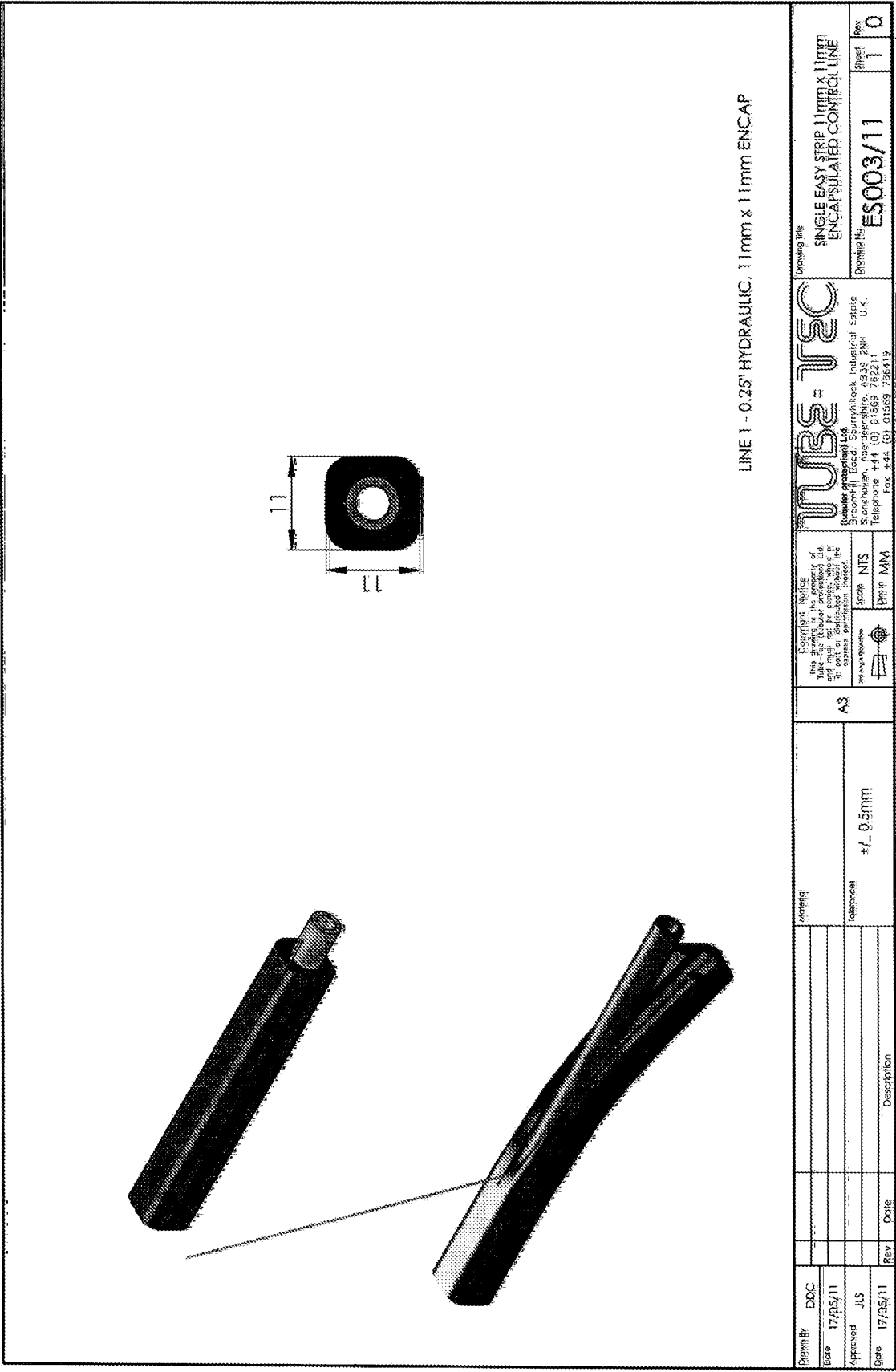


EXHIBIT A-5

EXHIBIT A-5



Drawn by: KJG	Checked: _____	Material: _____	Scale: A3	Notes: Notice: This drawing is the property of Tube-TEC. It is to be used for the design and construction of the product only. It is not to be used for any other purpose without the written consent of Tube-TEC. The user assumes all liability for any errors or omissions in this drawing.	Tube-TEC Tubular Protection Ltd. Sturminster Newton, Dorset, UK Telephone: +44 (0) 1328 782711 Fax: +44 (0) 1328 786415	Drawing No: ES005/11	Sheet: 1	Rev: 1
Date: 21/04/11	Approved: JLS	Manufactured: _____	Scale: +/- 0.5mm UNLESS STATED OTHERWISE	Notes: _____	Tube-TEC Tubular Protection Ltd. Sturminster Newton, Dorset, UK Telephone: +44 (0) 1328 782711 Fax: +44 (0) 1328 786415	Drawing No: ES005/11	Sheet: 1	Rev: 1
Date: 21/04/11	Rev: _____	Date: _____	Description: LINE A WAS 12" TBC LINE	Notes: _____	Tube-TEC Tubular Protection Ltd. Sturminster Newton, Dorset, UK Telephone: +44 (0) 1328 782711 Fax: +44 (0) 1328 786415	Drawing No: ES005/11	Sheet: 1	Rev: 1



LINE 1 - 0.25" HYDRAULIC, 11mm x 11mm ENCAP

Drawing title		SINGLE EASY STRIP 11mm x 11mm ENCAPSULATED CONTROL LINE		Drawing No Sheet Rev	
				ES003/11 1 0	
Copyright Notice This drawing is the property of Tube-tec (Ruber products) Ltd. and may not be copied, stored in a retrieval system or used in any form without permission in writing from the company.		TUBE-TEC (Ruber products) Ltd. 27 Moorhill Road, Skirryhill, Skirry, Shetland, U.K. Telephone: +44 (0) 1869 782111 Fax: +44 (0) 01869 786413			
Material		A3		Scale NTS Depth MM	
Technical		+/- 0.5mm			

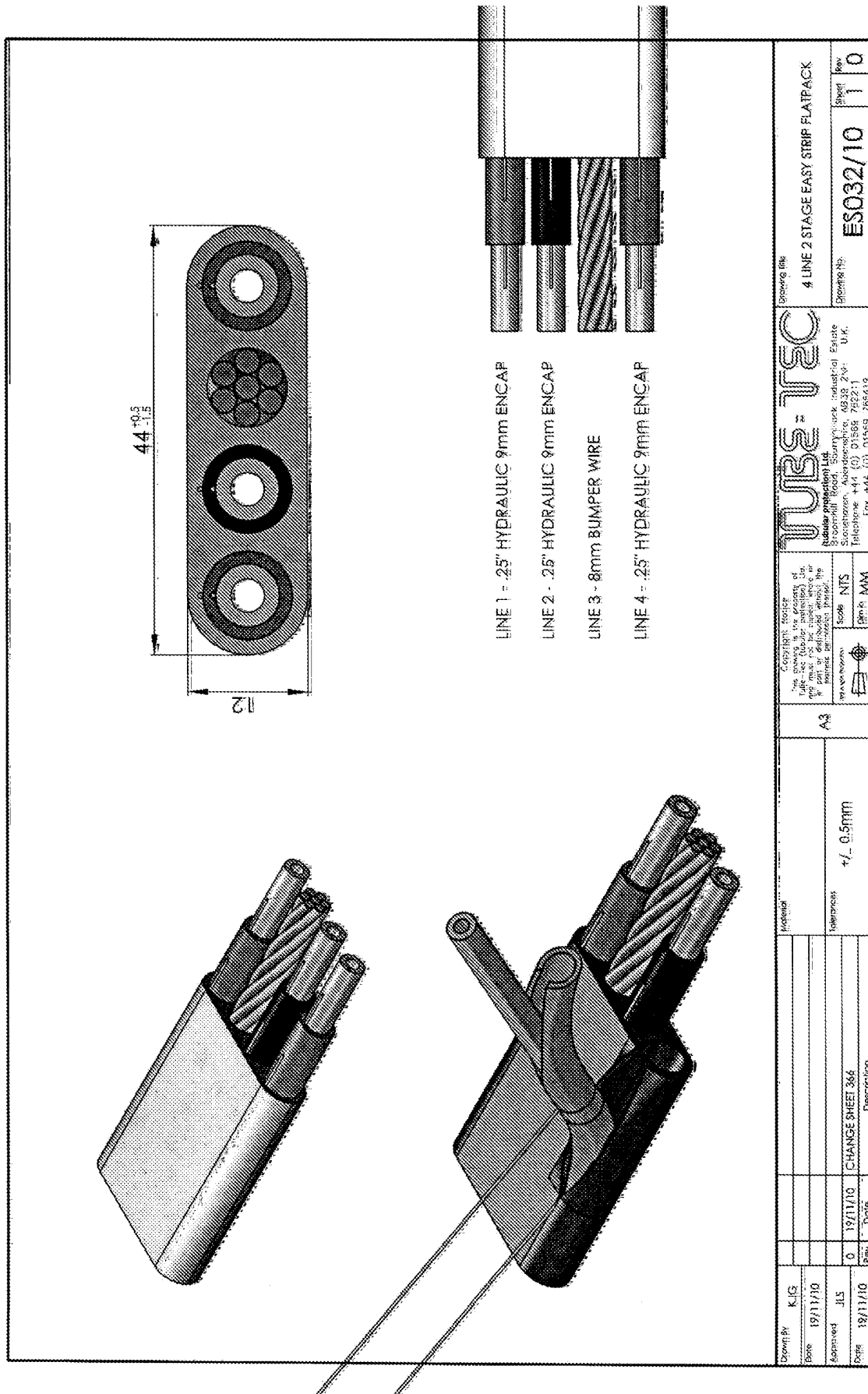


EXHIBIT A-6

EXHIBIT A-6

Products With and Without Safety-Strip Annual Demand (ft)

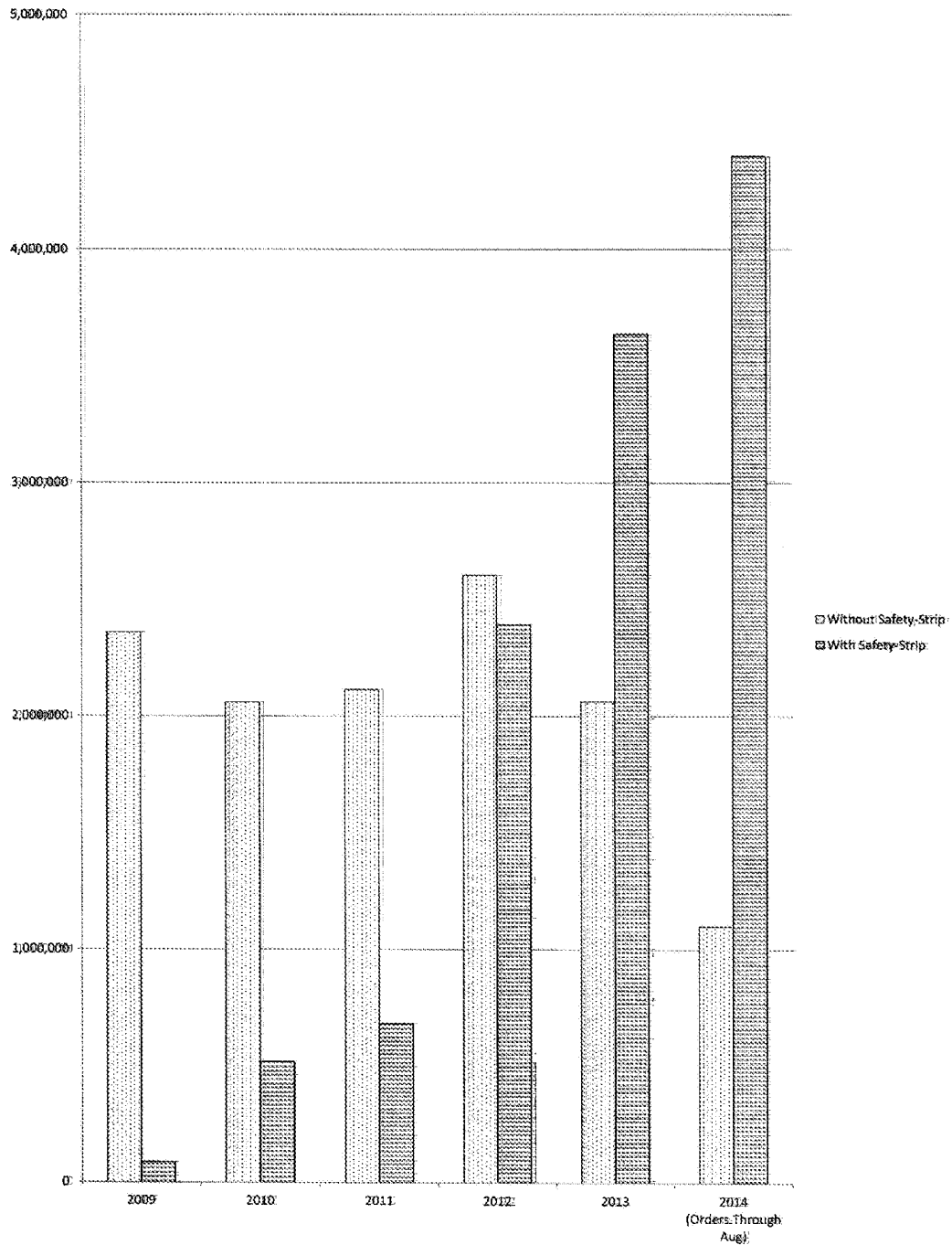
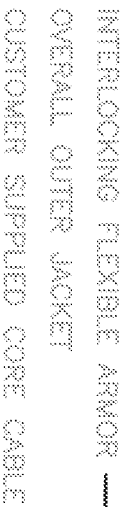


EXHIBIT A-7

EXHIBIT A-7

SECRET

CPID COMMUNICATION CABLES



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BOOK #:	PAUL J. REIS
DATE:	February 20, 2012
APPROVED BY:	PAUL R. PICARD
PERSON NO:	0128
ISSUANCE NO:	CPD COMMUNICATION CAREER SECTIONS

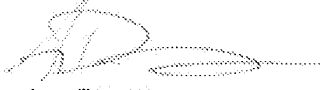
EXHIBIT B

EXHIBIT B

DECLARATION OF AMY DANGAS

1. I am submitting this Declaration as confirmation that I have first-hand experience with the Safety-Strip product as patented by Gulf Coast Downhole Technologies (patent No. 7,581,565), and have expertise in the oil and gas industry in which this product is utilized.
 2. I am Amy Dangas, Sales Manager with Deep Casing Tools. I was formally USA Account Manager for Omega Well Monitoring until January 17th 2014.
 3. I have 7 years experience in the downhole monitoring in the oil and gas industry from which I have gained detailed knowledge and experience with the installation of high pressure metal tube control lines and downhole cables that are commonly referred to as TEC. TEC (Tubing Encased Conductors) comprises of a conductor that is encased in a high pressure metal tube. It is common industry practice to cover the control lines and TEC with a protective jacket.
 4. Prior to the introduction of Safety-Strip, jackets were removed from the TEC and the control lines with simple hand held bladed tools that were used to scrape off the outer jacket or with complex rotating bladed devices designed specifically for this purpose. Neither method was sufficient to meet the needs of the industry, as these blades and tools were known to scratch or gouge the smooth outer sealing surface of the high pressure tubes. The tools were also known to cause injuries to personnel responsible for working with these products. I have known this deficiency to have existed for at least 2 years prior to the introduction of Safety-Strip in 2009.
 5. During my 7 years of employment with Omega Well Monitoring I have been at well sites to observe the installation of monitoring systems which included jacketed TEC. I was often asked by the rig supervisors and the Oil Companies' representatives if there was a better way, other than using cutting blades, to remove the protective jackets from the high pressure tubes. They frequently expressed concern about safety and scoring to the sealing surface of the tube which could compromise the integrity of the seal between the TEC and the downhole monitoring device.
 6. It is my information and belief that oil and gas companies do not approve of the use of bladed tools to remove the protective jackets from the high pressure tubes, and some are even implementing bans on the use of open blades during installations. While preparing for a monitoring system installation in 2013 the oil and gas company Talisman Energy Inc. informed Omega that the use of open blades were banned from being used to remove the protective jacket from the high pressure tube.
 7. While I was employed at Omega the company purchased, and to my knowledge continues to purchase, Safety-Strip products from Gulf Coast Downhole Technology, because Safety-Strip cables and flatpacks contain one or more tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets.
 8. Omega paid an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable and control lines without a tear cord.
 9. It is my information and belief that others purchase Safety-Strip at an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable without a tear cord, because the cables and control lines contain tear cords to safely separate the outer jacket from the metal tube without damage to the metal tube surface.
 10. I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.
 11. I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.
- I declare under penalty of perjury that the foregoing is true and correct. Executed this August 12, 2014.

Signature:



Name: Amy Dangas

EXHIBIT C

EXHIBIT C

DECLARATION OF CASEY BECHDOL

1. I am submitting this Declaration as confirmation that I have first-hand experience with the Safety-Strip product as patented by Gulf Coast Downhole Technologies (patent No. 7,581,565), and have expertise in the oil and gas industry in which this product is utilized.
2. I am Mr. Casey Bechdol Operations Manager with BMP Enterprises
3. I have a total of 14 years experience in the intelligent well sector of the Oil and Gas Industry. Before joining BMP Enterprises I held the position of Business Unit Coordinator – Intelligent Completions with Weatherford. I have detailed knowledge of the intelligent well systems that are used in the industry and have gained experience with the deployment, procurement and sale of encapsulated downhole jacketed metal tubed cables and metal control lines.
4. Intelligent Completions obtain downhole pressure and temperature data in real time to identify problems in the reservoir or wellbore without costly well intervention. Intelligent Well Systems (IWS) enable the operators to collect downhole data and remotely control selected reservoir zones which maximizes reservoir efficiency and increases production. Intelligent completions and IWS use high pressure metal tubed electrical data and hydraulic control lines which are installed into the well bores. In IWS systems multiple metal tubed control lines are often bundled together and jacketed to form a single umbilical that can be spooled. Within the industry this type of umbilical is referred to as a flatpack.
5. Prior to the introduction of Safety-Strip, encapsulated jackets were removed from single downhole cables and single control lines using a bladed rotational cutting device, similar to a heavy duty pencil sharpener. In a flatpack configuration a mechanical device that incorporated cutting blades was used to separate the multiple tubes from the outer jacket. These mechanical devices are limited in their performance especially with harder materials. The rotational cutting device could actually bend the tube. The flatpack encapsulated jacket removal tool would often damage the tubing on one side if the cutting blades became misaligned. Open blade knives were also used to cut through and scrap off the encapsulated jacket. The use of mechanical devices and knives resulted in damage, scores, nicks and gouges, to the sealing surface of the tube.
6. The tools are also known to cause injuries to personnel responsible for working with these products. I have personal knowledge of two safety instances when knives were used to remove the encapsulated jacket from the tube. The two accidents resulted in a cut hand and a cut thumb.
7. The use of knives and cutting devices to separate the encapsulated jackets from downhole cable and control lines do not meet the needs of the intelligent well industry as they are known to damage the sealing surface of the tube and can injure personnel responsible for working with these products. I have known this deficiency to have existed since entering the industry 14 years ago.

Signature:



Date:

8.15.14

8. BMP has searched for alternative methods and devices to replace the knives and bladed cutting devices. Other than Safety-Strip tear cords no tools have been found that could maintain the sealing integrity of the tube or provide an improved level of safety.

9. BMP has purchased Safety-Strip products from Gulf Coast Downhole Technology because Safety-Strip downhole cables contain tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets.

10. BMP pays an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable without a tear cord

11. It is my information and belief that others purchase Safety-Strip because the cables and flatpacks contain tear cords that address a long standing need to safely separate encapsulated jackets from the metal tube without damage to the metal tube surface.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this August 13, 2014.

SIGNATURE:

NAME:

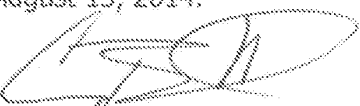

CASEY Bechdol

EXHIBIT D

EXHIBIT D

DECLARATION OF MARK WATSON

1. I am submitting this Declaration as confirmation that I have first-hand experience with the Safety-Strip product as patented by Gulf Coast Downhole Technologies (patent No. 7,581,565), and have expertise in the oil and gas industry in which this product is utilized.
2. I am Mr. Mark Watson, Regional Sales Manager for Africa, Europe, Russia, and the Middle East regions with Packers Plus.
3. I have 24 years' experience in the oil & gas industry. I have 17 years of first-hand experience with companies specializing in downhole monitoring. These monitoring companies are the Expro Group, Schlumberger, Wood Group, Weatherford and Sensornet. I have worked globally (USA in the Gulf of Mexico, North and West Africa, Australia, the Middle East, the UK and Norwegian sectors of the North Sea) for these companies covering a range of job disciplines, these being; 8 years of field work deploying systems, 5 years of project management and purchasing, 4 years of sales, business development and management. I have gained first hand and detailed knowledge and experience with the design of monitoring systems and the deployment of jacketed high pressure metal tubes that are used in hydrocarbon production from downhole well bores.
4. Prior to the introduction of Safety-Strip, the encapsulated jackets were removed from the high pressure tubes of the downhole cables and control lines using cutting blades in the form of knives, or that were fixed within a mechanical encapsulation removal tool. One tool operated in in a similar fashion to a pencil sharpener but was limited to use with single tubes. For jackets that contained multiple tubes (flatpacks) a tool that incorporated multiple blades and a gear mechanism was used to separate the jacket from the tubes. This device was ineffective as it did not remove the complete outer jacket. None of these tools and methods were sufficient to meet the needs of the industry, as these blades and tools were known to scratch or gouge the smooth outer sealing surface of the high pressure tubes used in downhole cables and flatpacks. After removal of the outer jacket it was common practice to polish the surface of the tube with emery cloth to eliminate scoring on the sealing surface caused by the scraping of the blades along the sealing surface. The polishing operation can compromise the sealing surface in that the diameter of the tube is reduced and the tube can become oval by the sanding and polishing operation. The tools were also known to cause injuries to personnel responsible for working with these products. I have known this deficiency to have existed for at least 15 years before the introduction of Safety-Strip in 2009.
5. I have witnessed a field engineer being injured during an installation of a monitoring system. The engineer was using an open blade to remove the outer jacket from the high pressure tube when the knife slipped off the line and cut through his coveralls and jeans resulting in a cut on his leg that required stitches.
6. I have heard of others that have been injured in using open blade knives and bladed cutting devices to remove outer jackets from high pressure tubes.
7. During my years of deploying jacketed high pressure tubes I was frequently asked by the Oil Companies' representatives on the oil rigs if there was a better way, other than using cutting blades and the ineffective bladed devices, to remove the protective jackets from the high pressure tubes. The Company Representatives often expressed concern relating to safety and the potential for an injury to occur when using the knives and cutting devices. Additionally they frequently expressed concern with the effect the scoring to the sealing surface of the tube would have on the reliability of the system.
7. While I was employed at Sensornet the company purchased Safety-Strip products from Gulf Coast Downhole Technology because Safety-Strip downhole cables contain tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries sometimes experienced when using blades or other tools to cut through the jackets.
8. While I was employed at Sensornet the company paid an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable and control lines without a

tear cord.

9. It is my understanding that since leaving the employment of Sensornet the company has continued to purchase Safety-Strip products from Gulf Coast Downhole Technology.

10. It is my understanding that others purchase Safety-Strip at an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable without a tear cord, because the cables and flatpacks contain tear cords to safely separate the outer jacket from the metal tube without damage to the metal tube surface.

11. It is my understanding that prior to the introduction of Safety-Strip the industry had a long standing need for a tool or method that could safely separate the outer jacket from the high pressure tubes without causing damage to the sealing surface.

12. I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

13. I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this August 13, 2014.

SIGNATURE



NAME:

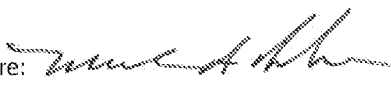
Mark Watson

EXHIBIT E

EXHIBIT E

DECLARATION OF MICHAEL BELEAU

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies in the Reexamination Serial No. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I am Michael Bealeu, Global Product Line Manager of Frac Systems at TAM International. I have also held the following positions during my 20 year career in the Oil and Gas Industry:
 - Wood Group Production Technology- Lead Service Technician, Project Manager
 - NOVA Technology- Project Manager, Technical Sales
 - WellDynamics- Service Technician, Project Manager, Technical Sales, Global Technical Advisor
 - Halliburton- Senior Account Manager
3. The above positions provided first-hand experience with jacketed pressure tubes used in downhole cables and flatpacks. I have installed and supervised the installation of these products.
4. I am familiar with many methods for removing encapsulation from downhole cables and flatpacks. These include open blades, double-handled knives, devices with captive blades, and pneumatic machinery. While these devices all remove encapsulation, each is known to frequently cause tube damage and personnel injuries. Some are also highly inefficient and add to expensive rig time.
5. There has been a long-standing need for a better means to remove jackets from downhole cables and flatpacks. As far back as the 1990's my customers expressed concern over the use of bladed tools to remove jackets from pressure tubes, but accepted their use in the absence of a better solution. Over the course of my career I was personally involved in management meetings in which this issue was discussed, but before Safety-Strip no acceptable alternatives were identified.
6. I have personally witnessed injuries experienced while removing cable jackets from pressure tubes. These include cuts to hands and fingers that often required medical attention.
7. I have witnessed pressure tubes damaged during the encapsulation removal process. Damage often included scratches that required remediation to ensure that the sealing surfaces of the pressure tubes

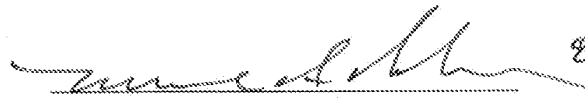
Signature:  Date: *August 18, 2014*

were fit for purpose in the downhole tube terminations. The attempts to repair the tube were sometimes known to cause other complications by distorting the shape of the tube which could make it impossible to get pressure tight seals with the metal ferrules used in the tube terminations.

8. I am aware that products that include Safety-Strip are more expensive than identical products that do not include Safety-Strip. The extra expense is justified because Safety-Strip reduces risk of tube damage, it reduces personnel accidents, and decreases required rig-time.
9. My employers have purchased Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube substantially straight, continuous, without break or interruption and structured to create a hermetic seal and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

 8/14/2014
Signature / Date

Michael Bealeu
Global Product Line Manager

EXHIBIT F

EXHIBIT F

DECLARATION OF SHAWN CALHOUN

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies in the Reexamination Serial No. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I am Shawn Calhoun, Completion Consultant at Hess. I have also held the following positions during my 22 year career in the Oil & Gas Industry:
 - Schlumberger- Service Specialist, Service Supervisor, Project Manager
 - Exxon- Completion Consultant
3. Each of the positions above provided first-hand experience with downhole cables and flatpacks that contained high pressure tubes. I have installed and supervised the installation of these products, and I have sourced and authorized the purchase of these products.
4. I have experience removing jackets from pressure tubes through a variety of methods, ranging from simple fixed blades to complex machinery. While the blades quickly removed the jackets, they also had the highest frequency of damage to the tube sealing surfaces and personnel injuries. The mechanical devices were often inefficient and not always effective at removing the jackets.
5. There has been a long-standing need for a better means to remove encapsulation from downhole cables and flatpacks. In 1999 I was tasked with replacing the bladed tools being used on the Exxon Diana Project. The cable and flatpack manufacturers I consulted were unable to offer any solutions, and I ultimately selected machinery from Antech Limited (from the United Kingdom) as our method for stripping the encapsulated jackets. With certain jacket materials the Antech machines performed better than the fixed blade knives, but they were ineffective with soft jacket materials and we were forced to revert back to blades for these products. Safety-Strip is superior to the blades and machinery we used for Diana and other projects, and I would have preferred to purchase Safety-Strip had it been available at that time.
6. I have personally seen bladed tools cause longitudinal scarring along the sealing surface of pressure tubes after they were used to remove encapsulated jackets, and this dated back to the beginning of my oilfield career in the early 1990's. Third party stripping machines (such as those

Signature

Shawn Calhoun

Date

8-17-14

provided by Antech) were invented to replace the bladed tools, but these were often unsatisfactory solutions.

7. I have personally authorized the purchase of Safety-Strip products for my projects. I am aware that the Safety-Strip feature is more expensive than otherwise identical products that do not include Safety-Strip. The extra cost is acceptable because Safety-Strip reduces the risk of tube damage and increases efficiency which saves money spent on rig-time.
8. Hess purchases Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube, i.e., substantially straight, continuous, without break or interruption and structured to create a hermetic seal and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

Shawn Calhoun 8/17/14
Signature / Date

Shawn Calhoun
Completion Consultant

EXHIBIT H

EXHIBIT H

DECLARATION OF MICHAEL KREJCI

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies in the Reexamination Serial No. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I have first-hand experience with high pressure tubes used in downhole cables and flatpacks, and over thirty years of expertise in the petroleum industry in which these products are utilized. I am currently the Downhole Monitoring Product Line Manager for Omega Well Monitoring, and I have also been employed by Baker Oil Tools in various positions including Product Line Manager, Global Training Manager, and Application Engineer.
3. In the early 1990's, my coworkers and I (at Baker Oil Tools) used fixed blade knives to remove jackets from cables and flatpacks. At this time, issues that included personnel injuries and damage to the tube sealing surface caused the use of knives to be considered a hazard, but alternative jacket removal options were not available. I personally witnessed tubes being damaged when encapsulation was removed, and I also witnessed accidents including cuts, to hands, arms, and even a technician's abdomen.
4. Over the years, my colleagues and I considered various alternatives offered by third party suppliers including covered cutting tools that eliminated open blades, and pneumatic stripping devices that incorporated wire wheels that could tear the encapsulation from the tube. These options proved to be inefficient, especially with flatpacks, and therefore were not accepted as suitable replacements for knives.
5. Between the years of 2000 - 2005 various oilfield operators including Shell, Chevron, and Exxon began to demand improved options for jacket removal in response to accidents and tube damage. Open blades began being banned from use on offshore rigs, particularly in the Gulf of Mexico and the North Sea. Requests to cable manufacturers for better options to remove the jackets from their products were not successful, as they only recommended third-party tools that had already proven to be less desirable than knives. The main result of the ban on knives was a compromise in which retractable blades became allowed rather than fixed blades as a means to improve safety issues. The risk of damage to the tubes continued to lack a satisfactory resolution until Safety-Strip became available from Gulf Coast Downhole Technologies.

Signature:

Michael Krejci

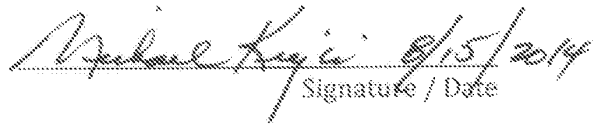
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8/15/2014

6. Omega Well Monitoring purchases Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube substantially straight, continuous, without break or interruption and structured to create a hermetic seal and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.
7. Omega Well Monitoring is aware that the Safety-Strip products cost more than otherwise identical products that do not have the tearing cord. Omega pays the higher price because the Safety-Strip tearing cord reduces the risk of damaging the tube sealing surface and reduces the possibility of injuries during installation.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

 8/15/2014
Signature / Date

Michael Krejci, Product Line Manager

EXHIBIT I

EXHIBIT I

DECLARATION OF STEVE KELLY

1. I am submitting this Declaration as confirmation that I have first-hand experience with the Safety-Strip product as patented by Gulf Coast Downhole Technologies (patent No. 7,581,565), and have expertise in the oil and gas industry in which this product is utilized.
2. I am Mr. Steve Kelly CEO and President of SMK
3. I have a total of 24 years experience in the Oil and Gas Industry. I was formally Business Development Manager with Baker Hughes where I acquired 10 years of experience in the downhole intelligent well sector. Prior to my employment with Baker Hughes I was employed by Halliburton for 14 years as a Field Engineer, Account Manager and Operations Manager and have detailed knowledge and experience of the use of downhole metal tube control lines and metal tube encased electrical cables. I have 10 year years of first-hand experience with the installation, procurement and sale of downhole metal tubed cable (also known as TEC) and metal control line tubes.
4. Prior to the introduction of Safety-Strip, the encapsulated jackets were removed from the TEC and control lines by cutting and scrapping with utility knives and double handed knives. A mechanical rotating device that incorporated a cutting blade was also used to remove the encapsulated jackets from single lines. Neither method was sufficient to meet the needs of the industry, as these blades and tools were known to scratch or gouge the smooth outer sealing surface of the high pressure tubes used in downhole TEC and control line flatpacks. The tools were also known to cause injuries to personnel responsible for working with these products. I have known this deficiency to have existed for at least 6 years prior to the introduction of Safety-Strip in 2009.
5. While I was employed at Baker Hughes the local district operations actively sought alternative methods and devices to replace the knives and rotational bladed cutting devices. Other than Safety-Strip tear cords no tools were found that could maintain the sealing integrity of the tube nor provide an improved level of safety.
6. While I was employed at Baker Hughes I had knowledge of training that was provided to field personnel to try and limit damaging the sealing surface of the tube when using knives and rotational bladed cutting devices to remove the encapsulated jacket. The training also included methods to repair damage to the sealing surface of the tube.
7. While I was employed at Baker Hughes the company purchased Safety-Strip products from Gulf Coast Downhole Technology because Safety-Strip TEC cables and flatpacks contain one or more tear cords between the smooth wall metal tube(s) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets.

Signature:



Date:

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8. It is my information and belief that since leaving the employment of Baker Hughes the company has continued to purchase Safety-Strip products from Gulf Coast Downhole Technology.

9. While I was employed at Baker Hughes the company paid an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable and flatpacks without the tear cords

10. It is my information and belief that since leaving the employment of Baker Hughes the company has continued to pay an additional price per linear foot of Safety-Strip above what is charged by Gulf Coast Downhole Technologies for its cable and flatpacks without the tear cord

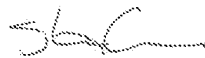
11. It is my information and belief that Baker Hughes and others purchase Safety-Strip because the cables and flatpacks contain tear cords that address a long standing need to safely separate encapsulated jackets from the metal tube without damage to the metal tube surface.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this August 13, 2014.

SIGNATURE: 

NAME: STEVE KELLY

8/14/14

EXHIBIT J

EXHIBIT J

DECLARATION OF BOBBY FIELD

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies in the Reexamination Serial No. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I am Bobby Field, Commercial Sales Leader at Precision-Hayes International. I have also held the following positions during my 35 year career in the Extrusion and Cabling Industry:
 - Custom Cable Company- Production Technician, Sales Manager, Vice President of Operations
 - GeoSource- Sales Manager
 - AmerCable- Sales Manager
 - The Rochester Corporation- Sales Manager of Specialty Products
 - De Regt Marine Cables- Sales Manager of Specialty Products
 - Hayes Industries- Executive Vice President
3. Each of the positions above provided first-hand experience with the extrusion of specialty products. For the past 24 years I have been employed at Hayes Industries and these specialty products included the extrusion of thermoplastic jackets over pressure tubes (used in downhole cables, chemical injection lines, control lines, and flatpacks) for the Oil and Gas Industry.
4. During my career at Hayes Industries it has been necessary at times to remove encapsulation from pressure tubes, particularly when defective jackets have to be replaced during manufacture. We are familiar with the various devices available for this purpose, including pneumatic machines, slitters, and cutting wheels. The method we have found to be most practical is to use sharp blades to cut through the jacket. Our labor force is highly trained, but we still experience incidents in which the jacket removal process results in damaged tubes or injuries to personnel.
5. During the first 10 years of my career I had experience working with specialty products that included tearing cords. These tearing cords were incorporated into products that had thin jackets made of soft materials. In comparison, the jackets extruded over pressure tubes are thick and use much harder materials. While working with pressure tubes over the last 24 years I did not consider adding tearing cords to the jackets.
6. During the last 24 years, Hayes Industries has encapsulated pressure tubes for a variety of domestic and international customers, including oil

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and gas operators and service companies. Many of these customers have requested better methods to remove the jackets from pressure tubes, and our best advice was to use sharp blades and well trained personnel. We did not consider tearing cords as a solution to this long standing problem.

7. Gulf Coast Downhole Technologies was the first customer to ask Hayes Industries to include a tearing cord as part of a jacketed pressure tube. Based on my experience in this industry, it was my opinion that the thickness and hardness of the jackets used in these products would make a tearing cord ineffective. I informed Jody James and Roy Torrance of my skepticism, and I was surprised when the prototypes were successful.
8. At Hayes Industries I have had personal experience using Safety-Strip to remove jackets from pressure tubes. This has been much more effective than the methods used for products without Safety-Strip, and in some situations I have found this to be as much as ten times faster than using blades. This has resulted in reduced internal manufacturing costs by reducing time required for rework.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

Bobby Field 8-15-14
Signature / Date

Bobby Field
Commercial Sales Leader

EXHIBIT K

EXHIBIT K

DECLARATION OF BRADLEY WHITFIELD

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies in the Reexamination Serial No. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I am Bradley Whitfield, Vice President of Sales and Operations at Deep Casing Tools. I have also held the following positions during my 12 year career in the Oil and Gas Industry:
 - Stewart and Stevenson- Sales
 - Rockbestos-Suprenant Cable Corporation- Sales Manager
 - Gulf Coast Downhole Technologies- Sales Manager
3. The above positions provided first-hand experience with the manufacture of downhole cables and flatpacks that contain pressure tubes, and extensive knowledge of the customer requirements for these products.
4. I am familiar with many methods for removing encapsulation from downhole cables and flatpacks. While employed by Rockbestos-Suprenant Cable Corporation (RSCC) I was trained to remove encapsulated jackets from pressure tubes using open blades. While working with various customers I have witnessed the various methods they used, including open blades and enclosed cutting blades and cutting wheels.
5. While employed at RSCC (2004-2008), I was contacted by various customers regarding their need for a better means to remove the encapsulated jackets from the downhole cables we provided. RSCC responded with recommendations of third party stripping tools, and to my knowledge never considered adding tearing cords to their products.
6. It was sometimes necessary at RSCC to remove long lengths of encapsulation if problems were experienced during the manufacturing process. RSCC used a machine provided by a third party to perform this operation.
7. As sales manager at Gulf Coast Downhole Technologies (GCDT), I sold downhole cables and flatpacks with and without the Safety-Strip feature. Customers who purchased Safety-Strip were aware that this feature was only available at a higher price, and that the only difference in the higher priced products was the tearing cord. They purchased the Safety-Strip products to reduce the risk of damaging pressure tubes while removing encapsulation, to minimize the chances of employee injuries, and to save installation time.

Signature



Date

08-14-2014

8. My customers have purchased Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube, i.e., substantially straight, continuous, without break or interruption and structured to create a hermetic seal, and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

 08-14-2014
Signature / Date

Bradley Whitfield
Vice President of Sales and Operations

EXHIBIT L

EXHIBIT L

DECLARATION OF SYMOND WATT

1. I am submitting this Declaration as confirmation that I have first-hand experience with the Safety-Strip product as patented by Gulf Coast Downhole Technologies (patent No. 7,581,565), and have expertise in the oil and gas industry in which this product is utilized.
 2. I am Mr. Symond Watt, General Manager for Premier Worldwide Services LLC.
 3. I have 21 years of experience in the oil & gas industry which includes nine years supplying products for downhole intelligent well systems (IWS) from which I have gained detailed knowledge and experience of jacketed metal tubes that are used to monitor and control hydrocarbon production from downhole well bores.
 4. Prior to the introduction of Safety-Strip, jackets were removed from downhole cables and flatpacks with simple-bladed tools scraping off the outer jacket or with complex rotating bladed devices designed specifically for this purpose. Neither method was sufficient to meet the needs of the industry, as these blades and tools were known to scratch or gouge the smooth outer sealing surface of the high pressure tubes used in downhole cables and flatpacks. The tools were also known to cause injuries to personnel responsible for working with these products. I have known this deficiency to have existed for at least four years prior to the introduction of Safety-Strip.
 5. Premier Worldwide Services' customers purchase Safety-Strip products manufactured by Gulf Coast Downhole Technology because Safety-Strip cables and flatpacks contain one or more tear cords between the smooth wall metal tube(s) (that is of hollow cylindrical shape, substantially straight, continuous, without break or interruption and with a tube surface structured to create a seal) and the outer jacket whereby the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface. Tool-free removal of the jacket(s) protects the outer sealing surface of the high-pressure tubes, and also protects installation personnel from injuries often experienced when using blades or other tools to cut through the jackets.
 6. Premier Worldwide Services' customers pay an additional price per linear foot of Safety-Strip above what is charged for cable and flatpacks without a tear cord.
 7. Premier Worldwide Services buy and sell jacketed downhole cables (also known in the industry as TEC: Tubing Encased Conductor) and jacketed pressure tubes manufactured by GCDT with and without Safety-Strip. We offer both products to our customers; products without Safety-Strip are purchased by customers unwilling to pay the added expense for Safety-Strip, or by customers who are unable to change long-term contracts that already specify products that do not include this feature. Many customers, however, do buy the products that include Safety-Strip. The Safety-Strip has proven to be valuable to our customers since, when given the option, many elect to buy the Safety-Strip product at a higher price than the non-Safety-Strip product, where the only difference between the two is the tear cords that facilitate the removal of the protective jacket. To date, customers have spent an additional US\$144,000 on Safety-Strip products instead of buying the equivalent non-Safety-Strip options, which equates to a premium of 4.4% for Safety-Strip.
 8. It is my information and belief that my customers purchase Safety-Strip because the cables and flatpacks contain tear cords between the smooth wall metal tube and the outer jacket.
- I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.
- I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.
- I declare under penalty of perjury that the foregoing is true and correct.
- Executed this August 13, 2014.



Signature:

Symond Watt.



Date: August 13, 2014.

iScanner iPhone App
www.iscannerapp.net

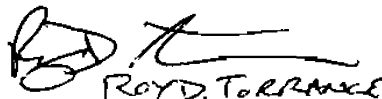
EXHIBIT M

EXHIBIT M

DECLARATION OF ROY TORRANCE

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies LLC in the Reexamination Serial No. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I am Roy Torrance, President of Gulf Coast Downhole Technologies LLC (Gulf Coast), owner of the jacketed cable which is subject of patents 2,721,737 (Canada), 2,165,043 (EPO) and 7,581,565 (USA).
3. Prior to joining Gulf Coast in 2004 I held the position of Western Hemisphere, Nigeria and Australia Operations Manager – Monitoring Systems for Wood Group Production Technology. I have 28 years experience in the oil and gas industry, with 25 of those being in the IWS (Intelligent Well Systems) and downhole monitoring sector of the industry.
4. I have an extensive knowledge of the IWS and downhole monitoring market, which includes the jacketed pressure tubes in the systems provided to the Operators (Oil and Gas companies). I have expertise regarding the specifications, reliability, installation and operation of these systems. I have an extensive knowledge and understanding of the commercial aspects of the IWS and downhole monitoring market.
5. System reliability is of critical importance to the commercial success of companies providing IWS and downhole monitoring systems. The integrity of the seals between the tubes, which contain high pressure hydraulic fluid, and the housing of the In-well IWS control valves, is essential for system reliability. In the case of electrical conductors that are encased in high pressure metal tubes (within the industry commonly referred to as TEC or Tubing Encased Conductor), the integrity of the seals between the tube and the housing for the electronic monitoring and control device are also essential to avoid the electrical system experiencing short circuit failure caused by fluid ingress. In both cases the seals between the tube and the housings of the devices are metal to metal compression ferrule fittings that grip the tube for pressure containment. For the seal to work effectively it is paramount that the sealing surfaces are free from any scratches, scores, or gouges and that the tube is round.
6. I have worked as a service engineer where I have gained first-hand experience installing substantially straight, continuous, smooth wall metal tubes without break or interruption and structured to create an hermetic seal that are used in the construction of TEC, control lines and flatpacks.
7. I have first-hand experience removing the encapsulated jacket from the underlying tubes and I am familiar with the techniques and tools used, which prior to the introduction of Safety-Strip, was limited to knives and mechanical

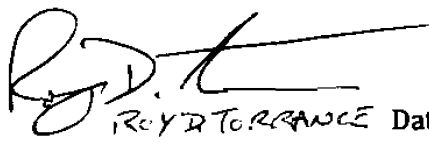
Signature


ROY D. TORRANCE

Date AUGUST 18, 2014

encapsulation cutters. Removal of the encapsulated jacket using knives and mechanical cutting devices often result in damage to the sealing surfaces in the form of scratches, scrapes, scores and gouges.

8. I have personally been aware of the long-standing need for a better means to remove jackets from downhole cables and flatpacks since entering the industry 28 years ago. During my employment at Wood Group Production Technology and at Gulf Coast Downhole Technologies I have researched a range of different options relating to stripping encapsulated jackets from TEC, control lines and flatpacks. None of the devices available in the market provided a satisfactory solution as they all had the potential to damage the sealing surface of the tube.
9. Safety-Strip evolved from a device I developed which consisted of a frame that held a steel piano wire in tension. The device was then pulled along the surface of the tube, with the wire perpendicular to the tube, while cutting through the jacket. This proved successful for short lengths, but the wire routinely broke and the wire left scratches on the surface of the tube. In several different configurations the cutting angles were changed and the wire was replaced with various artificial fibers and cords. These changes eliminated the scratches on the tube. However, the cutting cords the cutting fibers and cords would break after removing a short section of jacket. While considering the need to adapt the device to include a payoff and take up reel that would allow the cutting point of the cord to be moved before it reached the it's breaking point I concluded that the real solution would be to embed the cutting cord into or under the jacket.
10. I approached Bobby Field at Hayes Industries and requested that they manufacture prototypes with tear cords under the extruded jackets. Mr Field stated that based on his experience the tear cords would not cut through the types and thicknesses of thermoplastic materials that are used to provide resilient protective jackets for harsh downhole environments. To Mr. Field's surprise the trials provide successful.
11. Since the introduction of Safety-Strip in 2009, Gulf Coast has seen a growing acceptance within the industry to this new product which has resulted in a direct increase in Gulf Coast's sales of TEC, control lines, and flatpacks. Customers have recognized that Safety-Strip provides a solution to two long held issues with stripping encapsulated jackets from tubes; it eliminates damage to the sealing surface of the tubes, and it dramatically improves safety. In addition, the Safety-Strip removes the jacket significantly faster than traditional methods. These three benefits all provide operating efficiencies during deployment of the IWS and downhole monitoring systems which saves money spent on rig time.
12. Gulf Coast continues to manufacture products without Safety-Strip for customers who choose not to pay the additional price for this feature, or for

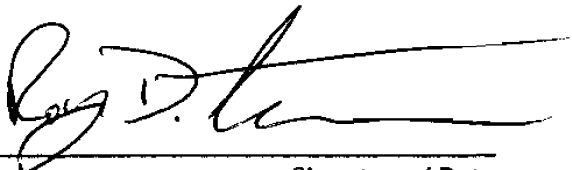
Signature  Date AUGUST 18, 2014

customers who have already specified non-Safety-Strip products in their systems. Large offshore developments, for example, sometimes approve products two to three years prior to having those products manufactured and delivered for their projects. This long term planning, combined with the time required to introduce Safety-Strip to the Oil and Gas Industry, explains why it took until 2013 for Safety-Strip to be in higher demand by our customers than our non-Safety-Strip products.

13. The benefits of Safety-Strip are highly valued by Gulf Coast's customers; cables and flatpacks that are identical to Safety-Strip products in all aspects other than the tearing cord are available from Gulf Coast at a lesser cost than the Safety-Strip products. Customer demand, however, is higher for Safety-Strip products, which in sales between January and August 2014 have already totaled an *additional* \$950,000 above what customers could have spent for otherwise identical products without Safety-Strip. This amounts to an approximately 14% premium that Gulf Coast customers elected to pay for the Safety-Strip feature.
14. With the growing awareness of the Safety-Strip products, and even though Safety-Strip products are more expensive, Gulf Coast predicts, based on market feedback, that the ratio of Safety-Strip to traditional jacketed products will continue to increase. Several Oil and Gas operators that have previously run traditional jacketed products have embraced the Safety-Strip product and are specifying its use on future offshore developments, many of which are still in the planning stages.
15. It is my belief that the overall market for jacketed tubed products is increasing at a lesser rate than Gulf Coast's annual growth of Safety-Strip product sales. I believe that these increased sales can be attributed to Gulf Coast increasing its market share because of the popularity of the Safety-Strip products.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on Information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.


AUGUST 18, 2014 Signature / Date

Roy Torrance

EXHIBIT A-1

EXHIBIT A-1

FLAT-PACK

FLATPA OPS-1

W2 WellDynamics
Transforming Reservoirs™

Training Requirements

Scope of work and materials used

Hazards and operating safely when handling flat-pack.

Specialised PPE and stripping tools.

Flat-pack and TEC construction and purpose.

Understanding and following the detailed procedure OPS-WI-01 Flat-Pack Encapsulation Stripping.

Training Objective

Understand the function, use and limitations of control-lines, TEC and flat-pack.

Be qualified to safely handle and strip flat-pack under rig-floor conditions.

PPE and specialised equipment

The use of the specialised PPE described here is mandatory.

Chain-mail gloves. These must be worn as a pair, whenever handling the stripping knives.

Butcher's or Welder's leather apron.

Specialised double-handled knives.

Sheath-knives, with the sharp point ground off may only be used to separate the control-lines.

Knives, which have not been modified in this way, may never be used.

Stripping Procedure...cont'd

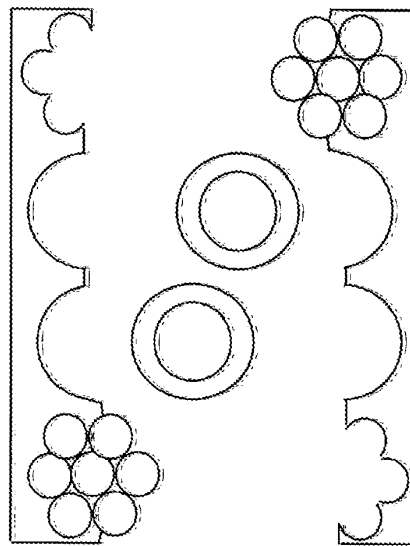
Working from the free end, lever out the control-line from the encapsulation, then using the plastic handle of a screwdriver or hammer, peel back the encapsulation towards the marked end.

Take great care not to kink the control-lines.

Repeat the process to remove the remaining control lines.

Now carefully peel the control lines free.

The bumper bars can now be cut off.



Stripping Procedure...cont'd

Stripping control-lines with centre-mounted or no bumper bars

Placing the bumper bar in the centre, or not fitting a bumper bar makes these flat-packs more difficult to strip, as the lack of support means that control-lines tend to kink more easily or become scored by the stripping knife. Lay the flat-pack on the deck. Determine the length of flat-pack to be stripped and mark the encapsulation at that point. Starting at the marked end-point of the flat-pack, use a knife to make a shallow cut completely around the flat-pack. It is not necessary to cut right down to the metal.

Take great care not to score the control-line sheath.

Stripping Procedure...cont'd

Use and assistant to restrain movement of the flat-pack (hold the section which is **NOT** to be stripped).

Take the knife in a two-handed grip drag it along one of the outer control-lines (along the lines shown in red) working backwards towards the free end of the flat-pack, to strip the encapsulation along one edge of the flat-pack. Make a second stripping pass to further expose the edge of the control-line. **Control the angle of the knife carefully, to minimise any Scoring of the control-line sheath.**

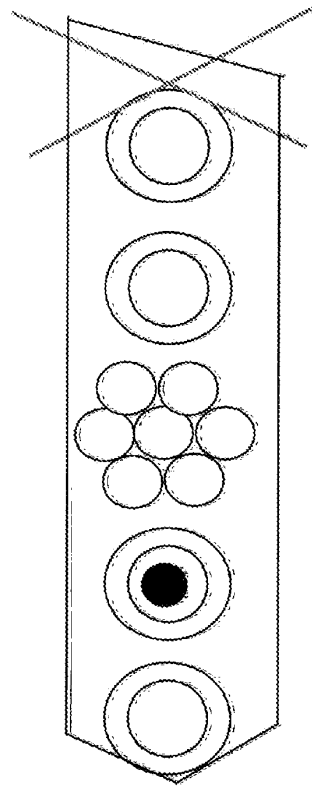
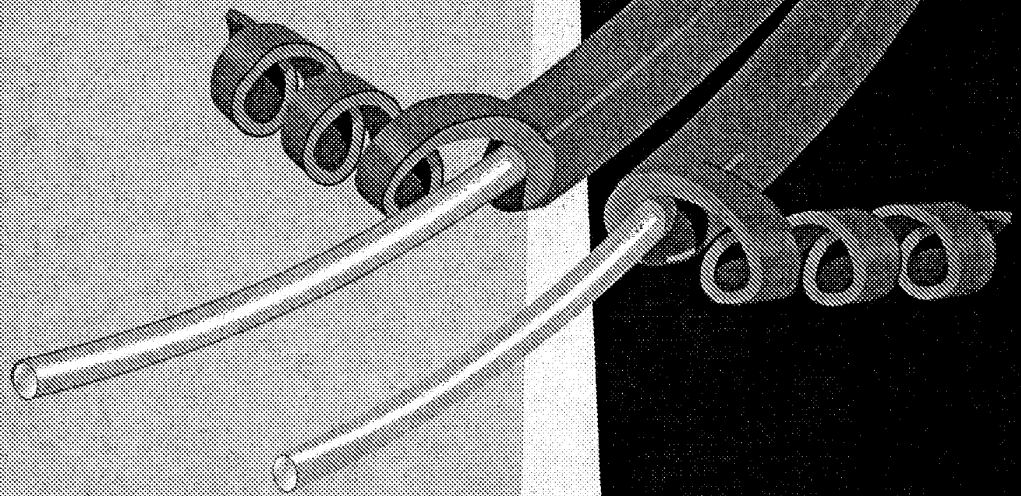


EXHIBIT A-3

EXHIBIT A-3

Strip and Split the
Cable – not your
fingers!

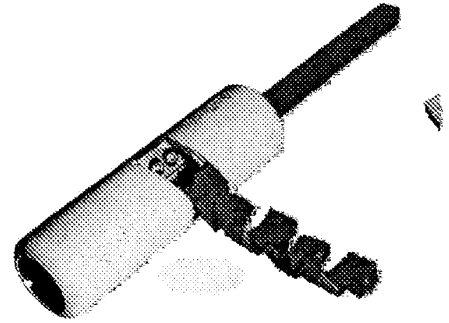


Hardworking
Strippers & Splitters

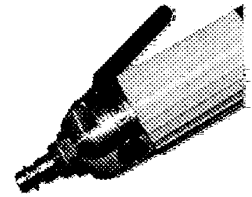
AnTech
Special Engineering Projects

Strippers & Splitters

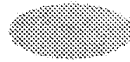
It used to be a chore; it used to damage lines; and it used to take time.. Not any more. Put away the hacksaws and knives and forget about injury to operators' hands – AnTech's unique range of Strippers and Splitters can remove the encapsulation from a cable or control line in a quick, simple and safe operation. Whether stripping or splitting a line at the wellsite or back in the yard, it takes just one man to operate any one of these indispensable tools.



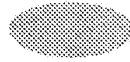
Operating in oilfields around the world since 1993, the AnTech range of Stripping and Splitting tools represent the industry standard for the removal of line encapsulation.



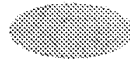
Features at a glance



Prevents Line Damage. The unique design of each tool ensures the plastic encapsulation is stripped away without causing surface damage to the internal metal line(s). This is essential to maintain the integrity of the line, but until now has been notoriously difficult to achieve when stripping encapsulation mid-line.



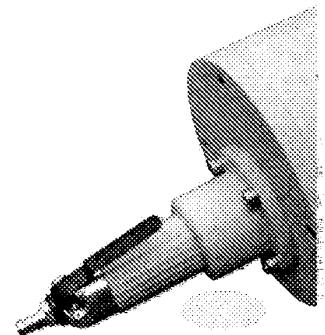
Operator Safety. Cut and injured hands were commonplace for those stripping or splitting a cable. This range of outstanding tools has virtually eliminated the risk of such injury.



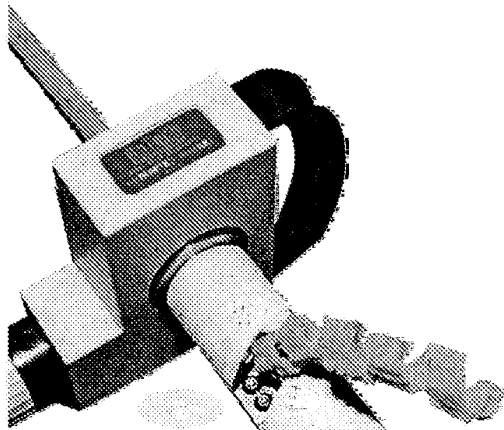
Simple to Use. Removing encapsulation and splitting lines was always a time consuming chore. Now, with the appropriate tool from AnTech, one man can complete the task simply and in a fraction of the time.



Flexible Application. For use on electric or hydraulic, single or multiple lines. Can also be used to remove encapsulation from flat-pack ranging from 11 x 11mm to 65 x 15mm. Tools are available for mid-line stripping and for cabling of unusual size.



AnTech
Special Engineering Projects



1

The Range

Hand Stripper

Just rotate this high quality hand tool along the cable to strip the encapsulation quickly, simply and safely.

2

Air Powered Stripper

For the long length lengths of encapsulation from high lines.

3

GunDog™ Stripper

A unique air-powered stripper for removing lead and encapsulation whilst both producing and peeling the exposed wire. Just connect the tool to an air supply and it's ready to go. Strong teeth for a delicate grip is how GunDog™ earned its name!

4

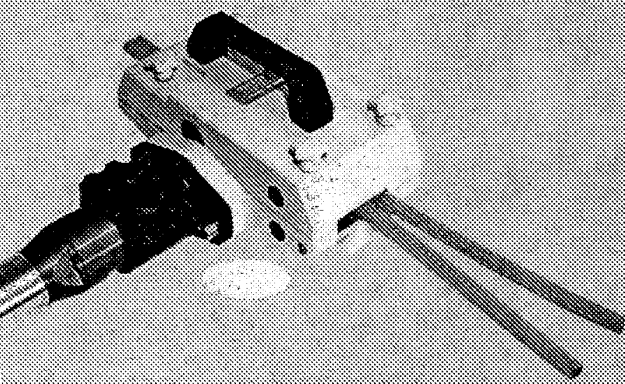
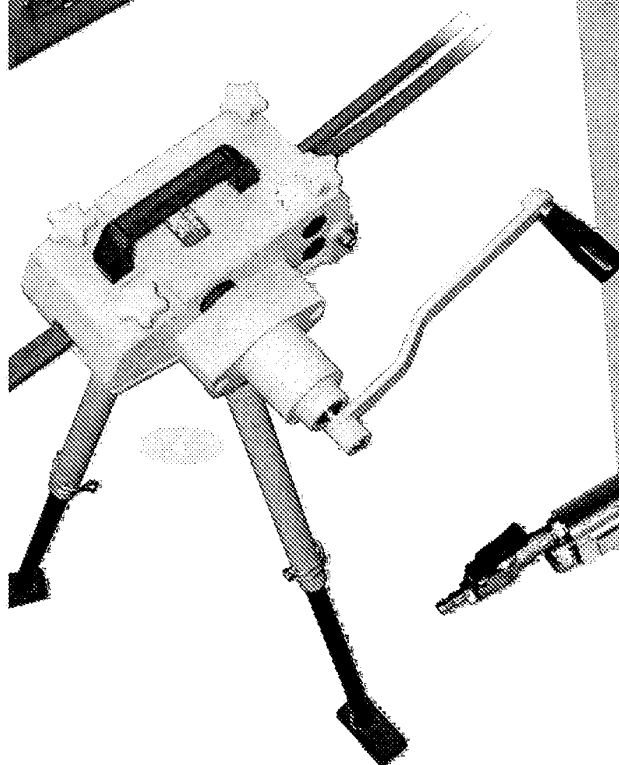
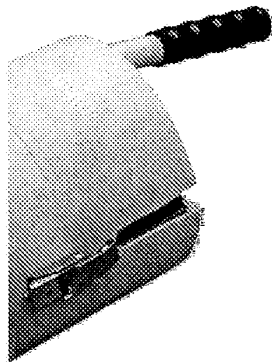
Hand Splitter

A robust portable and easy to use tool for splitting line in flat pack safely and under any conditions.

5

Air Powered Splitter

A simple but flexible tool that renders a time consuming chore into an effortless operation by pulling the flat pack safely through a cutting mechanism to split the encapsulation.



Ratings/Specifications

Encapsulation Strippers & Splitters

Line Size:	1/8" to 7/16" (3.2mm to 11mm)
Max Sheath Size (Strippers):	0.55" x 0.55" (14mm x 14mm)
Flat Pack (Max Dimensions):*	
GunDog™	2.6" x 0.59" (65mm x 15mm)
Splitters:	1.8" x 0.7" (44mm x 17mm)

Number of Cores for Splitting: 3 (option of 6 available)

These ratings are typical. Details for specific tools are available on request.

* Larger sizes can be catered for. Please ask for details.



AnTech
Special Engineering Projects

About AnTech Ltd

AnTech specialises in the design and manufacture of innovative products for the international upstream oil and gas industries. The Company is known throughout the world for its range of award-winning coiled tubing tools and related permanent completion products.

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email: antech@antech.co.uk

US & Canada:
Tel: 1 800 789 7515 Fax: 1 281 754 4333

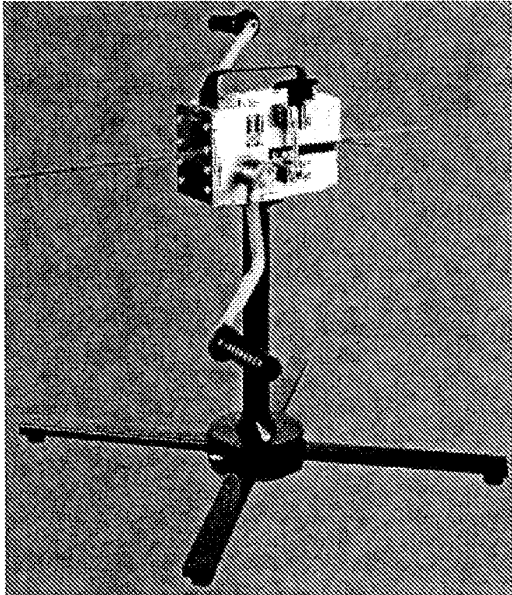
www.antech.co.uk

AnTech have a policy of continuous product improvement and reserve the right to change material specifications, dimensions and designs at any time without prior notice.

EXHIBIT A-4

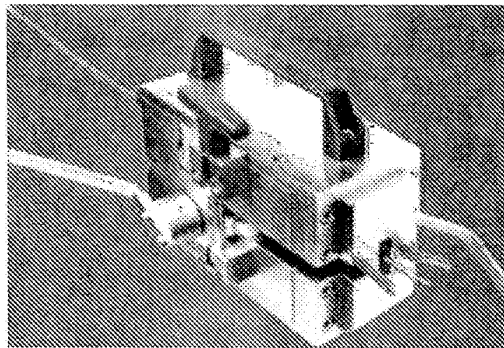
EXHIBIT A-4

ENCAPSULATION STRIPPING TOOL

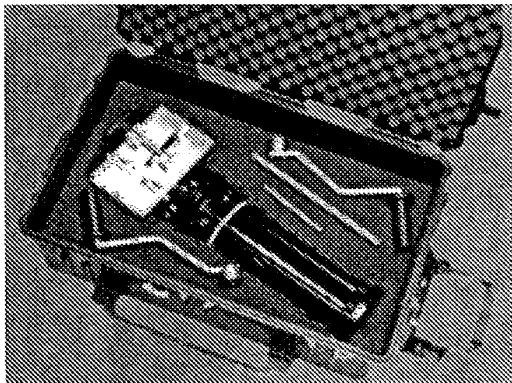
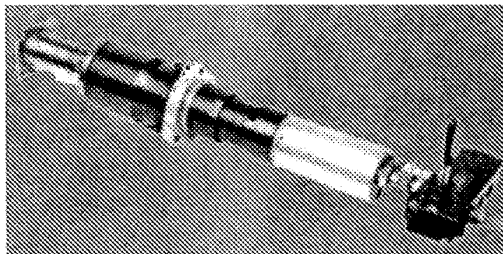


- Corrosion resistant stainless steel body
- Can be modified to suit different line configuration eg, 1/4", 3/8", dual, flatpack etc
- Safe and easy to operate design
- Fully portable
- Manual or air driven options
- Cutting blades cannot contract tube

- The 752 series tool strips encapsulated control line quickly, safely and with ease
- The stripping blades are arranged to be failsafe, therefore it is impossible for the blades to make contact with the tubing
- Available as either manually operated or air driven, the geared drive ensures that minimal effort is required.
- The standard tool is set to strip 1/4" line but most configurations are available including flatpacks
- Quick release fold-out stand makes assembly rapid and foolproof
- Dual handles ensure a smooth effortless stripping action



- Air motor available for stripping longer lengths of encapsulated control line



- The 752 series Encapsulation Stripping Tool is a fully portable unit. It can be assembled and ready for use in less than 1 minute.

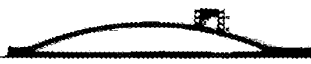
EXHIBIT G

EXHIBIT G

DECLARATION OF BRYAN PETRICH

1. I am submitting this Declaration in support of Gulf Coast Downhole Technologies in the Reexamination Serial No. 90/020,065 pertaining to patent No. 7,581,565 now pending in the United States Patent and Trademark Office.
2. I am Bryan Petrich, Drilling and Completions Supervisor at Hess. I have also held the following positions during my 19 year career in the Oil & Gas Industry:
 - Cameron- Project Manager
 - Wood Group Production Technology- Service Technician
 - WellDynamics- Country Manager, Angola
 - Chevron- Drill Site Manager
 - Shell- Completion Foreman
3. All of the above positions provided first-hand experience with high pressure tubes used in downhole cables and flatpacks of the type sold by Gulf Coast Downhole Technologies. In addition to performing or supervising the installation of these products, I have been responsible for selecting and authorizing the purchase of these products.
4. I am familiar with many methods for removing encapsulation from downhole cables and flatpacks. These include open blades, air-driven wire abrasive wheels, hot knives, and devices with captive blades. While these devices did remove the encapsulation, each had flaws related to tube damage and personnel safety. Some were also highly inefficient and burned expensive rig time.
5. There has been a long-standing need for a better means to remove jackets from downhole cables and flatpacks. During my employment at Wood Group production Technology (1998-99) a customer request (Shell) initiated research of alternative methods to remove encapsulation. At that time, neither cable manufacturers nor third party tool companies offered any solutions beyond the methods described above, and until Safety-Strip was available I am unaware of any other effective solution.
6. I have personally witnessed injuries experienced while removing cable jackets from high pressure tubes. These include cuts and punctures to hands, fingers, a shoulder, ribs, and one individual's stomach.

Bryan Petrich
8-17-14

- 
7. I have personally witnessed pressure tubes damaged when the encapsulation was removed with the various devices described in paragraph 4 above. This included scratches and gouges to the sealing surface of the tube, as well as changes to the shape of the tube caused by the stripping process or by attempts to repair the scratches or gouges. Both types of damage had the potential to compromise the ability of the ferrules to form effective seals on the tube.
 8. I have personally used Safety-Strip products and authorized the purchase of Safety-Strip products. I am aware that the Safety-Strip feature is more expensive than otherwise identical products that do not include Safety-Strip. The premium paid is acceptable because it reduces risk of tube damage, it reduces personnel accidents, and increases efficiency which saves money spent on rig-time.
 9. Hess purchases Safety-Strip cable from Gulf Coast Downhole Technologies because the Safety-Strip cable contains a tear cord between the smooth wall metal tube, i.e., substantially straight, continuous, without break or interruption and structured to create a hermetic seal, and the outer jacket and the tear cord can be pulled back to create a slit in the jacket and allow the jacket to be separated from the metal tube without damage to the metal tube surface.

I acknowledge that all statements made in this declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true.

I further acknowledge that willful false statements and the like are punishable by fine or imprisonment or both in accordance with 18 U.S.C. 1001 and may jeopardize the validity of patent No. 7,581,565.

 8-17-14

Signature / Date

Bryan Petrich
Drilling/Completions Supervisor

Electronic Patent Application Fee Transmittal				
Application Number:		90020065		
Filing Date:		24-Dec-2013		
Title of Invention:		TEAR CORD FOR JACKETED TUBE		
First Named Inventor/Applicant Name:		7581565		
Filer:		David Lee McEwing		
Attorney Docket Number:		SURP 13.01 REEX		
Filed as Small Entity				
ex parte reexam Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Reexamination Independent Claims	2821	2	210	420
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				420

Electronic Acknowledgement Receipt	
EFS ID:	19914532
Application Number:	90020065
International Application Number:	
Confirmation Number:	1470
Title of Invention:	TEAR CORD FOR JACKETED TUBE
First Named Inventor/Applicant Name:	7581565
Customer Number:	26328
Filer:	David Lee McEwing
Filer Authorized By:	
Attorney Docket Number:	SURP 13.01 REEX
Receipt Date:	20-AUG-2014
Filing Date:	24-DEC-2013
Time Stamp:	14:00:46
Application Type:	Reexam (Patent Owner)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 420
RAM confirmation Number	245
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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Total Files Size (in bytes):			29344145		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/020,065	12/24/2013	7581565	SURP 13.01 REEX	1470
26328 7590 07/31/2014 LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270			EXAMINER REIP, DAVID OWEN	
			ART UNIT 3993	PAPER NUMBER
			MAIL DATE 07/31/2014	DELIVERY MODE PAPER

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The time period for reply, if any, is set in the attached communication.



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Haynes, Soloway P.C.
175 Canal Street
Manchester, NH 03101

***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/020,065.

PATENT NO. 7581565.

ART UNIT 3993.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Ex Parte Reexamination Interview Summary	Control No. 90/020,065	Patent Under Reexamination 7581565
	Examiner DAVID O. REIP	Art Unit 3993
All participants (USPTO personnel, patent owner, patent owner's representative):		
(1) <u>David Reip, Eileen Lillis, Jimmy Foster - USPTO</u>	(3) <u>Jody James, PO</u>	
(2) <u>David McEwing, attorney for PO</u>	(4) _____	
Date of Interview: <u>15 July 2014</u> Type: a) ☒ Telephonic b) ☐ Video Conference c) ☐ Personal (copy given to: 1) ☐ patent owner 2) ☐ patent owner's representative) Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No. If Yes, brief description: _____ Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A. Any other agreement(s) are set forth below under "Description of the general nature of what was agreed to..." Claim(s) discussed: <u>1.</u> Identification of prior art discussed: <u>Hurley '680, Morgan '086, the 5/29/03 Swagelok document, a 2/4/03 brochure of O'Brien J-Line jacketed tubing, and various prior art references showing ripcords.</u> Description of the general nature of what was agreed to if an agreement was reached, or any other comments: <u>See Continuation Sheet.</u> (A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims patentable, if available, must be attached. Also, where no copy of the amendments that would render the claims patentable is available, a summary thereof must be attached.) A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION MUST INCLUDE PATENT OWNER'S STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. (See MPEP § 2281). IF A RESPONSE TO THE LAST OFFICE ACTION HAS ALREADY BEEN FILED, THEN PATENT OWNER IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO PROVIDE THE MANDATORY STATEMENT OF THE SUBSTANCE OF THE INTERVIEW (37 CFR 1.560(b)). THE REQUIREMENT FOR PATENT OWNER'S STATEMENT CAN NOT BE WAIVED. EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).		
/David O. Reip/	/EDL/	/JGF/
cc: Requester (if third party requester)		

Continuation of Description of the general nature of what was agreed to if an agreement was reached, or any other comments: Mr. James presented a background of the art of pressure tubing designed for downhole applications, and how the invention of adding a ripcord to jacketed tubing help solve a problem in the industry wherein tube outer sealing surfaces were being damaged by knives or other cutting tools while stripping a portion of the jacket, potentially preventing the surface of the tube from being able to form pressure tight fit with a compression fitting. The invention also is said to have help reduce personal injuries from knives being used in the well drilling environment.

The applied Hurley '680 reference was discussed, e.g. as to whether the armor layer 52 of the Fig. 4 embodiment is a smooth, solid wall metal tube...and even if so, could the tube's outer surface be considered a "sealing surface" as recited in claim 1. Morgan '086 was discussed, and both Mr. McEwing and Mr. James expressed doubts as to the "sealing surface" of the helically wound tubes as shown in Fig. 2 of Morgan '086. Examiner Reip noted, and PO agreed, that jacketed metal tubes and ripcords are both present in the prior art. Examiner Reip then expressed the opinion that the combination of prior art jacketed tubes and ripcords forms a compelling basis upon which to base prima facie obviousness rejections of the claims...and that any secondary considerations that the PO wishes to present, e.g. commercial success, long-felt need, and/or copying, would need to be particularly strong, detailed and compelling in order to overcome said obviousness.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/020,065	12/24/2013	7581565	SURP 13.01 REEX	1470
26328 7590 07/16/2014 LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270			EXAMINER REIP, DAVID OWEN	
			ART UNIT 3993	PAPER NUMBER
			MAIL DATE 07/16/2014	DELIVERY MODE PAPER

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JUL 16 2014

CENTRAL REEXAMINATION UNIT

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. 90/020,065.

PATENT NO. 7581565.

ART UNIT 3993.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

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Decision on Petition for Extension of Time in Reexamination	Application No.	Applicant(s)	
	90/020,065	7581565	
	Examiner	Art Unit	
	David Reip	3993	

1. THIS IS A DECISION ON THE PETITION FILED 15 July 2014.

2. THIS DECISION IS ISSUED PURSUANT TO:

A. ☒ 37 CFR 1.550(c) – The time for taking any action by a patent owner in a third party requested *ex parte* reexamination proceeding will be extended only for sufficient cause and for a reasonable time specified.

B. ☐ 37 CFR 1.550(c) – The time for taking action by a patent owner in a patent owner requested *ex parte* reexamination proceeding will only be extended for more than two months for sufficient cause and for a reasonable time specified.

C. ☐ 37 CFR 1.956 – The time for taking any action by a patent owner in an *inter partes* reexamination proceeding will be extended only for sufficient cause and for a reasonable time specified.

The petition is before the Central Reexamination Unit for consideration.

3. FORMAL MATTERS

Patent owner requests that the period for responding to the Office action mailed on 21 May 2014, which sets a two month period for filing a response thereto, be extended by one month.

A. Petition fee per 37 CFR §1.17(g):

i. ☐ Petition includes authorization to debit a deposit account.

ii. ☐ Petition includes authorization to charge a credit card account.

iii. ☒ Other fee paid.

B. ☒ Proper certificate of service was provided. (Not required in reexamination where patent owner is requester.)

C. ☒ Petition was timely filed.

D. ☒ Petition properly signed.

4. DECISION (See MPEP 2265 and 2665)

A. ☒ Granted or ☐ Granted-in-part for _____, because petitioner provided a factual accounting that established sufficient cause. (See 37 CFR 1.550(c) and 37 CFR 1.956).

i. ☐ Other/comment: _____.

B. ☐ Dismissed because:

i. ☐ Formal matters (See unchecked box(es) (A, B, C and/or D) in section 4 above).

ii. ☐ Petitioner failed to provide a factual accounting of reasonably diligent behavior by all those responsible for preparing a response to the outstanding Office action within the statutory time period.

iii. ☐ Petitioner failed to explain why, in spite of the action taken thus far, the requested additional time is needed.

iv. ☐ The statements provided fail to establish sufficient cause to warrant extension of the time for taking action (See attached).

v. ☐ The petition is moot.

vi. ☐ Other/comment: _____.

5. CONCLUSION

Telephone inquiries with regard to this decision should be directed to Eileen Lillis at 571-272-6928. In his/her absence, calls may be directed to Andres Kashnikov at 571-272-4361 in the Central Reexamination Unit.

	EILEEN D LILLIS SPE Art Unit: 3993
--	--

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT EXAMINING OPERATION

Applicant:	§	
Roy Torrance et al.	§	Group Art Unit: 3993
	§	
Serial No. 90/020,065	§	Examiner: Reip, David
	§	
Filed: 12/24/2013	§	Dkt. No.: SURP 13.01 REEX
	§	
Confirmation No. 1470	§	

For: Tear Cord for Jacketed Tube

REQUEST FOR EXTENSION OF TIME

Honorable Commissioner of Patents and Trademarks
Alexandria, Virginia

SIR:

This paper is presented as the Patent Owner's Request for Extension of Time of one month filed in accordance with the requirements of 37 CFR 1.550(c) along with the requisite petition fee.

This request for extension of time is requested in order that the Patent Owner have adequate time to obtain declarations in support of the Patent Owner's argument of Secondary Considerations as discussed in the Interview conducted July 15, 2014. The Patent Owner has circulated declarations to a number of customers regarding the circumstances for purchasing the Patent Owner's product. Additional time is required to obtain requisite approval within some customers for these declarations. Some declarations have already been obtained but it is believed more will be supplied. These declarations were solicited when it became apparent after diligent review of the facts of the

Ex Parte Reexamination
90/020,065
July 15, 2015

rejection that the Patent Owner possessed a strong argument under secondary considerations rebutting the rejection under obviousness. These declarations will be supportive of the Patent Owner's argument of commercial success and long felt industry need.

The date for response to the Office Action mailed May 21, 2014 is July 21, 2014. If granted, the date of response will be August 21, 2014.

Submitted this 15th day of July, 2014

/davidmcewing/

David McEwing
PO Box 70410
Houston, Texas 77270
713-514-0137
dmcewing@houstonpatentlaw.com

CERTIFICATE OF TRANSMISSION

I certify under personal knowledge that the aforesaid Request for Extension of Time along with the petition fee required in accordance with 37 CFR 1.17(g) was submitted to the USPTO via the EFS Web system on July 15, 2014 and a copy submitted by regular United States Mail to Haynes, Soloway P.C., 175 Canal Street, Manchester, NH 03101 on July 16, 2014.

/davidmcewing/

David McEwing

Electronic Patent Application Fee Transmittal				
Application Number:		90020065		
Filing Date:		24-Dec-2013		
Title of Invention:		TEAR CORD FOR JACKETED TUBE		
First Named Inventor/Applicant Name:		7581565		
Filer:		David Lee McEwing		
Attorney Docket Number:		SURP 13.01 REEX		
Filed as Small Entity				
ex parte reexam Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Petition Fee-37CFR 1.17(g)(GroupII)	2463	1	100	100

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				100

Electronic Acknowledgement Receipt	
EFS ID:	19588493
Application Number:	90020065
International Application Number:	
Confirmation Number:	1470
Title of Invention:	TEAR CORD FOR JACKETED TUBE
First Named Inventor/Applicant Name:	7581565
Customer Number:	26328
Filer:	David Lee McEwing
Filer Authorized By:	
Attorney Docket Number:	SURP 13.01 REEX
Receipt Date:	15-JUL-2014
Filing Date:	24-DEC-2013
Time Stamp:	18:01:29
Application Type:	Reexam (Patent Owner)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 100
RAM confirmation Number	4370
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Reexam Miscellaneous Incoming Letter	Request_for_Extension_of_Tim e_07-15-14.pdf	42680 7c67cdf1add98b401d1c473870fde49c053 b7b1	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30195 b9bf1d647a632a2b0f93cb8fc597888df5e1 6a12	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			72875		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/020,065	12/24/2013	7581565	SURP 13.01 REEX	1470
26328 7590 05/21/2014 LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270			EXAMINER REIP, DAVID OWEN	
			ART UNIT 3993	PAPER-NUMBER
			MAIL DATE 05/21/2014	DELIVERY MODE PAPER

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Office Action in Ex Parte Reexamination	Control No. 90/020,065	Patent Under Reexamination 7581565	
	Examiner DAVID O. REIP	Art Unit 3993	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

- a. ☐ Responsive to the communication(s) filed on ____.
- ☐ A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/were filed on ____.
- b. ☐ This action is made FINAL.
- c. ☐ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. ☒ Notice of References Cited by Examiner, PTO-892. | 3. ☐ Interview Summary, PTO-474. |
| 2. ☒ Information Disclosure Statement, PTO/SB/08. | 4. ☐ ____. |

Part II SUMMARY OF ACTION

- 1a. ☒ Claims 1-24 are subject to reexamination.
- 1b. ☐ Claims ____ are not subject to reexamination.
2. ☐ Claims ____ have been canceled in the present reexamination proceeding.
3. ☐ Claims ____ are patentable and/or confirmed.
4. ☒ Claims 1-24 are rejected.
5. ☐ Claims ____ are objected to.
6. ☐ The drawings, filed on ____ are acceptable.
7. ☐ The proposed drawing correction, filed on ____ has been (7a) ☐ approved (7b) ☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
- 1 ☐ been received.
- 2 ☐ not been received.
- 3 ☐ been filed in Application No. ____.
- 4 ☐ been filed in reexamination Control No. ____.
- 5 ☐ been received by the International Bureau in PCT application No. ____.
- * See the attached detailed Office action for a list of the certified copies not received.
9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: ____

cc: Requester (if third party requester)

U.S. Patent and Trademark Office
PTOL-466 (Rev. 08-13)

Office Action in Ex Parte Reexamination

Part of Paper No. 20140519

EX PARTE REEXAMINATION

Background

The subject patent being reexamined is U.S. Pat. No. 7,581,565, hereinafter "the subject patent" or "the '565 patent." As explicitly admitted by the patent owner ("PO") in the Background to the Disclosure section of the '565 patent, in electrical wires and fiber optic cables, it is known to incorporate tear cords (more commonly known in the art as "ripcords," which term will be used hereafter in this proceeding) to facilitate removal of a portion of the insulating layer(s) and, if included, armor layer(s). See also ripcords in the prior art, e.g. U.S. Pat. Apps. 2001/0029814 to Tiano and 2003/0118295 to Lail et al, and U.S. Pat. Nos. 4,041,237 to Stine et al and 5,719,353 to Carlson et al. Cutting tools such as a knife or hook blade may plunge too deeply through insulation and armor layers, damaging core electrical wires and/or optical fibers. Ripcords allow a technician to tear through cable components, e.g. the cable jacket and underlying armor layers, to facilitate removal of a portion of the cable insulation without the use of a cutting tool.

The prior art also includes smooth, solid wall metal tubing, such as that used in fluid handling, having an exterior coating or "jacket" of a polymeric material. Jacketed metal tubing is commonly used in applications where additional corrosion or mechanical is required. See, e.g., the press release "Swagelok Company Introduces Two New Lines of Instrumented Tubing: Insulated Tubing and Jacketed Tubing," dated May 29, 2003. Additionally, the tube jacket can be used to provide thermal insulation. See, e.g., U.S. Pat. Nos. 4,345,363 and 4,531,991.

Summary of Invention

Beginning with a smooth, solid wall metal tube with an exterior plastic jacket, the invention is, at a basic level, the inclusion of a ripcord between the outer surface of the metal tube and the inner surface of plastic jacket to facilitate removal of at least a portion of the plastic jacket without the use of a cutting tool.

Considering the above and the teachings of the prior art, the examiner finds the prior art as both anticipating and rendering obvious the claimed invention, for reasons as discussed in detail below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejection's under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 11, 13 and 24 are anticipated by U.S. Pat. No. 7,113,680 to Hurley et al ("Hurley '680"). Fig. 4 and the corresponding disclosure of Hurley '680 shows a jacketed metal tube device having all the limitations as recited in claims 1, 4, 5, 11, 13 and 24, including:

claim 1: a first protective jacket 50; a smooth solid wall metal tube 52 (col. 10, lines 47-50, "separation layer 52 can be formed from an armor layer, for example, a

Art Unit: 3993

metal or dielectric layer that may be formed as one or more pieces"); and a tear cord 54 (col. 5, lines 1-3, "Fiber optic cable 40 also includes...an optional ripcord 54 for facilitating removal of cable jacket 50";

claims 4 and 5: see alternative materials for the cable jacket 50 as discussed in col. 8, lines 15-21. Note that the recited ethylene chlorotrifluoroethylene is "a fluoro-plastic" as disclosed in col. 8 of Hurley '680;

claim 11: "a tear cord placed at a selected location on a length of the tube" includes any location. Thus, the ripcord 54 of Hurley '680 is shown in Fig. 4 as being at a "selected" location;

claim 13: in addition to the material being anticipated by Hurley '680 as discussed with respect to claim 4 and 5, col. 8, line 15-61 of Hurley '680 discloses that jacket 50 is extruded onto tube 52 without radiation curing; and

claim 24: Fig. 4 shows optical fiber bundles 44.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8, 10-17, 21 and 22 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 3,526,086 to Morgan ("Morgan '086") in view of

U.S. Pat. No. 5,557,698 to Gareis et al ("Gareis '698"). Fig. 3 and the corresponding disclosure of Morgan '086 shows a jacketed metal tube device that is basically the same as that recited in claims 1-5, 8, 10-17, 21 and 22, including:

claims 1-5 and 13: jackets 30-32, comprising "a wide choice of substances," e.g. "an elastomer of the polyvinyl chlorides, the butyls, the neoprenes, or the polypropylenes" (Morgan '086, col. 4, lines 16-35)...thus to the extent the particular recited materials of claims 4 and 5 are not expressly disclosed in Morgan '086, such materials are known in the art and it would have been obvious for one skilled in the art to select any appropriate material for the application and environment; metal tubes 22 and 24, with tubes 24 capable of conveying "a variety of substances" (Morgan '086, col. 3, lines 61-70), which one skilled in the art would appreciate as including hydraulic fluid or chemicals, esp. "in the operation of oil production" as discussed in Morgan;

claims 8 and 22: jacket 30 may comprise the "second inner jacket," as it is surrounds tubes 24 and is located between the outer surface of tubes 24 and the inner diameter of "first jacket" 32;

claim 12: tube 22 "may comprise a steel cable" (Morgan '086, col. 3, line 57);

claims 14, 16, 17 and 21: a plurality of solid wall metal tubes 24, any of said tubes 24 capable of having a compression fitting attached thereto as desired, e.g. when running pressurized gases or fluids therethrough; and

claim 15: conduits 28 "may provide conduction of electrical power and/or communication signals where the circumstances so require" (Morgan '086, col. 4, lines 6-9).

However, Morgan '086 does not disclose ripcords positioned next to various internal cable structures, e.g. tubes and steel cables, as recited in the claims. Figs. 12-14 of Gareis '698 teach a cable assembly having multiples ripcords 54 positioned at various levels inside the cable assembly. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate ripcords next to any of the internal structures of the Morgan '086 multiconduit line to allow access to said internal structures through the protective layers without the use of a cutting tool, e.g. next to any of central core tube 22, tubes 24, steel cables 26, and conduits 28. With respect to the "helically wound" limitation of claim 10, note the preferred embodiment of Fig. 2 of Morgan '086 comprises multiple conduits helically wound together. A ripcord placed alongside any of said conduits would thus be helically wound.

Claims 6 and 9 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Morgan '086 in view of Gareis '698, and further in view of U.S. Pat. No. 6,236,790 to Okada et al ("Okada '790"). Gareis '698 is silent as to the ripcord 54 material. However, col. 4, lines 17-22 of Okada '790 teaches a cable similar to Gareis '698 having a ripcord 8A comprising "for example, an aramid fiber" [ref. cl. 6] or "a metal fiber" [ref. cl. 9]. Thus, it would have been obvious to one of ordinary skill in the art to incorporate ripcords as taught by Gareis '698 into Morgan '086 (as discussed above), and further to make the ripcords out of aramid or metal fibers, as such materials are suitably strong to perform the function of ripping through the various layers of Morgan '086 without prematurely breaking.

Claims 1, 7, 18-20, 23 and 24 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,472,614 to Dupont et al ("Dupont '614") in view of Gareis '698. Fig. 1 and the corresponding disclosure of Dupont '614 shows a jacketed metal tube device that is basically the same as that recited in claims 1, 7, 18-20, 23 and 24, including:

claim 1: jackets 8, 12 and 14; and steel tubes 1 and 2 for transporting fluid;

claim 7: "The steel tubes may be made of carbon steel or stainless steel, for example" (Dupont '614, col. 2, lines 34-35);

claim 18: "Umbilicals are used for transmitting power, signals and fluids (fluid injection, hydraulic power, gas release, etc.) to and from a subsea installation [e.g. an oil or gas well] via the various elongated umbilical elements " (Dupont '614, col. 1, lines 10-13;

claim 23: "The outer sheath can be made by extrusion of thermoplastic (such as polyethylene)" (Dupont '614, col. 2, lines 38-39); and

claim 24: "Disposed around the core are...two optical fiber cables 4 [and] two armored electric power and/or signaling bundles 5" (Dupont '614, col. 2, lines 14-16).

However, Dupont '614 does not disclose ripcords positioned next to various internal cable structures, e.g. tubes and cables, as recited in the claims. Figs. 12-14 of Gareis '698 teach a cable assembly having multiples ripcords 54 positioned at various levels inside the cable assembly. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate ripcords next to any of

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the internal structures of the Dupont '614 umbilical to allow access to said internal structures through the protective layers without the use of a cutting tool, e.g. next to any of central core tube 1, tubes 2, fiber optic cables 4, and electric power/signaling bundles 5.

Service of Papers

After filing of a request for *ex parte* reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

Amendment in Reexamination Proceedings

Patent Owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c). See MPEP § 2250(IV) for examples to assist in the preparation of proper proposed amendments in reexamination proceedings.

Submissions

In order to insure full consideration of any amendments, affidavits, declarations or other documents as evidence of patentability, such documents must be submitted in response to the first Office action on the merits (which does not result in a close of prosecution). Submissions after the second Office action on the merits, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116 after final rejection and by 37 CFR 41.33 after appeal, which will be strictly enforced.

Notification of Concurrent Proceedings

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving the '565 patent throughout the course of this reexamination proceeding. Likewise, if present, the third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

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All correspondence relating to this *ex parte* reexamination proceeding should be directed as follows:

By U.S. Postal Service Mail to:

Mail Stop *Ex Parte* Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand to: Customer Service Window
Randolph Building
401 Dulany St.
Alexandria, VA 22314

By EFS-Web:

Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at

<https://efs.uspto.gov/efile/myportal/efs-registered>

EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Other useful telephone numbers:
Reexamination Practice

(571) 272-7703

Application/Control Number: 90/020,065

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Reexamination Facsimile Transmission No.

(571) 273-9900

/David O. Reip/
Patent Reexamination Specialist
Central Reexamination Unit
(571) 272-4702

Conferee: /JGF/

Conferee: /AK/

Notice of References Cited	Application/Control No. 90/020,065	Applicant(s)/Patent Under Reexamination 7581565	
	Examiner DAVID O. REIP	Art Unit 3993	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2003/0118295	06-2003	Lail et al.	385/101
*	B	US-6,472,614	10-2002	Dupont et al.	174/70S
*	C	US-5,719,353	02-1998	Carlson et al.	174/28
*	D	US-5,557,698	09-1996	Gareis et al.	385/101
*	E	US-4,531,991	07-1985	Ziemek et al.	156/79
*	F	US-4,345,363	08-1982	Leuchs et al.	29/527.4
*	G	US-4,041,237	08-1977	Stine et al.	174/36
*	H	US-3,526,086	09-1970	MORGAN GEORGE W	138/111
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

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	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Swagelok Company Introduces Two New Lines of Instrumentation Tubing: Insulated Tubing and Jacketed Tubing, May 29, 2003.
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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			Application Number	90/020065	
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			First Named Inventor	Torrance Roy	
			Art Unit	3993	
			Examiner Name	Reip David Owen	
			Attorney Docket Number	GCDH-01 Reex	
Sheet	2	of	3		

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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		Response	01-12-2012	Torrance Roy		
		Communication pursuant to				
		Article 94(3) EPC	05-22-2012	Torrance Roy		
		Response and amendment	11-20-2012	Torrance Roy		

Examiner Signature	/David Reip/	Date Considered	05/20/2014
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PTO/SB/08a (07-09)

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		Translation DE19741035	03-18-1999	Torrance Roy		
		Translation EP1914462	04-23-2008	Torrance Roy		

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		GB 480885	12-0301934	Okonite Callender Cable		
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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	18812159
Application Number:	90020065
International Application Number:	
Confirmation Number:	1470
Title of Invention:	TEAR CORD FOR JACKETED TUBE
First Named Inventor/Applicant Name:	7581565
Customer Number:	26328
Filer:	David Lee McEwing
Filer Authorized By:	
Attorney Docket Number:	SURP 13.01 REEX
Receipt Date:	21-APR-2014
Filing Date:	24-DEC-2013
Time Stamp:	12:52:33
Application Type:	Reexam (Patent Owner)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	sb0008a.pdf	272286 43dba8e89395868cc2c4e9bb77a898a4d8123ef	no	2

Warnings:

Information:

This is not an USPTO supplied IDS fillable form					
2	Information Disclosure Statement (IDS) Form (SB08)	sb0008a-3.pdf	267007 b45f7640f95a4c366a3badede13cddb14f602597	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Information Disclosure Statement (IDS) Form (SB08)	sb0008a-2.pdf	268734 dcd3d89033348475843901694973fa3e63402592	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
4	Non Patent Literature	Document1_04-21-2014.pdf	556260 f90051d4201e26e497da3618875c758481ec54d3	no	11
Warnings:					
Information:					
5	Non Patent Literature	Document2_04-21-2014.pdf	1000706 28ea99e714f183ba388d55cc099bd25b66138fea	no	14
Warnings:					
Information:					
6	Non Patent Literature	Document3_04-21-2014.pdf	571983 9fd24e946f61eb0602665c3764b7a9770dbb7f18	no	11
Warnings:					
Information:					
7	Non Patent Literature	Document4_04-21-2014.pdf	874362 24eb5564098f934c467ce91dba1c6711a0e5d022	no	15
Warnings:					
Information:					
8	Non Patent Literature	translationDE19741035C1.pdf	128707 673004758266fd1c2bc71eaf3aafa2f2c8c81ae2	no	8
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
9	Non Patent Literature	translationEP1914462A2.pdf	256887 64a590e013a414128ea4e9d571be9cf00c580976	no	19
Warnings:					

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

Information:

Total Files Size (in bytes):

4196932

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td style="width: 50%;">90/020065</td> </tr> <tr> <td>Filing Date</td> <td>12-24-2013</td> </tr> <tr> <td>First Named Inventor</td> <td>Torrance Roy</td> </tr> <tr> <td>Art Unit</td> <td>3993</td> </tr> <tr> <td>Examiner Name</td> <td>Reip David Owen</td> </tr> <tr> <td>Attorney Docket Number</td> <td>GCDH-01 Reex</td> </tr> </table>		Application Number	90/020065	Filing Date	12-24-2013	First Named Inventor	Torrance Roy	Art Unit	3993	Examiner Name	Reip David Owen	Attorney Docket Number	GCDH-01 Reex
Application Number	90/020065														
Filing Date	12-24-2013														
First Named Inventor	Torrance Roy														
Art Unit	3993														
Examiner Name	Reip David Owen														
Attorney Docket Number	GCDH-01 Reex														

[illegible]

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)	MM-DD-YYYY			
		Response	01-12-2012	Torrance Roy		
		Communication pursuant to				
		Article 94(3) EPC	05-22-2012	Torrance Roy		
		Response and amendment	11-20-2012	Torrance Roy		

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT EXAMINING OPERATION

Applicant:	§	
Jody James et al.	§	Group Art Unit: 3993
	§	
Serial No. 90/020,065	§	Examiner: Reip, David
	§	
Filed: 12/24/2013	§	Atty. Dkt. No.: Surp 13.01 REEX
	§	
Confirmation No. 1470	§	

For: Tear cord for jacketed tube

WAIVER OF RIGHT TO FILE PATENT OWNER STATEMENT

Honorable Commissioner of Patents and Trademarks
Alexandria, Virginia

SIR:

This paper is presented in response to the Office Action mailed February 28, 2014.

Gulf Coast Downhole Technologies, Inc. assignee of the 7,581,565 patent, waives its right under 37 CFR 1.530 to file a Patent Owner Statement.

90/0270,065
US Patent 7,581,565
Art Unit 3993 Response to Communication mailed February 28, 2014

Respectfully filed this 6th day of March, 2014

/davidmcewing/
David McEwing
Law Office of David McEwing P.C.
PO Box 70410
Houston, TX 77270
713-514-0137
dmcewing@houstonpatentlaw.com

CERTIFICATE OF TRANSMISSION AND SERVICE

The undersigned attests that the foregoing Waiver of Patent Owner Statement was transmitted to the United States Patent and Trademark Office via the EFS System on March 6, 2014.

The undersigned further attests that a copy of this Waiver was served on March 6, 2014 upon the third party requestor in accordance with 37 CFR 1.248 by depositing a copy in US Postal Service regular First Class Mail, postage prepaid, addressed to the third party requestor at the following mailing address:

Haynes, Soloway PC
175 Canal Street
Manchester, NH 03101

/davidmcewing/
David McEwing

Electronic Acknowledgement Receipt	
EFS ID:	18388031
Application Number:	90020065
International Application Number:	
Confirmation Number:	1470
Title of Invention:	TEAR CORD FOR JACKETED TUBE
First Named Inventor/Applicant Name:	7581565
Customer Number:	26328
Filer:	David Lee McEwing
Filer Authorized By:	
Attorney Docket Number:	SURP 13.01 REEX
Receipt Date:	06-MAR-2014
Filing Date:	24-DEC-2013
Time Stamp:	13:05:26
Application Type:	Reexam (Patent Owner)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Reexam Miscellaneous Incoming Letter	Response_to_Ex_parte_Rexxa mination_03-06-14.pdf	42181 420bf985c6ac14bf4bc74635084ff1a454aac 8a9	no	2

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/020,065	12/24/2013	7581565	SURP 13.01 REEX	1470
26328 7590 02/28/2014 LAW OFFICE OF DAVID MCEWING P.O. BOX 70410 HOUSTON, TX 77270			EXAMINER REIP, DAVID OWEN	
			ART UNIT 3993	PAPER NUMBER
			MAIL DATE 02/28/2014	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Haynes, Soloway PC
175 Canal Street
Manchester, NH 03101

***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/020,065.

PATENT NO. 7581565.

ART UNIT 3993.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

DECISION ON REQUEST FOR REEXAMINATION

A substantial new question of patentability affecting claims 1-24 of United States Patent Number 7,581,565 (“the ‘565 patent”) is raised by the request for *ex parte* reexamination.

Service of Papers

After filing of a request for *ex parte* reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

Waiver of Right to File Patent Owner Statement

In a reexamination proceeding, Patent Owner may waive the right under 37 CFR 1.530 to file a Patent Owner Statement. The document needs to contain a statement that Patent Owner waives the right under 37 CFR 1.530 to file a Patent Owner Statement and proof of service in the manner provided by 37 CFR 1.248. If the request for reexamination was made by a third party requester, see 37 CFR 1.550(f). The Patent owner may consider using the following statement in a document waiving the right to file a Patent Owner Statement:

Patent Owner waives the right under 37 CFR 1.530 to file a Patent Owner Statement.

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

Amendment in Reexamination Proceedings

Patent Owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c). See MPEP § 2250(IV) for examples to assist in the preparation of proper proposed amendments in reexamination proceedings.

Submissions

In order to insure full consideration of any amendments, affidavits, declarations or other documents as evidence of patentability, such documents must be submitted in response to the first Office action on the merits (which does not result in a close of prosecution). Submissions after the second Office action on the merits, which is