IN THE CIRCUIT COURT IN AND FOR ESCAMBIA COUNTY, FLORIDA

DEEPGULF, INC. and
TOKE OIL AND GAS, S.A.
Plaintiffs,
vs.
MARC M. MOSZKOWSKI
Defendant.

Case No.: 2018 CA 000543
Division: "E

DEFENDANT'S RESPONSE TO PLAINTIFF'S STATEMENT OF UNDISPUTED FACTS

INTRODUCTION

Defendant respectfully submits this Response to Plaintiff's Statement of Undisputed Facts in opposition to Plaintiff's Motion for Summary Judgment. Contrary to Plaintiff's assertions, the alleged "undisputed facts" are materially inaccurate, misleading, and unsupported by the evidence. The Plaintiff's statement not only fails to meet the standard required under Florida Rule of Civil Procedure 1.510(c), but it also misrepresents key elements of the case, attempting to obscure genuine issues of material fact that warrant trial.

Plaintiff’s reliance on distorted facts and unfounded conclusions undermines the fundamental purpose of a summary judgment motion, which is to resolve cases where no legitimate disputes exist. However, as demonstrated herein, the Plaintiff's submission is rife with factual inaccuracies and unsupported allegations that are directly contradicted by the evidentiary record. Defendant will address each purported "undisputed fact" and present evidence to expose these misrepresentations, demonstrating why summary judgment must be denied.

Defendant respectfully requests that this Court carefully scrutinize Plaintiff’s claims, deny the Motion for Summary Judgment in its entirety, and allow this matter to proceed to trial, where the truth can be fully and fairly established.

Defendant will present hereafter his detailed responses to each and every one of the Plaintiff's statements, including, for clarity, to those for which he has no comment.

1. *Plaintiff's statement of undisputed facts: In 2004, DeepGulf, Inc. was founded [Deposition of Marc M. Moszkowski dated July 17, 2019, Page 32, Line 15 -Page 35, Line 11]. Its initial sole shareholders were Rustin Howard and Marc Moszkowski [Deposition of Marc M. Moszkowski dated July 17, 2019, Page 34, Line 22 -Page 35, Line 2]. Marc Moszkowski has been a*

director and the executive officer for DeepGulf, Inc. [Affidavit of Rustin Howard, ¶ 4 and 5].

Defendant's comment:

Notwithstanding the futility of the issue, although since 2005 Mr. Howard had always referred to Defendant's position in his communications as to "*Chief Executive Officer*", or "*CEO*", for some reason he has stripped him since 2017 of the prefix "*Chief*", whereas, in the US, the term "*executive director*" is used only in the not-for-profit sector, local government entities, or the military (e.g. submarines) The term is not found in business organizations.

2. *Plaintiff's statement of undisputed facts: Marc Moszkowski entered into a Noncompetition, Nondisclosure, and Developments Agreements with DeepGulf on September 15,2005 [Affidavit of Rustin Howard, ¶ 6].*

Defendant's Response:

No comment

3. *Plaintiff's statement of undisputed facts: Marc Moszkowski entered into a Noncompetition, Nondisclosure, and Developments Agreements with DeepGulf on September 15,2005 [Affidavit of Rustin Howard, ¶ 6].*

Defendant's Response:

No comment

4. *Plaintiff's statement of undisputed facts: On or around August, 2008, DeepGulf, Inc. hired attorney, Jeffrey Goldman, to apply*

to obtain a permanent resident visa for Marc M. Moszkowski. Despite DeepGulf's best efforts to obtain the permanent resident visa, the application was denied. [Affidavit of Rustin Howard, ¶ 35].

Defendant's Response in opposition:

Defendant arrived in the United States in 1998. He stayed in the country on half a dozen successive visas and extensions, mostly of the H-1B type, until the expiration of the last in 2017.

Upon his last two entries into the United States, he was detained for over an hour by immigration officers who found suspicious that he lacked a permanent resident visa after nearly two decades of temporary non-resident visas. The officers stated that in their experience such an occurrence was unheard of, particularly for the educated president of a corporation.

Defendant believes that his employer, DeepGulf, Inc. did not act in good faith, nor did it exert genuine "*best efforts*". Furthermore, he was apprised of the rejection of his permanent resident visa application only during discovery in 2018, upon browsing documents served to him by the Plaintiff. Plaintiff had not seen fit to apprise him right after the rejection notice.

5. *Plaintiff's statement of undisputed facts: On or about September 10, 2007, DeepGulf, Inc. , Inc. received an inquiry from a potential customer about DeepGulf, Inc. 's Patented Ultra-deepwater J-Flex Pipelay system and the possibility of*

using it to lay pipe between Sunrise gas field and East Timor. [Affidavit of Rustin Howard, ¶ 10].

Defendant's Response in opposition:

See Response in opposition in statement 7 below.

6. *Plaintiff's statement of undisputed facts: Rustin Howard on behalf of DeepGulf, Inc. passed this inquiry on to Marc M. Moszkowski. [Affidavit of Rustin Howard, ¶ 11].*

Defendant's Response in opposition:

See Response in opposition in statement 7 below.

7. *Plaintiff's statement of undisputed facts: In addition, the potential customer had clicked the "contact us" button on the DeepGulf, Inc. website that sent an email to deepgulf@deep-gulf.com which was received by Marc M. Moszkowski. [Affidavit of Rustin Howard, ¶ 12].*

Defendant's Response in opposition:

Although Defendant fails to see any relevance in Plaintiff's statements 5, 6, and 7, he must respond in opposition since the chronology reported by Plaintiff for some unexplained purpose appears to be articulated backwards.

Here is the actual chronology, which would defeat on its face whatever arcane design Plaintiff may have had in mind:

A. On **September 10, 2007, at 6:19 AM**, Central Standard Time, Defendant received by email a detailed inquiry directly from a Mr. Graeme Mitaxa, an Australian national, on behalf of Toke Consultants S,A,, a Timorese concern;

B. On the very same day, **September 10, 2007, at 10:42 AM**, Defendant forwarded the inquiry to Mr. Howard;

C. On **September 11, 2007**, Jamille Ellingson, Operations Coordinator in Mr. Howard's office, received a phone call from Graeme Mitaxa in Jakarta, Indonesia, of which she would inform Mr. Howard "*as best she could*";

D. On **September 11, 2007, at 9:10 AM**, Ms. Ellingson informed Mr. Howard Tuesday, by email,

E. On **September 11, 2007, at 4:47 PM**, Mr. Howard informed Defendant of the call, also by email;

All information above being in the emails in the possession of Plaintiff.

8. *Plaintiff's statement of undisputed facts: On or around October 15, 2007, Marc M. Moszkowski went to East Timor to investigate the opportunity, in his capacity as Director and Officer of DeepGulf, Inc. [Affidavit of Rustin Howard, ¶ 13].*

Defendant's Response in opposition:

On October 15, 2007, Defendant was neither traveling to East Timor nor even in Pensacola, but in the wilderness of West Texas, at the time far from any means of telecommunication.

He did not travel to East Timor until nearly a month later.

October 15, 2007 was also the day for which Plaintiff later fabricated the minutes of a board meeting which never took place, since during the purported meeting Defendant

was 900 miles away from the supposed venue, and out of telephone reach.

See **Exhibit "C".**

Furthermore, in an email dated October 24, 2007, Toke's Graeme Mitaxa informed Defendant that the project in East Timor was cancelled, and he firmly stated the futility for Defendant to travel to East Timor.

See **Exhibit "Y".**

On the other hand, on October 31, 2007, after having just completed quite a long personal contract for Italian engineering concern SAIPEM in Houston, Texas, Defendant decided to bring to fruition a personal project he had had for decades, that of traveling by road camper around Australia. Consequently, on Hallowing night, 2007, he flew to Sydney, Australia, on his own volition and at his own expense. Sydney is at a distance of 2,400 miles from East Timor. The normal itinerary from the U.S. to East Timor, much shorter and cheaper, is through Taipei and Bali.

See **Exhibit "Y"** and **Exhibit "Z".**

While traveling north between Sydney and Brisbane, Defendant received a phone call from a Vicente Ximenes in East Timor, a person until then unknown to him. The gentleman expressed a desire to invite Defendant to East Timor. Defendant replied that he would make arrangements to fly several days later from Darwin, in the

Northern Territory of Australia. From there, he traveled round trip to Dili, the capital city of East Timor, again at his own expense.

It is worth bearing in mind that since the incorporation of Plaintiff, three years prior, Defendant had been, and was, supporting the company with his personal income and was paying for all his expenses out of pocket, since, despite Defendant's alarmed remonstrations to Mr. Howard for his lack of funding activity (see sample in **Exhibit "AA"**), Plaintiff did not raise any capital until **after** the first contract had been signed in East Timor, thanks to Defendant's efforts and financial support, and a large down-payment had been paid by the client. Incidentally, Defendant was never reimbursed of the more than $100,000 in expenses he incurred to support the company during the years the company went without Mr. Howard raising any capital, nor was he compensated in stock.

On November 12, twelve days after leaving Pensacola, he landed in East Timor, which he left on November 15 to resume his private circumnavigation of Australia, a journey of more than 6,000 miles. He left Australia from Perth on November 24 and was back in Pensacola on December 3.

9. *Plaintiff's statement of undisputed facts: On February 2, 2008, at a DeepGulf, Inc. Board Meeting, Marc M. Moszkowski gave information regarding the potential for pipeline operation in East Timor following his recent time spent researching the project. He informed the Board, and adamantly still maintains, it would not be possible to do business in East Timor as a US*

corporation. Based upon these representations, the Board discussed solutions including the creation of a DeepGulf, Inc. subsidiary company in East Timor. [Affidavit of Rustin Howard, ¶ 14].

Defendant's Response in opposition:

The opportunity never existed for tiny un-capitalized U.S. company to do business on its own directly with the Government of East Timor, where Defendant had been invited by two local businessmen and introduced to members of the Government, including the President and the Prime Minister. It defies common sense to even start to believe that the business could have been gifted by the two gentlemen to an unknown foreign corporation of two moreover devoid of any capital at the time.

10. *Plaintiff's statement of undisputed facts: In East Timor, Marc M. Moszkowski established Toke Oil and Gas, S.A. and made himself an owner rather than DeepGulf, Inc. [Affidavit of Rustin Howard, ¶ 15].*

Defendant's Response in opposition:

The opportunity never existed for Defendant to establish Toke Oil and Gas, S.A., nor for DeepGulf, Inc. to be an owner thereof. Again, it must be kept in mind that Defendant had been invited by two local businessmen to join the company, whose name was decided by the local owners and was evidently established by them, not by Defendant, not only a foreigner, but devoid of a business visa and work permit at the time.

When time came to form a company in East Timor, the only opportunity that was ever offered was for Defendant to join as an individual. The U.S. concern was never considered by the local businessmen as a partner, especially when considering that DeepGulf, Inc. was totally un-capitalized at the time, since Plaintiff started seeking investors only after the first contract had been finalized and signed with the Government of East Timor and the first payment had been effected. When raised thereafter, whatever capital was subscribed was never applied to fund any of the East Timor projects, which were all carefully cash-flow positive at all times, nor to pay for Defendant's salaries or expenses, since these were all covered by cash-flow derived from the projects.

Which begs the question as to what the capital finally subscribed was applied to.

11. *Plaintiff's statement of undisputed facts: Based on documents provided and represented by Marc M. Moszkowski to be the Founding Documents of Toke Oil and Gas, S.A., the earliest of them dated December 8, 2007 the three Founders of Toke Oil and Gas, S.A. are VoGue Lda. Company, Hali Group S.A. Company, and Marc M. Moszkowski an individual. [Affidavit of Rustin Howard, ¶ 16].*

Defendant's Response:

No comment

12. *Plaintiff's statement of undisputed facts: Based on documents provided and represented by Marc M. Moszkowski to be the Founding Documents of Toke Oil and Gas, S.A., Marc*

M. Moszkowski, an individual, received 30,000 shares or 33% of Toke Oil and Gas, S.A. [Affidavit of Rustin Howard, ¶ 17].

Defendant's Response:

No comment

13. *Plaintiff's statement of undisputed facts: Based on documents provided and represented by Marc M. Moszkowski to be the Founding Documents of Toke Oil and Gas, S.A., the initial meeting of Shareholders was dated January 2008 wherein Directors were appointed and Marc M. Moszkowski was appointed President-Director General. [Affidavit of Rustin Howard, ¶ 18].*

Defendant's Response:

No comment

14. *Plaintiff's statement of undisputed facts: Marc M. Moszkowski led the Board of DeepGulf, Inc. to believe that he established and was holding Toke Oil and Gas, S.A. in his name for the benefit of DeepGulf, Inc., and that it would have been reckless to hold that interest in DeepGulf, Inc.'s name. [Affidavit of Rustin Howard, ¶ 19].*

Defendant's Response in opposition:

The opportunity never existed for Defendant to establish and hold Toke Oil and Gas, S.A. in his name, or for DeepGulf, Inc. to be an owner thereof, and Defendant certainly never led anyone to so irrationally believe otherwise.

However, it would indeed have been unforgivably reckless for infant yet totally un-capitalized DeepGulf, Inc. to get

embroiled directly in a country which had been in a civil war for more than twenty years.

See on the subject Defendant's **First Affidavit**.

Instead, in order to protect DeepGulf, Inc., Defendant took the risk to shoulder personally the dangerous responsibility of operating in a country in violent turmoil with no guarantee that payments would be ever made. He did so indeed "*for the benefit*" of DeepGulf, Inc., although he meant by that phrase that protecting DeepGulf, Inc. would be *beneficial* to the U.S. entity.

However, even if the phrase "*to the benefit of*" were to be taken in a purely accounting sense, in reality, rather than the **33.33% share of profits** that was due to the 33.33% ownership which Defendant kept indeed for the benefit of DeepGulf, Inc. (as was further evidenced later when he turned it over to DeepGulf, Inc. without consideration), Defendant had Toke Oil & Gas S.A. pay DeepGulf, Inc. **50.3%** of all company **cash flow**, which is considerably more than the expected 33.33% of **profit** only.

Which begs the disconcerting question: based on which rationale is DeepGulf, Inc. suing Defendant for significantly less than it actually received?

15. *Plaintiff's statement of undisputed facts: While Marc M. Moszkowski was in East Timor, Rustin Howard attempted to travel to East Timor; however, Marc M. Moszkowski told Rustin Howard that it was too dangerous for Rustin Howard to go to East Timor. No other DeepGulf, Inc. employee or*

Director ever traveled to East Timor. [Affidavit of Rustin Howard, ¶ 20].

Defendant's Response in opposition:

Mr. Howard does not provide any information about his purported attempt, or attempts, nor does he specify a date, or dates, nor does he state a purpose.

Notwithstanding, such potential travel would have been not only dangerous, but also reckless, since one of the only two officers in DeepGulf, Inc. had quite obviously to remain outside the country in case the other experienced some serious misfortune inside.

See on the subject Defendant's **First Affidavit**.

16. *Plaintiff's statement of undisputed facts: Toke Oil and Gas, S.A. completed three contracts with total revenue of $14.9 million US dollars. The last project was completed in May, 2012. During those projects, Toke Oil and Gas, S.A. distributed $1.304 million purportedly as "Director Salaries". At the same time, Marc M. Moszkowski was also receiving his full-time DeepGul f, Inc. salary. While Marc M. Moszkowski was the President Director General, Toke Oil & Gas, S.A. paid the funds referred to in this Paragraph without the knowledge and approval of the DeepGulf, Inc. Board. [Affidavit of Rustin Howard, ¶ 21].*

Defendant's Response in opposition:

Contrary to his sworn affidavit statement, Mr. Howard was repeatedly informed of the payments in due time, and so he cannot deny knowledge.

See **Exhibits "E"** and **"F".**

See **Exhibit "S"** for a description of the contracts.

17. *Plaintiff's statement of undisputed facts: Marc Moszkowski was paid $345,000 from Toke Oil and Gas, S.A. while he was making a salary from DeepGulf, Inc. [Affidavit of Rustin Howard, ¶ 24 and 22].*

Note by Defendant: this statement seems to refer to ¶ 25, not ¶ 24 and/or 22.

Defendant's comment:

As profusely evidenced throughout this action, Plaintiff had been informed in detail of the transactions as early as 2011, 2012, and 2014, in electronic messages all acknowledged by the Plaintiff.

See **Exhibits "E"** and **"F".**

18. *Plaintiff's statement of undisputed facts: Marc M. Moszkowski negotiated DeepGulf, Inc.'s purchase of 30,000 shares or 33% of Toke Oil and Gas from Vincente Ximenes on or about August 12,2010. [Affidavit of Rustin Howard, ¶ 28].*

Defendant's Response:

No comment

19. *Plaintiff's statement of undisputed facts: Marc M. Moszkowski negotiated DeepGulf, Inc.'s purchase of an additional 30,000 shares or 33% of Toke Oil and Gas, S.A. from Vincente Ximenes on or about May 25, 2012. [Affidavit of Rustin Howard, ¶ 29].*

Defendant's Response:

No comment

20. *Plaintiff's statement of undisputed facts: DeepGulf, Inc. purchased an additional 30,000 shares or 33% of Toke Oil and Gas, S.A. from Marc M. Moszkowski on or about May 25, 2012, making DeepGulf, Inc. the sole owner of Toke Oil and Gas, S.A. [Affidavit of Rustin Howard, ¶ 30].*

Defendant's Response:

No comment

21. *Plaintiff's statement of undisputed facts: Since the inception of DeepGulf, Inc., there have been multiple patents applied for by Marc M. Moszkowski on behalf of the entity, some of which Marc M. Moszkowski has questioned whether the patents were owned by himself or by DeepGulf, Inc. [Deposition of Marc M. Moszkowski dated July 17,2019, Page 52, Line 19 -Page 57, Line 19] Defendant has conceded that the patents described in Paragraph 16(b) through 16(e) of Plaintiffs' Complaint [Doc. 1 at Pages 25-26] are owned by DeepGulf, Inc. [Deposition of Marc M. Moszkowski dated July 17,2019, Page 57, Lines 1 - 19].*

Defendant's Response:

No comment

22. *Plaintiff's statement of undisputed facts: Defendant testified that the patent described in Paragraph 16(a) of the Plaintiffs' Complaint "is questionable" as to whether or not it is owned by DeepGulf, Inc. and his sole reasoning is that he had not been paid a salary during the time when the patent was filed. [Deposition of Marc M. Moszkowski dated July 17, 2019, Page 53, Line 7 -Page 56, Line 25].*

Defendant's Response in opposition:

Irrelevant, since Count I of Plaintiffs' Complaint recognizes that Defendant had assigned his patent interest to Plaintiff Deepgulf, Inc. 20 years ago, 13 years before this lawsuit was filed (paragraph 16 of the complaint: "*I hereby assign all rights including, but not limited to, rights to inventions, patentable subject matter, copyrights and trademarks, …"*).

However, DeepGulf, Inc. is not in any position to "*own*" any of the patents, since there exists for each one of the patents a co-inventor, unrelated to Plaintiff Deepgulf, Inc, whose existence is well known to Plaintiff, since his identity clearly appears on each of the patents. Said co-inventor has not assigned his interests to Plaintiff, and it is unreasonable to believe that he would.

See **Exhibit "N".**

Again, all Plaintiff can claim is Defendant's interest in the patents, which **he already assigned** to Plaintiff Deepgulf, Inc. **20 years ago**.

23. *Plaintiff's statement of undisputed facts: Additionally, Defendant testified in his Deposition regarding further inventions that he had not disclosed to DeepGulf, Inc. until the present. [Deposition of Marc M. Moszkowski dated July 17, 2019, Page 108, Line 1 -Page 111, Line 3].*

Defendant's Response in opposition:

As stated in said pages of the Deposition, all information regarding natural gas technologies (which would have been those addressed in the deposition), had been profusely communicated to the Plaintiff.

Irrespective of the Plaintiff's interpretation of Defendant's words during the heated July 2019 deposition, the acronym "**CNG**", for "*Compressed Natural Gas*", appears in **801** emails sent or copied to Plaintiff before 2017, and in **533** emails received or copied from Plaintiff during the same period.

As for the acronym "**LNG**", for "*Liquefied Natural Gas*", it appears in **1,088** emails sent or copied to Plaintiff before 2017, and in **753** emails received or copied from Plaintiff during the same period.

Plaintiff does not specify the number of exchanged messages with such information that would qualify as a threshold for such information to be considered *disclosed*, or *undisclosed*.

24. *Plaintiff's statement of undisputed facts: DeepGulf, Inc. is the owner of the websites referred to as www.deepgulf.net and www.deep.gulf.com. When the websites were created, Marc M. Moszkowski already had an ISP provider and wanted to use the same provider for the DeepGulf, Inc. website to which Rustin Howard agreed. Marc M. Moszkowski and Rustin Howard worked together to create and organize the DeepGulf, Inc. website and content. We also selected the domain names for the websites together. I wrote the press releases, the "Case Story"*

and edited parts of the "Going Deep" page. Marc M. Moszkowski wrote the pipe-predictor pages and provided all the technical data on all our websites. He created the graphics and provided images. [Affidavit of Rustin Howard, ¶ 31] .

Defendant's Response in opposition:

Plaintiff fails to provide any evidence for his claims of ownership, and neglects to mention Defendant's endless editing of Mr. Howard's sparse contributions, be it about spelling, syntax, content, illustrations, or formatting.

The concept of ISP (Internet Service Provider) is here clearly misconstrued by Plaintiff, who seems to confuse the service delivered by an ISP with those of a Web Hosting Provider and a Domain Name Registrar, especially at a time when Defendant had no ISP.

The web pages apparently described by Plaintiff are about 20 years old and are therefore, and quite obviously, not in existence any more.

Remarkably, Plaintiff neglects to provide a rationale behind the Plaintiff not having paid on a monthly and yearly basis during the first 5 years and the past 10 all fees and expenses incurred for the domains and their hosting if Plaintiff were indeed their rightful owner, while Defendant did pay in a personal capacity on a monthly and yearly basis during the first 5 years and the past 10 all fees and expenses incurred for the domains and their hosting.

Respectfully submitted this 21st day of January 2025.

Marc Moszkowski, Pro Se
Email: m.moszkowski@deepgulf.net
Phone: +1(850)316 8462
Le Verdos
83300 Châteaudouble, France

CERTIFICATE OF SERVICE

I hereby certify that, on this 21st day of January 2025, a copy of this response has been furnished to Braden K. Ball, Jr., attorney for the plaintiffs, through the Florida Courts E-Filing Portal.

EXHIBIT
C

Board of Directors Meeting Minutes
DeepGulf, Inc.
18th September 2006

Meeting held at corporate offices at 700 S Palafox St, Pensacola, Florida.
Meeting called to order 2:18 PM by Rus Howard, Chairman of the Board.

In attendance: Rus Howard,
Marc Moszkowski

Status of current operations was discussed.

The board thanked Marc for his commitment to the future of the company and his agreement to work outside the United States in potentially hostile conditions.

Having no other business the meeting was adjourned at 5:10 PM.

Respectfully submitted,

Rus Howard, Secretary

Comments by Marc Moszkowski:
I never saw these minutes before the lawsuit, and cannot find any email containing them.
On 18 September 2006, I had just moved from Houston to Pensacola the day before and was very busy assembling and moving my furniture, opening boxes and sorting contents, and preparing the house for the first visit of my friend Kathy Tanner at 5 PM. There was no way in hell that I could have spent 3 hours in Howard's office for this alleged meeting.
Furthermore, I had just moved to Pensacola and our interest was exclusively in the Gulf of Mexico, so why on Earth would the Board thank me for activities that were not to be considered for more than a year? The second highlighted paragraph was obviously copied/pasted from the alleged 15 October 2007 Board meeting, more than a year later, which would have coincided with my project to travel to East Timor.
The meeting and the minutes were therefore forged by Howard.

Board of Directors Meeting Minutes
DeepGulf, Inc.
October 15, 2007

Meeting held at corporate offices at 700 S Palafox St, Pensacola, Florida.
Meeting called to order 2:11 PM by Rus Howard, Chairman of the Board.

In attendance: Rus Howard,
Marc Moszkowski,

Status of current operations was discussed, including: potential for pipeline operations in East Timor and Australia. Resolution passed to support Marc's Executive role in East Timor and related countries. The board agreed to pay all travel, lodging and associated expenses in order for Marc to carry out overseas operations required to secure future contracts,

The board thanked Marc for his commitment to the future of the company and his agreement to work outside the United States in potentially hostile conditions.

Having no other business the meeting was adjourned at 5:00 PM.

Respectfully submitted,

Rus Howard, Secretary

Comments by Marc Moszkowski:
I never saw these minutes before the lawsuit, and cannot find any email containing them.
On October 15, 2007, between 2:11 PM and 5:00 PM, I was traveling in my car, somewhere between Fort Stockton and Fredericksburg in West Texas, about 900 miles west of Pensacola, in an area which had then no cell phone coverage, and at a time when roaming costs were anyway extravagant. I was 900 miles from Pensacola on that day, and could not anyhow have had the 3 hour meeting on the phone, either from a cell phone or a payphone.
The meeting and the minutes were therefore forged by Howard after the fact.

Comments by Marc Moszkowski:
First mention of the possibility of a trip to East Timor did not occur until October 19.
Invitation to East Timor was not received until November 3.
Tickets were purchased by Marc Moszkowski on October 26 for a trip around Australia, for which he left on October 31.
On October 15 East Timor was just one of several prospects and DeepGulf did not even consider it seriously. There is strictly no possibility that the trip could have been considered then, and there is no trace of it in the 35,000 messages.

Board of Directors Meeting Minutes
DeepGulf, Inc.
February 4th, 2008

Meeting held at corporate offices at 700 S Palafox St. Pensacola, Florida.
Meeting called to order 2:05 PM by Rus Howard, Chairman of the Board.

In attendance: Rus Howard
Marc Moszkowski

Status of current operations were discussed, Marc gave information regarding the potential for pipeline operations in East Timor following his recent time spent researching the project. The Board learned that it would not be possible to do business in Timor as a US corporation. A resolution was passed to create a subsidiary company to be named Toke Petroleum.

Having no other business the meeting was adjourned at 5:00 PM.

Respectfully submitted,

Rus Howard, Secretary

Moszkowski believes that the purported resolution was passed unilaterally by Mr. Howard long after the fact, since a) said resolution was never communicated in any form to Moszkowski until discovery, a decade later, and b) the name chosen for the purported subsidiary was "Toke Petroleum", a company that not only already existed at the time but was the company from which the first request had been received from East Timor in September 2007. Moszkowski does not believe that he would have agreed to DeepGulf "creating" a subsidiary company that not only already existed but also belonged to others, and he strongly suspects that the resolution, like so many others, was fabricated after the fact by Mr. Howard.

Board of Directors Meeting Minutes
Deep Gulf, Inc.
October 3, 2008

Meeting held by phone

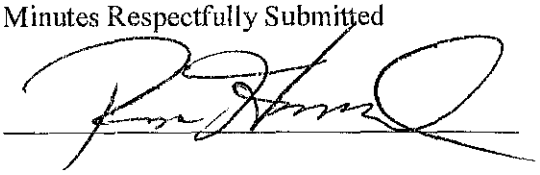
In attendance: Rus Howard
Marc Moszkowski

Noted that authorization for Mr. Moszkowski's salary could not be found in board meeting minutes, the board then voted and passed a resolution setting the salary for Mr. Moszkowski, the company President, at 132,000 per year, and ratified salaries paid to him since January this year.

After some discussions and noting that Mr. Howard's other obligations did not permit him to commit full time to the company, the board then voted on and passed resolution setting a part time salary for Mr. Howard, company Chairman and Secretary, at 77,700 per year, starting on the next pay cycle.

The meeting was then adjourned.

Minutes Respectfully Submitted



Comments by Marc Moszkowski:
I never saw these minutes before the lawsuit, and cannot find any email containing them.
On 3 October 2008, I was in Pensacola, so why would the meeting have been held by phone when my desk was about 75 ft from Howard's house?
The 3 October 2008 minutes of meeting were fabricated by Howard expressly for the lawsuit. I would never have agreed to Howard receiving $77,700 a year for working a couple of hours per week in his comfortable office in Pensacola while I had $132,000 for working 100 hours weeks in an unhealthy jungle on the other side of the planet. Howard created the minutes when he realized that it didn't make sense for him to accuse me of having received a salary from Toke without DeepGulf's board's authorization, while he did not bother to obtain board's authorizations for his and my salaries.
I first learned of Howard's salary fortuitously, around November 7, 2009, more than a year later, and was not a little peeved by it. Incidentally, Howard at the time admitted a salary of $60,000 only.

Toke Oil & Gas S.A.

Shareholders Meeting Minutes

Thursday 27 February 2013 at 9:00 am.

The meeting was held at Amari Atrium Hotel in Bangkok, Thailand

With notice duly given in accordance with company bylaws the meeting was called to order at 9:02 AM.

Shares in attendance;

90,000 common shares owned by DeepGulf, Inc. represented by Rustin Howard, Chairman of DeepGulf, Inc. That being 100% of all outstanding shares it was declared that a Quorum was present and the meeting had full authority to conduct business.

Rustin Howard acted as Secretary of the meeting.

Apologies were received from Marc Moszkowski, CEO DeepGulf.

A motion was made to nominate Rustin Howard and Marc Moszkowski to the Board of Directors. No other nominations were made and the matter was called to a vote.

The Vote for Directors	For	Against	Abstain
Marc Moszkowski	90,000	0	0
Rustin Howard	90,000	0	0

Marc Moszkowski and Rus Howard were elected as Directors of the company.

With no other business to discuss or transact, the meeting ended at 9:18 AM

_____

Rustin Howard, acting secretary

Toke Oil & Gas S.A.

Board of Directors Meeting Minutes
Thursday 27 February 2013 at 9:22 am.

The meeting was held at Amari Atrium Hotel in Bangkok, Thailand.
In attendance: Rustin Howard, Marc Moszkowski, and Rustin Howard acting as Secretary.

Meeting was called to order at 9:22 AM.
With Mr. Howard and Mr. Moszkowski in attendance it was determined that a Quorum was present and the meeting had full authority to conduct business.

Banking Authority.
A motion was made and seconded to authorize the company to open bank accounts in the USA with Wells Fargo, and in Timor Leste with ANZ Bank. Rus Howard and Marc Moszkowski will be signatories on the accounts. The motion passed unanimously.

Articles of Incorporation
A motion was made and seconded to adopt revised articles of incorporation, copies were presented to the Board and a copy is attached to the minutes. The revised articles of incorporation authorized 20,000,000 shares of the stock, including Class A voting common shares and Class B non-voting common shares, and 5,000,000 preferred shares.
The motion passed unanimously.

Stock Dividend
A motion was made to issue a stock dividend of 55.555556 shares for each share of common stock outstanding on the date of this meeting. Total shares outstanding after the dividend will be 5,000,000 shares. No partial shares will be issued.
The motion passed unanimously.

Election of Officers
Motion was made and seconded that the officers of the corporation shall be
Marc Moszkowski, President
Rustin Howard, Chairman and CFO
Trish Taylor, Secretary
The motion passed unanimously.

Authority to Negotiate and Sign
Motion was made to authorize Marc Moszkowski and Rustin Howard to negotiate with Beltron to sign deal that contemplates the sale of shares to Beltron Telecom Green Energy Systems Limited. Board is contemplating the sale of 3,000,000 shares of common stock at $10 per share. Further, this resolution would authorize Marc and/or Rustin to sign an agreement if the terms were substantially similar to the draft MOU reviewed in the meeting. (see attached)
The motion passed unanimously.
There being no further business to discuss the meeting was adjourned at 10:38 am.

_____
Rustin Howard, acting as Secretary

Minutes of the
Special Meeting of Deep Gulf Board of Directors
15 January 2016

Directors Attending:
Marc Moszkowski
Tom McMillan II
Bill Lott, arrived late 10:42
Rus Howard

The meeting was called by Company President Marc Moszkowski.
Notice of meeting was sent by email to all members of the board on 1/13/2016 by Marc Moszkowski to which all members acknowledged receipt.

Rus welcomed everyone to the meeting.
The meeting was called to order at 9:44 pm.
The meeting was then turned over to Marc Moszkowski.
M Moszkowski reviewed status and progress on various projects and ventures, including potential JV Partners in Korea, status of EDTL project and politics in East Timor, and on the financial condition of the company and the need for funding. Rus expressed concern about reliability of information about happenings in Asia.

Some discussion was had about the nature and detail of the C-GAS Joint Venture including possible terms of agreement and potential margins for the JV partners.

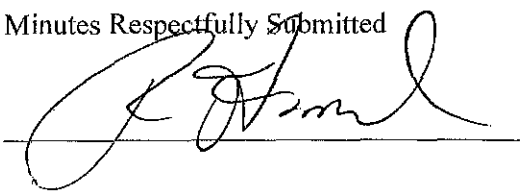
Marc asked about his salary and about unreimbursed expenses during startup including travel to Timor to secure the company's first contract. After some discussion he said he would not claim the pre-revenue expenses if the company would give him backpay for any unaccrued salary after the company secures revenue or investor capital. The Board agreed.

No resolutions were proposed.

Rus made a motion to adjourn the meeting, which was seconded by Bill Lott.

The meeting ended at 12:09 pm.

Minutes Respectfully Submitted



Comment by Marc Moszkowski:
I never saw this version of the minutes before the lawsuit, and cannot find any email containing it.
Both highlighted paragraphs were added by Howard after he had submitted the minutes of meeting to me (see original next page). I believe he added the paragraphs especially for the lawsuit.

Minutes of the
Special Meeting of Deep Gulf Board of Directors
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Directors Attending:
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Some discussion was had about the nature and detail of the C-GAS Joint Venture including possible terms of agreement and potential margins for the JV partners.

No resolutions were proposed.

Rus made a motion to adjourn the meeting, which was seconded by Bill Lott.

The meeting ended at 12:09 pm.

Minutes Respectfully Submitted

_____

Executive Order on Salaries

Sept 28, 2012

Skype conversation
Rus and Marc

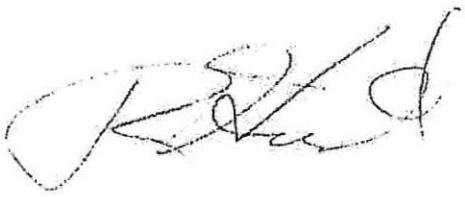
After lengthy discussion on how Israel must defend itself against Libya and the bomb and a few updates on status in Timor, I raised the issue of payroll and the lack of funds.

I told marc we are getting very low on funds. I told him that we can make the next payroll but I thought we should cease to pay payroll. He said he needed the money.
I explained to him that if we accrue payroll and not pay it, but book the amount due as a debt we still must pay the taxes and it would soon consume all of our remaining funds.

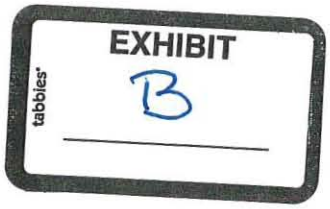
I told him that we could pay him some of the money that the company owed him since there are no payroll taxes on repayment of debt. He was very happy to hear that.

We agreed to not accrue any further executive officer payroll till the company had funds to pay.

Also discussed travel plans to Dili on First of October.



See Marc Moszkowski's comments in the next page,showing why the alleged "Executive Order" is a forgery.
I never saw this document before the lawsuit, and cannot find any email containing it, or relating it.
Beside, what bizarre rationale would Howard have had to write a secret summary of the phone conversation on the very day of the phone conversation, without sharing it with Marc Moszkowski, or sending him an email relating it?



COMMENTS BY MARC MOSZKOWSKI ON THE "EXECUTIVE ORDER ON SALARIES DATED SEPTEMBER 28, 2012"

This document is a one-sided transcript of a Skype conversation. I don't see how it could have any legal value. It is in no way an "*Executive Order*".

The first paragraph seems to be quite irrelevant and to have been inserted derisively after the fact to add some credibility to the authenticity of the document.

I can't find a copy of the document anywhere in my emails or Skype messages. Very likely, the document was forged after the fact.

As a matter of fact, I was in Sydney, Australia, on Sept. 28, 2012. Howard had just spent the whole week with me in Rodney Lewis' house in Sydney, and, on Sept. 28 had just returned to Pensacola the day before. I cannot imagine that he would not have addressed such an important issue while we spend the week together 24/7 in the same house and in adjacent bedrooms, but waited a day after his returning to Pensacola to address it, allegedly on Skype.

I was the Chief Executive Officer at the time. How come the Chairman of the Board issued the Executive Order, and not me, especially since Howard has repeatedly claimed that he was not an executive officer? He could have asked me to issue the order, or given me a draft for me to sign. Also, how come he did not send me a copy by email of this extremely important decision? The answer is that, like for so many other corporate documents produced as evidence, it is a forgery.

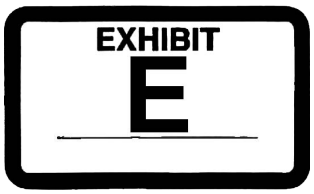
I think Ball must produce the original computer files relating to all the corporate documents I have said were forged after the fact. We already requested those from him, but did not receive any so far. He must also

produce the original print-outs, so we can analyze them for authenticity. Either the print-outs are recent and Howard has the computer files, or he does not have the files and the print-outs can be dated.

What is the "*some money that the company owed him*"? It seems Howard disguised the salaries until March 2013 as repayment of debt in order to evade paying payroll taxes, which indeed were fraudulently not paid.

Until discovery, I did not know of Howard's commitment to DHS to guarantee my salaries on his personal assets.

MMM

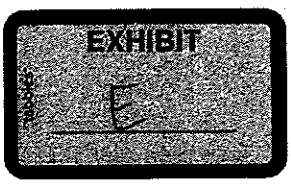


From: Marc Moszkowski <m.moszkowski@tokeoilandgas.com>
Sent: Wednesday, January 26, 2011 8:20 PM
To: 'Rus Howard'
Subject: Emailing: Income Statements TOG 2008 to 2010-Final.xls, Balance Sheets TOG 2008 to 2010-Final.xls
Attachments: Income Statements TOG 2008 to 2010-Final.xls; Balance Sheets TOG 2008 to 2010-Final.xls

Your message is ready to be sent with the following file or link attachments:

Income Statements TOG 2008 to 2010-Final.xls Balance Sheets TOG 2008 to 2010-Final.xls

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.



From: Rus Howard <rus@whitesandinvestments.com>
Sent: Thursday, January 27, 2011 5:42 PM
To: Marc Moszkowski
Subject: RE: Emailing: Income Statements TOG 2008 to 2010-Final.xls, Balance Sheets TOG 2008 to 2010-Final.xls

Received the spreadsheets.

rus

-----Original Message-----
From: Marc Moszkowski [mailto:m.moszkowski@tokeoilandgas.com]
Sent: Wednesday, January 26, 2011 8:20 PM
To: Rus Howard
Subject: Emailing: Income Statements TOG 2008 to 2010-Final.xls, Balance Sheets TOG 2008 to 2010-Final.xls

Your message is ready to be sent with the following file or link
attachments:

Income Statements TOG 2008 to 2010-Final.xls Balance Sheets TOG 2008 to 2010-Final.xls

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Balance Sheet

TOKE OIL & GAS S.A.
Year 2008
Financial Statements in U.S. Dollars

ASSETS		LIABILITIES	
Current Assets		**Current Liabilities**	
Cash	$279.92	Accounts payable	$0.00
Accounts receivable		Short-term notes	
(less doubtful accounts)		Current portion of long-term notes	
Inventory		Interest payable	
Temporary investment		Taxes payable	$0.00
Prepaid expenses		Accrued payroll	
Total Current Assets	$279.92	**Total Current Liabilities**	$0.00
Fixed Assets		**Long-term Liabilities**	
Long-term investments		Mortgage	$0.00
Land		Other long-term liabilities	
Buildings		**Total Long-Term Liabilities**	$0.00
(less accumulated depreciation)			
Plant and equipment			
(less accumulated depreciation)		**Shareholders' Equity**	
Furniture and fixtures		Capital stock	$0.00
(less accumulated depreciation)		Retained earnings	$279.92
Total Net Fixed Assets	$0.00	**Total Shareholders' Equity**	$279.92
TOTAL ASSETS	$279.92	**TOTAL LIABILITIES & EQUITY**	$279.92

Income Statement

TOKE OIL & GAS S.A.
Year 2008
Financial Statements in U.S. Dollars

Revenue			
Gross Sales		$ 3,103,088.38	
Less: Sales Returns and Allowances			
Net Sales			$3,103,088.38
Cost of Goods Sold			
Add:	Purchase of Goods and Services	$2,560,914.54	
	Direct Labor		
	Direct Operating Costs		
	Indirect Expenses		
Subtotal		$2,560,914.54	
Less: Miscellaneous			
Cost of Goods Sold			$2,560,914.54
Gross Profit (Loss)			$542,173.84
Expenses			
ACCOMMODATION		$21,175.45	
ACCOUNTING FEES		$172.25	
BANK CHARGES		$225.00	
CASH ADVANCES		$14,180.99	
COMMUNICATIONS		$18,600.00	
DIRECTORS SALARIES		$303,828.45	
EQUIPMENT RENTAL		$225.00	
FUEL		$82,910.00	
FURNITURE		$676.95	
HARDWARE		$5,664.69	
MISCELLANEOUS		$5,600.00	
OFFICE RENTAL		$11,182.75	
OFFICE SUPPLIES		$2,188.27	
SHIP STORES		$48,861.73	
SALARIES			
SHIP AGENCY		$8,936.00	
TRANSPORTATION		$6,262.84	
TRAVEL		$8,803.55	
VEHICLE PURCHASE		$2,400.00	
TAX			
Total Expenses			$541,893.92
Net Operating Income			$279.92
Other Income			
Gain (Loss) on Sale of Assets			
Interest Income			
Total Other Income			$0.00
Net Income (Loss)			$279.92

Balance Sheet

TOKE OIL & GAS S.A.
Year 2009
Financial Statements in U.S. Dollars

ASSETS		LIABILITIES	
Current Assets		**Current Liabilities**	
Cash	$677.27	Accounts payable	$0.00
Accounts receivable		Short-term notes	
(less doubtful accounts)		Current portion of long-term notes	
Inventory		Interest payable	
Temporary investment		Taxes payable	$0.00
Prepaid expenses		Accrued payroll	
Total Current Assets	$677.27	**Total Current Liabilities**	$0.00
Fixed Assets		**Long-term Liabilities**	
Long-term investments		Mortgage	$0.00
Land		Other long-term liabilities	
Buildings		**Total Long-Term Liabilities**	$0.00
(less accumulated depreciation)			
Plant and equipment			
(less accumulated depreciation)		**Shareholders' Equity**	
Furniture and fixtures		Capital stock	$0.00
(less accumulated depreciation)		Retained earnings	$677.27
Total Net Fixed Assets	$0.00	**Total Shareholders' Equity**	$677.27
TOTAL ASSETS	$677.27	TOTAL LIABILITIES & EQUITY	$677.27

Income Statement

YOKE OIL & GAS S.A.
Year 2009
Financial Statements in U.S. Dollars

Revenue			
Gross Sales		$ 2,190,177.42	
Less: Sales Returns and Allowances			
Net Sales			$2,190,177.42
Cost of Goods Sold			
Add:	Purchase of Goods and Services	$1,825,484.77	
	Direct Labor		
	Direct Operating Costs		
	Indirect Expenses		
Subtotal		$1,825,484.77	
Less: Miscellaneous			
Cost of Goods Sold			$1,825,484.77
Gross Profit (Loss)			$364,692.65
Expenses			
ACCOMMODATION		$4,043.00	
ACCOUNTING FEES		$15.00	
BANK CHARGES		$88.30	
CASH ADVANCES		$5,366.50	
COMMUNICATIONS		$2,900.04	
DIRECTORS SALARIES		$324,040.77	
EQUIPMENT RENTAL			
FUEL		$13,005.00	
FURNITURE			
HARDWARE		$0.00	
MISCELLANEOUS		$170.00	
OFFICE RENTAL		$10,577.00	
OFFICE SUPPLIES			
SHIP STORES			
SALARIES			
SHIP AGENCY		$3,354.55	
TRANSPORTATION		$383.99	
TRAVEL		$0.00	
VEHICLE PURCHASE		$351.15	
TAX			
Total Expenses			$364,295.30
Net Operating Income			$397.35
Other Income			
Gain (Loss) on Sale of Assets			
Interest Income			
Total Other Income			$0.00
Net Income (Loss)			$397.35

Balance Sheet

TONE OIL & GAS S.A.
Year 2010
Financial Statements in U.S. Dollars

ASSETS		LIABILITIES	
Current Assets		**Current Liabilities**	
Cash	$4,725.00	Accounts payable	$28,000.00
Accounts receivable	$52,000.00	Short-term notes	
(less doubtful accounts)		Current portion of long-term notes	
Inventory		Interest payable	
Temporary investment		Taxes payable	$0.00
Prepaid expenses		Accrued payroll	
Total Current Assets	$56,725.00	**Total Current Liabilities**	$28,000.00
Fixed Assets		**Long-term Liabilities**	
Long-term investments		Mortgage	$0.00
Land		Other long-term liabilities	
Buildings		**Total Long-Term Liabilities**	$0.00
(less accumulated depreciation)			
Plant and equipment			
(less accumulated depreciation)		**Shareholders' Equity**	
Furniture and fixtures		Capital stock	$0.00
(less accumulated depreciation)		Retained earnings	$4,752.55
Total Net Fixed Assets	$0.00	**Total Shareholders' Equity**	$28,725.00
TOTAL ASSETS	$56,725.00	TOTAL LIABILITIES & EQUITY	$56,725.00

Income Statement

TOKE OIL & GAS S.A.
Year 2010
Financial Statements in U.S. Dollars

Revenue			
Gross Sales		$ 2,919,364.82	
Less: Sales Returns and Allowances			
Net Sales			$2,919,364.82
Cost of Goods Sold			
Add:	Purchase of Goods and Services	$2,068,277.50	
	Direct Labor		
	Direct Operating Costs		
	Indirect Expenses		
Subtotal		$2,068,277.50	
Less: Miscellaneous			
Cost of Goods Sold			$2,068,277.50
Gross Profit (Loss)			$851,087.32
Expenses			
ACCOMMODATION		$26,612.50	
ACCOUNTING FEES		$763.58	
BANK CHARGES		$66.00	
CASH ADVANCES		$11,868.55	
COMMUNICATIONS		$6,750.00	
DIRECTORS SALARIES		$484,895.00	
EQUIPMENT RENTAL		$38,520.00	
FUEL		$115,175.70	
FURNITURE			
HARDWARE		$7,871.00	
MISCELLANEOUS		$16,038.45	
OFFICE RENTAL		$26,797.75	
OFFICE SUPPLIES			
SHIP STORES			
SALARIES		$18,000.00	
SHIP AGENCY		$16,789.13	
TRANSPORTATION		$24,898.76	
TRAVEL			
VEHICLE PURCHASE			
TAX		$51,965.62	
Total Expenses			$847,012.04
Net Operating Income			$4,075.28
Other Income			
Gain (Loss) on Sale of Assets			
Interest Income			
Total Other Income			$0.00
Net Income (Loss)			$4,075.28

Income Statement

TOKE OIL & GAS S.A.
Year 2011
Financial Statements in U.S. Dollars

Revenue			
Gross Sales		$ 6,153,867.00	
Less: Sales Returns and Allowances			
Net Sales			$ 6,153,867.00
Cost of Goods Sold			
Add:	Purchase of Goods and Services	$4,620,383.31	
	Direct Labor		
	Direct Operating Costs		
	Indirect Expenses		
Subtotal		$4,620,383.31	
Less: Miscellaneous			
Cost of Goods Sold			$4,620,383.31
Gross Profit (Loss)			$ 1,533,483.69
Expenses			
ACCOMMODATION		$128,333.65	
ACCOUNTING FEES		$1,668.34	
BANK CHARGES		$8,341.69	
CASH ADVANCES		$30,350.91	
COMMUNICATIONS		$50,050.12	
DIRECTORS SALARIES		$192,000.00	
EQUIPMENT RENTAL		$168,521.00	
FUEL		$256,667.30	
FURNITURE		$0.00	
HARDWARE		$7,685.65	
MISCELLANEOUS		$45,530.21	
OFFICE RENTAL		$40,602.17	
OFFICE SUPPLIES		$4,466.01	
SHIP STORES		$46,947.53	
SALARIES		$196,231.00	
SHIP AGENCY		$45,191.41	
TRANSPORTATION		$56,325.64	
TRAVEL		$0.00	
VEHICLE PURCHASE		$0.00	
TAX		$246,155.00	
Total Expenses			$1,525,067.64
Net Operating Income			$ 8,416.05
Other Income			
Gain (Loss) on Sale of Assets		$0.00	
Interest Income		$0.00	
Total Other Income			$0.00
Net Income (Loss)			$ 8,416.05

From:	Marc Moszkowski <m.moszkowski@deep-gulf.com>
Sent:	Friday, May 25, 2012 10:04 AM
To:	'Rustin Howard' (rus.howard@deep-gulf.com)
Cc:	Trish Taylor (t.taylor@deep-gulf.com)
Subject:	Emailing: Income Statements TOG 2011.xls, Balance Sheets TOG 2011.xls
Attachments:	Income Statements TOG 2011.xls; Balance Sheets TOG 2011.xls

Rus,

Attached are the financial reports for Toke Oil & Gas in 2011. I would like to discuss them with you before they are published.

Best.

Marc

From: Rus Howard <rus.howard@deep-gulf.com>
Sent: Saturday, May 26, 2012 7:22 AM
To: 'Marc Moszkowski'
Subject: RE: Emailing: Income Statements TOG 2011.xls, Balance Sheets TOG 2011.xls

OK Will talk to you when you are back in town. No need to discuss till then, enjoy your weekend.

rus

-----Original Message-----
From: Marc Moszkowski [mailto:m.moszkowski@deep-gulf.com]
Sent: Friday, May 25, 2012 10:04 AM
To: 'Rustin Howard'
Cc: Trish Taylor
Subject: Emailing: Income Statements TOG 2011.xls, Balance Sheets TOG 2011.xls

Rus,

Attached are the financial reports for Toke Oil & Gas in 2011. I would like to discuss them with you before they are published.

Best.

Marc

Balance Sheet

TOKE OIL & GAS S.A.
Year 2011
Financial Statements in U.S. Dollars

ASSETS

Current Assets

Cash	$8,785.65
Accounts receivable	$546,132.83
(less doubtful accounts)	
Inventory	
Temporary investment	
Prepaid expenses	
Total Current Assets	$554,918.48

Fixed Assets

Long-term investments	
Land	
Buildings	
(less accumulated depreciation)	
Plant and equipment	$110,725.28
(less accumulated depreciation)	$25,000.00
Furniture and fixtures	
(less accumulated depreciation)	
Total Net Fixed Assets	$85,725.28

TOTAL ASSETS	$640,643.76

LIABILITIES

Current Liabilities

Accounts payable	$615,002.08
Short-term notes	
Current portion of long-term notes	
Interest payable	
Taxes payable	
Accrued payroll	$12,753.00
Total Current Liabilities	$627,755.08

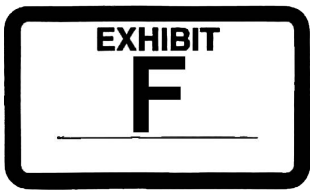
Long-term Liabilities

Mortgage	
Other long-term liabilities	
Total Long-Term Liabilities	$0.00

Shareholders' Equity

Capital stock	
Retained earnings	$12,888.68
Total Shareholders' Equity	$12,888.68

TOTAL LIABILITIES & EQUITY	$640,643.76



From: Marc Moszkowski <m.moszkowski@deep-gulf.com>
Sent: Thursday, March 06, 2014 4:58 PM
To: 'Rustin Howard'; Jen Cabbage
Subject: Emailing: releve_00050136739_20110221.pdf, releve_00050136739_20110621.pdf, releve_00050136739_20111122.pdf, releve_00050136739_20120721.pdf, Copy of Recapitulatif crédits exceptionnels.xlsx, releve_00050136739_20100721.pdf
Attachments: Copy of Recapitulatif crédits exceptionnels.xlsx; SG-12 Jan 10.pdf; SG-24 Jun 10.pdf; SG-08 Feb 11.pdf; SG-27 May 11.pdf; SG-21 Nov 11.pdf

Your message is ready to be sent with the following file or link attachments:

releve_00050136739_20110221.pdf
releve_00050136739_20110621.pdf
releve_00050136739_20111122.pdf
releve_00050136739_20120721.pdf
Copy of Recapitulatif crédits exceptionnels.xlsx releve_00050136739_20100721.pdf

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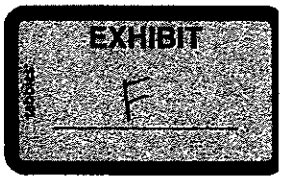

2011	21/11/2011	21/11/2011	VIR RECU 321R48805 DE. VICENTE XIMENES VILA VERDE MOTIF: SALARY MONTANT RECU: 59975,00 USD TAUX CHANGE: EUR/USD 1,35570 ORIGINE: 60000,00 USD			44 239,14		21-Nov-11	$60,000
2011	27/05/2011	27/05/2011	VIR RECU 145R54813 DE: VICENTE XIMENES VILA VERDE MOTIF: PAY TO MARC ACCOUNT MONTANT RECU: 74975,00 USD TAUX CHANGE: EUR/USD 1,41540 ORIGINE: 75000,00 USD			52 970,89		27-May-11	$75,000
2011	08/02		VIR RECU 035R55931 DE: TOKE OIL AND GAD SA HOTEL DILI SUITE 1 56 RUA DOS MOTIF: PAYMENT OF SERVICES MONTANT RECU: 50000,00 USD TAUX CHANGE: EUR/USD 1,37200			36 443,15	*+239 051,39*	08/02/11	08-Feb-11	$50,000
2010	24/06		VIR RECU 173R48601 DE: 1011179780001 TOKE OIL AND GAS SA MOTIF: DIRECTOR FEE MONTANT RECU: 59965,00 USD TAUX CHANGE: EUR/USD 1,23830			48 425,26	*+317 648,88*	24/00/10	24-Jun-10	$60,000
2010	12/01		VIR RECU 008R42486 DE: 1011179780001 TOKE OIL AND GAS DILI EAST TIMOR MONTANT RECU: 99965,00 USD TAUX CHANGE: EUR/USD 1,44150			69 347,90	*+454 892,40*	12/01/10	12-Jan-10	$100,000

SOCIETE GENERALE

RELEVE D'IDENTITE BANCAIRE

TITULAIRE DU COMPTE
M. MARC MOSZKOWSKI

DOMICILIATION AGENCE SOCIETE GENERALE
[redacted]
Tél. : [redacted]

REFERENCES BANCAIRES

Banque	Agence	Numéro de compte	Clé
[redacted]			

IDENTIFICATION INTERNATIONALE
IBAN : [redacted]
BIC-ADRESSE SWIFT : **SOGEFRPP**

A remettre à tout organisme demandant vos références bancaires

GENERALE

RELEVE DE COMPTE
en euros

[redacted]

du 23 12 2009 au 21 01 2010

M. MARC MOSZKOWSKI
LE VERDOS
83300 CHATEAUDOUBLE

envoi n° 1 **page 1/2**

Toute l'équipe de votre Agence se joint à moi afin de vous présenter
*** nos MEILLEURS VOEUX pour l'année 2010. ***
Votre Conseiller.

Date	Nature de l'opération	Débit	Crédit	Contre-valeur en francs(1)	Valeur
	SOLDE PRECEDENT		**180,83**	***+1.186,17***	
	***** SOLDE AU 31/12/2009 +180 ,83 *****				
12/01	VIR RECU 008R42486 DE: 1011179780001 TOKE OIL AND GAS DILI EAST TIMOR MONTANT RECU: 99965,00 USD TAUX CHANGE: EUR/USD 1,44150		69 347,90	*+454 892,40*	12/01/10
12/01	VIREMENT VIRT FAV.50138438 REG DECOUVERT	5 000,00		*-32 797,85*	12/01/10
12/01	> FRAIS SUR VIR INTL RECU 008R42486 REF 0082091 1 VIREMENT(S) POUR: 16,50 1 COMMISSION DE CHANGE POUR: 34,67	51,17 *		*-335,65*	12/01/10
15/01	000001 VIR EUROPEEN EMIS AGENCE POUR: ARTHUR MOSZKOWSKI REF: 0139531500006 MOTIF: VIRT RECU MARC MOSZKOWSKI LIB: VIRT FAV.ARTHUR MOSZKOWSKI LIB: ORDRE FAX	4 000,00		*-26 238,28*	15/01/10
15/01	000001 VIR EUROPEEN EMIS AGENCE POUR: BERGEREAU JACQUELINE REF: 0139531500004 MOTIF: VIRT RECU MARC MOSZKOWSKI LIB: VIRT FAV.JACQUELINE BERGEREAU LIB: ORDRE FAX	6 000,00		*-39 357,42*	15/01/10
16/01	> FRAIS SUR VIR EUROPEEN EMIS DE 6 000,00 E DU 15/01/2010	3,20 *		*-20,99*	16/01/10
16/01	> FRAIS SUR VIR EUROPEEN EMIS DE 4 000,00 E DU 15/01/2010	3,20 *		*-20,99*	16/01/10
18/01	VIREMENT VIRT FAV.50138438 ORDRE FAX	38 052,00		*-249 604,76*	18/01/10
20/01	> COTISATION JAZZ	7,80 *		*-51,16*	20/01/10
	TOTAUX DES MOUVEMENTS	**53.117,37**	**69.347,90**		

AGENCE : [redacted]
TITULAIRE DU COMPTE
M. MARC MOSZKOWSKI

GENERALE

RELEVE DE COMPTE
en euros

[redacted]

du 23 12 2009 au 21 01 2010

Date	Nature de l'opération	Débit	Crédit	Contre-valeur en francs(1)	Valeur
	NOUVEAU SOLDE		**16.411,36**	***+107.651,46***	

Les écritures précédées du signe > désignent les frais sur vos opérations bancaires courantes relatives à la convention de compte de dépôt, ou leur remboursement.

(1) Les contre-valeurs en francs ont été calculées sur la base de 1 euro = 6,55957 francs. Les montants d'opérations exprimés en francs n'ont qu'une valeur indicative. Le solde en francs est la contre-valeur du solde en euros après application des règles de conversion et d'arrondis.

Votre code client figurant ci-dessous, complété par votre code secret personnalisable, vous permet d'utiliser l'ensemble des services de Banque à Distance : Internet, Internet Mobile et [redacted]

Code Client : M. MARC MOSZKOWSKI [redacted]

Si vous ne connaissez pas votre code secret Banque à Distance, contactez votre Conseiller en Agence ou appelez le [redacted] touche #.

* Depuis l'étranger : (+33) 1 76 77 3933 - Tarif au 01/01/2009 : 0,34€ TTC/min depuis une ligne fixe France Télécom, en France métropolitaine. Depuis un autre opérateur en France ou à l'étranger, tarification selon l'opérateur.

En cas d'utilisation de votre découvert autorisé, le taux qui vous sera appliqué pour le calcul des intérêts s'établit à 17,95%
(Taux effectif global 19,66% équivalent au Taux journalier de 0,0492%),
à compter du 01/01/2010.
Pour tout besoin de trésorerie, consultez votre conseiller de clientèle.

Filigrane — LE FIL ROUGE DE VOTRE FIDÉLITÉ

N° d'adhérent JAZZ : 04608277 **Votre situation au : 31/12/2009**

36303 solde précédent	+	588 points acquis	-	0 points utilisés	-	12584 points annulés	=	24307 * nouveau solde

***dont 7741 points à utiliser avant le 31/12/2010.**

Avec JAZZ, votre fidélité est récompensée !
Pour en savoir plus sur vos points ou les transformer en cadeaux, connectez-vous sur www.particuliers.societegenerale.fr ou contactez le 09 69 36 7000

SOCIETE GENERALE

RELEVE D'IDENTITE BANCAIRE

TITULAIRE DU COMPTE
M. MARC MOSZKOWSKI

DOMICILIATION AGENCE SOCIETE GENERALE
[redacted]
Tél. : [redacted]

REFERENCES BANCAIRES

Banque	Agence	Numéro de compte	Clé
[redacted]			

IDENTIFICATION INTERNATIONALE
IBAN : [redacted]
BIC-ADRESSE SWIFT : **SOGEFRPP**

A remettre à tout organisme demandant vos références bancaires

RELEVE DE COMPTE
en euros

n° [redacted]

du 23 06 2010 au 21 07 2010

M. MARC MOSZKOWSKI
LE VERDOS
83300 CHATEAUDOUBLE

BDB

envoi n° 7 **page 1/2**

Date	Nature de l'opération	Débit	Crédit	Contre-valeur en francs(1)	Valeur
	SOLDE PRECEDENT	**-463,79**		*-3.042,26*	
24/06	VIR RECU 173R48601		48 425,26	*+317 648,88*	24/06/10
	DE: 1011179780001				
	TOKE OIL AND GAS SA				
	MOTIF: DIRECTOR FEE				
	MONTANT RECU: 59965,00 USD				
	TAUX CHANGE: EUR/USD 1,23830				
24/06	➢ FRAIS SUR VIR INTL RECU 173R48601	40,71*		*-267,04*	24/06/10
	REF 1733420				
	1 VIREMENT(S) POUR: 16,50				
	1 COMMISSION DE CHANGE POUR: 24,21				
	***** SOLDE AU 30/06/2010 +47 920 ,76 *****				
02/07	VIREMENT 50138438	40 000,00		*-262 382,80*	02/07/10
02/07	CARTE X7272 27/05 VINCIPARK NICE	4,80		*-31,49*	02/07/10
02/07	CARTE X7272 27/05 ORANGE WIFI	9,90		*-64,94*	02/07/10
	COMMERCE ELECTRONIQUE				
02/07	CARTE X7272 27/05 MAC DONALD GASSIN	10,50		*-68,88*	02/07/10
02/07	CARTE X7272 27/05 LE SAFARI	54,50		*-357,50*	02/07/10
02/07	CARTE X7272 28/05 ANCA BORNE PARC	4,00		*-26,24*	02/07/10
02/07	CARTE X7272 28/05 IVAC	11,25		*-73,80*	02/07/10
02/07	CARTE X7272 28/05 ESCOT 2705-3005	21,50		*-141,03*	02/07/10
02/07	CARTE X7272 28/05 TOTAL PUGET THENIER	79,79		*-523,39*	02/07/10
02/07	CARTE X7272 29/05 A.R.E.A.	20,60		*-135,13*	02/07/10
02/07	CARTE X7272 03/06 SUPER U	7,99		*-52,41*	02/07/10
02/07	CARTE X7272 04/06 OSCARO.COM	15,86		*-104,03*	02/07/10
	COMMERCE ELECTRONIQUE				
02/07	CARTE X7272 04/06 BOUYG TEL	108,99		*-714,93*	02/07/10
	COMMERCE ELECTRONIQUE				
02/07	CARTE X7272 07/06 REL.ELF DU DORON	65,86		*-432,01*	02/07/10
02/07	CARTE X7272 14/06 ESCOT 1406-1606	4,90		*-32,14*	02/07/10
02/07	CARTE X7272 14/06 A.R.E.A.	10,80		*-70,84*	02/07/10
02/07	CARTE X7272 14/06 MC DONALD'S	11,65		*-76,42*	02/07/10
02/07	CARTE X7272 16/06 LECLERC	64,32		*-421,91*	02/07/10
02/07	CARTE X7272 17/06 GEANT CG835	52,10		*-341,75*	02/07/10
02/07	CARTE X7272 18/06 PASCAL COSTE	20,50		*-134,47*	02/07/10
02/07	CARTE X7272 21/06 ESCOT 2106-2306	7,20		*-47,23*	02/07/10
02/07	CARTE X7272 21/06 R.BREGUIERES SUD	58,10		*-381,11*	02/07/10
17/07	➢ COTISATION JAZZ	8,00*		*-52,48*	17/07/10
	TOTAUX DES MOUVEMENTS	**40.693,82**	**48.425,26**		

AGENCE : **NICE MUSICIENS**
TITULAIRE DU COMPTE
M. MARC MOSZKOWSKI

GENERALE

RELEVE DE COMPTE
en euros
n° [redacted]

du 23 06 2010 au 21 07 2010

BDB **envoi n° 7** **page 2/2**

Date	Nature de l'opération	Débit	Crédit	Contre-valeur en francs(1)	Valeur
	NOUVEAU SOLDE		**7.267,65**	***+47.672,66***	

Les écritures précédées du signe ➢ désignent les frais sur vos opérations bancaires courantes relatives à la convention de compte de dépôt, ou leur remboursement.

(1) Les contre-valeurs en francs ont été calculées sur la base de 1 euro = 6,55957 francs. Les montants d'opérations exprimés en francs n'ont qu'une valeur indicative. Le solde en francs est la contre-valeur du solde en euros après application des règles de conversion et d'arrondis.

Votre code client figurant ci-dessous, complété par votre code secret personnalisable, vous permet d'utiliser l'ensemble des services de Banque à Distance : Internet, Internet Mobile et [redacted]

Code Client : M. MARC MOSZKOWSKI [redacted]

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* Depuis l'étranger : (+33) 1 76 77 3933 - Tarif au 01/01/2009 : 0.34€ TTC/mn depuis une ligne fixe France Télécom, en France métropolitaine. Depuis un autre opérateur en France ou à l'étranger, tarification selon l'opérateur.

En cas d'utilisation de votre découvert autorisé, le taux qui vous sera appliqué pour le calcul des intérêts s'établit à 17,60%
(Taux effectif global 19,24% équivalent au Taux journalier de 0,0482%),
à compter du 01/07/2010.
Pour tout besoin de trésorerie, consultez votre conseiller de clientèle.

Filigrane — LE FIL ROUGE DE VOTRE FIDÉLITÉ

N° d'adhérent JAZZ : 04608277 **Votre situation au : 30/06/2010**

29376 solde précédent	+	455 points acquis	-	0 points utilisés	-	0 points annulés	=	29831 * nouveau solde

***dont 7741 points à utiliser avant le 31/12/2010.**

Depuis le 1er juin 2010, Nouveau barème de points Filigrane !
Retrouvez-le et commandez vos cadeaux sur www.particuliers.societegenerale.fr, E
Service Clientèle Filigrane : 09 69 36 7000 appel non surtaxé

SOCIETE GENERALE

RELEVE D'IDENTITE BANCAIRE

TITULAIRE DU COMPTE
M. MARC MOSZKOWSKI

DOMICILIATION AGENCE SOCIETE GENERALE
[redacted]
Tél. : [redacted]

REFERENCES BANCAIRES

Banque	Agence	Numéro de compte	Clé
[redacted]			

IDENTIFICATION INTERNATIONALE
IBAN : [redacted]
BIC-ADRESSE SWIFT : **SOGEFRPP**

A remettre à tout organisme demandant vos références bancaires

RELEVE DE COMPTE
en euros

n° [redacted]

du 22 01 2011 au 21 02 2011

M. MARC MOSZKOWSKI
LE VERDOS
83300 CHATEAUDOUBLE

BDB

Date	Nature de l'opération	Débit	Crédit	Contre-valeur en francs(1)	Valeur
	SOLDE PRECEDENT		**432,61**	*+2.837,74*	
25/01	CARTE X5147 RETRAIT DAB 22/01 20H54 CA DES SAVOIE 04842124	40,00		*-262,38*	25/01/11
26/01	CARTE X5147 RETRAIT DAB 25/01 14H20 CA DES SAVOIE 04842124	40,00		*-262,38*	26/01/11
	***** SOLDE AU 31/01/2011 +352 ,61 *****				
01/02	CARTE X5147 31/12 DISSERKOI	69,00		*-452,61*	01/02/11
01/02	CARTE X5147 02/01 GGE DU GD PONT	0,19		*-1,25*	01/02/11
01/02	CARTE X5147 02/01 LAGODA	42,06		*-275,90*	01/02/11
01/02	CARTE X5147 03/01 GGE DU GD PONT	25,02		*-164,12*	01/02/11
01/02	CARTE X5147 12/01 LA POYA	81,60		*-535,26*	01/02/11
01/02	CARTE X5147 16/01 SULPICE TELE COMMERCE ELECTRONIQUE	10,80		*-70,84*	01/02/11
01/02	CARTE X5147 19/01 LAGODA	25,87		*-169,70*	01/02/11
01/02	CARTE X5147 21/01 EUROSPORT COMMERCE ELECTRONIQUE	4,90		*-32,14*	01/02/11
01/02	CARTE X5147 22/01 LE CANADA	29,25		*-191,87*	01/02/11
01/02	CARTE X5147 23/01 CHAL BOUQUETIN	68,30		*-448,02*	01/02/11
08/02	VIR RECU 035R55931 DE: TOKE OIL AND GAD SA HOTEL DILI SUITE 1 56 RUA DOS MOTIF: PAYMENT OF SERVICES MONTANT RECU: 50000,00 USD TAUX CHANGE: EUR/USD 1,37200		36 443,15	*+239 051,39*	08/02/11
08/02	➢ FRAIS SUR VIR INTL RECU 035R55931 REF 0358003 1 VIREMENT(S) POUR: 16,50 1 COMMISSION DE CHANGE POUR: 18,22	34,72*		*-227,75*	08/02/11
14/02	VIR RECU 041R49088 DE: MARC MICHEL MOSZKOWSKI 10440 DEERWOOD RD 337 MONTANT RECU: 5400,00 USD TAUX CHANGE: EUR/USD 1,37370		3 930,99	*+25 785,60*	14/02/11
14/02	VIREMENT VIRT FAV.01395/00050138438 ORDRE FAX	39 000,00		*-255 823,23*	14/02/11
14/02	➢ FRAIS SUR VIR INTL RECU 041R49088 REF 0415353 1 VIREMENT(S) POUR: 16,50 1 COMMISSION DE CHANGE POUR: 14,00	30,50*		*-200,07*	14/02/11
	TOTAUX DES MOUVEMENTS	**39.502,21**	**40.374,14**		

AGENCE : NICE MUSICIENS
TITULAIRE DU COMPTE
M. MARC MOSZKOWSKI

GENERALE

RELEVE DE COMPTE
en euros

n° [redacted]

du 22 01 2011 au 21 02 2011

BDB **envoi n° 2** **page 2/2**

Date	Nature de l'opération	Débit	Crédit	Contre-valeur en francs(1)	Valeur
	NOUVEAU SOLDE		**1.304,54**	***+8.557,22***	

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Code Client : M. MARC MOSZKOWSKI [redacted]

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SOCIETE GENERALE

RELEVÉ DE COMPTE

COMPTE DE PARTICULIER - en euros

n° [redacted]

du 21/05/2011 au 21/06/2011
envoi n°6 Page 1/2

VOS CONTACTS

Votre Banque à Distance, 24 h/24

Code client
M. MARC MOSZKOWSKI [redacted]
Internet : [redacted]
Internet mobile : [redacted]
Téléphone : [redacted]

Votre agence NICE MUSICIENS

Par messagerie dans votre Espace Client
[redacted]
Téléphone : [redacted]
Fax : [redacted]

Votre Conseiller en agence

[redacted]
Téléphone : [redacted]

BDB

M. MARC MOSZKOWSKI
LE VERDOS
83300 CHATEAUDOUBLE

RELEVÉ DES OPÉRATIONS

Contre-valeur indicative 1 euro = 6.55957 francs

Date	Valeur	Nature de l'opération	Débit	Crédit
		SOLDE PRÉCÉDENT AU 20/05/2011	**219,72**	
23/05/2011	23/05/2011	CARTE X5147 RETRAIT DAB 21/05 11H25 HSBC FRANCE DRAGUIGNAN 771641	20,00	
27/05/2011	27/05/2011	VIR RECU 145R54813 DE: VICENTE XIMENES VILA VERDE MOTIF: PAY TO MARC ACCOUNT MONTANT RECU: 74975,00 USD TAUX CHANGE: EUR/USD 1,41540 ORIGINE: 75000,00 USD		52.970,89
27/05/2011	27/05/2011	>- FRAIS SUR VIR INTL RECU 145R54813 REF 1454002 1 COMMISSION DE CHANGE POUR: 26,49	26,49*	
		***** SOLDE AU 31/05/2011 + 52.704,68 *****		
01/06/2011	01/06/2011	CARTE X5147 03/05 ESCOT 0205-0405	5,00	
01/06/2011	01/06/2011	CARTE X5147 03/05 A.R.E.A.	11,10	
01/06/2011	01/06/2011	CARTE X5147 03/05 REL.ELF DU DORON	77,70	
01/06/2011	01/06/2011	CARTE X5147 04/05 MC DONALD'S/TRANS	7,80	
01/06/2011	01/06/2011	CARTE X5147 06/05 SPF DL	62,37	
01/06/2011	01/06/2011	CARTE X5147 06/05 CARREFOUR DRAGUI	106,63	
01/06/2011	01/06/2011	CARTE X5147 13/05 CARREFOUR MARKET	35,87	
01/06/2011	01/06/2011	CARTE X5147 16/05 INTERMARCHE	63,17	
01/06/2011	01/06/2011	CARTE X5147 19/05 LECLERC STATION	79,60	
01/06/2011	01/06/2011	CARTE X5147 20/05 ESCOT 1905-2205	4,60	
01/06/2011	01/06/2011	CARTE X5147 20/05 MAISON DE LA BOU	19,96	
01/06/2011	01/06/2011	CARTE X5147 20/05 CARREFOUR TRANS	73,03	
01/06/2011	01/06/2011	CARTE X5147 21/05 SPF DL	45,36	
01/06/2011	01/06/2011	CARTE X5147 29/04 Agip Suisse SA 220 30,89 EUR SUISSE	30,89	

1 Depuis l'étranger : (+33) 1 76 77 3933 - Tarif au 01/01/2011 : 0,34 eur TTC/min depuis une ligne fixe France Télécom, en France métropolitaine.
Depuis un autre opérateur en France ou à l'étranger, tarification selon l'opérateur.

X R44-01A

SOCIETE GENERALE

RELEVÉ DE COMPTE

COMPTE DE PARTICULIER - en euros

n° [redacted]

du 21/05/2011 au 21/06/2011
envoi n°6 Page 2/2

Date	Valeur	Nature de l'opération	Débit	Crédit
01/06/2011	01/06/2011	CARTE X5147 30/04 Restaurant Le Sonalon 70,80 CHF SUISSE 1 EUR=1,2861 CHF	55,05	
04/06/2011	04/06/2011	≻ FRAIS PAIEMENT HORS ZONE EURO 1 PAIEMENT A 1,00 EUR NT 55,05 EUR A 2,70%	2,49*	
04/06/2011	04/06/2011	≻ FRAIS PAIEMENT HORS ZONE EURO 1 PAIEMENT A 1,00 EUR NT 30,89 EUR A 2,70%	1,83*	
06/06/2011	06/06/2011	VIREMENT	45.000,00	
18/06/2011	18/06/2011	≻ COTISATION JAZZ	7,50*	
18/06/2011	18/06/2011	≻ OPTION TRANQUILLITE	0,50*	
		TOTAUX DES MOUVEMENTS	**45.736,94**	**52.970,89**

NOUVEAU SOLDE AU 21/06/2011 **+ 7.014,23**

Soit pour information, solde en francs de + 46.010,33 F

Les écritures précédées du signe ≻ désignent les frais sur vos opérations bancaires courantes relatives à la convention de compte de dépôt, ou leur remboursement.

Filigrane — LE FIL ROUGE DE VOTRE FIDÉLITÉ

N° d'adhérent JAZZ : 04608277

Votre situation au : 31/05/2011

24964 solde précédent	+	319 points acquis	-	0 points utilisés	-	0 points annulés	=	**25283*** **nouveau solde**

*** dont 8839 points à utiliser avant le 31/12/2011**

Avec JAZZ, votre fidélité est récompensée !
Pour en savoir plus sur vos points ou les transformer en cadeaux, connectez-vous sur www.particuliers.societegenerale.fr ou contactez le 09 69 36 7000

Société Générale
S.A. au capital de 933 027 038,75 Eur

552 120 222 RCS Paris
Siège Social
29, bd Haussmann 75009 Paris

US006776560B2

(12) **United States Patent**
Moszkowski et al.

(10) **Patent No.: US 6,776,560 B2**
(45) **Date of Patent: Aug. 17, 2004**

(54) **FLEX J-LAY TOWER**

(76) Inventors: **Mark Moszkowski**, 1902 Ashford Hollow, Harris County, TX (US) 77077; **Benton F. Baugh**, 14626 Oak Bend, Harris County, TX (US) 77079-6441

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/167,891**

(22) Filed: **Jun. 13, 2002**

(65) **Prior Publication Data**

US 2003/0231931 A1 Dec. 18, 2003

(51) **Int. Cl.**[7] **F16L 1/12**
(52) **U.S. Cl.** **405/166**; 405/170
(58) **Field of Search** 405/158, 166, 405/169, 170, 168.1, 167

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,331,212 A		7/1967	Cox et al.	
3,472,034 A		10/1969	Lawrence	
3,524,326 A		8/1970	Craste	
3,555,835 A	*	1/1971	Smith	405/167
3,581,506 A		6/1971	Howard	
3,602,175 A		8/1971	Morgan et al.	
3,680,322 A		8/1972	Nolan, Jr. et al.	
3,747,356 A		7/1973	Lochridge et al.	
3,860,122 A		1/1975	Cernosek	
3,937,334 A		2/1976	Bleyl et al.	
4,068,490 A	*	1/1978	Jegousse	405/166
4,091,629 A		5/1978	Gunn et al.	
4,202,653 A		5/1980	Moller	
4,324,194 A		4/1982	Elliston	
4,340,322 A		7/1982	Springett et al.	
4,347,029 A		8/1982	Latimer et al.	
4,472,079 A	*	9/1984	Langner	405/167
4,486,123 A		12/1984	Koch et al.	
4,569,168 A		2/1986	McGovney et al.	
4,704,050 A		11/1987	Wallace	
4,917,540 A		4/1990	Recalde	
5,000,416 A		3/1991	Fantasia	
5,145,289 A		9/1992	Titus	
5,421,675 A		6/1995	Brown et al.	
5,458,441 A		10/1995	Barry	
5,464,307 A		11/1995	Wilkins	
5,527,134 A		6/1996	Recalde	
5,603,588 A		2/1997	Herbert	
5,971,666 A		10/1999	Martin et al.	
6,213,686 B1		4/2001	Baugh	
6,273,643 B1		8/2001	Baugh	
6,293,732 B1		9/2001	Baugh	

FOREIGN PATENT DOCUMENTS

GB	1178219	1/1970

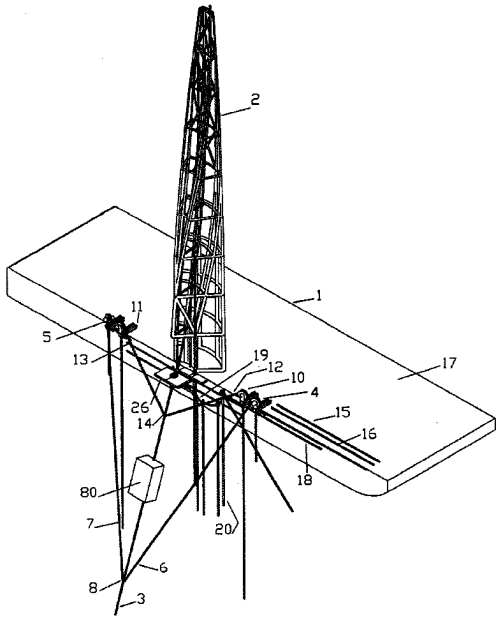
* cited by examiner

Primary Examiner—Michael Safavi

(57) **ABSTRACT**

A method for j-laying a pipeline from an offshore vessel to the floor of the ocean comprising a multiplicity of winches for supporting the upper end of the pipeline at its natural hanging angle, a mast in a fixed angle to the vessel, holding new pipe section in the mast for welding to the upper end of the pipeline, and flexing the lower end of the new pipe section into alignment with the upper end of the pipeline to allow welding to the pipeline and flexing the remainder of the new pipe section to remain within the mast.

27 Claims, 4 Drawing Sheets



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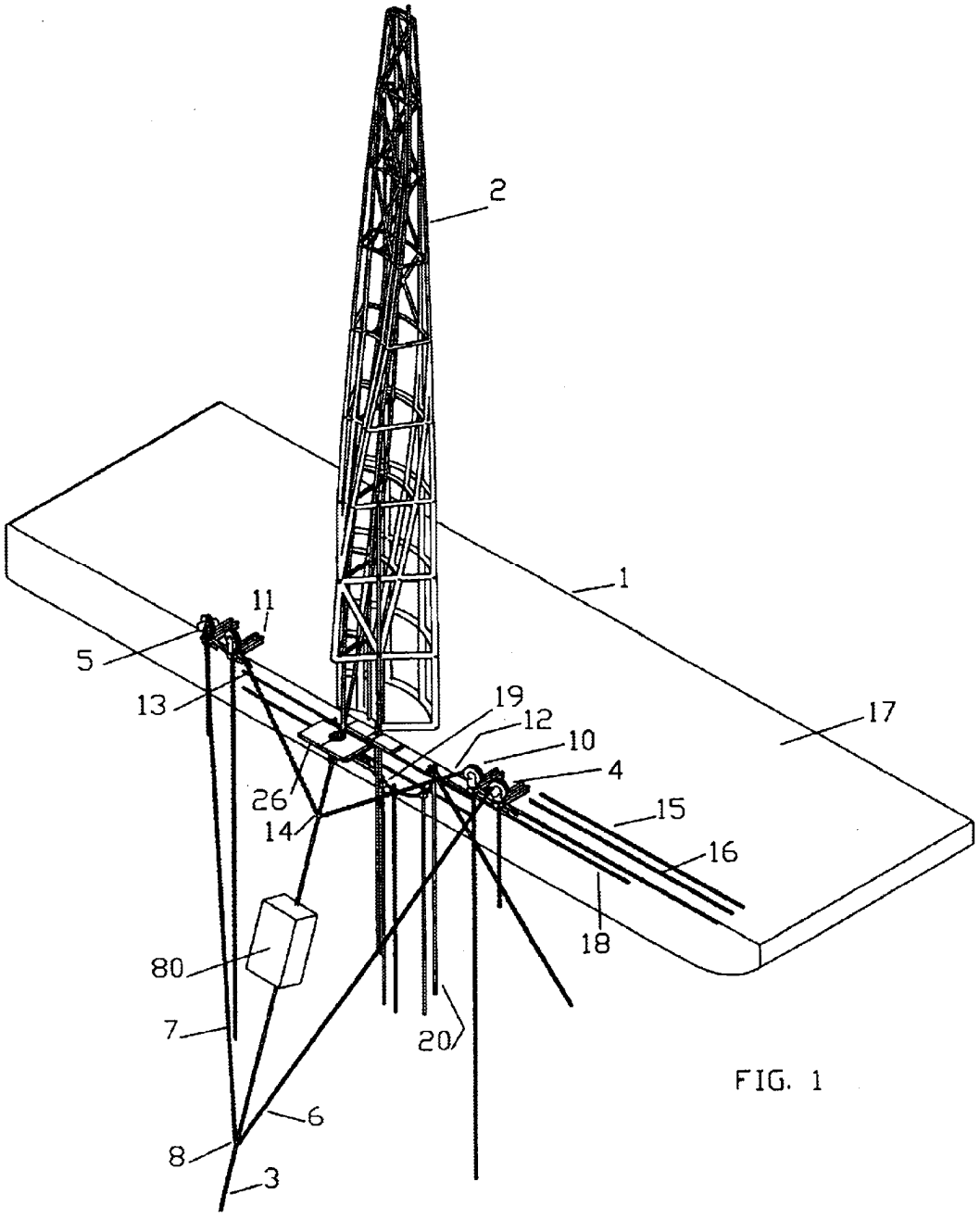

FIG. 1

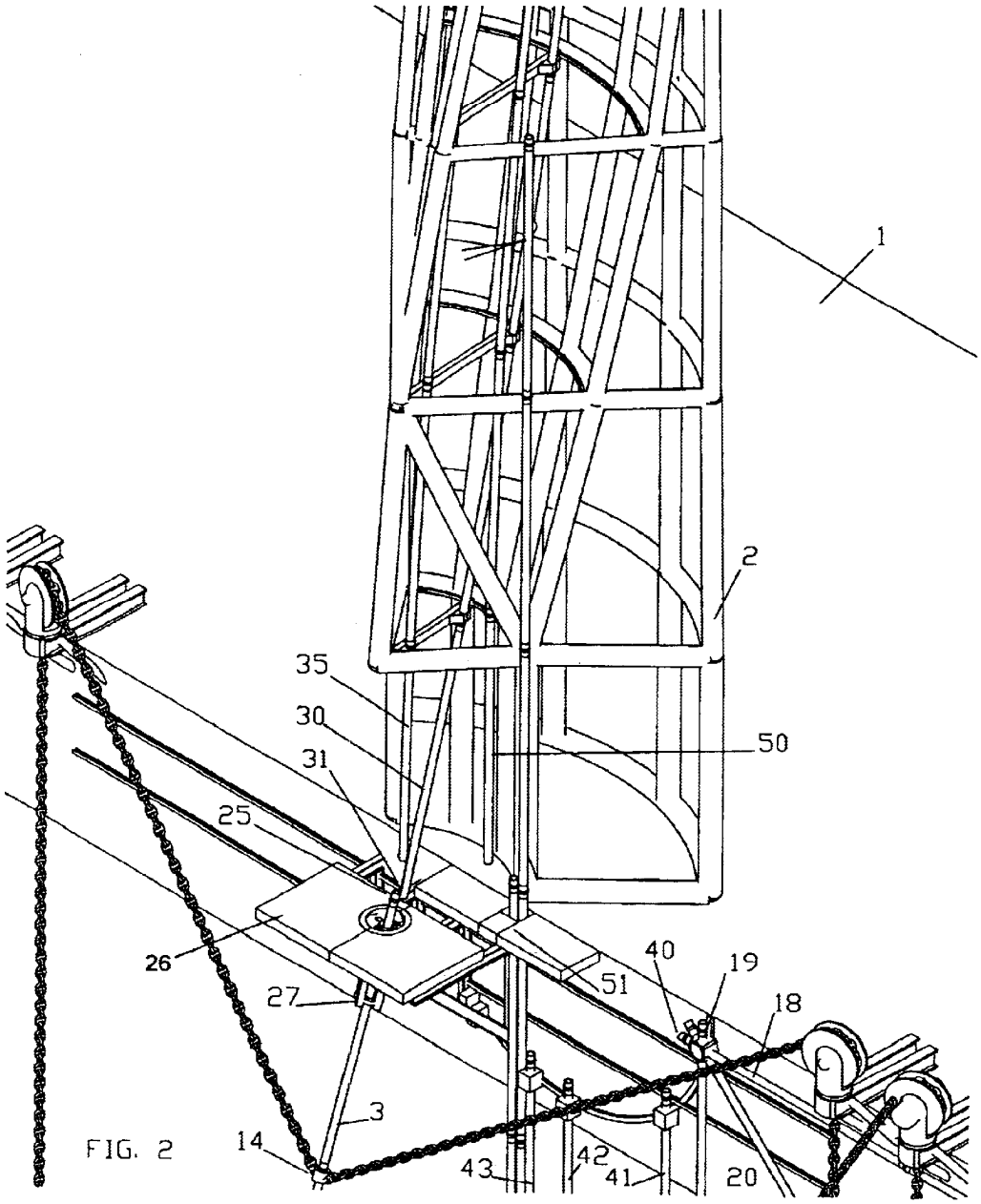

FIG. 2

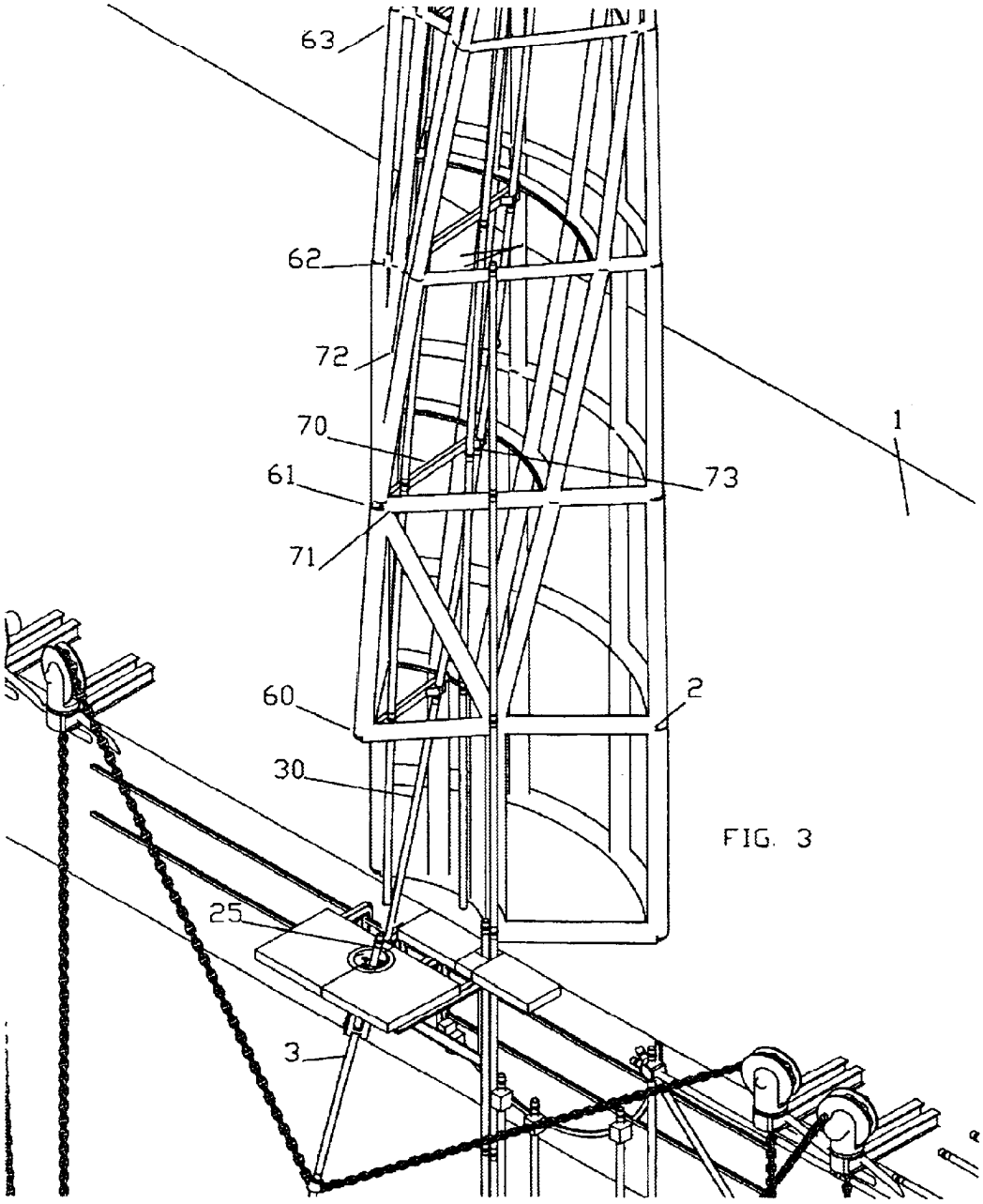

FIG. 3

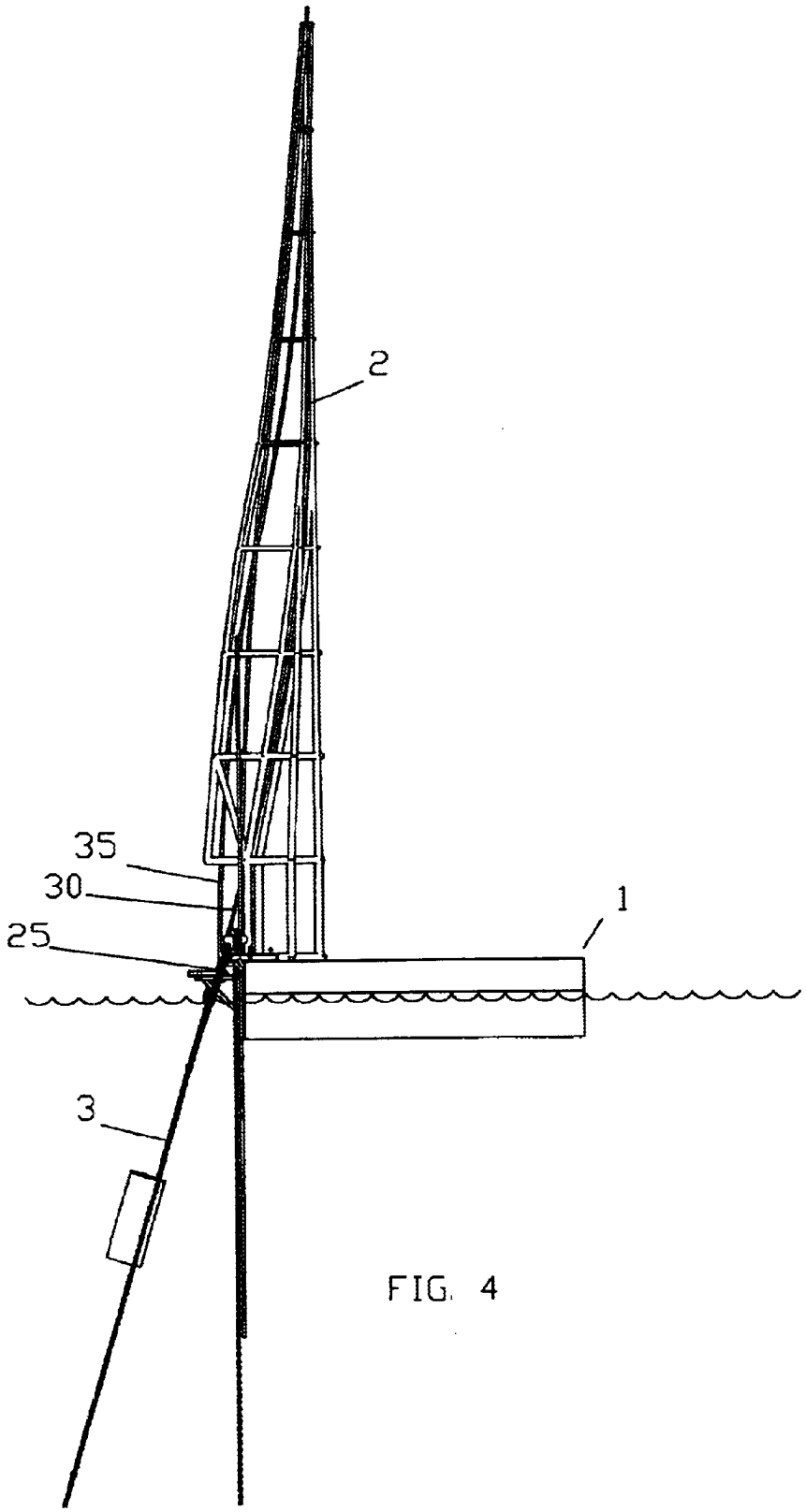

FIG. 4

FLEX J-LAY TOWER

BACKGROUND OF THE INVENTION

Underwater pipelines can be continuously laid from a surface vessel employing S-Lay, Natural J-Lay or Forced Vertical J-Lay mechanical arrangements. Each of these methods have the pipeline being laid approaching the ocean floor in a catenary curve.

S-Lay systems have the pipeline bent back from its near catenary curve to an almost horizontal position where strings of pipes can be added on a vessel deck. Natural J-Lay systems (called J-Lay systems in short) keep the pipeline in its natural near catenary attitude. New pipes have to be brought up at a slanting angle to match the angle of the upper end of the pipeline in the water. Forced Vertical J-Lay systems have the top end of the pipeline bent further from the near catenary curve so as to bring it to a vertical position where new pipes can to be added in a vertical tower.

Both the first and the third type use so-called "stingers" to bend the pipeline to the desired attitude for welding new pipe sections. The second type requires a pipe clamping device sometimes also called improperly a "stinger".

S-Lay arrangements offer the definite advantage of a near horizontal pipeline on vessel deck, allowing in-line multiple welding, testing and coating stations but require long and, in deep water, deep, expensive and relatively fragile stingers to bend the pipe from its natural no moment angle in the water to the near horizontal on the vessel deck.

Forced Vertical J-Lay systems allow the use of fixed vertical pipe laying towers but also require a sometimes very deep stinger. In addition, keeping the stingers within reasonable dimensions sometimes induce plastic deformation of the pipe, or permanent plastic deformation. In large diameter pipelines, the moment required to handle the upper end of the pipeline can be substantial.

Natural J-Lay systems do not require genuine stingers, strictly speaking, but at the cost of a neither horizontal nor vertical laying attitude, thus involving complex articulated towers. Current natural J-Lay arrangements demand the provision of complex upending or erecting strongback arms to bring new pipes or strings of pipes to a non horizontal variable position where they are jointed to the existing deployed pipeline.

The three kinds of arrangements require that the pipeline total weight be supported above deck in clamps or friction tensioners, the weight of the pipe being held back from the bottom or the top of the systems. Whether J-Laying or S-Laying, that provision is a real drawback when the job calls for the installation of large manifolds inline, as the size of the manifold is bound to be limited by the dimensions of the tensioning or weight holding device. In addition, near vertical J-Lay arrangements where the weight of the deployed pipeline is supported from the top of the tower require very strong structures, thus limiting the overall capacity of the system.

Natural J-Lay Systems have historically been designed as modified onshore drilling rigs. Little of the specific marine environment taken into consideration and all operations are carried on above vessel deck level until the pipeline is eventually lowered into the water. Those systems use drawworks, ram-rig type cylinders or near vertical friction pipe tensioners to hold back the weight of the deployed pipeline, strongback pipe erectors to upend new strings of pipe and rotating articulated masts to allow for a variable pipe angle at water level. In addition, some designs integrate mechanical gimballing of the whole system to compensate for weathervaning vessel rotation.

SUMMARY OF THE INVENTION

The object of this invention is to provide a system for laying pipeline from a vessel with a tower at a fixed angle, but allowing the lower end of the new pipe sections to be aligned with the suspended pipeline by flexing the new pipe sections.

A second object of the present invention is to suspend the pipeline with a multiplicity of winches.

A third object of the present invention is to allow weathervaning of the vessel around the suspended pipeline.

Another object of the invention is to suspend the load of the pipeline below the deck of the vessel rather than above the deck of the vessel.

Another object of the invention is to allow for handling of relatively large subsea packages in the work area while handling the load of the pipeline below the working table area.

Another object of the invention is to provide an area to feed relatively short pipe sections into the tower for welding together in the tower.

Another object of the present invention is to provide the ability to lay pipelines at a variety of angles from a fixed angle tower, without requiring the inducement of a moment on the top of the pipeline.

Another object of the invention is to do the required pipe bending on the portion of the pipeline which is not under tension.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a system of this invention.

FIG. **2** is a perspective view of the work table area.

FIG. **3** is a perspective view of the lower section of the mast.

FIG. **4** is a view of the mast from the front of the vessel.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. **1**, a vessel **1** is shown having mast **2** rigidly attached. A pipeline **3** is suspended into the seawater by winches **4** and **5** cooperating with chains **6** and **7** and with connector **8**. The pipeline **3** is also suspended by winches **10** and **11** cooperating with chains **12** and **13** and with connector **14**. Connectors **8** and **14** are releasable types as are well known in the industry. The pipeline **3** is lowered by releasing one connector, i.e. **8** and lowering chains **12** and **13** by winches **10** and **11** respectively. While the pipeline **3** is being lowered, the winches **4** and **5** pull chains **6** and **7** up along with connector **8** to the top of its stroke. At that time connector **8** will be relocked and connector **14** will be released and the process repeated. In this type of "hand over hand" operation, the pipeline will be lowered.

New pipe sections **15** and **16** are shown on the deck **17** of vessel **1**. New pipe section **18** has been moved to engage a track **19** and is shown swung down into the water as new pipe section **20**.

Referring now to FIG. **2**, the upper end **25** of pipeline **3** is shown going thru a split work table **26** and thru a split stinger **27**. Stingers of conventional designs are usually utilized to assist in bending of the upper end of the pipeline under high tension to allow its alignment with the new pipe

section above. In contrast, stinger **27** is utilized only to stabilize the upper end **25** of pipeline **3** for welding. New pipe section **30** has a lower end **31** for welding to the upper end **25** of pipeline **3**. As will be discussed later, the new pipe section **30** is flexed to align with the natural position of the upper end **20** of pipeline **3**.

New pipe section **35** is shown in an alternate position to new pipe section **30**, illustrating the degree of movement which the flexing of the new pipe sections of this invention allows.

Pipe section **18** is shown attached to track **19** and swung down as new pipe section **20** using a connector **40**. The new pipe section **20** moves around the track **19** at positions **41**, **42**, and **43**. Finally, the new pipe section is pulled up into the mast **2** as new pipe section **50**. When the mast **2** can handle longer new pipe sections than the vessel **1** can weld together from shorter pipe sections, shorter sections can be pulled up into the mast in sequence and welded together generally in the area indicated as **51**. In special cases such as when the deck of the vessel can only deliver doubles of pipe and the tower can handle sextuples, 2 preparation welds can be required for every actual pipeline weld. This means that 2 separate pipe stations would be required at **51**, or alternately a second weld station can be established part way up the mast **2**.

Referring now to FIG. **3**, several flexing sections **60**, **61**, **62**, and **63** are shown engaging the new pipe section **30**. In flexing section **61**, arm **70** engages a pivot point **71** near the front and a circular track **72** at the rear. The arm **70** has a connector **73** attached which can move along the length of arm **70**. The movement of arm **70** and connector **73** are remotely controlled to flex the new pipe section **30** to be axially aligned with the upper end **25** of new pipe section **3** and within the area of the tower.

Referring now to FIG. **4**, in a conventional tower the upper section of the suspended pipeline is bent to align with the mast. In this invention, the upper end **25** of the pipeline **3** is not bent to align with the mast **2**, but rather remains in its natural angle. In the variety of angles available for the pipeline, the upper end of the new pipe section **30** would tend to be a large cone. For a sextuple new pipe section, it would be a very large cone. In this invention, rather than accommodating a very large cone, the mast and the associated arms bends the new pipe section such that the top of the new pipe section is always in the same location. The top of the mast **2** is actually very small rather than a very large cone. This is facilitated because to bend the pipeline under tension below the support point is very difficult. To bend or flex the new pipe section while it is not under tension is much easier.

Referring again to FIG. **1**, skid **80** is shown mounted above the support connector **8**. This means that the skid **80** can be welded into the pipeline **3** while above the split work table **26**. The split work table **26** can be separated along tracks **81** and the skid **80** lowered. The connector **14** can be reattached to the pipeline above the skid **80** allowing the connector **8** to be released and reattached above the skid **80**. This process greatly simplifies the process of handling mid-pipeline skids such as **80**.

The particular embodiments disclosed above are illustrative only, as the invention may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. Furthermore, no limitations are intended to the details of construction or design herein shown, other than as described in the claims below. It is therefore evident that the particular embodiments disclosed above may be altered or modified and all such variations are considered within the scope and spirit of the invention. Accordingly, the protection sought herein is as set forth in the claims below.

We claim:

1. A method of j-laying pipes from a vessel on the surface of the water to the ocean floor comprising

a mast in a fixed position relative to said vessel, said mast holding a new pipe section,

a pipeline suspended from said vessel at an angle with respect to said mast such that the upper end of said pipeline is not axially aligned with said mast,

alternately welding said new pipe sections onto said upper end of said pipeline to become part of said pipeline and lowering the combination of said pipeline and said new pipe section,

said new pipe section being flexed such that said lower end of said new pipe section is axially aligned with said upper end of said pipeline,

wherein said pipeline is suspended from said vessel with winches, and

wherein a first pair of winches cooperate with a first connector to support said pipeline while a second connector is released for movement and alternately a second pair of winches cooperate with said second connector to support said pipeline while said first connector is moved in order to lower said pipeline.

2. A method of j-laying pipes from a vessel on the surface of the water to the ocean floor comprising

a mast in a fixed position relative to said vessel, said mast holding a new pipe section,

a pipeline suspended from said vessel at an angle with respect to said mast such that the upper end of said pipeline is not axially aligned with said mast,

alternately welding said new pipe sections onto said upper end of said pipeline to become part of said pipeline and lowering the combination of said pipeline and said new pipe section,

said new pipe section being flexed such that said lower end of said new pipe section is axially aligned with said upper end of said pipeline,

wherein a multiplicity of arms are provided to flex said new pipe section, and

wherein said arms are mounted on circular tracks for movement around said mast.

3. A method of j-laying pipes from a vessel on the surface of the water to the ocean floor comprising

a mast in a fixed position relative to said vessel, said mast holding a new pipe section,

a pipeline suspended from said vessel at an angle with respect to said mast such that the upper end of said pipeline is not axially aligned with said mast,

alternately welding said new nine sections onto said upper end of said pipeline to become part of said pipeline and lowering the combination of said pipeline and said new pipe section,

said new pipe section being flexed such that said lower end of said new pipe section is axially aligned with said upper end of said pipeline, and

wherein said new pipe section is brought to the mast for attachment to the upper end of said pipeline by lowering into the water and pulling up into said mast.

4. The invention of claim **3**, wherein said new pipe section is brought to said mast in 2 or more pipe pieces for welding together to form said new pipe section.

5. The invention of claim 4, wherein said 2 or more pipe pieces are formed of pipe joints welded together on the deck of said vessel.

6. A method of j-laying pipes from a vessel on the surface of the water to the ocean floor comprising

suspending the upper end of a pipeline below a vessel on a multiplicity of flexible lines from winches and controlling said winches to position said upper end of said pipeline below a mast,

said mast being mounted at a fixed angle with respect to said vessel,

suspending a new pipe section to be welded to the said upper end of said pipeline in said mast,

using a multiplicity of arms to flex said new pipe section such that the lower end of said new pipe section is axially aligned with said upper end of said pipeline,

welding said lower end of said new pipe section to said upper end of said pipeline, and

lowering said pipeline.

7. The invention of claim 6, wherein said pipeline is suspended from said vessel alternately with two sets of said winches.

8. The invention of claim 7, wherein said winches use chain to suspend said pipeline.

9. The invention of claim 6, wherein said multiplicity of arms are provided to flex said new pipe section.

10. The invention of claim 9, wherein said arms are mounted on circular tracks for movement around said mast.

11. The invention of claim 6, wherein said new pipe sections are keelhauled below said vessel to deliver them to said mast.

12. The invention of claim 6, further comprising weathervaning said vessel about said pipeline, using said multiplicity of arms to keep the lower end of said new pipe section aligned with said upper end of said pipeline.

13. The invention of claim 6, wherein the first pair of said winches connected to a first connector support said pipeline while the second pair of said winches connected to a second connector adjusts to a different holding position.

14. The invention of claim 6, wherein the first pair of said winches are connected to a first connector supporting said pipeline while the second pair of said winches are connected to a second connector to be released from said pipeline to pass an object larger than said pipeline.

15. A method of j-laying pipes from a vessel on the surface of the water to the ocean floor comprising

a mast mounted on a floating vessel,

suspending pipe sections in the water,

bringing said suspended pipe sections up out of the water and into said mast,

welding 2 or more said suspended pipe sections together to make a longer pipe section,

suspending a pipeline being laid from said vessel by a multiplicity of winches, said suspended pipeline having an upper end,

welding the lower end of said longer pipe section to said upper end of said pipeline, and

using said multiplicity of winches to lower said combination of said pipeline and said longer pipe section.

16. The invention of claim 15, wherein said mast is fixed relative to said vessel.

17. The invention of claim 15, wherein the first pair of said winches connected to a first connector support said pipeline while the second pair of said winches connected to a second connector adjusts to a different holding position.

18. The invention of claim 15, wherein the first pair of said winches are connected to a first connector supporting said pipeline while the second pair of said winches are connected to a second connector to be released from said pipeline to pass an object larger than said pipeline.

19. The invention of claim 15, wherein said a multiplicity of arms are provided to flex said new pipe section.

20. The invention of claim 19, wherein said arms are mounted on circular tracks for movement around said mast.

21. The invention of claim 15, wherein said new pipe sections are keelhauled below said vessel to deliver them to said mast.

22. The invention of claim 15, further comprising weathervaning said vessel about said pipeline and using said multiplicity of arms to keep the lower end of said new pipe section aligned with said upper end of said pipeline.

23. The invention of claim 15, wherein the first pair of said winches connected to a first connector support said pipeline while the second pair of said winches connected to a second connector adjusts to a different holding position.

24. The invention of claim 15, wherein the first pair of said winches are connected to a first connector supporting said pipeline while the second pair of said winches are connected to a second connector to be released from said pipeline to pass an object larger than said pipeline.

25. The invention of claim 15, wherein the welding together of said 2 or more pipe sections occurs proximate the base of said mast.

26. The invention of claim 15, wherein 2 or more weld stations are provided proximate the base of said mast for welding 2 or more new pipe sections together at the same time.

27. The invention of claim 15 wherein a first weld station is provided proximate the base of said mast and a second weld station is provided higher in said mast to allow two welds to be made on said new pipe section at the same time.

* * * * *

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(12) **United States Patent**
Moszkowski et al.

(10) **Patent No.: US 9,644,792 B2**
(45) **Date of Patent: May 9, 2017**

(54) **METHOD OF FULLY EXPELLING COMPRESSED GAS FROM A TANK**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 21 days.

(21) Appl. No.: **14/729,160**

(22) Filed: **Jun. 3, 2015**

(65) **Prior Publication Data**

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(51) **Int. Cl.**
B65B 31/00 (2006.01)
F17C 5/06 (2006.01)

(52) **U.S. Cl.**
CPC ***F17C 5/06*** (2013.01); *F17C 2205/0323* (2013.01); *F17C 2205/0364* (2013.01); *F17C 2223/0123* (2013.01); *F17C 2223/036* (2013.01); *F17C 2225/0123* (2013.01); *F17C 2225/036* (2013.01); *F17C 2227/041* (2013.01); *F17C 2260/02* (2013.01); *F17C 2270/0105* (2013.01); *F17C 2270/0171* (2013.01)

(58) **Field of Classification Search**
CPC F17C 5/06; F17C 2223/0123; F17C 2225/036; F17C 2225/0123; F17C 2205/0364; F17C 2270/0105; F17C 2260/02; F17C 2227/04; F17C 2227/041; F17C 2227/042
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,854,826 A * 10/1958 Johnston F04B 15/08 137/210

OTHER PUBLICATIONS

U.S. Appl. No. 12/804,259, filed Jan. 19, 2012, M. Moszkowski.

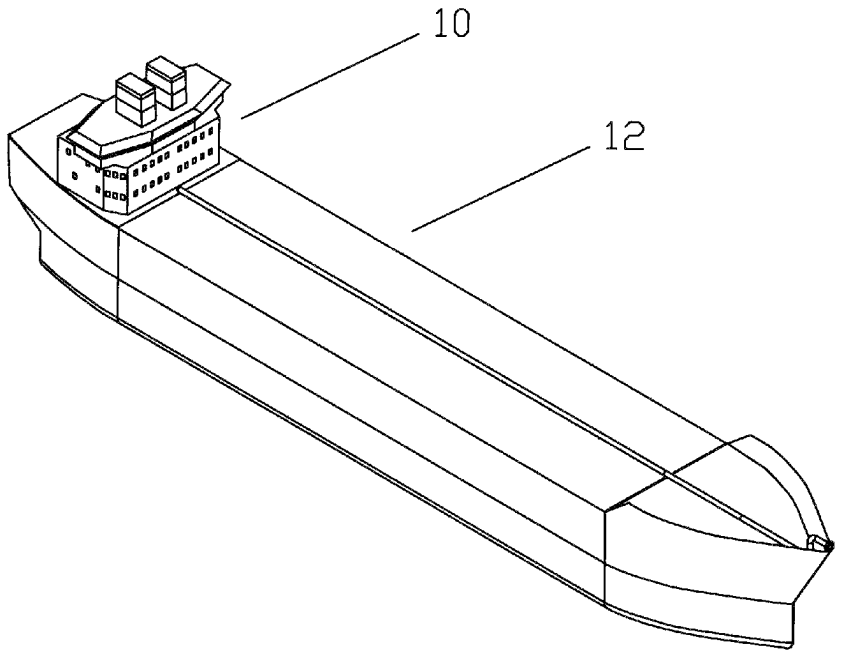
* cited by examiner

Primary Examiner — Jason K Niesz

(57) **ABSTRACT**

The method of transferring compressed gas at from a first tank to a second tank without decompressing the compressed gas and then re-pressuring the compressed gas comprising filling the second tank with a fluid, connecting a first fluid connection on the first tank to a second fluid connection on the second tank with a first line with one or more first valves, connecting a first gas connection on the first tank to a second gas connection on the second tank with a second line with one or more second valves, opening the first valves and the second valves to allow the compressed gas to pressurize the fluid, and pumping the fluid in the second tank into the first tank, thereby causing the compressed gas in the first tank to be displaced into the second tank.

34 Claims, 8 Drawing Sheets



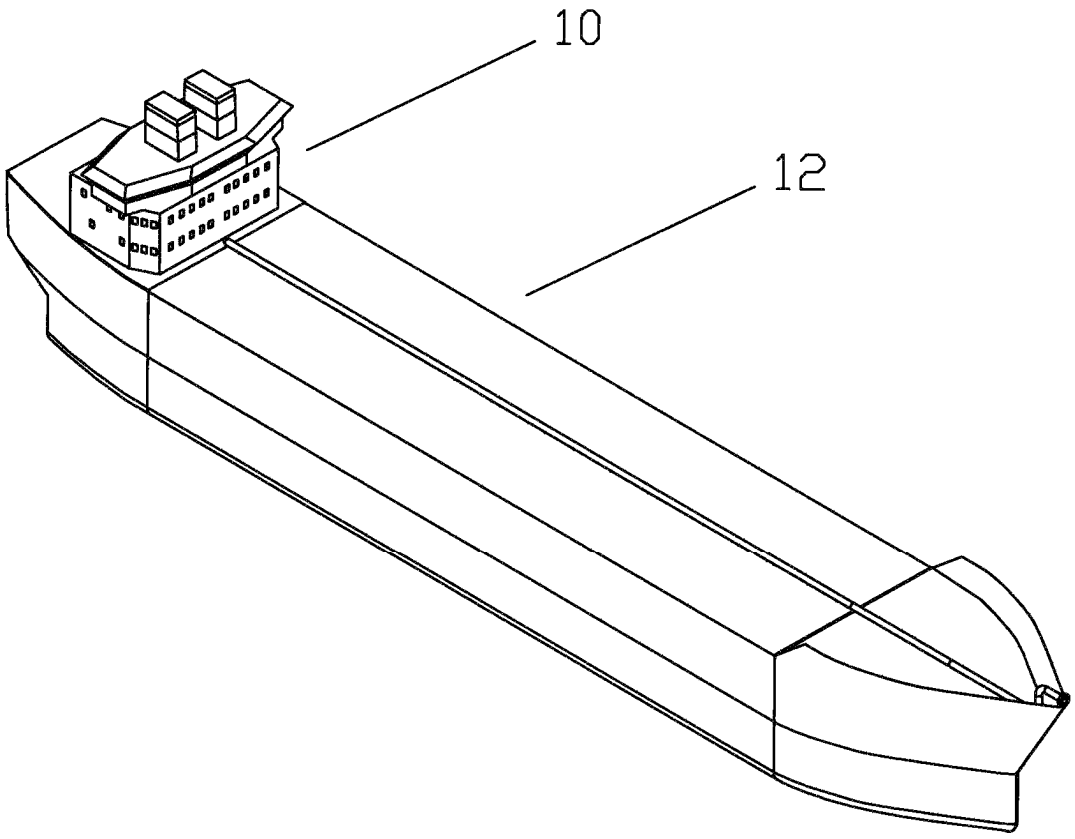


FIG. 1

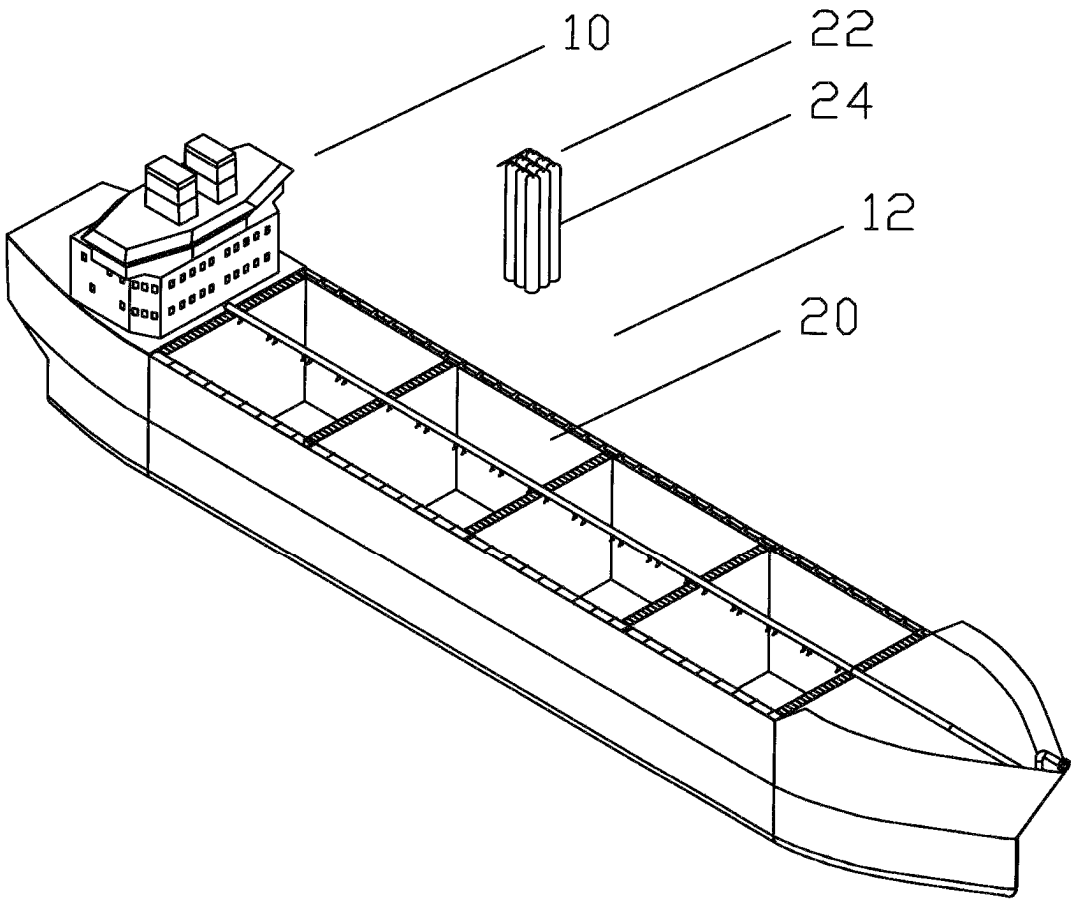


FIG. 2

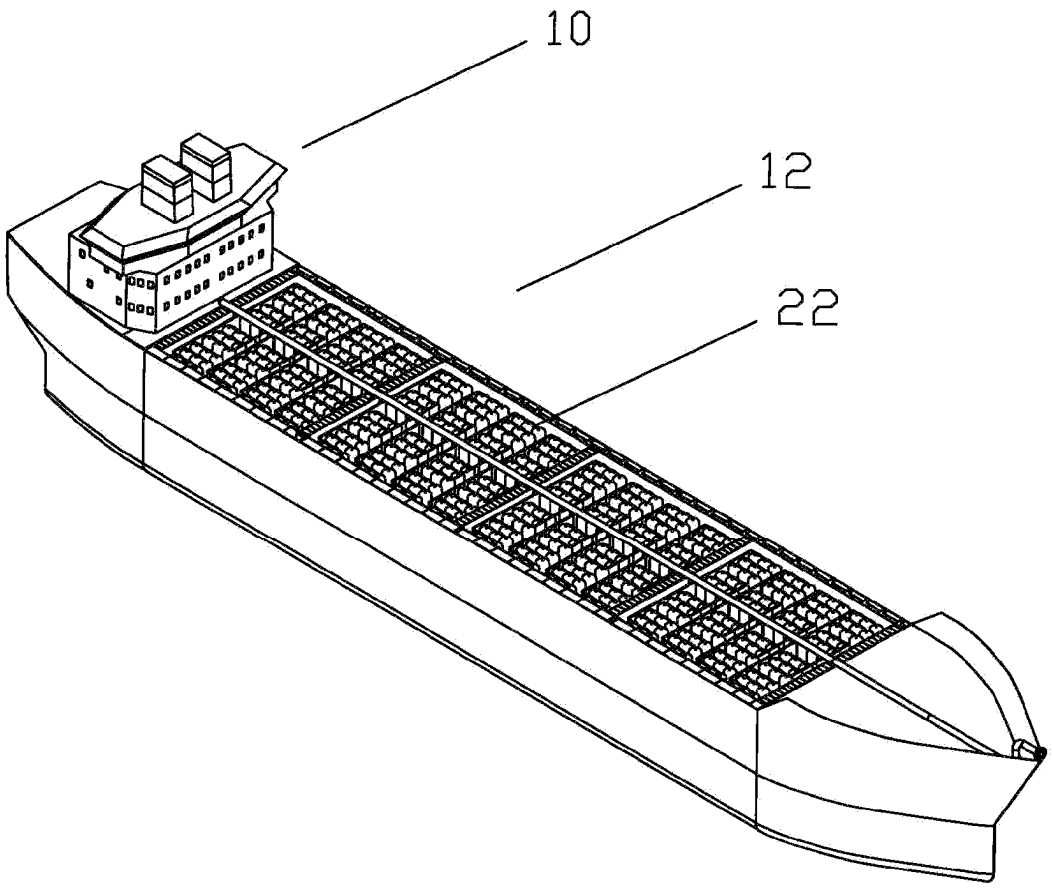


FIG. 3

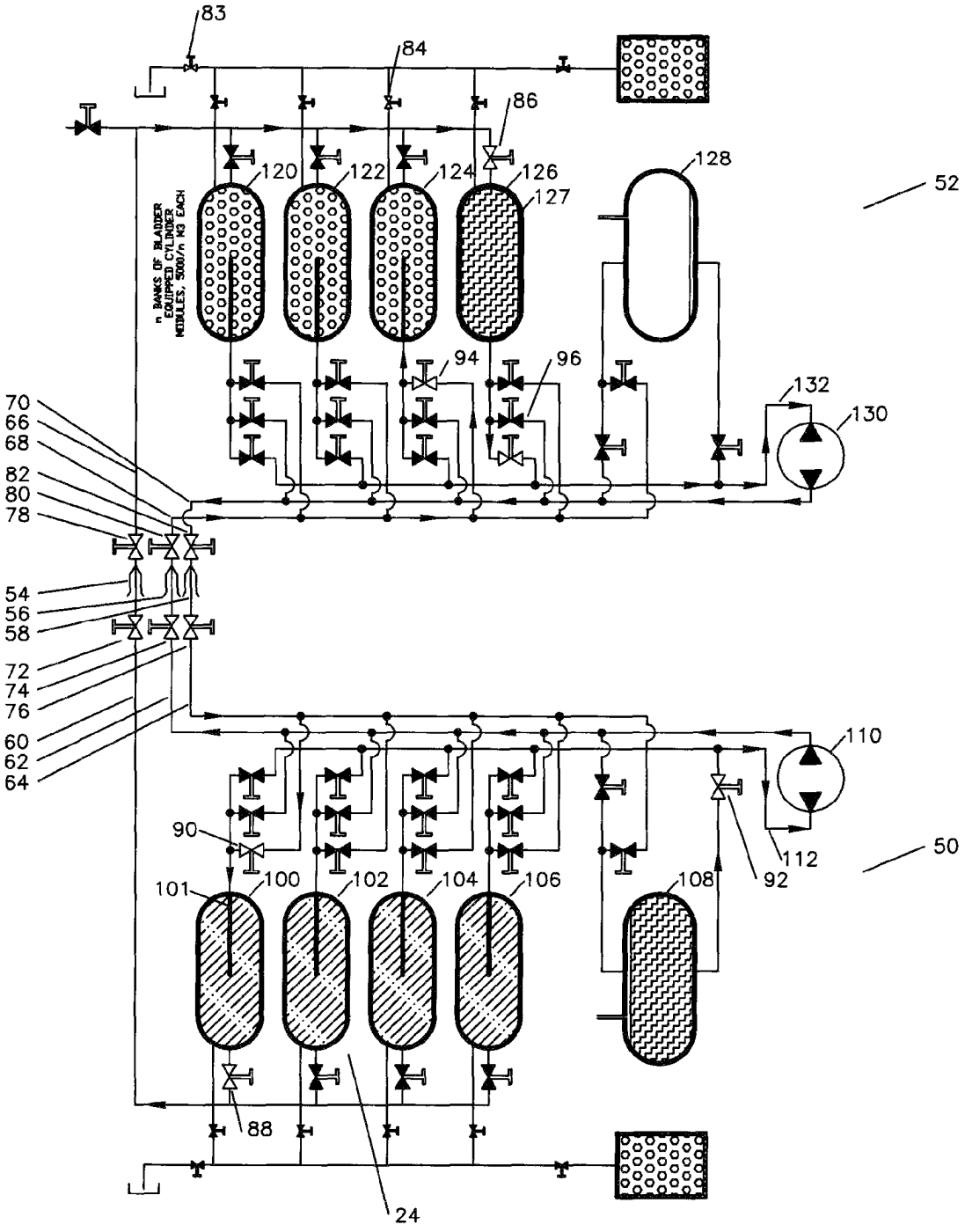

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FIG. 4

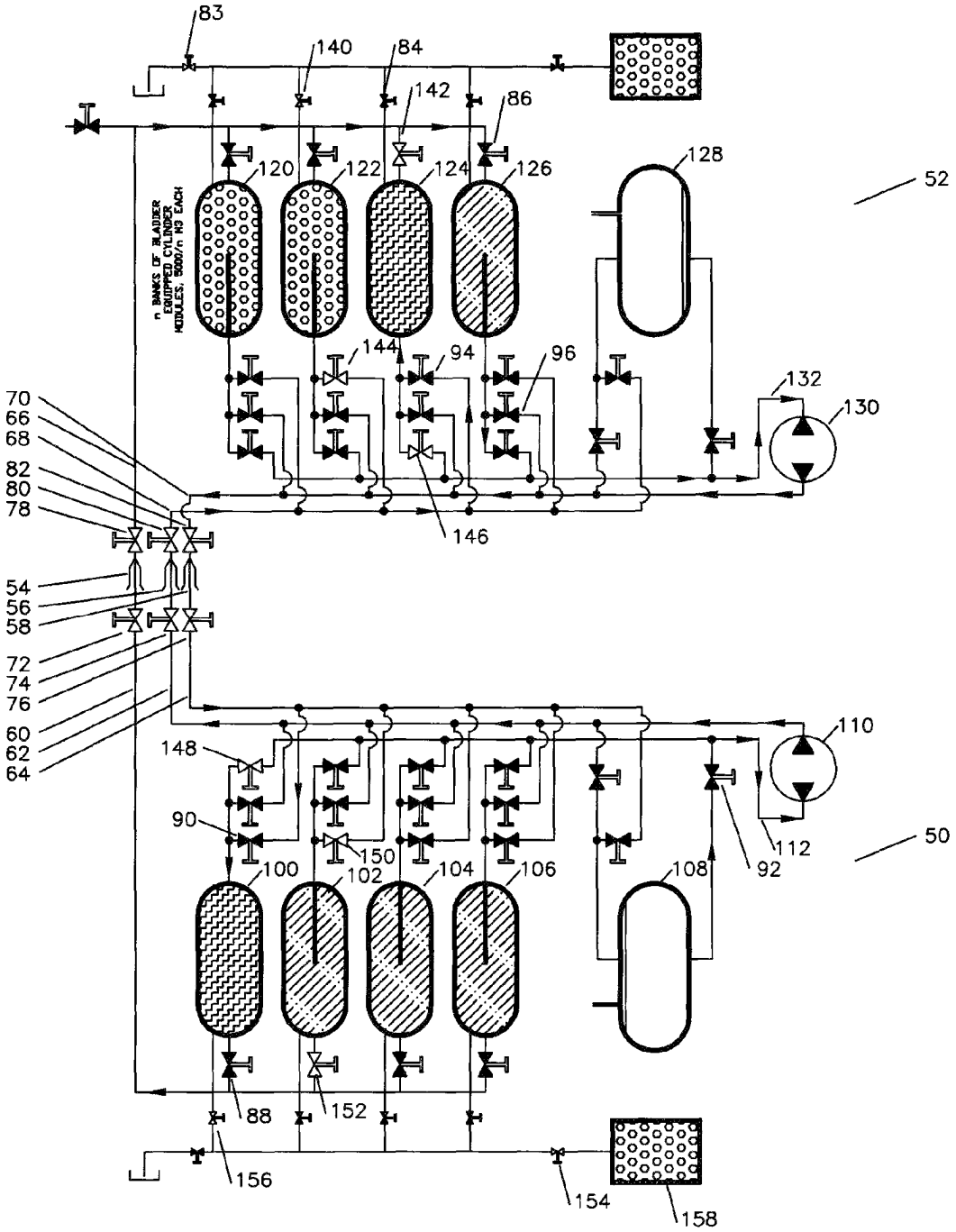
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FIG. 5

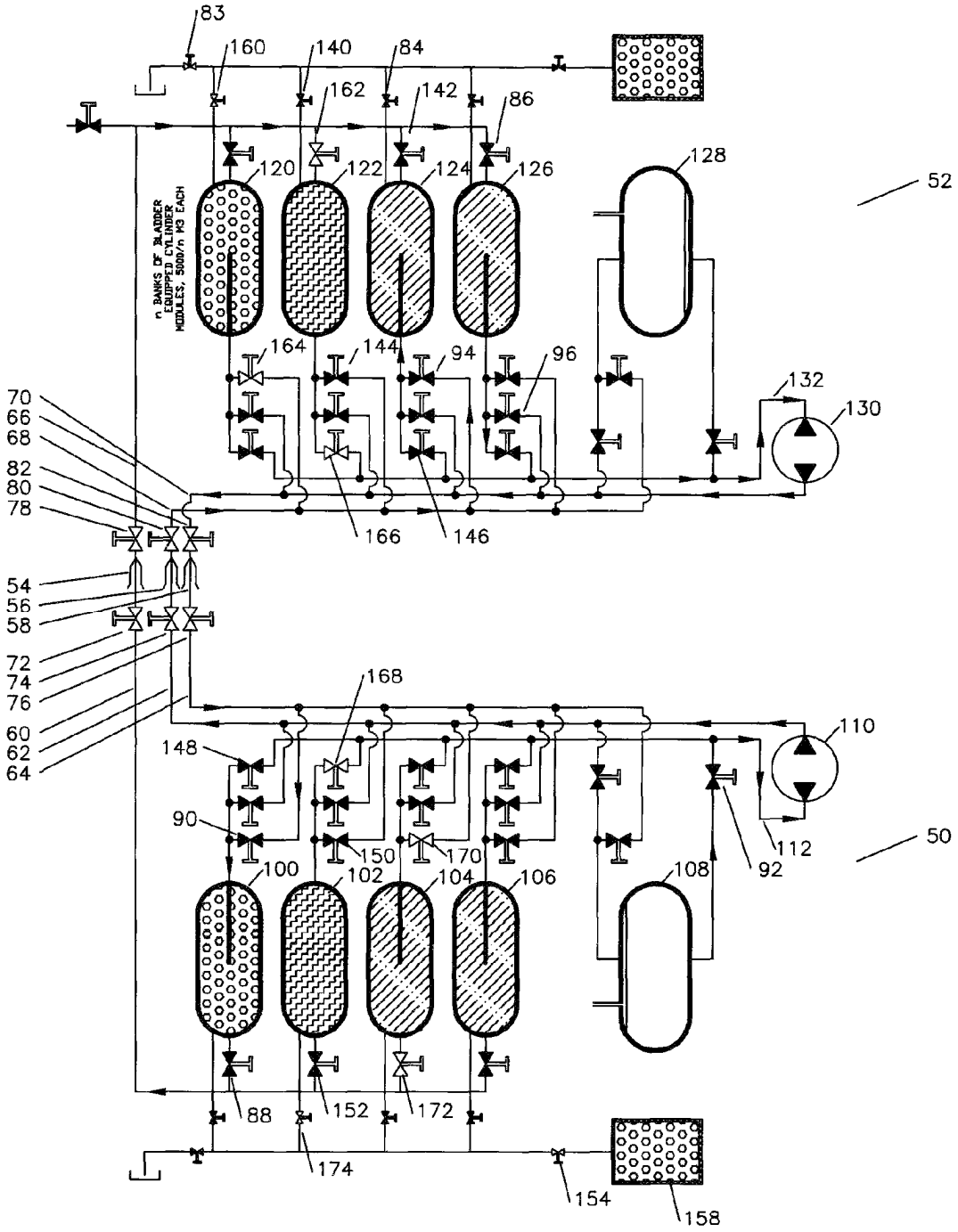
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FIG. 6

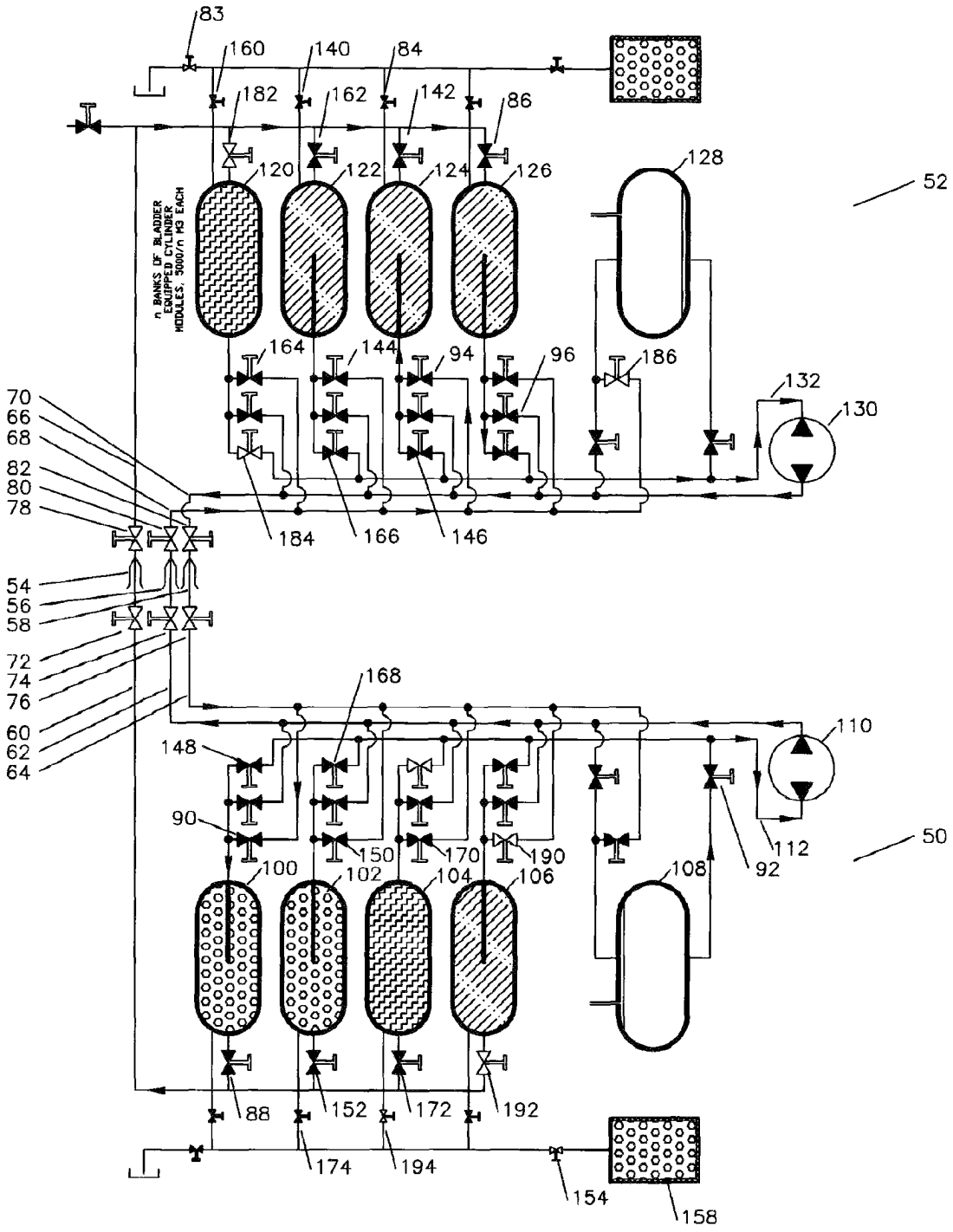
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FIG. 7

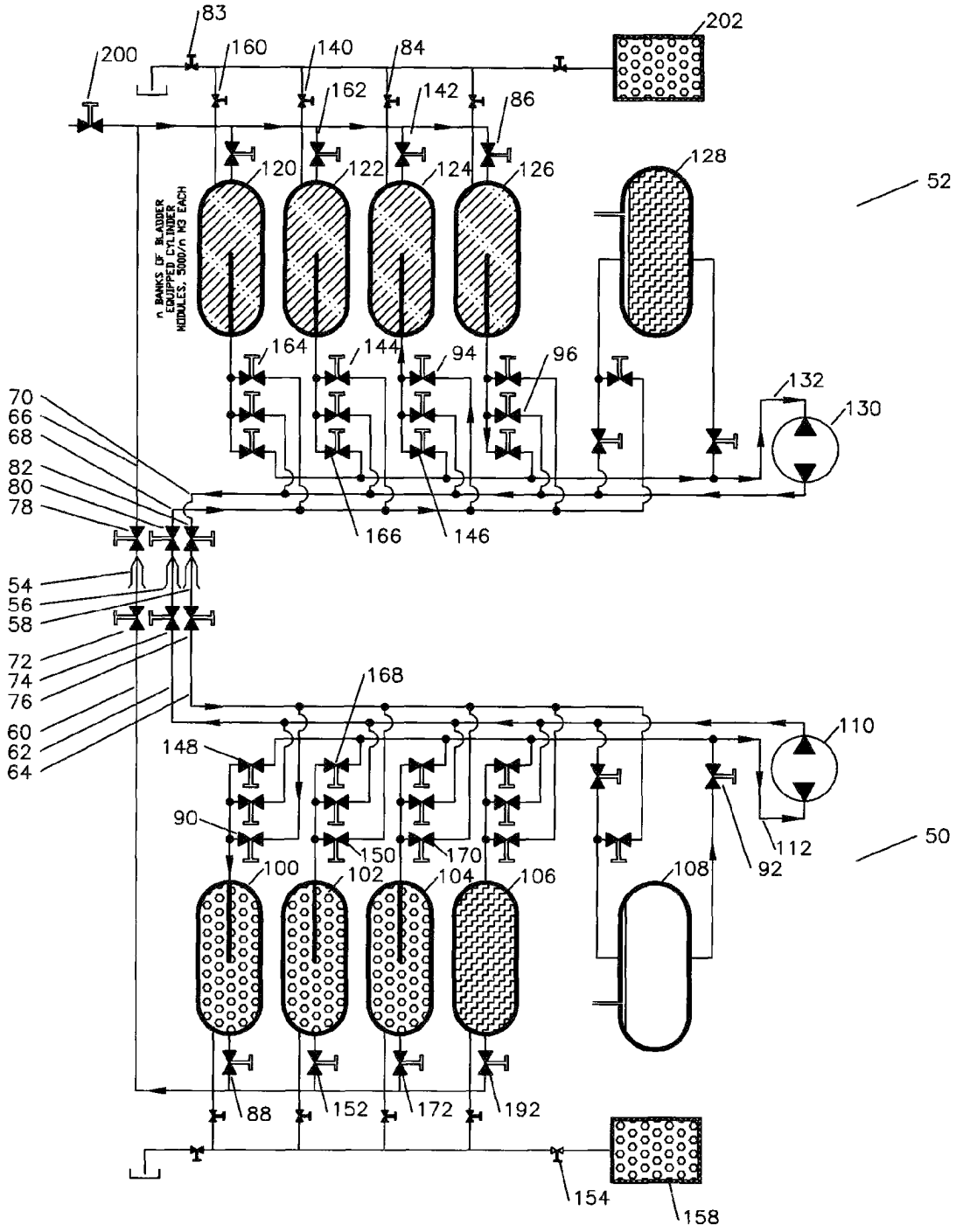
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FIG. 8

METHOD OF FULLY EXPELLING COMPRESSED GAS FROM A TANK

TECHNICAL FIELD

This invention relates to the method expelling compressed gas from one or more compressed gas tanks, especially as associated with the transportation and delivery of compressed natural gas.

BACKGROUND OF THE INVENTION

The transportation of natural gas from the supply location to the tanks at the market by ship or truck transportation tanks requires that the gas be highly compressed to make the transportation economic. The expense of high pressure transportation tanks (e.g. 3000 p.s.i.) rather than at atmospheric pressure (e.g. 0 p.s.i.) is more than offset by the fact that about 250 times as much gas product can be transported.

A second problem exists that if the tanks at the market have an intermediate pressure such as 600 p.s.i. When the 3000 p.s.i. high pressure transportation tanks are dumped into the market tanks, approximately 1780 p.s.i. will remain in the transportation tanks. This means that approximately 60% of the product transported remains undelivered.

Two choices have remained here in the art. First, you can simply leave the gas in the transportation tanks for the return trip and always be transporting this 60% of the volume back and forth from the supply location to the market location. Secondly you can provide gas compression pumps to pump the stranded gas from the ship or truck transportation tanks and deliver all the gas to market. The gas compressors are expensive and expensive to operate. However, the higher cost in many cases is the time tying up the access to the terminal while they are being pumped out. Especially in the case of ocean going ship terminals, the dock time is an expensive charge. However, because of the efficiency of the compressors, residual pressure never comes below about 600 p.s.i. or 20% of the original pressure.

Throughout the history of the transportation of natural gas, the balance between the transportation of the stranded gas in the transportation tanks and the cost to pump it out has been studied with various combinations of stranded gas and compression applied. In the case of trucks, the total volume of stranded gas is not large, however, in very large ocean going vessels, the amount of gas stranded by contemporary methods can be very large.

Another problem associated with conventional methods of transportation are nefarious thermal issues. If the receiving tank pressure is zero and the transportation tank pressure is 3,000 p.s.i., for example, the instantaneous temperature drop upon opening the valve would be 84 degrees K or 151 degrees F., with very bad consequences if there was any water or foreign gases or liquids in the transportation tank. In addition to substantial thermal risks, the 3000 p.s.i. on the transportation tank and 0 p.s.i. in the receiving tank will average out to be 1500 p.s.i. in both tanks, with half of the gas being delivered. At that point gas compressors would be employed with more and more time and money spent as the percentage of the transported gas is transferred, as was also indicated above.

BRIEF SUMMARY OF THE INVENTION

The object of this invention is to provide a method of transferring compressed gas from a transportation tank to a stationary tank with little or no gas in it and vice-versa without requiring the use of gas compressors.

A second objective of this invention to provide a method of transferring compressed gas from a transportation tank to a stationary tank with little or no gas in it and vice-versa without decompression and recompression.

A third objective of this invention is that all of the gas is expelled from the transportation tank so that all the product is delivered to market, rather than a lower pressure residual simply being carried back in the transportation tank for another trip.

Another objective of this invention is that as the tank can be totally purged, it can also be disconnected from the other tanks for maintenance, if required, which would be precluded by any residual natural gas in the tanks.

Another advantage of this invention is that the connectors can easily be backfilled with either a liquid or nitrogen before being safely disconnected.

Another objective of this invention is that there is no transfer of liquid between the two systems, the required power to pump the water would be 5,600 kW with an expenditure of 5.5 metric tons of gas. Gas usage would not really be a problem but power would, as well as regulation of the system.

Another objective of this invention is minimizing the transfer differential pressure so that it enables the installation of safety devices on the tanks so that in case of a collision when the piping on top of the tanks is ripped off or any other type of leakage, a safety mechanism can quickly shut down the flow of gas trying to exit the tank through the broken piping, substantially increasing the safety level of the system.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a view of a vessel having the filling method of this invention.

FIG. **2** is a view of the vessel of FIG. **1** with the top deck removed and showing a set of tanks about to be installed.

FIG. **3** is a view of the vessel of FIG. **2** with a full complement of storage bottles installed.

FIG. **4** is a schematic of method of the present invention as would be seen when the transportation vessel arrives at the delivery location, valves are opened, but pumping has not started.

FIG. **5** is a schematic of method of the present invention after a first tank of compressed natural gas has been transferred and valves are set up to deliver the second tank of compressed natural gas.

FIG. **6** is a schematic of method of the present invention after the second tank of compressed natural gas has been transferred and valves are set up to deliver the third tank of compressed natural gas

FIG. **7** is a schematic of method of the present invention after the third tank of compressed natural gas has been transferred and valves are set up to deliver the fourth tank of compressed natural gas.

FIG. **8** is a schematic of method of method of the present invention after the fourth tank of compressed natural gas has been transferred and all valves are closed.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to FIG. **1**, an offshore tanker **10** is shown which has a substantial central portion **12** which contains gas storage tanks.

Now referring to FIG. **2**, the offshore tanker **10** is shown with the top cover from the central portion **12** removed and showing a number of storage chambers **20**. A bank of storage bottles **22** is shown with one of the individual bottles identified as **24**. Individual bottles can be of a variety of sizes, for example 24 inches in diameter by 45 feet long.

Referring now to FIG. **3**, offshore tanker **10** is shown with more of the double wall covering from central portion **12** removed and a full set of bottles **22** installed. In this model **576** of the bottles **24** are shown.

Referring now to FIG. **4**, a graphic of the pumping system of this invention is shown. The lower portion of the graphic shows a transportation tank system **50** for transportation of the compressed gases and the upper portion shows a stationary tank system **52**. The transportation tank system **50** will likely be aboard a ship, but can be transported by a variety of means including barges, railroads, and trucks. The stationary tank system **52** is described following as the location to which the transportation tank system **50** delivers the compressed natural gas for distribution and use but can as well represent the location where the transportation tank system is efficiently loaded, whether from a shore based or offshore location.

Hose connectors **54**, **56**, and **58** connect hoses **60**, **62**, and **64** from the transportation tank system to piping **66**, **68**, and **70** on the stationary tank system. The connectors **54**, **56**, and **58** can be one of several styles which are well known in the art. Due to size they will likely be of the remotely hydraulically operated type. Valves **72**, **74**, and **76** and valves **78**, **80**, and **82** are on each side of hose connectors **54**, **56**, and **58** to close off the ends of the hoses or piping when a disconnection is done. Hoses **60**, **62**, and **64** can be neutrally buoyant with additional buoyancy added to float the valves **72**, **74**, and **76** also as they move to the shore installation for connection. Alternately the piping **66**, **68**, and **70** can be floating hoses, or both sides of the hose connectors **54**, **56**, and **58** can be floating hoses.

The floating gas hose would be rated for a working pressure of 4,250 p.s.i. (we plan to work at 2,133 p.s.i.), inside diameter 7 inch, outside diameter 11 inch, minimum dynamic bending radius 9 foot (7 foot static and 6 foot storage), weight 68 lbs. per ft. The liquid hoses would be the same, which enjoys a higher rating of 5,000 p.s.i. There would be 1 gas line and two liquid lines. The 3 hoses will be bundled, except at their end. Fluid flow needs to be 1,000 cubic meters per hour (4,400 GPM), but with little head if the fluid flows between the receiving and the loading station. The system is inherently safe as no pressure control needs to be applied. In some cases, the difficulty of handling the large high pressure hoses may be made more practical by handling them with a crane.

When a fully loaded transportation tank system comes into port for unloading, all valves in both the transportation tank system and the stationary tank system will be closed. After the hose connectors **54**, **56**, and **58** are connected, valves **72**, **74**, and **76** and valves **78**, **80**, and **82** are opened as shown. Additionally, valves **86**, **88**, **90**, **92**, **94**, and **96** are opened.

Tank **100** shows bladder **101** which is empty and collapsed to a flat position. Tank **126** shown bladder **127** which is fully expanded against the internal walls of tank **126**. The bladders are resilient balloon like members which separate the fluids and gases which will be in the tanks from time to time. Various means can be utilized to achieve this separation of fluids and gases such as floating piston. In some cases no separating method would be required if the fluid utilized did not tend to absorb the gasses and floats or sonar was used to monitor the level of the fluids in the tanks.

All valves in this description are shown as manual valves for simplicity. For rapid and controlled operations, all valves are likely to be remotely controlled.

By opening valves **86** and **88** the pressure of the gas in tank **100** will pressurize the fluid in tank **126**. Operating pump **130** will draw fluid out the bladder of tank **126** and pump it through hoses **132**, **70** and **64** and valve **90** to tank **100**. This will displace the compressed natural gas in tank **100** through valve **88** hoses **60** and **66**, through valve **86** and into the space outside the bladder in tank **126**. As the pressure in the two tanks was equalized, there will not be a head pressure to pump against, but rather simply flowing friction losses will be incurred.

When pump **110** is operated, fluid will be drawn from tank **108** through valve **92** and pumped through hoses **62** and **68** into the bladder of tank **124**. The nitrogen gas in tank **124** will be vented through valves **84** and **83**. As the fluid in tank **108** and the nitrogen gas in tank **124** are at atmospheric pressure, there will not be a head pressure to pump against, but rather a simple flowing friction loss will be incurred.

This means that the pressure of tanks **100** and **126** will be the same, and will remain the same during the entire gas transfer process at the high pressure of the compressed natural gas. The pressure in tanks **108** and **124** will be a relatively constant pressure at atmospheric pressure plus a small pumping flow loss. This means safety relief valves can be installed on closely controlled conditions rather than trying to compromise on varying pressures of a typical compression process. The ability this provides to quickly recognize a leakage condition or overpressure condition can substantially increase the safety of the systems.

Referring now to FIG. **5**, the results of the pumping in FIG. **4** is seen. Valves **84**, **86**, **88**, **90**, **92**, **94**, and **96** are now closed. Valves **140**, **142**, **144**, **146**, **148**, **150**, **152**, **154**, and **156** are opened.

Operating pump **130** will draw fluid out the bladder of tank **124** and pump it through valve **146**, hoses **132**, **70** and **64**, valve **150** and into the bladder of tank **102**. This will displace the compressed natural gas in tank **102** through valve **152**, hoses **60** and **66**, valve **142** and into the space outside the bladder in tank **124**.

When pump **110** is operated, fluid will be drawn from tank **100** through valve **148**, hoses **112**, **62** and **68**, valve **144** and into the bladder of tank **122**.

The nitrogen gas in tank **122** will be vented through valves **140** and **83**. Nitrogen plant **158** will generate nitrogen and pump it through valves **154** and **156** into the area outside the bladder in tank **100**.

Referring now to FIG. **6**, the results off the pumping in FIG. **5** is seen. Valves **140**, **142**, **144**, **146**, **148**, **150**, and **152** are now closed. Valves **160**, **162**, **164**, **166**, **168**, **170**, **172**, and **174** are opened.

Operating pump **130** will draw fluid out the bladder of tank **122** and pump it through valve **164**, hoses **132**, **70** and **64**, valve **170** and into the bladder of tank **104**. This will displace the compressed natural gas in tank **104** through valve **172**, hoses **60** and **66**, valve **164** and into the space outside the bladder in tank **122**.

When pump **110** is operated, fluid will be drawn from tank **102** through valve **168**, hoses **62** and **68**, valve **164** and into the bladder of tank **120**.

The nitrogen gas in tank **120** will be vented through valves **160** and **83**. Nitrogen plant **158** will generate nitrogen and pump it through valves **154** and **174** into the area outside the bladder in tank **102**.

Referring now to FIG. **7**, the results off the pumping in FIG. **6** is seen. Valves **160**, **162**, **164**, **166**, **168**, **170**, and **172** are now closed. Valves **182**, **184**, **186**, **188**, **190**, **192** and **194** are opened.

Operating pump **130** will draw fluid out the bladder of tank **120** and pump it through valve **184**, hoses **132**, **70** and **64**, valve **190** and into the bladder of tank **106**. This will displace the compressed natural gas in tank **106** through valve **192**, hoses **60** and **66**, valve **182** and into the space outside the bladder in tank **120**.

When pump **110** is operated, fluid will be drawn from tank **104** through valve **188**, hoses **112**, **62** and **68**, valve **186** and into tank **128**.

Nitrogen plant **158** will generate nitrogen and pump it through valves **154** and **194** into the area outside the bladder in tank **104**.

Referring now to FIG. **8**, as the compressed natural gas in tanks **120**, **122**, **124**, and **126** are exported to users through valve **200**, nitrogen from nitrogen plant **202** will be pumped into the space outside the bladders of tanks **120**, **122**, and **124** and fluids are pumped from tank **128** into the bladder of tank **126** to be prepared for a subsequent reloading.

As the transportation tank system **50** is in transit to the supply location, the fluids in the bladder of tank **106** are pumped into tank **108** and nitrogen from nitrogen plant **158** is pumped into the space outside the bladder of tank **106**. These final pumping operations will return the status of the transportation tank system **50** and the stationary tank system to the status as was shown in FIG. **4**.

Another advantage of this invention is minimizing of the transfer differential pressure is that it enables the installation of safety devices on the tanks. In case of a collision when the piping on top of the tanks is ripped off, a valve mechanism shuts down the flow of gas trying to exit the tank through the broken piping, activated by the differential pressure above a certain predetermined level.

The particular embodiments disclosed above are illustrative only, as the invention may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. Furthermore, no limitations are intended to the details of construction or design herein shown, other than as described in the claims below. It is therefore evident that the particular embodiments disclosed above may be altered or modified and all such variations are considered within the scope and spirit of the invention. Accordingly, the protection sought herein is as set forth in the claims below.

That which is claimed is:

1. The method of transferring compressed gas at from a set of delivery tanks to a set of receiving tanks without decompressing said compressed gas and then re-pressuring said compressed gas comprising:

a first step of connecting a first fluid delivery connection on a first delivery tank of said set of delivery tanks to a first receiving fluid connection on a first receiving tank of said set of receiving tanks with a first fluid line with one or more first fluid valves,

said first delivery tank containing first fluid and said first receiving tank not containing a fluid,

opening said first valves and pumping said first fluid from said first delivery tank into said first receiving tank,

a second step of providing a second compressed gas filled tank associated with said delivery tanks and a second fluid filled tank associated with said receiving tanks,

connecting a second fluid delivery connection on a second delivery tank of said set of delivery tanks to a second receiving fluid connection on a second receiving tank of said set of receiving tanks with a second fluid line with one or more second fluid valves,

connecting a first gas delivery connection on said second delivery tank of said set of delivery tanks to a second gas receiving connection on said second receiving tank on said set of receiving tanks with a second line with one or more second gas valves,

said second delivery tank containing a first compressed gas and said second receiving tank containing a second fluid,

opening said second fluid valves to allow said first compressed gas to pressurize said second fluid,

opening said first gas valves and pumping said second fluid from said second receiving tank into said second delivery tank such that said first compressed gas will be displaced into said second receiving tank, and

repeating said first step and said second step with a third delivery tank filled with a second compressed gas taking the place of said second delivery tank, said first receiving tank taking the place of said second receiving tank for the exchange of a second fluid with a second gas, and said first delivery tank being replaced by said second delivery tank and a third receiving tank taking the place of said first receiving tank for transferring a second fluid from said delivery set of tanks to said receiving set of tanks.

2. The invention of claim **1** further comprising said set of tanks is on a moving vessel for transportation.

3. The invention of claim **2** further comprising said fluid in said moving vessel is a ship.

4. The invention of claim **2** further comprising said fluid in said moving vessel is a barge.

5. The invention of claim **2** further comprising said fluid in said moving vessel is a train.

6. The invention of claim **2** further comprising said fluid in said moving vessel is a truck.

7. The invention of claim **1** further comprising said set of tanks is on a moving vessel for transportation.

8. The invention of claim **7** further comprising said fluid in said moving vessel is a ship.

9. The invention of claim **7** further comprising said fluid in said moving vessel is a barge.

10. The invention of claim **7** further comprising said fluid in said moving vessel is a train.

11. The invention of claim **7** further comprising said fluid in said moving vessel is a truck.

12. The invention of claim **1** further comprising said first line and said second line have connectors intermediate their ends.

13. The invention of claim **12** further comprising said first line and said second line are neutrally buoyant for floating in seawater for connection.

14. The invention of claim **12** further comprising said first line and said second line can be flooded with an environmentally friendly fluid or gas prior to disconnection.

15. The method of transferring compressed gas at a first pressure and first temperature environmental conditions from a first tank to a second tank without decompressing said compressed gas and then re-pressuring said compressed gas comprising:

said compressed as being above its boiling temperature in said environmental conditions within said tanks,

filling said second tank with a fluid, said fluid being below its boiling temperature in said environmental conditions,

connecting a first fluid connection on said first tank to a second fluid connection on said second tank with a first line with one or more first valves,

connecting a first gas connection on said first tank to a second gas connection on said second tank with a second line with one or more second valves,

opening said first valves and said second valves to allow said compressed gas to pressurize said fluid, and

pumping said fluid in said second tank into said first tank, thereby causing said compressed gas in said first tank to be displaced into said second tank.

16. The invention of claim **15** further comprising said first tank is on a moving vessel for transportation.

17. The invention of claim **16** further comprising said fluid in said moving vessel is a ship.

18. The invention of claim **16** further comprising said fluid in said moving vessel is a barge.

19. The invention of claim **16** further comprising said fluid in said moving vessel is a train.

20. The invention of claim **16** further comprising said fluid in said moving vessel is a truck.

21. The invention of claim **15** further comprising said second tank is on a moving vessel for transportation.

22. The invention of claim **21** further comprising said fluid in said moving vessel is a ship.

23. The invention of claim **21** further comprising said fluid in said moving vessel is a barge.

24. The invention of claim **21** further comprising said fluid in said moving vessel is a train.

25. The invention of claim **21** further comprising said fluid in said moving vessel is a truck.

26. The method of transferring compressed gas at from a first tank to a second tank without decompressing said compressed gas and then re-pressuring said compressed gas comprising:

filling said second tank with a fluid,

connecting a first fluid connection on said first tank to a second fluid connection on said second tank with a first line with one or more first valves,

connecting a first gas connection on said first tank to a second gas connection on said second tank with a second line with one or more second valves,

opening said first valves and said second valves to allow said compressed gas pressurize said fluid,

pumping said fluid in said second tank into said first tank, thereby causing said compressed gas in said first tank to be displaced into said second tank, and

said first fluid connection is separated from said first gas connection in said first tank by a bladder.

27. The method of transferring compressed gas at from a first tank to a second tank without decompressing said compressed gas and then re-pressuring said compressed gas comprising:

filling said second tank with a fluid,

connecting a first fluid connection on said first tank to a second fluid connection on said second tank with a first line with one or more first valves,

connecting a first gas connection on said first tank to a second gas connection on said second tank with a second line with one or more second valves,

opening said first valves and said second valves to allow said compressed gas to pressurize said fluid,

pumping said fluid in said second tank into said first tank, thereby causing said compressed gas in said first tank to be displaced into said second tank, and

said first fluid connection is separated from said first gas connection in said first tank by a piston.

28. The method of transferring compressed gas at from a first tank to a second tank without decompressing said compressed gas and then re-pressuring said compressed gas comprising:

filling said second tank with a fluid,

connecting a first fluid connection on said first tank to a second fluid connection on said second tank with a first line with one or more first valves,

connecting a first gas connection on said first tank to a second gas connection on said second tank with a second line with one or more second valves,

opening said first valves and said second valves to allow said compressed gas to pressurize said fluid,

pumping said fluid in said second tank into said first tank, thereby causing said compressed gas in said first tank to be displaced into said second tank, and

said second fluid connection is separated from said second gas connection in said second tank by a bladder.

29. The method of transferring compressed gas at from a first tank to a second tank without decompressing said compressed gas and then re-pressuring said compressed gas comprising:

filling said second tank with a fluid,

connecting a first fluid connection on said first tank to a second fluid connection on said second tank with a first line with one or more first valves,

connecting a first gas connection on said first tank to a second gas connection on said second tank with a second line with one or more second valves,

opening said first valves and said second valves to allow said compressed gas to pressurize said fluid,

pumping said fluid in said second tank into said first tank, thereby causing said compressed gas in said first tank to be displaced into said second tank, and

said second fluid connection is separated from said second gas connection in said second tank by a piston.

30. The invention of claim **15** further comprising said fluid is water.

31. The invention of claim **15** further comprising said fluid contains an additive to reduce the freezing temperature.

32. The method of transferring compressed gas at from a first tank to a second tank without decompressing said compressed gas and then re-pressuring said compressed gas comprising:

filling said second tank with a fluid,

connecting a first fluid connection on said first tank to a second fluid connection on said second tank with a first line with one or more first valves,

connecting a first gas connection on said first tank to a second gas connection on said second tank with a second line with one or more second valves,

opening said first valves and said second valves to allow said compressed gas to pressurize said fluid,

pumping said fluid in said second tank into said first tank, thereby causing said compressed gas in said first tank to be displaced into said second tank, and

said first line and said second line have connectors intermediate their ends.

33. The invention of claim **32** further comprising said first line and said second line are neutrally buoyant for floating in seawater for connection.

34. The invention of claim **32** further comprising said first line and said second line can be flooded with an environmentally friendly fluid or gas prior to disconnection.

* * * * *

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(12) **United States Patent**
Moszkowski et al.

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(45) **Date of Patent: Apr. 3, 2012**

(54) **DUAL GRADIENT PIPELINE EVACUATION METHOD**

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(58) **Field of Classification Search** 166/344, 166/351, 352, 357, 366, 368, 267, 400, 401, 166/339, 170, 177.3
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,953,158	A *	9/1960	Shea et al.	137/268
3,266,076	A *	8/1966	Surber	15/104.062
3,384,169	A *	5/1968	Leonard	166/357
3,411,483	A *	11/1968	Canoy	606/116
3,495,380	A *	2/1970	Goldman et al.	95/153
3,565,689	A *	2/1971	Lowe et al.	134/8
3,590,919	A *	7/1971	Talley, Jr.	166/357
3,788,084	A *	1/1974	Matthews, Jr.	405/173
3,961,493	A *	6/1976	Nolan et al.	405/158
4,216,026	A *	8/1980	Scott	134/4
4,252,465	A *	2/1981	Broussard et al.	405/158
4,416,703	A *	11/1983	Scott	134/8
4,543,131	A *	9/1985	Purinton, Jr.	134/8
4,705,114	A *	11/1987	Schroeder et al.	166/357
4,745,937	A *	5/1988	Zagustin et al.	137/13
4,753,261	A *	6/1988	Zagustin et al.	137/13
5,117,915	A *	6/1992	Mueller et al.	166/381
5,181,571	A *	1/1993	Mueller et al.	166/381
5,215,781	A *	6/1993	Lowther	427/11
5,232,475	A *	8/1993	Jepson	95/260
5,639,313	A *	6/1997	Khalil	134/18
5,795,402	A *	8/1998	Hargett, Sr. et al.	134/8
5,879,561	A *	3/1999	Klomp et al.	210/698
5,891,262	A *	4/1999	Khalil et al.	134/22.11
6,109,829	A *	8/2000	Cruickshank	405/169
6,129,150	A *	10/2000	Lima	166/357
6,267,182	B1 *	7/2001	Lima	166/335
6,277,286	B1 *	8/2001	S.o slashed.ntvedt et al.	166/250
6,536,540	B2 *	3/2003	de Boer	175/70
6,539,778	B2 *	4/2003	Tucker et al.	73/49.5
6,554,068	B1 *	4/2003	Chatterji et al.	166/285
6,672,391	B2 *	1/2004	Anderson et al.	166/357
6,680,284	B1 *	1/2004	Heidlas et al.	504/367
6,843,331	B2 *	1/2005	de Boer	175/70
7,008,466	B2 *	3/2006	Collins	95/153
7,093,661	B2 *	8/2006	Olsen	166/357
7,264,653	B2 *	9/2007	Panchalingam et al.	95/153
7,281,880	B2 *	10/2007	Tucker et al.	405/154.1
7,389,818	B2 *	6/2008	Hoiland	166/367
7,490,671	B2 *	2/2009	Gramme et al.	166/357
7,516,794	B2 *	4/2009	Gramme et al.	166/357
7,708,839	B2 *	5/2010	Yemington	134/22.11
7,721,807	B2 *	5/2010	Stoisits et al.	166/366
7,815,744	B2 *	10/2010	Abney et al.	134/22.18
RE42,358	E *	5/2011	Tucker et al.	73/49.5

(Continued)

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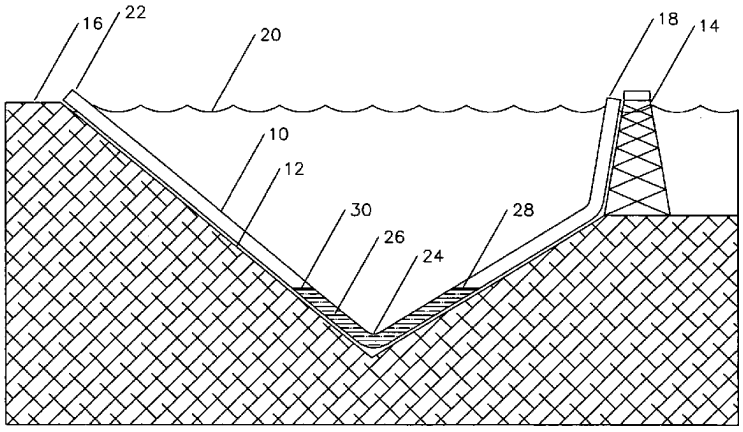
(57) **ABSTRACT**

The method of removing a first liquid from a subsea pipeline which has a central portion lower than each of the ends of the subsea pipeline by pumping a second lower density fluid into the pipeline and the either removing the second lower density fluid by either displacing it with gas or evaporating the second lower density fluid to a gas.

6 Claims, 4 Drawing Sheets



U.S. PATENT DOCUMENTS

2005/0006086	A1*	1/2005	Gramme	166/105.5
2006/0115332	A1*	6/2006	Abney et al.	405/169
2007/0102369	A1*	5/2007	Gramme et al.	210/748
2008/0053659	A1*	3/2008	Kinnari et al.	166/367
2008/0245528	A1*	10/2008	Stokka et al.	166/357
2008/0296062	A1*	12/2008	Horton et al.	175/5
2009/0223672	A1*	9/2009	Naik	166/344
2010/0236633	A1*	9/2010	Esparza et al.	137/13

* cited by examiner

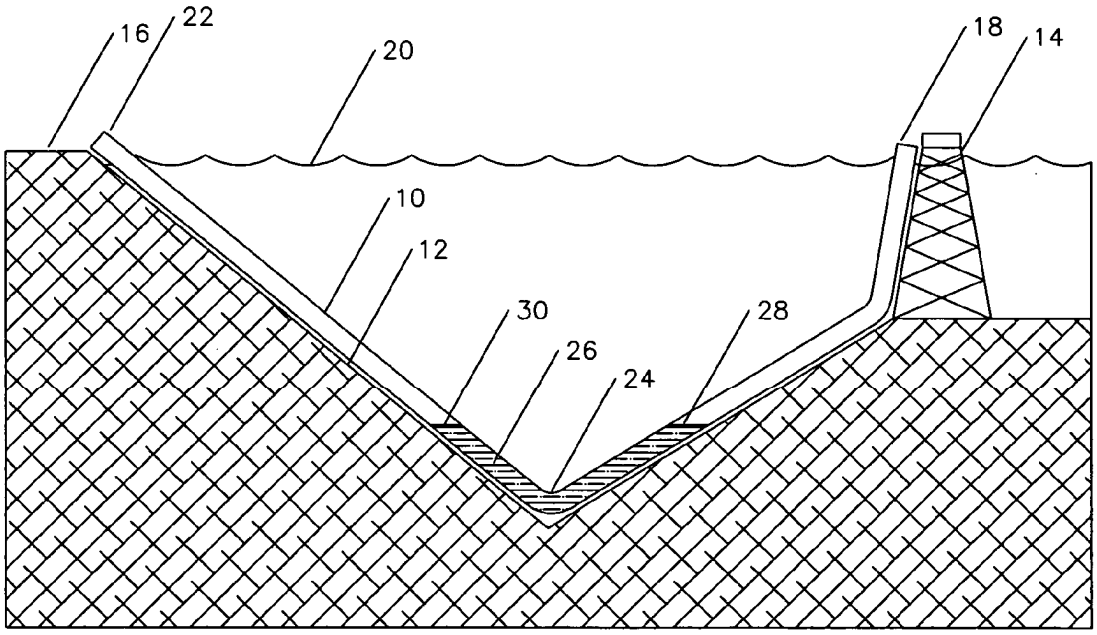


FIGURE 1

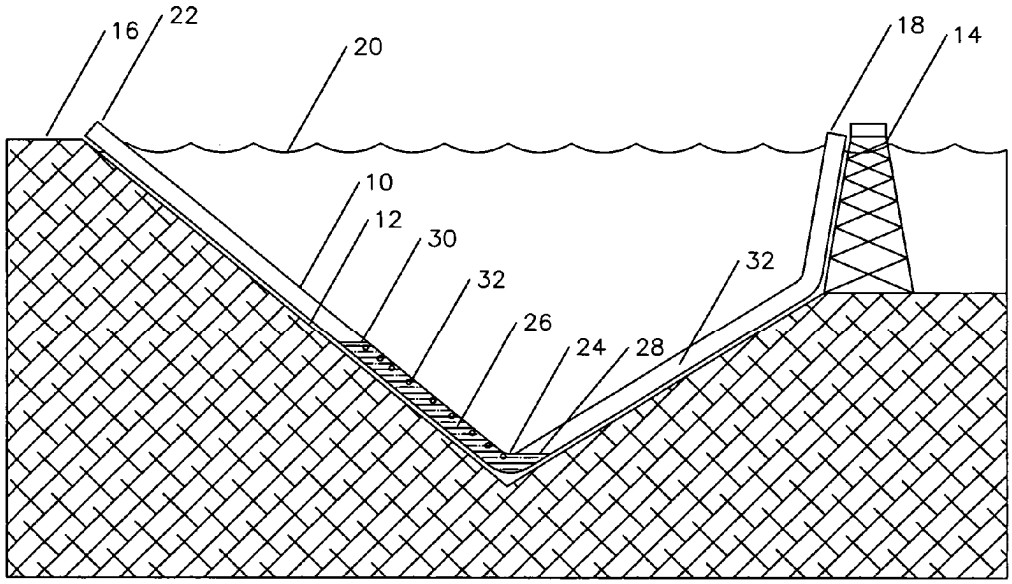


FIGURE 2

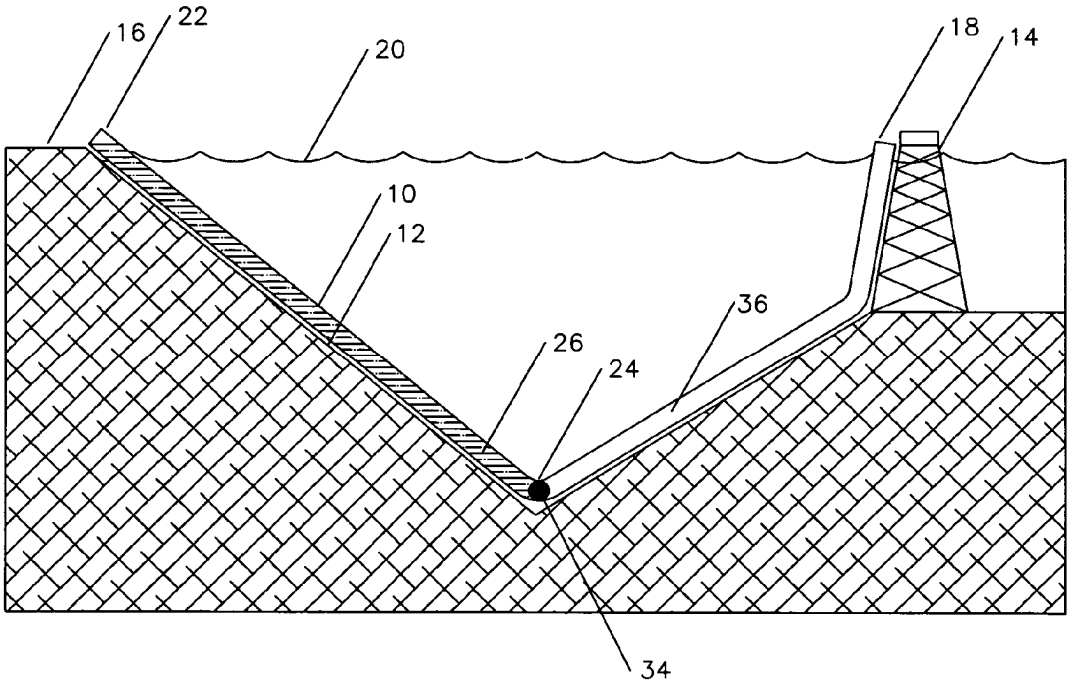


FIGURE 3

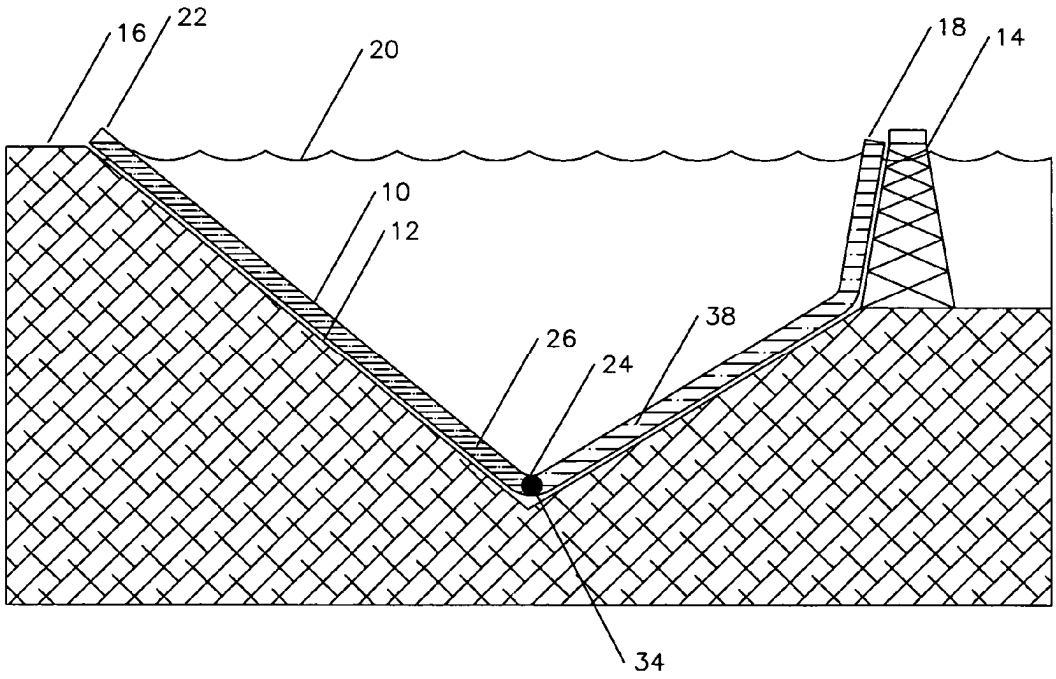


FIGURE 4

DUAL GRADIENT PIPELINE EVACUATION METHOD

TECHNICAL FIELD

This invention relates to the general subject of removing unwanted water from the lower areas of a deepwater subsea pipeline using alternate liquids of lower density.

CROSS-REFERENCE TO RELATED APPLICATIONS

Not applicable

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable

REFERENCE TO A "MICROFICHE APPENDIX"

Not applicable

BACKGROUND OF THE INVENTION

The field of this invention is that of removing unwanted water from deepwater pipelines. In some cases methane and other desirable gases will be produced from subsea wells and brought to the surface for initial processing. A prime function of this pre-processing is to remove the water from the gas.

After processing, the gasses will be returned to and along a seafloor pipeline for delivery to a remote location, also at sea level. As the high volume of gasses are passed into the pipeline, some portion of liquids will also reach the pipeline. These liquids, primarily water, will accumulate in the lowest points of the pipelines.

There are pipelines which have each end above sea level, and go through seafloor valleys as deep at 11,000 ft. deep. If a small amount of water accumulates in the pipeline, flowing gasses will simply percolate thru the water. The gas will push the water down on the near side and up on the far side until gas reaches the lowest point. At this time gas passes under the lowest point inside the pipeline and percolates up the far side. If there is enough water in the pipeline to raise the elevation of the water on the downstream side up 100 feet, it will take about 46.5 p.s.i. in gas pressure to do this (salt water is about 0.465 p.s.i./ft.). If you have gas supply pressure of 2,000 p.s.i., it will lift the gas on the downstream side by 4301 feet. If the pipeline depth is greater than 4301 feet, the pipeline is effectively completely blocked. Accumulated salt water in the 11,000 foot deep pipeline would be able to block a pressure of 5,115 p.s.i. (0.465*11,000).

BRIEF SUMMARY OF THE INVENTION

The object of this invention is to provide a method of removing unwanted liquids from a subsea pipeline by displacing the unwanted fluids with a lower density fluid which can be more easily removed by pumping.

A second object of this invention is to provide a method of removing unwanted liquids from a subsea pipeline by displacing the unwanted fluids with a more desirable fluid which can be more easily removed by evaporation.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a section of a pipeline extending from an offshore platform through a subsea valley and back up to the shore, having water at the low point in the pipeline.

FIG. **2** is a section of the pipeline of FIG. **1** showing the water displaced towards the downstream side of the low point by gas pressure from the upstream side and gas percolating through the water.

FIG. **3** is a section of the pipeline of FIGS. **1** and **2** showing water being displaced using gas and a pig.

FIG. **4** is a section of the pipeline of FIG. **3** using a low density liquid as the driving means to remove the water from the pipeline.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to FIG. **1**, a pipeline **10** is shown on the seafloor **12** between offshore platform **14** and the shore **16**. Upstream end **18** of pipeline **10** is approximately at sea level **20** as is the downstream end at **22**. The lowest point or "valley" in the pipeline **24** can be as deep as 11,000 feet deep. Water **26** is shown in the pipeline and is presently shown with its upstream end **28** at approximately at the same level as downstream end **30**.

Referring now to FIG. **2**, the upstream gas pressure **32** has been increased to force the water at the upstream end **28** down to the level of the upper side of the low point of the pipeline at **24**. The water at the downstream end **30** is pushed up enough that gas bubbles **32** are percolating through the water **26**. The differing head pressure of the water is the gas pressure differential required to accomplish this. Again, this head pressure is generally calculated by the difference in height times 0.465 p.s.i. per foot. Additional flows of gas in the pipeline will not remove the water, but simply pass through the water until enough water accumulates such that it will no longer flow at all.

Referring now to FIG. **3**, a pipeline pig **34** which seals against the bore of the pipeline has been pushed to the "valley" **24** by a working media **36**. As discussed above it would take approximately 5,115 p.s.i. gas to accomplish this if air is the working media.

The compression of gas to these pressures at high volumes associated with large diameter and long subsea pipelines is time consuming and expensive. Finding very large compressors in remote areas operating at that range of pressure would be problematic. The internal volume of a 32 inch diameter pipe **200** miles long is about 4.5 million cu. ft. which would represent an average standard air volume of about 750 million cu. ft. As air has substantial oxygen in it, it has more than a chance of auto-igniting or "dieseling" and generating high and damaging pressures. Nitrogen can be used in place of air without the danger of explosions, but would be very high in cost and supply in remote areas is unlikely.

Referring now to FIG. **4**, consider that instead of gas on the upstream side of the pig **34** a different liquid **38** is used. Liquefied propane/butane is a relatively incompressible liquid when subjected to a pressure of at least 28 psi for butane and 112 psi for propane at 68 degrees F. or lower, and is present as a "condensate" in most pipelines. When a liquid at that temperature, the density of butane is 58% that of sea water and that of propane is 50%.

If a 50/50 mixture of propane and butane were to be used as the media for pushing the dewatering pig, more than 50% of the head pressure necessary would be provided by the weight of the liquid mixture in the pipeline. An additional pressure of only 2,400 psi would be required. Further, to pump a liquid instead of a gas it is inherently a much more efficient operation. This means that instead of 5,115 p.s.i. of difficult gas compression, only 2400 p.s.i. of relatively easy liquid pumping would be required.

After the pipeline pig passes the valley and continues up the opposite side, the required pumping pressure would go from a maximum of 2400 p.s.i. to 0 p.s.i. when the mixture reached sea level at the outlet end. At that point as the pipeline if full of mixture, there are two methods of removing the mixture from the pipeline. As it is approximately ½ as heavy as the water was, adequate gas pressure may be available to simply pump it out using a second pig. Secondly, if the downstream end of the pipeline is simply vented at low pressure, the propane/butane mixture will simply evaporate, although it may take a while.

The particular embodiments disclosed above are illustrative only, as the invention may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. Furthermore, no limitations are intended to the details of construction or design herein shown, other than as described in the claims below. It is therefore evident that the particular embodiments disclosed above may be altered or modified and all such variations are considered within the scope and spirit of the invention. Accordingly, the protection sought herein is as set forth in the claims below.

That which is claimed is:

1. The method of removing a first liquid from a subsea gas pipeline which has an intermediate portion which is lower than the ends of said subsea pipeline, comprising:

displacing said first liquid from said subsea pipeline by pumping a second liquid into said pipeline, and

allowing at least a portion of said second liquid to evaporate to a gas.

2. The method of claim **1** further comprising said first liquid is water.

3. The method of claim **1** further comprising said second liquid is propane.

4. The method of claim **1** further comprising said second liquid is butane.

5. The method of claim **1** further comprising said second liquid is a propane/butane mixture.

6. The method of claim **1**, further comprising separating said first liquid from said second liquid during said pumping operations with a pig which seals in the bore of said subsea gas pipeline.

* * * * *

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(19) United States

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(43) Pub. Date: Jan. 19, 2012

Baugh et al.

(54) METHOD OF PROVIDING AN OUTLET ON A SUBSEA PIPELINE

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(21) Appl. No.: **12/804,260**

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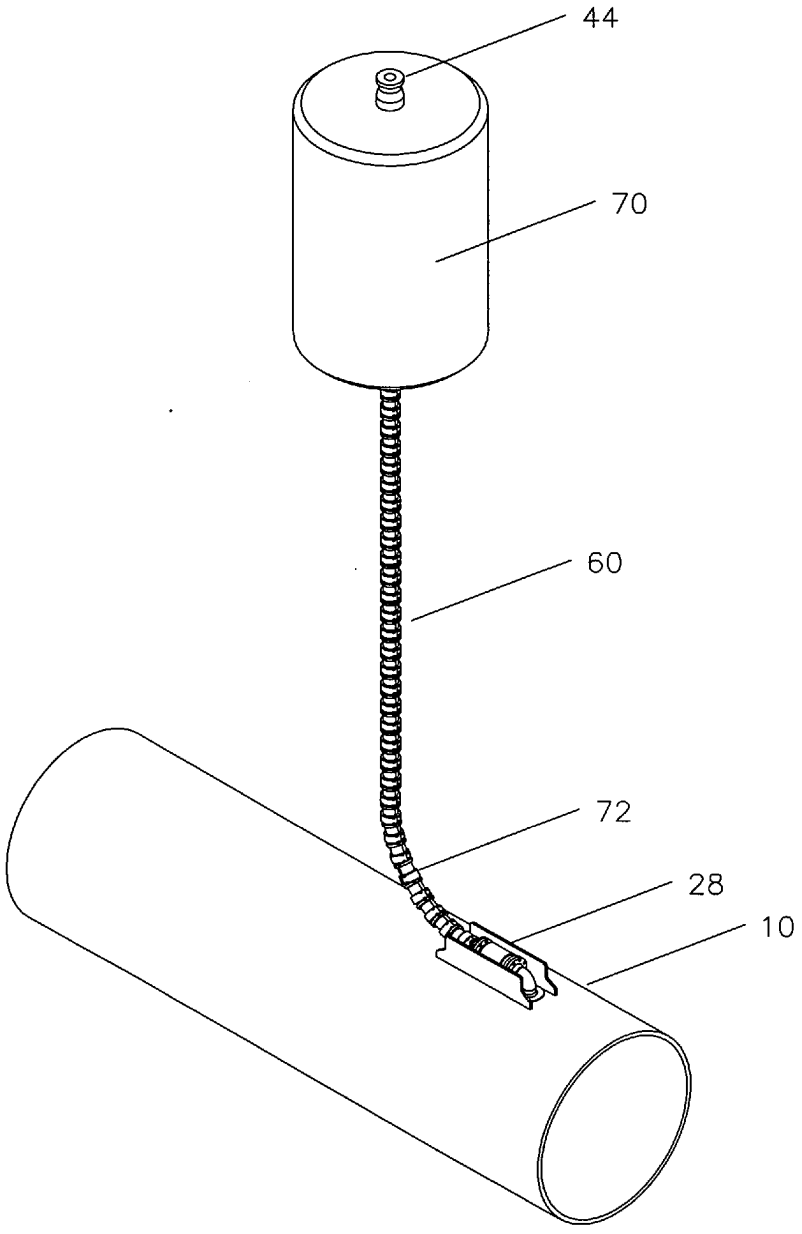
Publication Classification

(51) **Int. Cl.**
F16L 1/12 (2006.01)

(52) **U.S. Cl.** **405/169**

(57) **ABSTRACT**

The method of providing an accessible outlet on a subsea pipeline which has an unknown rotational orientation comprising connecting a first end of a flexible hose to the subsea pipeline, providing a multiplicity of connected bend restrictor sections around the flexible hose to restrict the bending of the hose, and providing buoyancy to the end of the hose such that the second end of the hose will remain accessible for future operations.



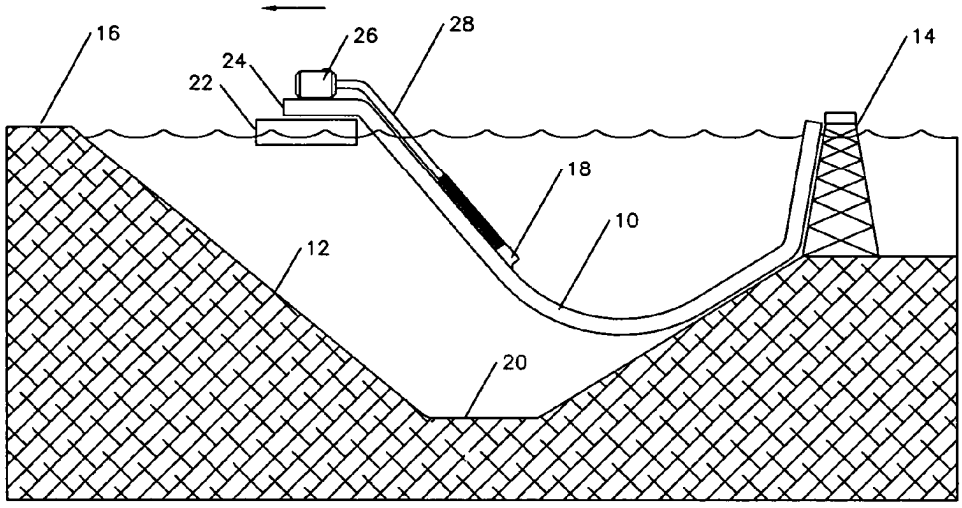


FIG. 1

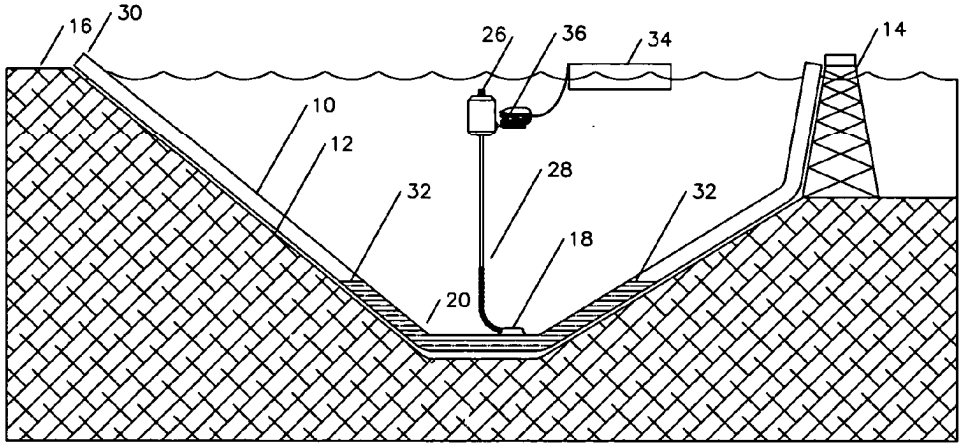


FIG. 2

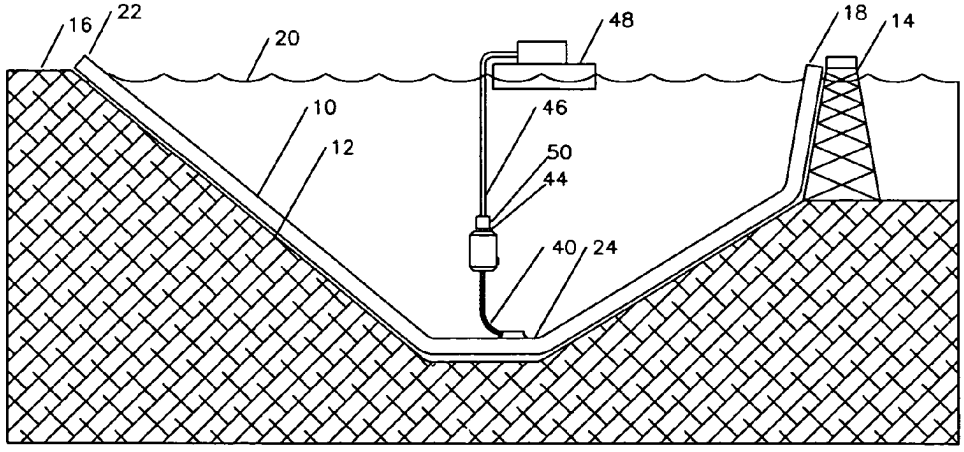


FIG. 3

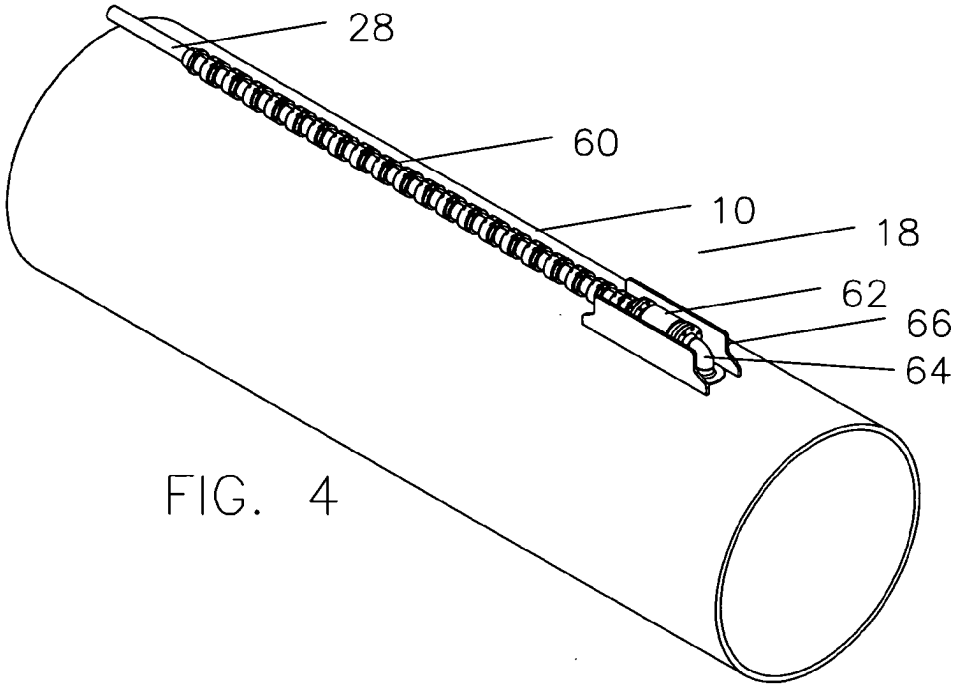


FIG. 4

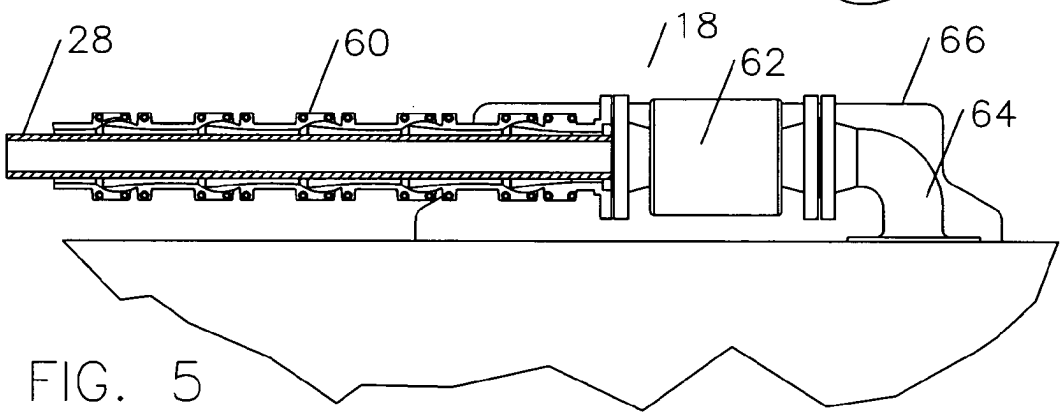


FIG. 5

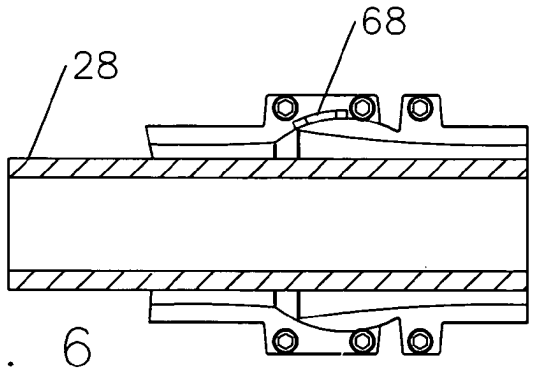


FIG. 6

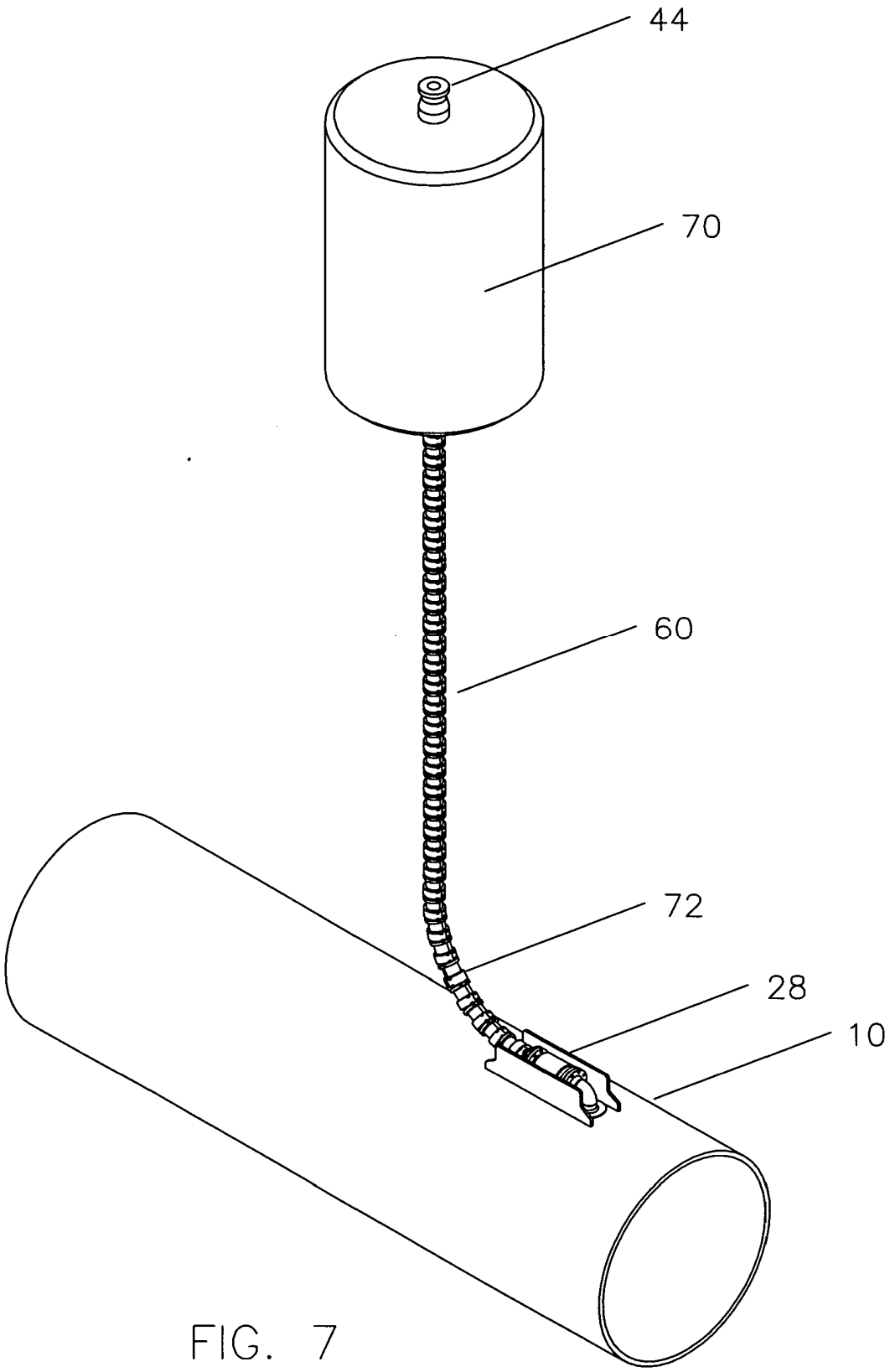


FIG. 7

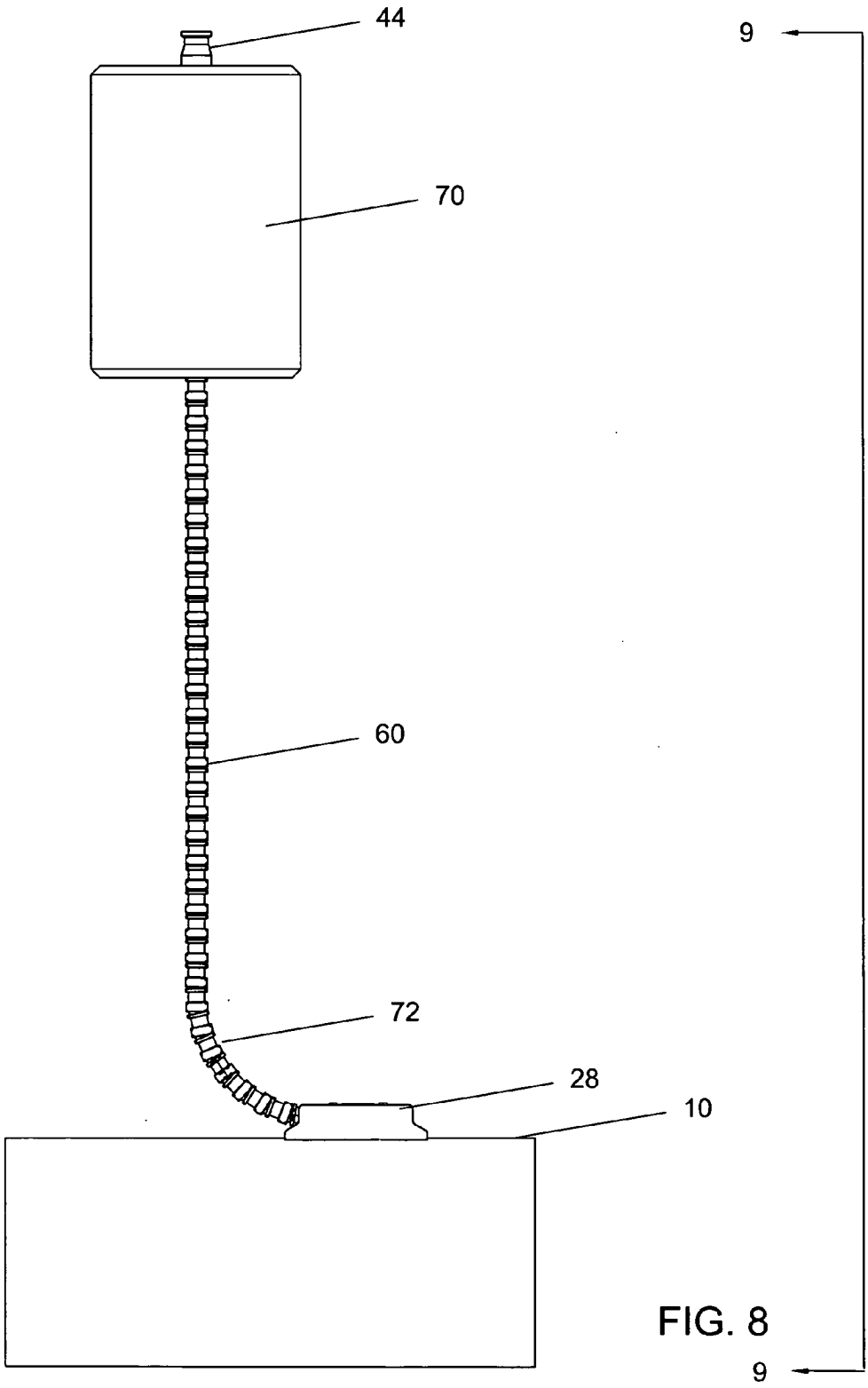


FIG. 8

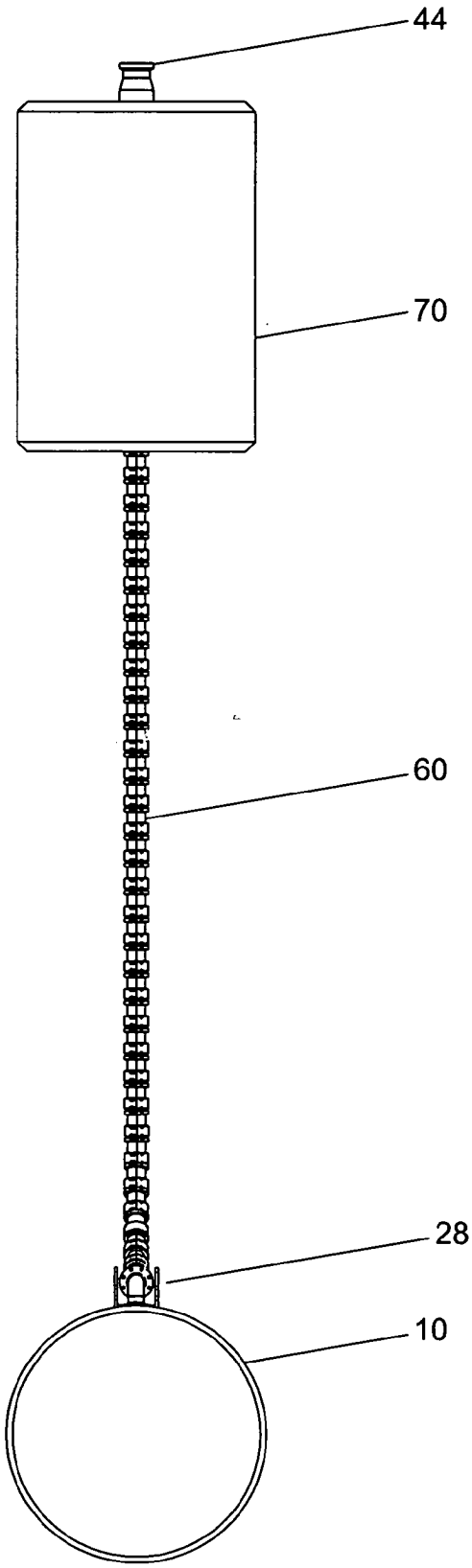


FIG. 9

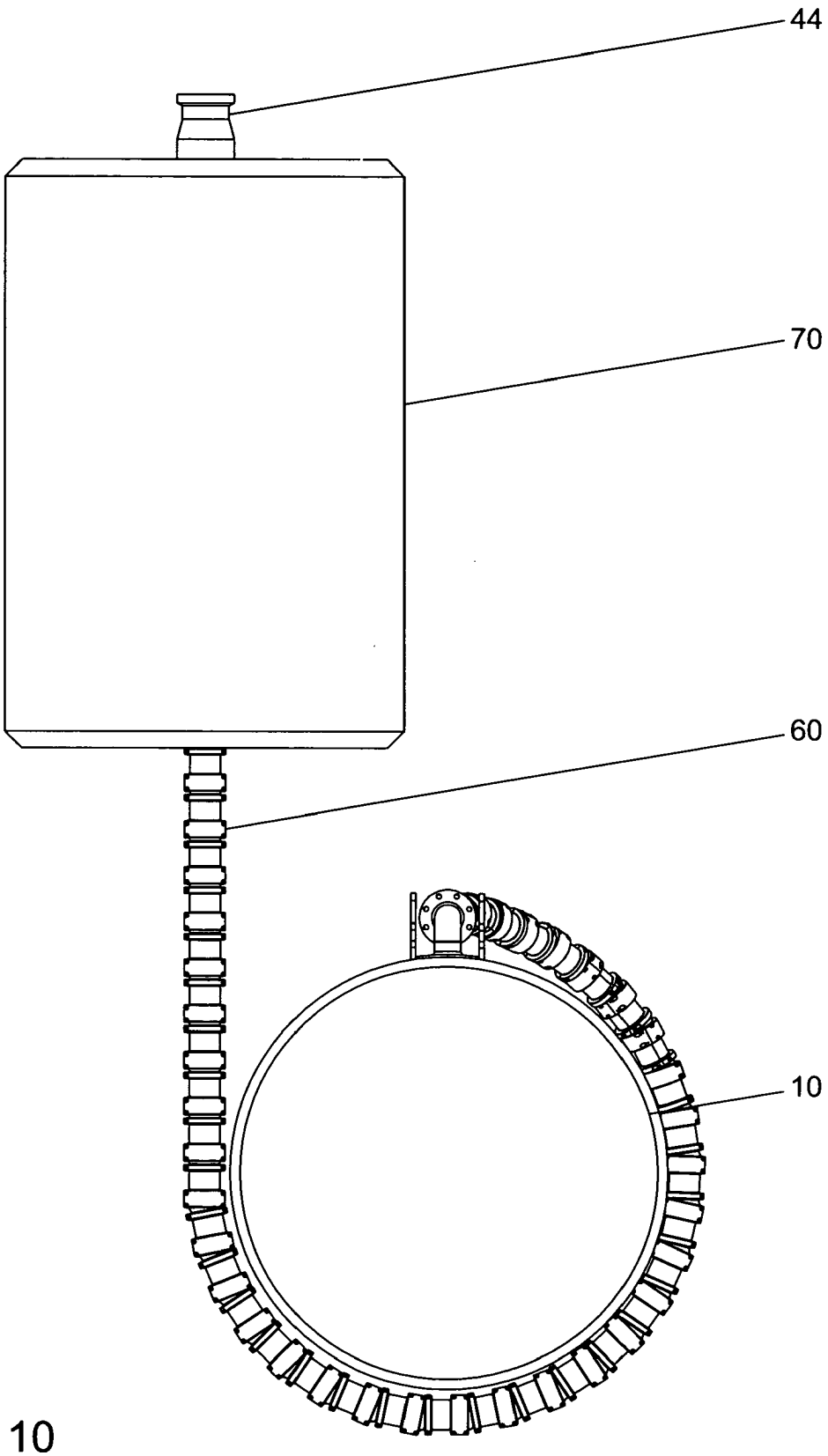


FIG. 10

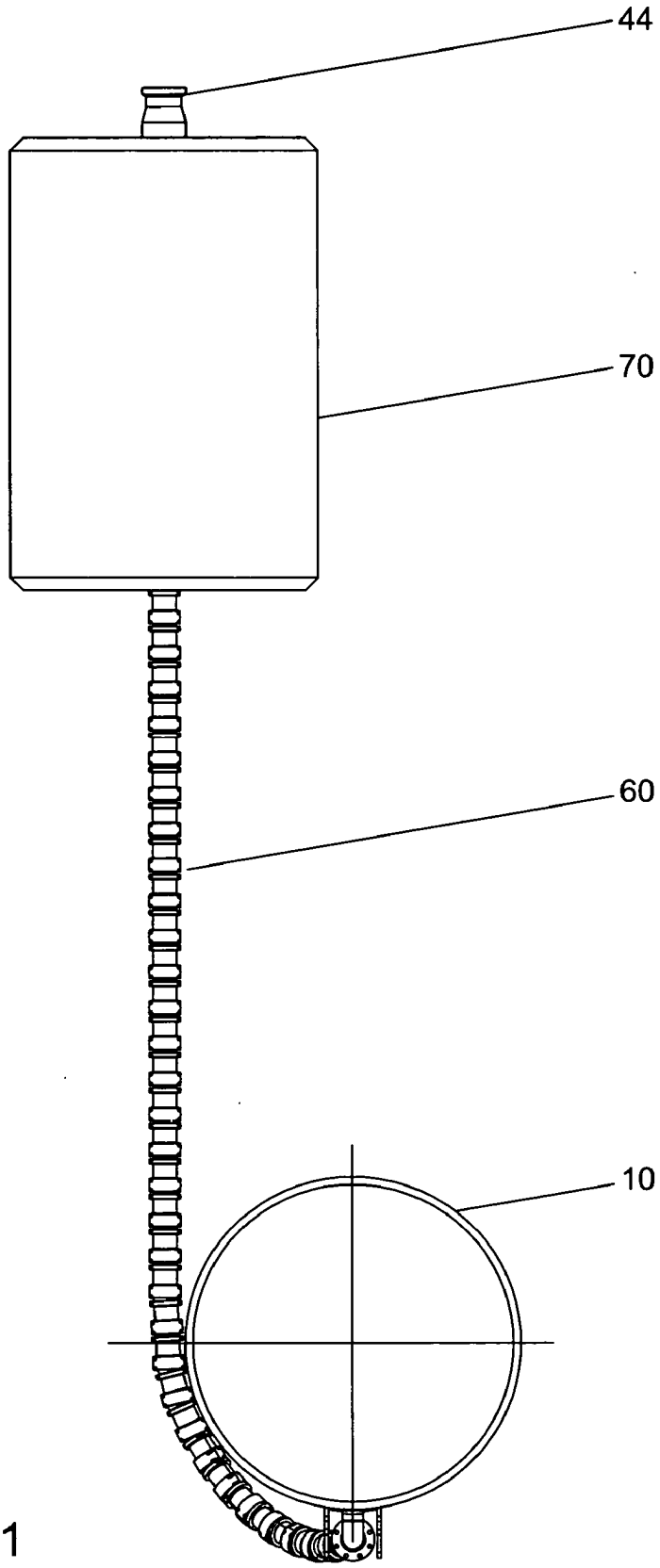


FIG. 11

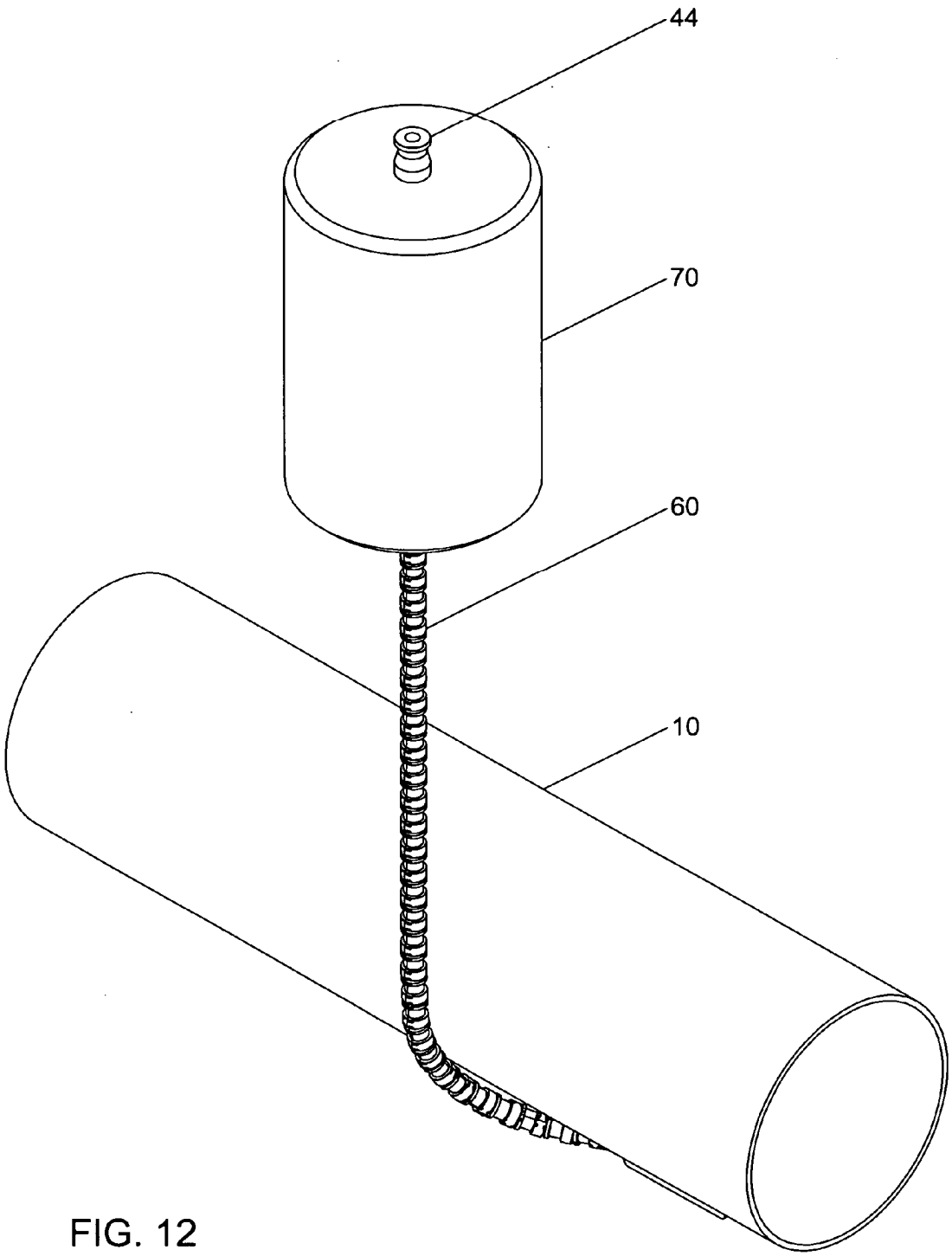


FIG. 12

METHOD OF PROVIDING AN OUTLET ON A SUBSEA PIPELINE

TECHNICAL FIELD

[0001] This invention relates to the general subject of providing outlets for fluid connection to subsea pipelines.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0002] Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0003] Not applicable

REFERENCE TO A "MICROFICHE APPENDIX"

[0004] Not applicable

BACKGROUND OF THE INVENTION

[0005] The field of this invention is that of pipelines in deep water where the process of laying the pipeline involves substantial stresses in the pipeline which can leave the exact orientation of the pipeline unknown. In the worst case scenario, the outlets on the pipeline can be oriented straight down and be completely inaccessible. Any orientation other than straight to the side or straight up typically involve substantial complications to any future tie-ins.

[0006] Outlets are needed for a variety of reasons. The first is simply the immediate connection of another pipeline. The potential for future tie-ins also exists as when a pipeline is laid, the full extent of future tie-ins is not known. In some cases the original supply of gas planned for the pipeline can be depleted and other reservoir locations can be found to tie in to the pipeline, if appropriate connection points are available.

[0007] In relatively deep water, water can accumulate in gas pipelines, slowing and sometimes completely stopping the flow. Frequently the production of natural gas also produces some water. When this water accumulates at the low point in the pipeline, it blocks the flow of water until the gas pushes the water in the upstream side down to the lowest point, with all the water pushed up the downstream side. The historic solution for this is to install a "pig" in the pipeline which seals on the internal bore of the pipeline and pumping it through the pipeline. As the pig sweeps through the pipeline, it will push the water out the other end. If the gas pressure is not sufficient, it will simply not be able to push the water up the other side.

[0008] Another problem which exists is the tendency for gas pipelines to form hydrates when water is present. At the pressures and temperatures of deepwater subsea pipelines, hydrates can form and block pipelines for months. Hydrates are something similar to crushed ice which are a mixture of water and natural gas.

[0009] There has long been a need for a more flexible way to make connections to subsea pipelines and a way to remove water from the pipelines, to remove other liquids from the pipeline, or to inject flow into the pipeline. Due to the probability that a contemporary pipeline will have an unpredictable orientation when it is laid on the sea floor, connection points are rarely added to pipelines or when they are they are provided with a large stabilizing skid to force them into a specific orientation.

BRIEF SUMMARY OF THE INVENTION

[0010] The object of this invention is to provide a method of allowing pipelines to land in an unknown orientation when laid on the seafloor and still providing an outlet with a desired orientation.

[0011] A second object of this invention is to provide an outlet in a subsea pipeline capable of removing unwanted liquids from the pipeline.

[0012] A third object of this invention is to provide a method to allow the flow of gas or liquids from another subsea pipeline.

[0013] Another object of the present invention is to provide a method of flowing gases and/or liquids into a subsea pipeline from another pipeline.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. **1** is a view of a pipeline being laid with the outlet of this invention.

[0015] FIG. **2**. Is a view of the pipeline of FIG. **1** completely laid and being used to remove unwanted liquids from the pipeline.

[0016] FIG. **3** is a view of a pipeline outlet being connected for an auxiliary pipeline.

[0017] FIG. **4** is a perspective view of a portion of FIG. **1** showing the outlet exiting the pipeline as it is being laid from the vessel.

[0018] FIG. **5** is a partial section of the outlet showing the flexible hose and the surrounding bend restrictor.

[0019] FIG. **6** is a closer view of a bend restrictor section showing an anti-rotation key.

[0020] FIG. **7** is a perspective view of the outlet as would be seen if the subsea pipeline did not rotate during laying.

[0021] FIG. **8** is a side view of the view of FIG. **7**.

[0022] FIG. **9** is an end view of FIG. **8** as seen along lines "**9-9**" of FIG. **8**.

[0023] FIG. **10** is a view similar to FIG. **9**, but with the subsea pipeline rotated 360 degrees.

[0024] FIG. **11** is a view similar to FIG. **10**, but with the subsea pipeline rotated only 180 degrees.

[0025] FIG. **12** is a perspective view of FIG. **11**.

DETAILED DESCRIPTION OF THE INVENTION

[0026] Referring now to FIG. **1**, a subsea pipeline **10** is shown being laid on the seafloor **12** from an offshore structure **14** towards the shore **16**. A pipeline outlet **18** is connected into subsea pipeline **10** in a position such that it will land in a low point or subsea valley **20** in the pipeline path along the seafloor **12**.

[0027] The pipelay vessel **22** is shown with the pipeline end **24** and buoy **26** which is connected to hose **28** which in turn is connected to pipeline outlet **18**. By attaching the hose **28** to the pipeline outlet **18** and in turn attaching the buoy **26** to the hose at the appropriate position, a single pipelay vessel **22** is able to both deploy the subsea pipeline **10** and the buoy **26**.

[0028] Referring now to FIG. **2**, the subsea pipeline **10** is fully laid on the ocean floor **12** with end **30** arriving at a shore facility (not shown). The pipeline outlet **18** is laid in the valley **20** with hose **28** going up to buoy **26** near the surface of the ocean. Water **32** is shown collected in the low portion of the

subsea pipeline **10** in the valley **20**. Sufficient accumulations of water in the valley of the pipeline will stop the flow of gas in the pipeline. The outlet **18**, hose **28** and buoy **26** are utilized to remove the unwanted water from the subsea pipeline **10** by a surface vessel **34**. In the embodiment shown a remotely operated vehicle (ROV) **36** is deployed from the surface vessel **34**, engages the buoy **26** and operates a pump to pump the water out of the pipeline and to the surface. One method for doing this is to have a first hose with seawater flowing down to a motor proximate the pipeline outlet **18** to drive a pump to pump the pipeline water back up to the surface.

[0029] Referring now to FIG. **3**, the hose **40** is shorter than hose **28** of FIG. **2** and buoy **42** provides a connection mandrel **44** facing upwardly. Pipeline **46** is lowered from vessel **48** with a connector **50** on the lower end for sealingly engaging with connection mandrel **44**. At this time the pipeline **46** can be laid along the ocean floor to other facilities as required. A characteristic of subsea pipelines as they are laid from deep-water vessels is that they frequently twist slightly. When a steel pipeline such as **46** twists 180 degrees, the rigidity of the pipeline tends to prevent it from being twisted and will cause the flexible hose at the end to absorb all the twist. If the hose **40** is short, i.e. 50 feet long, and is twisted 180 degrees it will frequently give the hose spiral failure. As will be seen in FIG. **6**, the hose can be reinforced against spiral failure without limiting its flexibility.

[0030] Referring now to FIG. **4**, subsea pipeline **10** is shown with an outlet hose **28** protected at its lower end by a multiplicity of bend restrictor sections **60** and attached a control package **62**. Control package section **62** can comprise shut-off valves, check valves, and/or pumps as are required for the particular purpose of the pipeline outlet. The control package section is in turn connected to elbow **64** into the subsea pipeline **10**. On each side of the control package section, protective gussets **66** are shown. This is as it would be seen when being laid from the vessel before the buoy **26** is launched.

[0031] Referring now to FIG. **5**, a closer partial view of the outlet **18** is seen showing the hose **28** inside the multiplicity of bend restrictor sections **60**.

[0032] Referring now to FIG. **6**, a single half section of bend restrictor is shown with an orientation key **68** which allows the bend restrictor sections to sustain torque and protect the hose **28** from being damaged by torsion.

[0033] Referring now to FIG. **7**, a perspective view of an outlet for attaching a pipeline is seen with the bend restrictor sections **60** going all the way up to the buoy **70** in order to protect the hose within from torque. As shown, the pipe did not rotate during the laying process, and the bend restrictors allow a simple 90 degree curve upwards toward the buoyancy.

[0034] Referring now to FIG. **8**, a side view of FIG. **7** is seen.

[0035] Referring now to FIG. **9**, an end view of the arrangement of view **7** is seen.

[0036] Referring now to FIG. **10**, the view of FIG. **9** is shown with the subsea pipeline **10** rotated a full 360 degrees showing what happens when the pipe is rotated in the laying process. The pipe is rotated, but the connection **44** is still available for connection.

[0037] Referring now to FIG. **11**, the view of FIG. **9** is shown with the subsea pipeline **10** rotated 180 degrees in the laying process.

[0038] Referring now to FIG. **12**, a perspective view of FIG. **11** is shown.

[0039] The particular embodiments disclosed above are illustrative only, as the invention may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. Furthermore, no limitations are intended to the details of construction or design herein shown, other than as described in the claims below. It is therefore evident that the particular embodiments disclosed above may be altered or modified and all such variations are considered within the scope and spirit of the invention. Accordingly, the protection sought herein is as set forth in the claims below.

That which is claimed is:

1. A method of providing an accessible outlet on a subsea pipeline on the seafloor at a location distal from the ends of said pipeline which has an unknown rotational orientation about the centerline of said pipeline comprising:

connecting a first end of a flexible hose to said subsea pipeline,

providing a multiplicity of connected bend restrictor sections around said flexible hose to restrict the bending of said hose, and

providing buoyancy to the second end of said hose such that said second end of said hose will remain accessible for future operations.

2. The method of claim **1**, further comprising the centerline of said first end of said flexible hose is eccentric to and approximately parallel to the centerline of said subsea pipeline which has an unknown rotational orientation.

3. The method of claim **1**, further comprising providing a pump to pump liquids from said subsea pipeline into said hose.

4. The method of claim **1**, further comprising providing a check valve to prevent the flow of liquids from said flexible hose into said subsea pipeline.

5. The method of claim **1**, further comprising providing a check valve to prevent the flow of liquids from said subsea pipeline into said flexible hose.

6. The method of claim **1**, further comprising said multiplicity of bend restrictor sections are long enough to allow said subsea pipeline to rotate one full rotation and still allow said second end of said hose to remain vertical.

7. The method of claim **1**, further comprising launching said flexible hose, multiplicity of bend restrictors, and said buoyancy from the same vessel said subsea pipeline is being laid from.

8. A method of providing an accessible outlet on a subsea pipeline eccentric to the centerline of said subsea pipeline on the seafloor at a location distal from the ends of said pipeline which has unknown rotational orientation about the centerline of said pipeline comprising:

connecting a first end of a flexible hose to said subsea pipeline,

providing a multiplicity of connected bend restrictor sections around said flexible hose to restrict the bending of said hose,

providing buoyancy to the second end of said hose such that said second end of said hose will remain accessible for future operations, and

providing said bend restrictor sections with torsional capacity and connecting said buoyancy to one of said bend restrictor sections to protect said hose from torsional stress.

* * * * *

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(19) United States

(12) Patent Application Publication

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(43) Pub. Date: Jan. 19, 2012

Moszkowski et al.

(54) METHOD OF FILLING CNG TANKS

(76) Inventors: **Marc Moszkowski**, Houston, TX (US); **Benton Frederick Baugh**, Houston, TX (US)

(21) Appl. No.: **12/804,259**

(22) Filed: **Jul. 19, 2010**

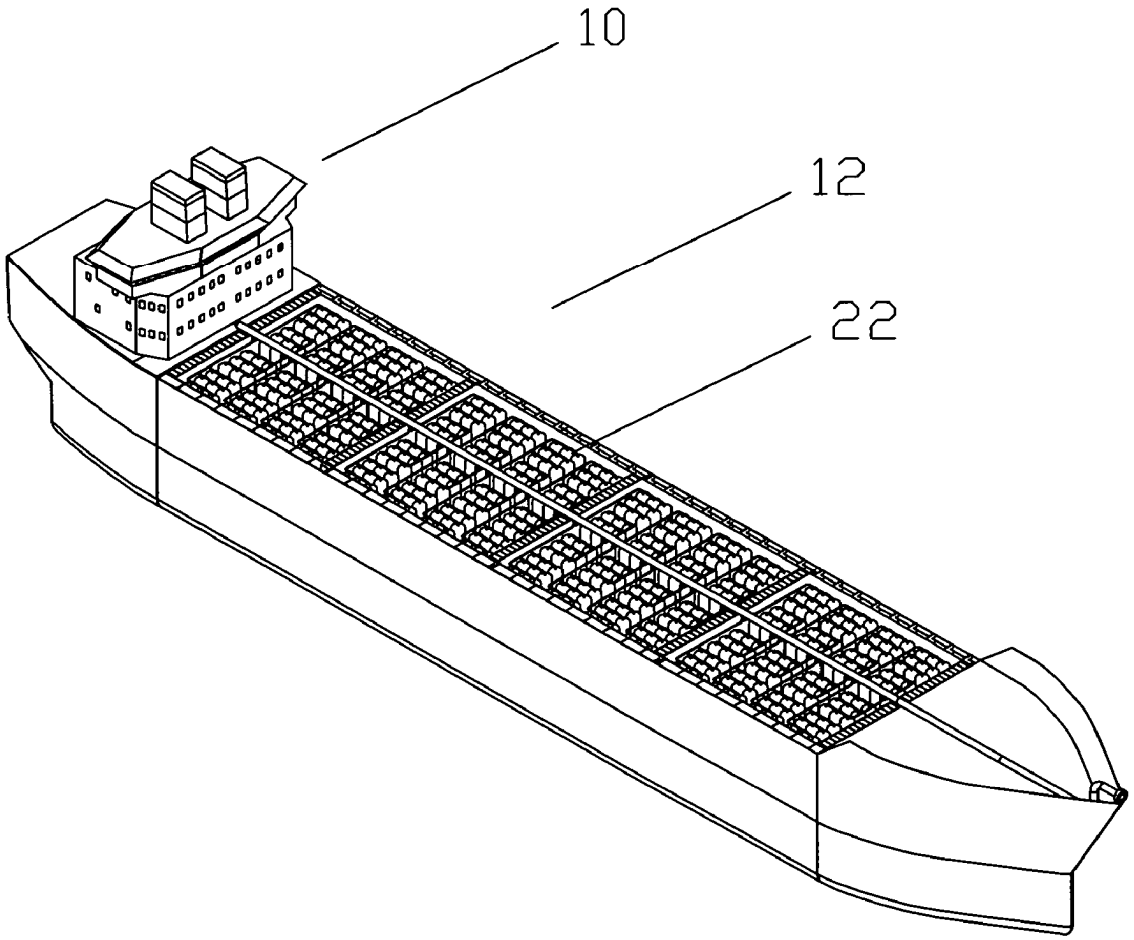
Publication Classification

(51) **Int. Cl.**
F17C 5/06 (2006.01)

(52) **U.S. Cl.** **141/4**; 137/14

(57) **ABSTRACT**

The method of charging a tank with a gas product up to a desired pressure and temperature without increasing the gas in the tank to a pressure and temperature higher than a desired pressure and temperature, comprising pressurizing the incoming gas to be put into the tank to a pressure equal to or higher than the pressure of the resident gas already in the tank, cooling the incoming gas to a temperature lower than the resident gas, mixing the incoming gas with the resident gas up to the desired pressure such that the pressure and temperature of the combined gas will be increased without increasing the temperature and pressure of the resident gas to a pressure and temperature higher than the desired pressure or temperature.



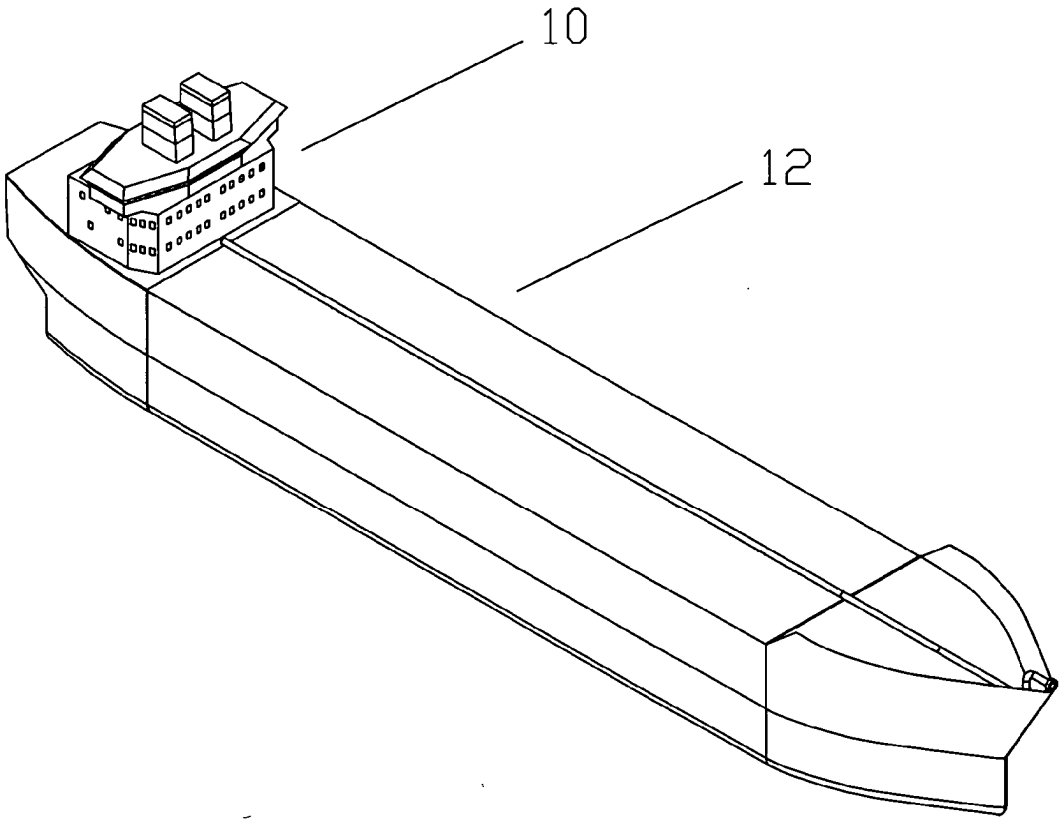


FIG. 1

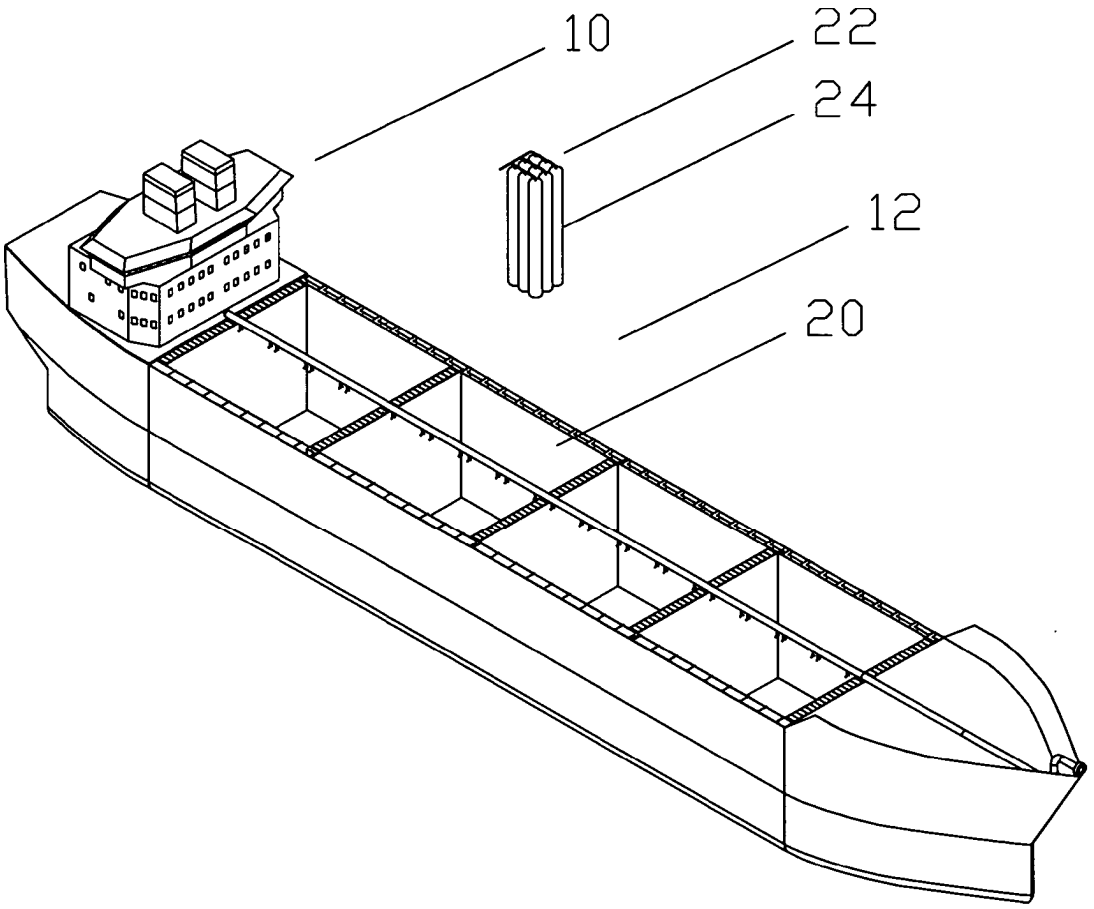


FIG. 2

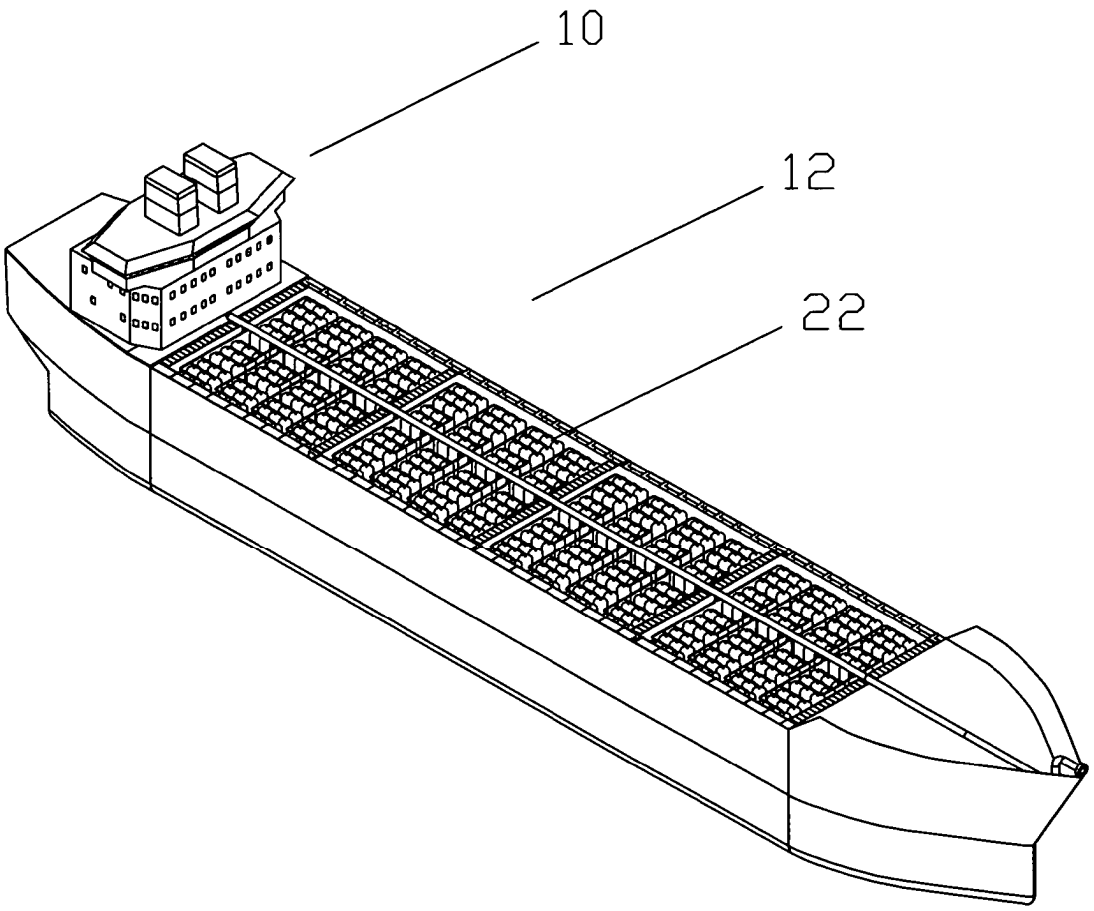


FIG. 3

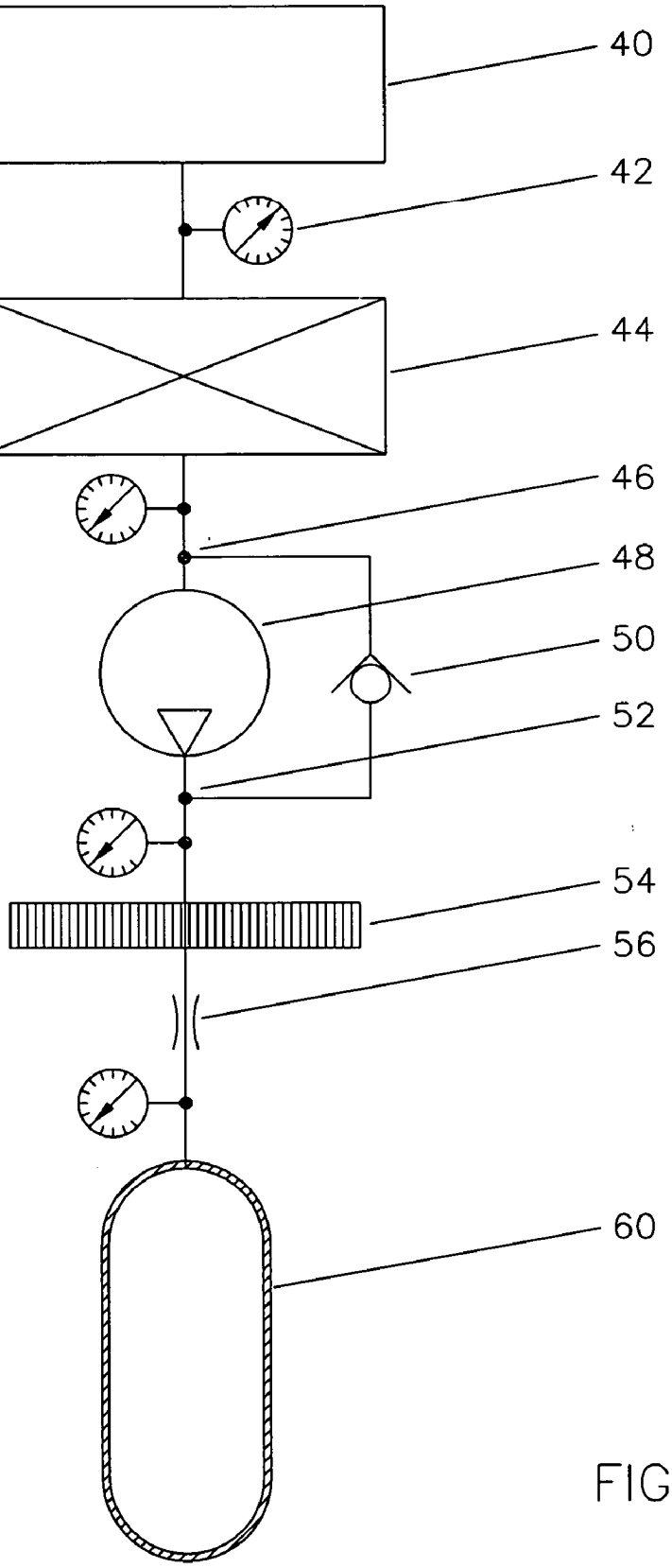


FIG. 4

METHOD OF FILLING CNG TANKS

TECHNICAL FIELD

[0001] This invention relates to the general subject of filling compressed natural gas tanks with gas without over pressuring the tanks.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0002] Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0003] Not applicable

REFERENCE TO A "MICROFICHE APPENDIX"

[0004] Not applicable

BACKGROUND OF THE INVENTION

[0005] The field of this invention of that of charging or increasing the pressure in tanks with a gas product with a relatively high pressure. If such a tank is desired to be charged to a specific pressure such as 2000 p.s.i., it is charged as a progressive process. During this process a portion of this gas is input at a lower pressure such as at 1000 p.s.i. and at a temperature such as 72 degrees F., the volume will be approximately reduced by approximately one half when the pressure is brought up to 2000 p.s.i. During the remainder of the process this gas which was at a temperature at 1000 p.s.i., increases to about 200 degrees when it reaches 2000 p.s.i. If the pressure is simply pumped up to 2000 p.s.i., when the temperature cools back to 72 degrees F. the pressure will drop considerably.

[0006] This means that if you want to transport a product at 2000 p.s.i., you will need to overpressure the tanks to a higher pressure such that it will cool back to a combination of 72 degrees F. and 2000 p.s.i. In realistic terms, this may well mean that the pressure must be pumped up to 2500 p.s.i. This means that the pressure vessel needs to be designed with a working pressure of 2500 p.s.i. rather than a working pressure of 2000 p.s.i., with an extra 25% material weight simply to hold the pressure. This extra weight represents a substantial metal and weight cost, as well as a net reduction in the volume of gas product which can be transported in a vessel of a given size.

BRIEF SUMMARY OF THE INVENTION

[0007] The object of this invention is to provide a method of charging a tank system to a working pressure without having to over design the tank system due to temperature variations in the gas.

[0008] A second object of the present invention is to provide a method of charging a gas tank in which the temperature of the charging gas is reduced by an amount to compensate for the compression heat gained in the gas which is already in the tank.

[0009] A third object of this invention is to provide

[0010] Another object of the present invention

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. **1** is a view of a vessel having the filling method of this invention.

[0012] FIG. **2** is a view of the vessel of FIG. **1** with the top deck removed and showing a set of tanks about to be installed.

[0013] FIG. **3** is a view of the vessel of FIG. **2** with a full complement of storage bottles installed.

[0014] FIG. **4** is a schematic of method of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0015] Referring now to FIG. **1**, an offshore tanker **10** is shown which has a substantial central portion **12** which contains gas storage tanks.

[0016] Now referring to FIG. **2**, the offshore tanker **10** is shown with the top cover from the central portion **12** removed and showing a number of storage chambers **20**. A bank of storage bottles **22** is shown with one of the individual bottles identified as **24**. Individual bottles can be of a variety of sizes, for example 4 feet in diameter by 34 feet long.

[0017] Referring now to FIG. **3**, offshore tanker **10** is shown with more of the double wall covering from central portion **12** removed and a full set of bottles **22** installed. In this model 576 of the bottles **12** are shown. For each of the 576 bottles to be 25% lighter would comprise a substantial weight savings. If one presumes the same 576 bottles are in the same configuration, it would mean that they were the same outer diameter. This means that the 25% of metal removed yields a larger internal volume of the tank for higher gas transportation capacity. This means the tanks cost less, weigh less and so require less fuel to move, but have greater capacity of product.

[0018] Referring now to FIG. **4**, a graphic of the pumping system of this invention is shown. At the top of the schematic, the supply of gas **40** is shown being produced at some pressure as is shown on the pressure gauge **42**. The gas is piped to processing equipment at **44**. The supply of gas **40** will be processed through processing equipment **44** to remove unwanted elements by processes such as filtering and low pressure evaporation.

[0019] At the exit of the processing equipment **44** a tee **46** is seen with one outlet going to a pump **48** and another bypassing the pump **48** through a check valve **50**. Another tee **52** is placed downstream of the pump **48** and joins the flow through the check valve **50** and the flow through the pump **48**. The purpose of this is to allow initial pressures coming out of the process equipment **44** to simply bypass the pump **48** and flow into the bottles **24**.

[0020] Once the pressure in the bottle **24** exceeds the pressure coming out of the process equipment **44**, the gas will no longer flow through the check valve **50**. The pump will then pump the gas to a pressure higher than the pressure in the bottle **24**, for example 25% higher. The compressed gas will become hot as a natural effect of being compressed. The hot compressed gas will be cooled through a cooler **54** to be approximately the temperature of the gas resident in the bottle **24**. The compressed and cooled gas is then lowered in pressure by going though a choke **56**, with the resulting temperature being lower than the gas **60** in the bottle **24**.

[0021] At this point the cool gas flows into the tank and cools the resident gas **60** by mixing as it heats the resident gas

by compression. When the compression and precooling are properly set, the cooling by mixing and the heating by compression can be balanced. This says that if you want to ship gas at 2000 p.s.i. and 72 degrees F., you can build a tank rated for 2000 p.s.i. and 72 degrees F. to do the job. You do not have to overdesign it to handle 2500 p.s.i. and 200 degrees F.

[0022] In a particular application of interest, the gas comes with 20% carbon dioxide by volume. Daily gas delivery is 1,288 MT/day. The initial gas pressure is about 200 bar (2,800 psi) at temperature 140 C (284 F). Overall the gas will see its pressure drop before it enters the bottles. In the process CO2 is separated as a liquid which later is used as a refrigerant by vaporizing it before release to the atmosphere.

[0023] Cooling through a water exchanger only (Process 1): the heat capacity of the gas is about 2.5 that of water. Considering that the sea temperature is 30 C (86 F) and should exit the heat exchanger at 40 C (104 F) and assuming the gas (or rather supercritical fluid) enters at 140 C (284 F) and exits at 40 C (104 F), the total water volume entering the exchanger would be 120 l per second. The flow decreases dramatically if process 3 as described following is used.

[0024] Cooling due to pressure drop (Process 2): according to initial calculations, the gas temperature drop due to pressure drop through the valve when entering the blocks will be 75 C (135 F) when starting the loading operation and will taper off to 10 C (50 F) upon loading completion. The exiting fluid temperature would be −35 C (−31 F) to +30 C (86 F) depending on loading completion. In both states CO2 is a liquid at pressures exceeding 75 bar (1,050 psi).

[0025] The pressurized liquid CO2 can be used in an evaporator to lower the temperature of the liquid or supercritical fluid further (Process 3). If there is condensation in the exchanger the heat of evaporation equals the heat of liquefaction. Also, the process can be used to decrease the temperature of the fluid without change of phase by 85 C (153 F) from 140 to 55 C (284 to 131 F). A combination of 1 and 3 can also be used.

[0026] In short, the combination of 20% of carbon dioxide and the pressures and temperatures encountered will make possible the separation of liquid CO2 without a need to re-pressurize.

[0027] The particular embodiments disclosed above are illustrative only, as the invention may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. Furthermore, no limitations are intended to the details of construction or design herein shown, other than as described in the claims below. It is therefore evident that the particular embodiments disclosed above may be altered or modified and all such variations are considered within the scope and spirit of the invention. Accordingly, the protection sought herein is as set forth in the claims below.

That which is claimed is:

1. The method of charging a tank with a gas product up to a desired pressure and temperature without increasing the gas in said tank to a pressure and temperature higher than said desired pressure and temperature, comprising:

pressurizing the incoming gas to be put into said tank to a pressure higher than the pressure of the resident gas already in said tank,

allowing said incoming gas to expand to a lower pressure to cool said incoming gas to a temperature lower than said resident gas,

mixing said incoming gas with said resident gas up to said desired pressure such that the pressure and temperature of the combined gas will not be higher than said desired pressure or temperature.

2. The method of claim **1** further comprising cooling said incoming gas prior to allowing said incoming gas to expand.

3. The method of claim **1** further comprising cooling said incoming gas by expansion through an orifice.

4. The method of claim **1** further comprising said tank comprising a multiplicity of individual tanks which are interconnected by piping.

5. The method of claim **4** further comprising said multiplicity of tanks are on a ship for ocean transport.

6. The method of charging a tank with a gas product up to a desired pressure and temperature without increasing the gas in said tank to a pressure and temperature higher than said desired pressure and temperature, comprising:

cooling the incoming gas to be put into said tank to a temperature lower than the temperature of the resident gas already in said tank,

mixing said incoming gas with said resident gas up to said desired pressure and temperature such that the pressure or temperature of the combined gas will not be higher than said desired pressure or temperature.

7. The method of claim **6** further comprising cooling said incoming gas by expansion through an orifice.

8. The method of claim **6** further comprising said tank comprising a multiplicity of individual tanks which are interconnected by piping.

9. The method of claim **8** further comprising said multiplicity of tanks are on a ship for ocean transport.

10. The method of charging a tank with a gas product up to a desired pressure/temperature combination without increasing the gas in said tank to a pressure/temperature combination higher than said desired pressure/temperature combination, comprising:

pressurizing the incoming gas to be put into said tank to a pressure equal to or higher than the pressure of the resident gas already in said tank,

cooling said incoming gas to a temperature lower than said resident gas,

mixing said incoming gas with said resident gas up to said desired pressure/temperature combination such that the pressure/temperature combination of the combined gas will be increased without increasing the temperature/pressure combination of the resident gas to a pressure/temperature combination higher than said desired pressure/temperature combination.

11. The invention of claim **10**, further comprising said incoming gas will be cooled by expansion to a lower pressure through an orifice.

12. The method of claim **10** further comprising said tank comprising a multiplicity of individual tanks which are interconnected by piping.

13. The method of claim **12** further comprising said multiplicity of tanks are on a ship for ocean transport.

* * * * *

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(19) United States

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Moszkowski et al. (43) Pub. Date: Jun. 22, 2006

(54) DYNAMIC POSITIONING CONNECTION

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(21) Appl. No.: **11/015,722**

(22) Filed: **Dec. 20, 2004**

Publication Classification

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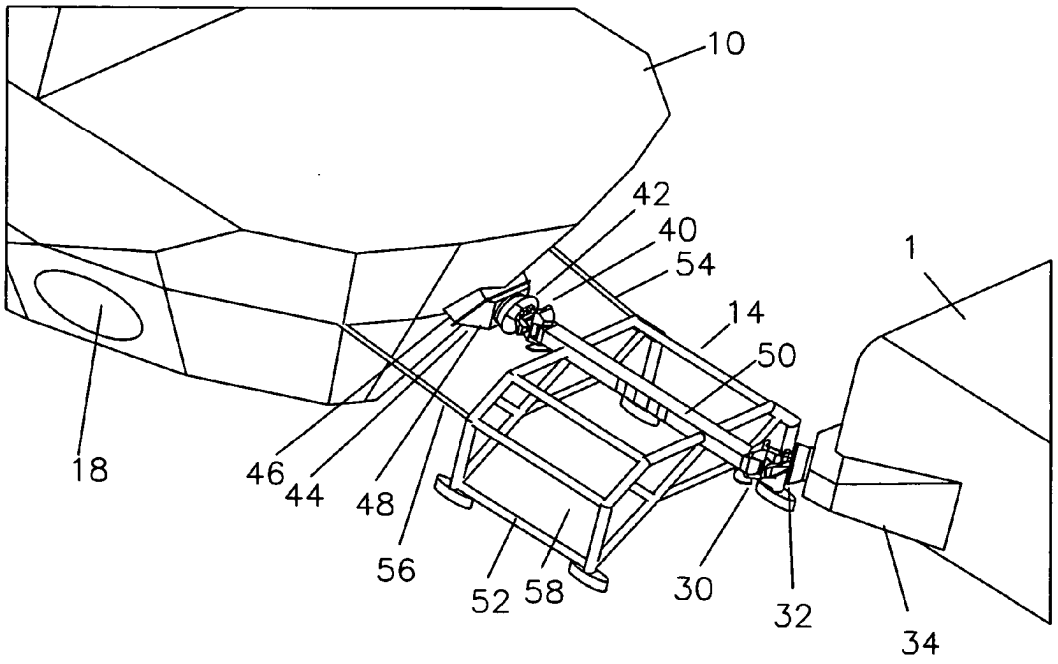
B63B 21/58 (2006.01)
B63B 35/44 (2006.01)

(52) **U.S. Cl.** **114/250**

(57) **ABSTRACT**

A method of providing for the dynamic positioning of a vessel comprising providing a dynamically positioned service boat, linking the service boat to the vessel by a rigid link with a first connection between the link and the vessel, a second connection between the link and the service boat, the combination of connections having 3 degrees of rotational freedom, said supply boat having one degree of axial freedom relative to said vessel, and using the power of the service boat to dynamically position said vessel in a desired location.



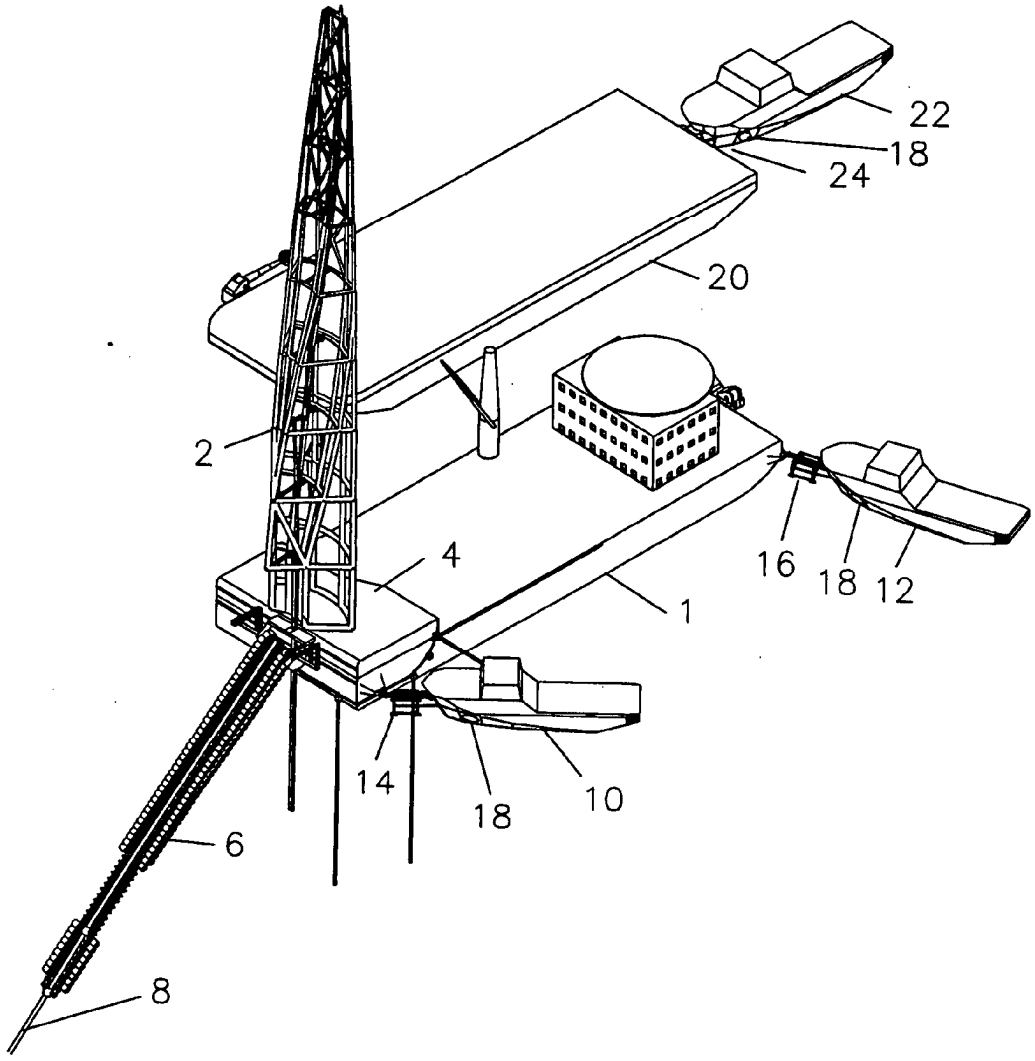


FIGURE 1

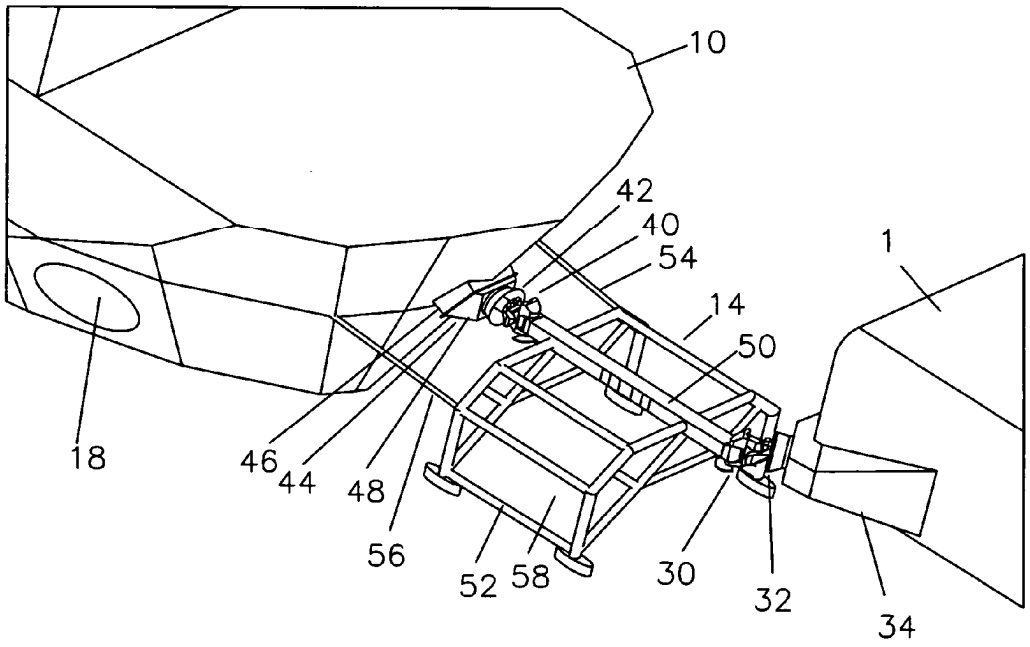


FIGURE 2

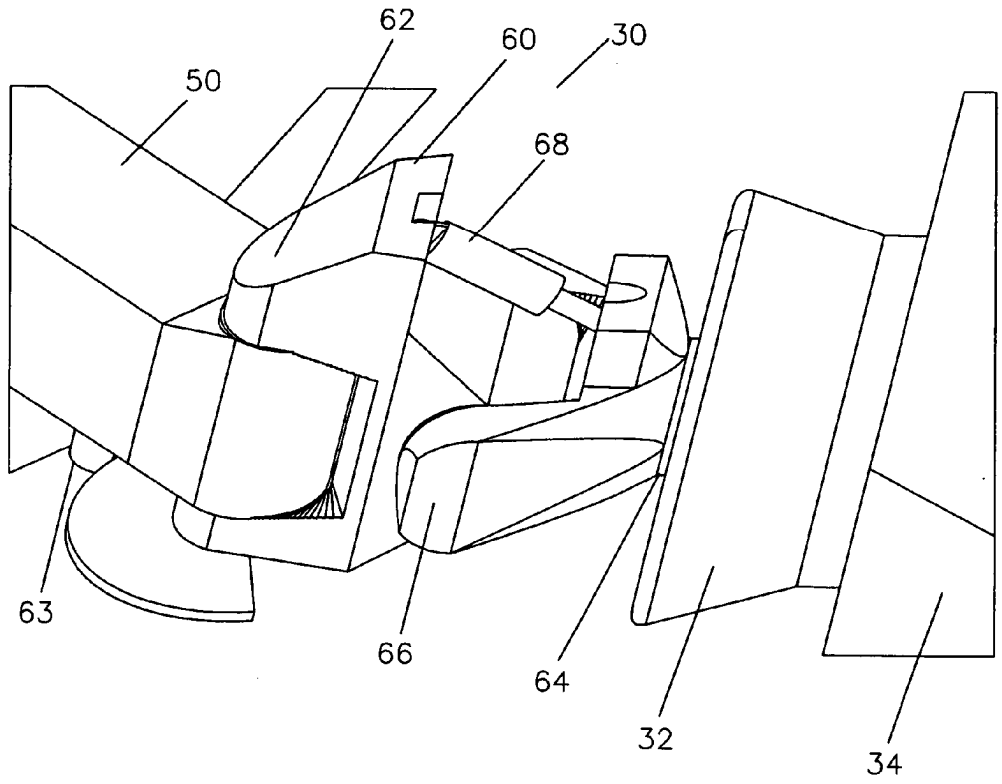


FIGURE 3

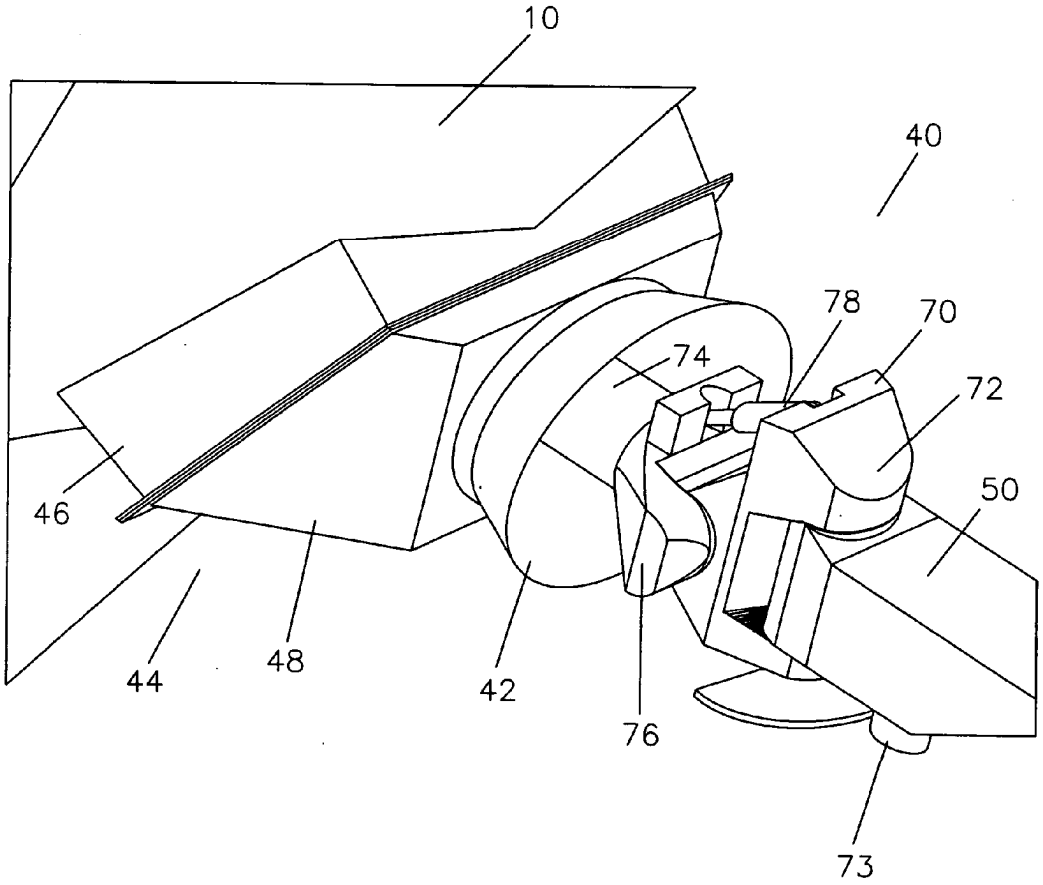


FIGURE 4

DYNAMIC POSITIONING CONNECTION

BACKGROUND OF THE INVENTION

[0001] In shallow waters, pipelay is primarily done by an "S-Lay" method, which means that the welding is done along the deck of a flat barge and then the pipe bends down to the ocean floor in a sort of "S" curve. The pipe bends down on a radiused stinger and then naturally curves back to horizontal as it reaches the ocean floor. In deeper water, the forces on the stinger and the size of the required stinger make it more favorable to weld the pipe together in a near vertical position and have a single bend at the ocean floor. The forms a "J" in the pipe and gives it the name of the "J-Lay" method.

[0002] Offshore deepwater pipeline laying systems are characteristically limited to high cost specialty vessels due the combination of loads and positioning required to accomplish the pipelaying. J-Lay pipelay systems are characteristically complicated and require special connections to the vessel. This makes a costly specialty custom vessel an appropriate investment. As the custom vessel is an appropriate investment, investment in onboard dynamic positioning also becomes an appropriate investment.

[0003] Dynamic positioning is using the propellers to actively hold the vessel in position, in contrast to passively holding the vessel in position with anchors and anchor lines.

[0004] A pipelay system such as the Flex J-lay Tower described in U.S. Pat. No. 6,776,560 provides the unique ability to be simply mounted on a flat and economical barge. Such a barge or vessel would typically not have dynamic positioning available. The barge or vessel could then be positioned along the pipeline route by one or more service boats which can provide the dynamic positioning capability. The service boats would be connected to the barge or vessel by the connections of this invention.

[0005] Such service boats have previously been connected to vessels of this type by a rope, which provides only an axial tension. If the service boat wants to provide a force on the vessel in any direction other than straight along the rope, the service boat must move radially around the connection point on the vessel to another position. The service boat could then pull in that direction only.

[0006] An appropriate mechanical connection would have the ability for the service boat to push or pull the vessel. When the service boat has a horizontal bow thruster, it can provide a sideways force on the connection, and therefore on the vessel. By combinations of axial thrust and sideways bow thrusters, the service boat can impart a force on the vessel in any horizontal direction.

[0007] A complication to a mechanical connection between the vessel and the service boat is that the larger vessel and the smaller supply boat will characteristically have different periods of vertical motion. As one is going up, the other will be going down at some times during operations.

BRIEF SUMMARY OF THE INVENTION

[0008] The object of this invention is to provide a system for improved dynamically positioning a vessel by mechanically connecting one or more dynamically positioned service boats to the vessel.

[0009] A second object of the present invention is to provide 3 degrees of rotational freedom on the mechanical connection between the vessel and the one or more service boats.

[0010] A third object of the present invention is to provide one degree of axial freedom for normal operations.

[0011] Another object of the present invention is to provide a second degree of mechanical freedom when desired.

[0012] Another object of the present invention is to allow the service boat to exert a sideways force on the vessel.

[0013] Another object of this invention is to allow the service boat to exert a push or pull on the vessel in any direction

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

[0014] **FIG. 1** is a view of a j-lay system on a barge and of a supporting pipe barge, each having service boats connected by connections of this invention for dynamic positioning.

[0015] **FIG. 2** is a view of a portion of the pipelay barge and a service boat with the connection of this invention between.

[0016] **FIG. 3** is an enlarged view of the joint between the central connection member and the pipelay barge.

[0017] **FIG. 4** is an enlarged view of the joint between the central connection member and the service boat with dynamic positioning.

DETAILED DESCRIPTION OF THE INVENTION

[0018] **FIG. 1** shows a pipelay vessel **1** with a j-lay tower **2** mounted on the deck **4**. A pipe supporting mechanism **6** is shown with a portion of the pipeline **8** suspended in the ocean water. Service boats **10** and **12** are attached to the pipelay vessel **1** by links **14** and **16** respectively.

[0019] Side thrusters **18** are provided near the bow of the service boats **10** and **12** which enable the service boats to provide a lateral force on links **14** and **16**. Various combinations of lateral and axial forces from the service boat to the vessel allow the service boat to impart forces in any direction to the vessel.

[0020] An additional barge **20** is shown in a position to re-supply the pipelay vessel **1** with pipe or other supplies. A third service boat **22** is shown attached by link **24**.

[0021] Referring now to **FIG. 2**, link **14** is shown between vessel **1** and service boat **10**. Pivoting joint **30** is shown engaging funnel **32** which is mounted to vessel **1** at **34**. The mounting can be prepared and permanently affixed to the vessel **1**, can be removeably attached, or can be magnetically attached.

[0022] Pivoting joint **40** is shown engaging funnel **42** which is mounted to service boat **10** at **44**. Portion **46** of the mounting can be prepared and permanently affixed to the vessel **10** and portion **48** can be bolted to portion **46**.

[0023] Link **14** has a main axial member **50** and a structure **52**. Cables or chains **54** and **56** connect between structure **52**

and service boat **10** to restrict rotational movement in the plane of the surface of the ocean, restricting the two vessels to a single degree of axial freedom relative to each other. When an extra degree of axial freedom is desired, tension can be released on cables or chains **54** and **56**. Buoyancy material **58** is shown generally within the structure **52** to make the structure **52** positively buoyant.

[**0024**] Cables or chains can be installed on the opposite end of the link and attached directly to the vessel to restrict the degree of motion on the opposite end of the link.

[**0025**] Referring now to **FIG. 3**, pivoting joint **30** is shown in greater detail. Central member **60** is pivoted horizontally relative to main axial member **50** about a vertical pin generally located at **62** (not shown). Motor **63** can be powered to rotate central member **60** about the vertical pin located at **62**. Stab **64** is pivoted vertically relative to central member **60** about a horizontal pin generally located at **66** (not shown). Stab **64** lockingly engages funnel **32** to connect to vessel **1** and can rotate about the centerline of the stab. Cylinder **68** can be used to position the stab **64** when the stabbing connection is made. Vertical pin at **62**, horizontal pin at **66**, and stab **64** provide **3** degrees of angular freedom.

[**0026**] Referring now to **FIG. 4**, pivoting joint **40** is shown in greater detail. Central member **70** is pivoted horizontally relative to main axial member **50** about a vertical pin generally located at **72** (not shown). Motor **73** can be powered to rotate central member **70** about the vertical pin located at **72**. Stab **74** is pivoted vertically relative to central member **70** about a horizontal pin generally located at **76** (not shown). Stab **74** lockingly engages funnel **42** to connect to service boat **10** and can rotate about the centerline of the stab. Cylinder **78** can be used to position the stab **74** when the stabbing connection is made. Horizontal pin at **66** vertical pin at **76**, and stab **74** provide decrees of angular freedom.

[**0027**] The particular embodiments disclosed above are illustrative only, as the invention may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. Furthermore, no limitations are intended to the details of construction or design herein shown, other than as described in the claims below. It is therefore evident that the particular embodiments disclosed above may be altered or modified and all such variations are considered within the scope and spirit of the invention. Accordingly, the protection sought herein is as set forth in the claims below.

1. A method of providing for the dynamic positioning of a vessel comprising

providing a dynamically positioned service boat,

providing a link,

providing a first connection between said link and said vessel,

providing a second connection between said link and said service boat,

providing three degrees of rotational freedom by the combination of said first connection and said second connection,

providing one degree of axial freedom between said service boat and said vessel by the combination of said first connection and said second connection, and using the power of said service boat to position said vessel in a desired location.

2. The method of claim 1, further comprising said combination of said first connection and said second connection providing a second degree of axial freedom.

3. The method of claim 1, further comprising providing flotation material for said link such that said link is positively buoyant.

4. The method of claim 1 further comprising providing sideways thrust on said service boat to provide a lateral force on said link and thereby a lateral force on said vessel.

5. The method of claim 4 further comprising the combination of said lateral forces and axial forces from said service boat onto said link allows said link to exert forces on said vessel in any horizontal direction.

6. The method of claim 1 further comprising said first connection being a stab engaging a funnel.

7. The method of claim 6 further providing a cylinder to position said stab prior to entering said funnel.

8. The method of claim 1 further comprising that said first connection being magnetically attached to said vessel.

9. The method of claim 1 further comprising said second connection having a portion permanently affixed to said service boat and a portion removeably attached to said permanently affixed portion on said service boat.

10. The method of claim 9 further comprising said removeably attached portion being a funnel.

11. A method of providing for the dynamic positioning of a vessel comprising

providing a dynamically positioned service boat,

providing a rigid link,

providing a first connection between said link and said vessel, said first connection

providing 3 degrees of rotational freedom and one degree of axial freedom,

providing a second connection between said link and said service boat, said second connection providing 3 degrees of rotational freedom and 2 degrees of axial freedom, and using the power of said service boat to position said vessel in a desired location.

12. A method of providing for the dynamic positioning of a vessel comprising

providing a dynamically positioned service boat,

providing a link capable of pushing or pulling,

providing a first connection between said link and said vessel, said first connection providing 3 degrees of rotational freedom,

providing a second connection between said link and said service boat, said second connection providing three degrees of rotational freedom,

providing one degree of axial freedom between said vessel and said service boat,

and using the power of said service boat to position said vessel in a desired location.

13. The method of claim 12, further comprising said second connection provides a third degree of angular freedom

14. The method of claim 12 further comprising providing a second degree of axial freedom between said vessel and said service boat.

15. The method of claim 12 further comprising providing sideways thrust on said service boat to provide a lateral force on said link and thereby a lateral force on said vessel.

16. The method of claim 15 further comprising the combination of said lateral forces and axial forces from said service boat onto said link allows said link to exert forces on said vessel in any horizontal direction.

17. The method of claim 12 further comprising said first connection being a stab engaging a funnel.

18. The method of claim 17 further providing a cylinder to position said stab prior to entering said funnel.

19. The method of claim 12 further comprising that said first connection being magnetically attached to said vessel.

20. The method of claim 12 further comprising said second connection having a portion permanently affixed to said service boat and a portion removeably attached to said permanently affixed portion on said service boat.

21. The method of claim 20 further comprising said removeably attached portion being a funnel.

22. The method of claim 12, further comprising providing flotation material for said link such that said link is positively buoyant.

* * * * *

m.moszkowski@deep-gulf.com

EXHIBIT Y

From: graeme mitaxa <entecsol@yahoo.com>
Sent: Friday, October 26, 2007 8:34 AM
To: Marc Moszkowski
Subject: RE: Timor Leste Project

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Marc.

Thanks for the update.

Here is one for you in return.

Together with two other Australians I established Engineered Technical Solutions almost 6 years ago. both of whom are directors of Toke consultans S.A. in Dili.

The two local directors from Dili have now informed me that the project we originally offered the Government now has several conditions added.

We have immediateld tendered our resignations from the board of directors and withdrawn all support for all projects in Timor Leste.

The project will now be offered t The govern ment of Papua New Guinea.

There will certainly be a requirement for pipelines so you are still required. Returning to the directors of ENTECSOL.

One partner resides in Brisbane I forwarded your email to him and his contact details are as follows.

Kim Lynch

Tel: Work : +61 311,53743

Home: : +61 7 335 260271

Mobile : +61 411 431 312

Kim would be delighted to touch base with you during your time in Brisbane.

Should you find time to swing through Jakarta I can meet any time you require.

You have my number

Regards

Graeme.

Marc Moszkowski <m.moszkowski@deep-gulf.com> wrote:

> Dear Graeme,
>
> Your web access to our presentations was changed to:
>
> User name: graeme
>
> Password: romit
>
> The previous sunrise/trench combination is no longer valid.
>
> In another register, I am going to travel to Australia anyhow early next week, as I had already made arrangements with friends in Sydney and Brisbane and I don't want to have them change their plans. Anyway it'll be nice to be there for a couple of weeks and I anticipate to have access to the Internet and be able to carry out my professional duties from there. If there is any opportunity for meetings while in Australia, just let me know, I intend to do some traveling around. I can also stop over in Jakarta on the way to Europe after my stay in Australia.
>
> Thanks,
>
> Marc
>
> ---
>
> **From:** graeme mitaxa [mailto:entecsol@yahoo.com]
> **Sent:** Wednesday, October 24, 2007 4:42 AM

To: marc moszkowski
Subject: Timor Leste Project

Dear Marc,

I regert to inform you that the proposed project has become a political football.

The partners that reside in Dili have been extremely busy attempting to set up a separate deal which would take the proposal from being humanitarian based to stripping the returns into their pockets. The local politicans are also involved.

At this point in time I feel it would be futile for you to travel so far to give a presentation.

Both the partners and the government are demanding that they have fuul,control of all the project funding of almost US $ 9 billion.

I think not

The two in Dili have rewritten the deal to a point that The Sultan of Brunei has withdrawen his support simply because the operation would now be in direct competition to Shell's operations in Brunei.

I have informed the partners in Dili of the confidentiallity agreement that we have but am afraid that they may not comply which places me in a difficult position.

Would you be able to call me later this evening.

Thanking you

Best Regards

Graeme

_____
Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

m.moszkowski@ultradeepoffshore.com

EXHIBIT Z

From: Roshni Umrigar - HOU <rumrigar@griffintravel.com>
Sent: Friday, October 26, 2007 4:18 PM
To: Marc Moszkowski (E-mail)
Subject: FW: MOSZKOWSKI/MARC MR 31OCT PNS

MOSZKOWSKI/MARC MR 31OCT PNS

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INVOICE 0005626930
DATE 26OCTOBER07
BOOKING REF 364RHP
AGENT 39/39

LOTT SHIP AGENCY INC
P O BOX 1802
MOBILE AL 36633

TICKETLESS RESERVATION
RECORD LOCATOR: ANSSXE
VESSEL: EUROPA
REGISTRY: ST VINCENT

ACCOUNT NUMBER 311978

SERVICE	DATE	FROM	TO	DEPART	ARRIVE
CONTINENTAL AIRLINES CO 5838 Y ECONOMY	31OCT WEDNESDAY	PENSACOLA FL REGIONAL	HOUSTON TX G.BUSH INTERCO TERMINAL B	305P	444P
				NON STOP	
		RESERVATION CONFIRMED		1:39 DURATION	
		FLIGHT OPERATED BY CHAUTAUQUA AIRLINES IN			
	AIRCRAFT OWNER:	RP CHAUTAUQUA AIRLINES			
	AIRCRAFT:	EMBRAER RJ135/140/145			
		SEAT 05B NO SMOKING CONFIRMED		MOSZKOWSKI/MARC	

CLICK HERE FOR HOUSTON CITY INFO, TRANSFERS & EVENTS

CONTINENTAL AIRLINES CO 1788 Y ECONOMY	31OCT WEDNESDAY	HOUSTON TX G.BUSH INTERCO TERMINAL C	LOS ANGELES CA INTL TERMINAL 6	525P	706P
		SNACK		NON STOP	
		RESERVATION CONFIRMED		3:41 DURATION	
	AIRCRAFT:	BOEING 737-800			
		SEAT 08A NO SMOKING CONFIRMED		MOSZKOWSKI/MARC	

CLICK HERE FOR LOS ANGELES CITY INFO, TRANSFERS & EVENTS

AIR FARE 371.16	TAX 44.14	AIR TOTAL USD	415.30
		SERVICE FEES	35.00
		INVOICE TOTAL:USD	450.30

PAYMENT: AX XXXXXXXXXXX5028/EXP0708 105632

RESERVATION NUMBER(S) AF/JDDSPT CO/ANSSXE QF/PJZUYI

ETKT:CO 005 7031522581 MOSZKOWSKI/MARC MR

--*** ** *****--**
--*** *********** AFTER HOURS SERVICES *********** *****--**
--*** *************** 866-501-9748 *************** *****--**
--*** * OUTSIDE USA - CALL COLLECT: 713-535-1490 * *****--**
--*** ** *****--**
--* CHECK MY TRIP AMADEUS RESERVATION NUMBER: 364RHP ***--**
--*** ** *****--**
****
****** RETAIN THIS PAGE AS YOUR RECEIPT *****
CLAIM YOUR RESERVATION AT AIRPORT BY GIVING
THE RECORD LOCATOR AND SHOWING PICTURE I.D.
****
** CHECK IN REQUIREMENTS: WE RECOMMEND YOU CLAIM YOUR *
** RESERVATION AT LEAST ** 2 HOURS ** PRIOR **
* TO YOUR SCHEDULED DEPARTURE. FAILURE TO DO *
** SO COULD RESULT IN CANCELLATION OF RESERVATION **
** -- YOU WILL *NOT* BE ELIGIBLE FOR -- **
** -- DENIED BOARDING COMPENSATION -- **
****
*** INCREASED SECURITY MEASURES ARE IN EFFECT ***
********** DOMESTIC CHECK-IN 2 HOURS **********
******** INTERNATIONAL CHECK-IN 3 HOURS ********
ONLY PSGRS W/ BOARDING PASSES ARE PERMITTED PAST SECURITY
KNIVES OR OTHER POTENTIAL WEAPONS MUST BE IN CHECKED BAGGAGE
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US CITIZENS ARE REQUIRED TO HAVE A PASSPORT
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MEXICO AND CANADA - EFFECTIVE 01JAN06
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RECONFIRM ALL INTERNATIONAL FLIGHTS LOCALLY

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---

m.moszkowski@ultradeepoffshore.com

From: Roshni Umrigar - HOU <rumrigar@griffintravel.com>
Sent: Friday, October 26, 2007 4:19 PM
To: Marc Moszkowski (E-mail)
Subject: FW: MOSZKOWSKI/MARC MR 31OCT LAX

MOSZKOWSKI/MARC MR 31OCT LAX

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INVOICE 0005626951
DATE 26OCTOBER07
BOOKING REF 364RHP
AGENT 39/39

LOTT SHIP AGENCY INC
P O BOX 1802
MOBILE AL 36633

TICKETLESS RESERVATION
RECORD LOCATOR: PJZUYI
VESSEL: EUROPA
REGISTRY: ST VINCENT

ACCOUNT NUMBER 311978

SERVICE	DATE	FROM	TO	DEPART	ARRIVE
QANTAS AIRWAYS	31OCT	LOS ANGELES CA	SYDNEY AU	1030P	700A
QF 12	WEDNESDAY	INTL	KINGSFORD SMIT		02NOV
V ECONOMY		TERMINAL 4	TERMINAL 1		
NON SMOKING		REFRESHMENTS/MEAL		NON STOP	
		RESERVATION CONFIRMED		14:30 DURATION	
	AIRCRAFT:	BOEING 747-400			

CLICK HERE FOR SYDNEY CITY INFO, TRANSFERS & EVENTS

QANTAS AIRWAYS	24NOV	PERTH WA	SINGAPORE	430P	845P
QF 71	SATURDAY		CHANGI		
V ECONOMY		TERMINAL 1	TERMINAL 1		
NON SMOKING		DINNER		NON STOP	
		RESERVATION CONFIRMED		5:15 DURATION	
	AIRCRAFT:	AIRBUS INDUSTRIE A330-300			
		SEAT 35A NO SMOKING CONFIRMED		MOSZKOWSKI/MARC	

CLICK HERE FOR SINGAPORE CITY INFO, TRANSFERS & EVENTS

AIR FARE BULK	TAX 160.00YQ	TOTAL TICKET	BULK 1981.43
	MARINE AND OFFSHORE DISCOUNT		-413.59
		INVOICE TOTAL:	1567.84

PAYMENT: *CHECK

RESERVATION NUMBER(S) AF/JDDSPT CO/ANSSXE QF/PJZUYI

ETKT:QF 081 7031522598   MOSZKOWSKI/MARC MR

--* CHECK MY TRIP AMADEUS RESERVATION NUMBER: 364RHP ***--**
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** -- DENIED BOARDING COMPENSATION -- **
****
--*** ********** ******--**
--*** *********** AFTER HOURS SERVICES *********** ******--**
--*** *************** 866-501-9748 *************** ******--**
--*** * OUTSIDE USA - CALL COLLECT: 713-535-1490 * ******--**
--*** ********** ******--**
--* CHECK MY TRIP AMADEUS RESERVATION NUMBER: 364RHP ***--**
--*** ********** ******--**
TOTAL CHARGE TO CREDIT CARD XXXXXXXX85028/0708 $1567.84
*** INCREASED SECURITY MEASURES ARE IN EFFECT ***
********** DOMESTIC CHECK-IN 2 HOURS **********
******** INTERNATIONAL CHECK-IN 3 HOURS ********
ONLY PSGRS W/ BOARDING PASSES ARE PERMITTED PAST SECURITY
KNIVES OR OTHER POTENTIAL WEAPONS MUST BE IN CHECKED BAGGAGE
IF FLIGHT SEGMENTS ARE NOT FLOWN IN ORDER,
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http://www.star.net.uk

m.moszkowski@deep-gulf.com

From: reservations@regionallink.com.au
To: m.moszkowski@deep-gulf.com
Subject: YOUR BOOKING DETAILS

Reservation Number: Z6Y4K7
Reservation Date: 5 Nov 2007

** Your Traveller Details **

1 Mr Marc Moszkowski

Class: Economy

TL0500 Airnorth Regional
Departing Darwin on 12 Nov 2007 at 07:00 Arriving Dili on 12 Nov 2007 at 08:15
TL0501 Airnorth Regional
Departing Dili on 15 Nov 2007 at 09:00
Arriving Darwin on 15 Nov 2007 at 11:15

** Fare and Payment Details **

Base fare: AUD705.00
Taxes and Other Charges: AUD117.93
Total fare: AUD822.93

TICKET COLLECTION:
Electronic Ticket - No paper ticket is required. Please show photo identification when checking in for flight.

In the event any problems, please contact our reservation service:
Phone: +61 (8) 89204 001
E-mail: reservations@regionallink.com.au

Please see terms and conditions below. Thank you for booking your ticket with RegionalLink.

** Terms and Conditions **

Check In

Domestic Departures

Passengers should arrive at the airport check-in desk a minimum of 45 minutes prior to departure. Arriving 45 minutes prior to scheduled departure will enable RegionalLink to process boarding passes, clear new and additional security procedures, and assist in on time departures. Unfortunately seats cannot be guaranteed if you and/or the person(s) that you have made this booking for do not arrive 45 minutes before the scheduled departure time

International Departures

Passengers should arrive at the airport check-in desk a minimum of 90 minutes prior to departure. Arriving 90 minutes prior to scheduled departure will enable RegionalLink to process boarding passes, allow time for the process off customs and immigration formalities, additional security procedures, and assist in on time departures. Unfortunately seats cannot be guaranteed if you and/or the person(s) that you have made this booking for do not arrive 90 minutes before the scheduled departure time

Animals

All Livestock will need to be Booked by Australian Air Express for all RegionalLink Flights IN and OUT of Darwin and other Ports.
All Live Animals will need to be lodged at Australian Air Express or their agent 90 mins before departure time.
RegionalLink will not accept any Live Animals via the check-in counter.
Any Livestock NOT booked will be on the discretion of Australia Air Express.
Australian Air Express can be contacted on 131213.

Baggage Allowance

Passengers travelling on RegionalLink services are guaranteed uplift of 13 kg.
Up to 20 Kg is carried subject to available space All baggage in excess of 20 kg is charged at 1% of the full economy airfare per Kilo and is on a space available basis.

Catering

Snack service is provided on EM2 120 (Brasilia) operated services.

Children

Children aged between 5-11 years inclusive travelling without the supervision of a person aged 12 years or over may not be booked via the Internet. Please contact RegionalLink direct on 1800 627 474.

Special handling

Please contact RegionalLink Reservations directly on +61 (8) 89204 001

m.moszkowski@ultradeepoffshore.com

From: Roshni Umrigar - HOU <rumrigar@griffintravel.com>
Sent: Friday, October 26, 2007 4:19 PM
To: Marc Moszkowski (E-mail)
Subject: FW: MOSZKOWSKI/MARC MR 24NOV SIN

MOSZKOWSKI/MARC MR 24NOV SIN

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INVOICE 0005626963
DATE 26OCTOBER07
BOOKING REF 364RHP
AGENT 39/39

LOTT SHIP AGENCY INC
P O BOX 1802
MOBILE AL 36633

TICKETLESS RESERVATION
RECORD LOCATOR: JDDSPT
VESSEL: EUROPA
REGISTRY: ST VINCENT

ACCOUNT NUMBER 311978

SERVICE	DATE	FROM	TO	DEPART	ARRIVE
AIR FRANCE	24NOV	SINGAPORE	PARIS	1130P	610A
AF 257	SATURDAY	CHANGI	CHARLES DE GAU		25NOV
V ECONOMY		TERMINAL 1	TERMINAL 2E		
NON SMOKING		MEAL/BREAKFAST		NON STOP	
		RESERVATION CONFIRMED		13:40 DURATION	
AIRCRAFT:		BOEING 777-300ER			
		SEAT 44A NO SMOKING CONFIRMED		MOSZKOWSKI/MARC	

CLICK HERE FOR PARIS CITY INFO, TRANSFERS & EVENTS

AIR FRANCE	25NOV	PARIS	NICE	1100A	1230P
AF 7702	SUNDAY	CHARLES DE GAU	COTE D AZUR		
V ECONOMY		TERMINAL 2F	TERMINAL 2		
NON SMOKING				NON STOP	
		RESERVATION CONFIRMED		1:30 DURATION	
AIRCRAFT:		AIRBUS INDUSTRIE A321			

CLICK HERE FOR NICE CITY INFO, TRANSFERS & EVENTS

AIR FARE BULK	TAX 14.33SG	TOTAL TICKET	BULK 1791.79
	MARINE AND OFFSHORE DISCOUNT		-908.00
		INVOICE TOTAL:	883.79

PAYMENT: *CHECK

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RESERVATION NUMBER(S)  AF/JDDSPT  CO/ANSSXE  QF/PJZUYI

ETKT:AF 057 7031522608    MOSZKOWSKI/MARC MR

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****************************************
**--*** CHECK MY TRIP AMADEUS RESERVATION NUMBER: 364RHP ***--**
**--***** ****************************************** *****--**
**--***** *********** AFTER HOURS SERVICES *********** *****--**
**--***** *************** 866-501-9748 *************** *****--**
**--***** * OUTSIDE USA - CALL COLLECT: 713-535-1490 * *****--**
**--***** ****************************************** *****--**
**--*** CHECK MY TRIP AMADEUS RESERVATION NUMBER: 364RHP ***--**
**--***** ****************************************** *****--**
TOTAL CHARGE TO CREDIT CARD XXXXXXXX85028/0708 $883.79
*** INCREASED SECURITY MEASURES ARE IN EFFECT ***
********** DOMESTIC CHECK-IN 2 HOURS **********
******** INTERNATIONAL CHECK-IN 3 HOURS ********
ONLY PSGRS W/ BOARDING PASSES ARE PERMITTED PAST SECURITY
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m.moszkowski@ultradeepoffshore.com

From: Roshni Umrigar - HOU <rumrigar@griffintravel.com>
Sent: Friday, October 26, 2007 4:19 PM
To: Marc Moszkowski (E-mail)
Subject: FW: MOSZKOWSKI/MARC MR 03DEC NCE

MOSZKOWSKI/MARC MR 03DEC NCE

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DATE 26OCTOBER07
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AGENT 39/39

LOTT SHIP AGENCY INC
P O BOX 1802
MOBILE AL 36633

TICKETLESS RESERVATION
RECORD LOCATOR: JDDSPT
VESSEL: EUROPA
REGISTRY: ST VINCENT

ACCOUNT NUMBER 311978

SERVICE	DATE	FROM	TO	DEPART	ARRIVE
AIR FRANCE	03DEC	NICE	PARIS	1005A	1140A
AF 7701	MONDAY	COTE D AZUR	CHARLES DE GAU		
L ECONOMY		TERMINAL 2	TERMINAL 2F		
NON SMOKING				NON STOP	
		RESERVATION CONFIRMED		1:35 DURATION	
	AIRCRAFT:	AIRBUS INDUSTRIE A320-100/200			

CLICK HERE FOR PARIS CITY INFO, TRANSFERS & EVENTS

AIR FRANCE	03DEC	PARIS	ATLANTA GA	135P	530P
AF 388	MONDAY	CHARLES DE GAU	HARTSFIELD JAC		
L ECONOMY		TERMINAL 2E	TERMINAL S		
NON SMOKING		MEAL/MEAL		NON STOP	
		RESERVATION CONFIRMED		9:55 DURATION	
	COCKPIT CREW:	AF AIR FRANCE			
	AIRCRAFT:	AIRBUS INDUSTRIE A340-300			
		SEAT 40A NO SMOKING CONFIRMED		MOSZKOWSKI/MARC	

CLICK HERE FOR ATLANTA CITY INFO, TRANSFERS & EVENTS

AIR FRANCE	03DEC	ATLANTA GA	PENSACOLA FL	811P	830P
AF 8630	MONDAY	HARTSFIELD JAC	REGIONAL		
L ECONOMY		TERMINAL S			
NON SMOKING				NON STOP	
		RESERVATION CONFIRMED		1:19 DURATION	
DL 0820		FLIGHT OPERATED BY DL DELTA AIR LINES			

AIRCRAFT OWNER: DL DELTA AIR LINES
COCKPIT CREW: DL DELTA AIR LINES
CABIN CREW: DL DELTA AIR LINES
AIRCRAFT: BOEING 757-200/300
SEAT 45F NO SMOKING CONFIRMED MOSZKOWSKI/MARC

CLICK HERE FOR PENSACOLA CITY INFO, TRANSFERS & EVENTS

AIR FARE BULK	TAX 5.50YC	TOTAL TICKET	BULK 3956.42
	MARINE AND OFFSHORE DISCOUNT		-3278.00
		INVOICE TOTAL:	678.42

PAYMENT: *CHECK

RESERVATION NUMBER(S) AF/JDDSPT CO/ANSSXE QF/PJZUYI

ETKT:AF 057 7031522617 MOSZKOWSKI/MARC MR

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TOTAL CHARGE TO CREDIT CARD XXXXXXXX85028/0708 $678.42
*** INCREASED SECURITY MEASURES ARE IN EFFECT ***
********** DOMESTIC CHECK-IN 2 HOURS **********
******** INTERNATIONAL CHECK-IN 3 HOURS ********
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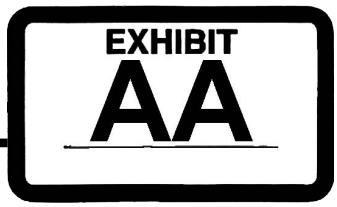

m.moszkowski@deep-gulf.com

From: Marc Moszkowski <m.moszkowski@deep-gulf.com>
Sent: Wednesday, September 5, 2007 12:17 PM
To: 'Rustin Howard'
Subject: Future

Rus,

Any new developments in the financing of DeepGulf? Where do we stand with regards to the financing efforts?

We need to make an evaluation of DeepGulf's accomplishments within the last three years. I have done my part of the technical work, calculations, thorough research, presentations, business plans, financial simulations, web sites and the like but it seems we have not done much progress with raising money, although I may be wrong, please let me know if I am.

We need to make a decision regarding the future. You know the only reason for having Pensacola as my residence is that I wanted to be close to you so that we could work together on a daily basis and make DeepGulf evolve. We are not having enough meetings, in my opinion, and our communication is sparse and not reactive enough. Basically I think we need to make sure that at least 4 to 6 hours are dedicated every day to developing the company, in close collaboration. At first I started to spend a lot if time in your office every day, but not having there any proper space made it very uncomfortable, so the day we started being three in the same office room with one of the occupants eating junk food 2 feet from my desk I realized I needed to make my home my office. At one point you started coming to my home office several times a week, but apparently gave up.

Another concern is the strategic choices for the company. You know we are disagreeing on some of the points, such as deciding whether our offer to Chevron was premature. I think it probably was. In my opinion there is only few ways of raising the capital, we discussed it several times and the subject was again expounded by Bill Lott last week. My opinion is based on decades of experience in this industry.

I am working something like 16 hours a day on subjects all related to the oil and gas industry, about 50% directly for Saipem and Chevron and thus indirectly for DeepGulf, and the balance for J-Flex. In addition I had the model built at my own expense, it is sitting here, apparently not of great interest to anyone.

Are we certain the proper effort is allocated to raising money and keeping each other up-to-date with information? It may be but I am not aware of it and I think I should be better kept informed of everyday's effort.

Rus, my lease is due September 15. I need to know if it's worth for me staying in Pensacola for another year. In a related field, is DeepGulf the best choice for J-Flex? I am sorry for all the candid questions, they need to be asked to ourselves.

Please let me know, I am somewhat discouraged with DeepGulf. I don't see much happening despite all the work I put in the project.

Please call me.

Marc

FIVE DAYS ONLY BEFORE THE FIRST TIMORESE CONTACT