

M T S D P C N E W S

SEPTEMBER 2017



CHAIRMAN'S REMARKS

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Earlier we had concerns regarding the effects of hurricane Harvey. Fortunately the conference hotel and surrounding areas were not damaged or flooded. Highways, airports and other necessary infrastructure recovered rapidly. Thankfully the conference can go on as scheduled.

This year's Dynamic Positioning Conference will be held October 10th and 11th in Houston TX, with the optional workshop on October 9th. The program is posted on the [DP Committee website](#). Conference topics exhibit a lot of innovation. For example, papers about serious problems discovered during vessel DP trials; Independent Performance Validation, and Probabilistic Risk Assessment to mention a few. The Wednesday lunchtime presentation is also about innovation, the ALLSEAS Pioneering Spirit. The workshop focuses on reactivation of vessels, and of people. We are honored to have Derrick O'Keefe, National Offshore Petroleum Safety and Environmental Authority, Australia, as our keynote speaker. This year's conference should be excellent. Be sure to attend.

The DP community worked for several years on the update of IMO MCS CIRC 645. That update was approved and has been released as IMO MSC.1/Circ.1580. It is evolutionary, and reflects many improvements made by the industry since 645 was published. The new 1580 will apply to new construction, while existing vessels remain in 645 with the exception that IMO recommends existing vessels adopt section 4 of 1580.

We have a "Learning from Incidents" (LFI) posted recently, a new TECHOP; PRS AND DPCS HANDLING OF PRS; and a new draft "TECHOP – RPD102 FMEA Gap Analysis", which is posted for comment through 20 September. The latter is our supplement to DNV GL's Recommended Practice "Failure Mode and Effect Analysis (FMEA) of Redundant Systems".

I hope to see you at the DP Conference in October.

Best regards,
Pete Fougere
Chairman

DP CONFERENCE TO TAKE PLACE AS PLANNED

BY STEVE BROWNE

We would like to assure all those who have registered for the upcoming Dynamic Positioning Conference in October – as well as those who are considering attending - that the Conference will take place as planned. Fortunately, the Westin Memorial Hotel was not affected by the storm and has been fully operational throughout the storm including power and utilities. The hotel remains easily accessible, and businesses and restaurants in the area are open and operating normally. We have met with the Westin Hotel staff, and they look forward to hosting our conference and have promised flawless service during the event.

While the devastating floods associated with Hurricane Harvey have impacted Houston, the water is subsiding rapidly and all airports are currently open and operating at full capacity. All major freeways are now open, with the exception of one small area of the Sam Houston Tollway, which is expected to be open well before the conference. Offices and businesses are

open and back to work. To be candid, not everything that you may have seen on social media and from some unreliable news sources has been factual nor has it been an accurate reflection of the situation in Houston. We are confident, ready and able to put on the high quality technical conference you have come to expect, and the great food and entertainment that Houston is known for is still here, up and running, and doing business as usual.

The hotel has generously extended the date for booking hotel rooms at the discounted conference room rate to September 26th, in case you have not booked your room yet. We have decided to extend the early registration date until September 26th as well. If you have NOT yet registered and plan on attending, please register now. A very strong technical program has been put in place, so please make every effort to attend. Please also make your hotel booking if you are coming from out of town.

WHAT'S NEW

<http://dynamic-positioning.com>

September 14, 2017

TECHOPS – PRS AND DPCS HANDLING OF PRS

PRS and DPCS Handling of PRS

September 11, 2017

ADVANCE PROGRAM

THE DP Committee has issue the Advance Program for the 2017 Conference.

July 25, 2017, 2017

NEW LEARNING FROM INCIDENTS REPORT

LFI 2017 - 2 - Backup DP Transfer Switch Functionality.

June 21, 2017

TECHOPS—RP D102 FMEA GAP ANALYSIS

Comments accepted until September 20, 2017

MTS DP WORKSHOP EUROPE

BY BRIAN HAYCOCK & DAN ENDERSBY

The first MTS DP Committee facilitated workshop event in Europe took place on the 11th and 12th of April 2017 in Aberdeen, Scotland at the offices of DNVGL, Cromarty House Regent Quay Aberdeen. The workshop followed the familiar pattern of the MTS DP conference workshops conducted in Houston on the day preceding the Annual MTS DP Conference.

The workshop focused on enhancing awareness of DP related issues and the steps that can be taken to address these issues. It also focused on means to enhance value and effectiveness in the management of DP operations across the Supply Chain. Additionally, the workshop provided a venue for the participants to gain awareness of the TECHOPs published by the MTS DP COMMITTEE.

The topics for 2017 workshop were chosen by the sponsors for their significance and relevance to activities being carried out offshore Europe:-

- Proving fault ride-through capability of DP vessel HV power plants
- FMEAS, proving trials, annual DP trials – purpose of testing - beyond tradition:
- Cross connections and their impacts: Violating the principles of independence, segregation, autonomy, fault tolerance, fault resistance, fault ride through in DP system redundancy concepts.
- External interfaces with DP control systems including emergency shut down and fire and gas safety shut down (ESD and F&G)

- Overview on ASOGs; background to the ASOG process; leveraging the MTS DP committee guidance documents to develop ASOGs

The workshop was registered to capacity and was well represented by a diverse group of stakeholders from the DP Community (Oil Companies, Vessel owners, Third Party Consultancy Organization, Representatives from the Marine Safe Forum, personnel providing DP vessel assurance, etc.).

At the conclusion of the workshop the consensus of opinion was that the sessions were valuable and productive. There was unanimous consensus that similar workshops would be welcomed on an annual basis. This was further reiterated by communication from the representative of the Marine Safe Forum. Marine Safe Forum requested to be engaged in the planning of further workshops. It expressed the opinion of its constituent members that information regarding such workshops be promulgated across a broader audience and wider participation, given the value derived from this premiere workshop.

MTS DP COMMITTEE THANKS THE SPONSORS OF THE WORKSHOP, DNVGL ABERDEEN, WHO PROVIDED ITS FACILITIES, REFRESHMENTS AND LUNCH FOR THE PARTICIPANTS AND “MAC” ABERDEEN, FOR HOSTING DINNER FOR THE PARTICIPANTS.

OF MICE AND MOHOLE

BY SEAN HOGUE
CHAIRMAN OF THE HISTORY SUB-COMMITTEE

“The drill touched bottom at 12:15 and bit into the ocean sediment. From now on everything is new, everything is unknown.”

Project Mohole was to deep sea exploration what the first manned shuttle launch was to the space program. Running from 1958 through 1966 under the guidance of the American Miscellaneous Society, the goal was to drill down to a layer of the earth known as the Mohorovicic Discontinuity, which marks the boundary between the earth’s crust and its mantle. The decision to attempt this feat through the seafloor was a pragmatic one; land drilling to that depth would have been impossible due to the extreme depths and temperatures involved.

The initial plan for the project consisted of three phases:

1. The experimental drilling program
2. The intermediate vessel phase
3. Final drilling to the Moho

The intent of phase 1 was to provide proof of concept and to show it was possible to drill to the extreme depths required from an untethered working platform. Prior to this, drilling operations were performed from anchored barges or jack-up rigs. As the intent was to drill in water depths greater than 10,000 feet of water it was clear that a new solution was needed.

ENTER THE CUSS 1

Global Maritime was brought onboard to provide that solution. The CUSS 1 (named for the Continental, Union, Superior, and Shell oil companies that developed it in 1956) was the first drillship in the modern sense of the word. It was equipped with four rotating thrusters, one at each corner, and was the first vessel to utilize dynamic positioning. Position monitoring was provided by way of submersible sonar buoys in a circular pattern around the vessel, which it would receive signals from in order to maintain a footprint of approximately 600 feet in diameter.

The first phase was a huge success, with the vessel drilling five holes off the coast of Guadalupe Island, Mexico. The deepest of these was to 601 feet, drilled in 11,700 feet of water – an unprecedented first not only due to the depths involved, but in that it was performed while on DP. The samples obtained penetrated through to the second layer of the earth's crust, which had never been done before and offered the scientists new insight into its composition.

Unfortunately, the project stalled after this point and never reached the second phase. Operational control was transferred to the National Science Foundation (NSF), eventually leading to the eventual dissolution of the AMSOC committee. While the project lumbered on for a time, congress finally discontinued the project due to increasing costs.

Technical challenges in designing a drilling system that could penetrate the 35,000 feet required (while the deepest hole drilled on land at that time was to 27,000 feet) from an untethered platform ended up costing \$57 million before congress denied further funding.

While the project stopped there, it was by no means a failure. There were many technical firsts accomplished and the lessons learned has helped drive both dynamic positioning and drilling technology through to this day, including the invention of the Guide Shoe which helps prevent the drill string from breaking once it reaches the surface. We also owe the term “moon-pool” from the CUSS 1.

A FIRST-HAND ACCOUNT

The Mohole Project was very big news in 1961; so much so that Life Magazine sent John Steinbeck out to the CUSS 1 to report on the story. He was onboard for ten days during the drilling of the initial five test holes and provided us with an excellent first-hand account. The remarkable thing is that he did this in-between writing *The Winter of Our Discontent* in 1961 and winning of the Nobel Prize in literature, in 1962.

Steinbeck, author of 27 books including the Pulitzer Prize winning *Grapes of Wrath*, was no stranger to travel in the name of journalism. He served as a war correspondent in 1943 for the *New York Herald Tribune*, accompanying the troops during missions. Steinbeck later traveled to Russia a number of times starting in 1947; eventually led to the publication of his book *A Russian Journal*. He was also a good friend of Ed Ricketts, an American Biologist with whom Steinbeck traveled frequently and co-authored *The Log of The Sea of Cortez*.

The Mohole article penned for Life Magazine is titled “High Drama of Bold Thrust Through the Ocean Floor – Earths Second Layer is Tapped in Prelude to Mohole” and is an excellent first-hand account of the ground-breaking operation onboard the CUSS 1, as well as a testament to the skills of John Steinbeck, one of the finest American authors of the 20th century. [A copy of the text can be found in the history section of the Dynamic Positioning website.](#) I hope you enjoy it.

TECHNICAL CHAIR SPOTLIGHT

GRAEME REID

MARITIME ASSURANCE & CONSULTING LTD (MAC)



Graeme Reid is an Electrical Engineer and the Managing Director at Maritime Assurance & Consulting Ltd (MAC), a Bureau Veritas Group Company. MAC offers support services to the marine, construction, drilling, floating production, decommissioning and renewables industries around the world.

Graeme started his career as an Electrical Engineer in 1991, serving an apprenticeship in a local papermill before moving into the marine, oil and gas markets.

He then began working with ABB in 1996 as a field engineer specializing in complex power systems. During employment with ABB, Graeme held several positions leading to the role of Account Manager for the marine business in the UK.

In 2003, Graeme joined Poseidon Maritime (PML) as a consultant and became the Operations & Commercial Manager in 2006.

After the sale of Poseidon Maritime to Noble Denton in 2007, Graeme became Operations Director. He then quickly assumed the position of Northern Operations Director in Noble Denton, Aberdeen. The Newcastle and Oslo offices of Noble Denton were added to his responsibility within 6 months.

In late 2008, Graeme became the Regional Managing Director for the company, with additional responsibility of the London, Slough and Kazakhstan operations.

In 2010, Graeme founded Maritime Assurance & Consulting Ltd (MAC). He sold MAC in 2016 to the Bureau Veritas Group with the vision of expanding the services of MAC internationally.

Today, Graeme continues his duties at MAC as the Managing Director, including the development of the company and ultimate responsibility for legal compliance, personnel, quality, health, safety and the environment. He leads several teams; including Naval Architecture, Dynamic Positioning, Marine Consulting and Office Management.

In his spare time, Graeme enjoys spending time with his family, playing golf badly and he has just completed his second “Ride the North” cycle – a 175-mile journey across the Scottish highlands in aid of Charlie House, a charity based in Aberdeen that aims to support children with complex disabilities and life limiting conditions, which MAC has supported for many years.



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