



IPLOCA

New Technologies Committee

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New Technologies Committee Chairman



The Road to Success



The Road to Success 3rd Edition

Contents

1. Introduction
2. Development Phases of a Pipeline Project
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3rd Edition September 2013

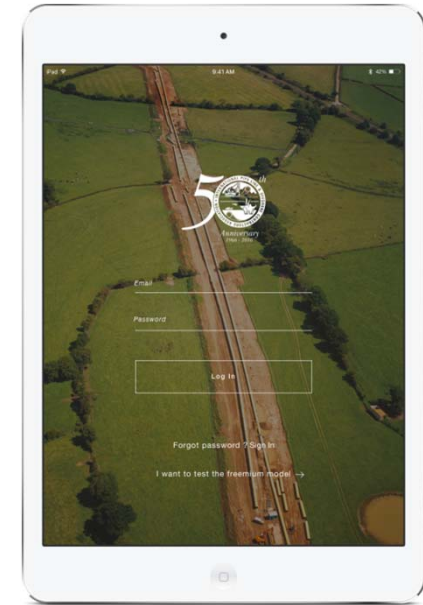


The Road to Success 4th Edition

Will be available everywhere,
any time to all IPLOCA Members
for free

Name: The Road to Success

Password: To be advised



4th Edition September 2016



The Road to Success 4th Edition

Includes:

- new chapters
- revised existing chapters
- features including bookmarks and highlights





The Road to Success App Future Versions

Will include:

- new chapters
- revised existing chapters
- videos
- interactive images, graphs, and formulas
- collaborative features
- etc...





Novel Construction Fall Plenary Session

Wednesday 26th and Thursday 27th October
Geneva Switzerland



Registration is required

www.iploca.com/novelplenarysession



2016 IPLOCA Excellence in Project Execution Award



2016 IPLOCA Excellence in Project Execution Award

- First year of the Award in 2016
- Frequency of the Award: every 2 years



2016 IPLOCA Excellence in Project Execution Award

Concept awarded:

A successful execution of a contract for pipeline projects and/or their facilities which constitute a step change in both owner company's satisfaction and a trade mark for the contractor's execution capacity



2016 IPLOCA Excellence in Project Execution Award

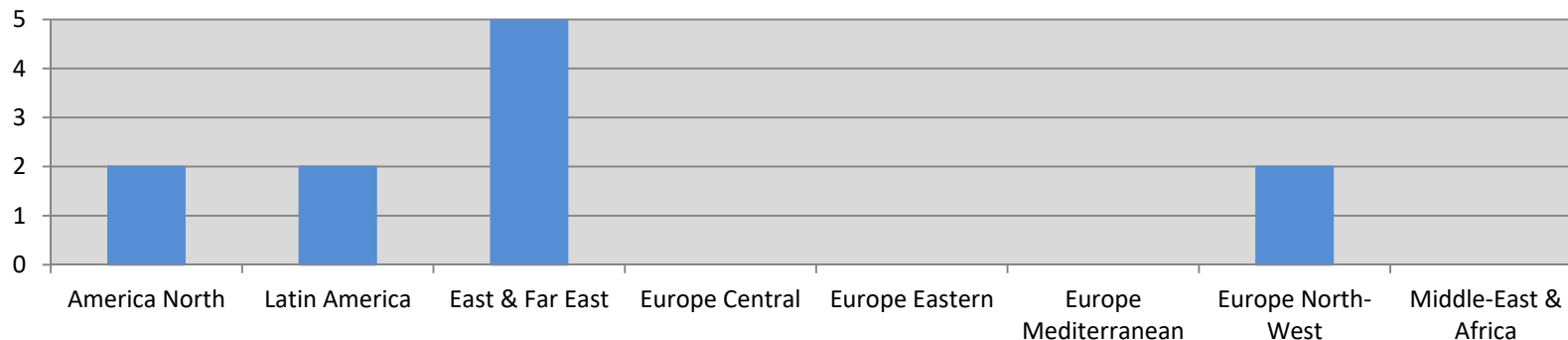
Scoring the Entry:

- Does it prove to be a challenging project?
- Is it an identifiable step forward in technology/construction process?
- Does it show outstanding results on HSE?
- Does it highlight solutions put in place to overcome difficulties?
- Does it provide changes or new methods in the manner pipelines are installed?
- Does it have positive feedback from the client?



2016 IPLOCA Excellence in Project Execution Award

11 entries received





- Pipeline wall thickness variation Inspection Solution



- Ramones II, North. A challenging Project in Mexico



- Vijaipur-Dadri Pipeline. Challenging project in hard conditions in India



- iPad Initiative, a solution to replace field paperwork



- 4th Transmission Pipeline Stage 2. A challenging project in a complex environment in Thailand



- APLNG Pipeline. A large and complex project executed in Australia



- Pipe Dryer Technology. A technic to dry the external coating of the pipeline before holiday detection



- Pipe transport by cable crane on a project in Peru



- Shah Gas Development Project. Construction of pipeline in Abu Dhabi to transport gas with high H₂S content



- Shah Denis pipeline coating. Project implementing strong core values and global capabilities



- Tetney Sealine Replacement Project. Replacement of an offshore pipeline section in 65 days



2016 IPLOCA Excellence in Project Execution Award

3 Runners-Up



2016 IPLOCA Excellence in Project Execution Award

1st Runner-Up



IPLOCA EXCELLENCE IN PROJECT EXECUTION AWARD 2016

MCJV: McCONNELL DOWELL + CCC

**AUSTRALIA PACIFIC LNG
PIPELINES PROJECT – AUSTRALIA**



IPLOCA Excellence in Project Execution Award 2016 AUSTRALIA PACIFIC LNG PIPELINES PROJECT

Australia Pacific LNG Pipelines Project

Client: Australia Pacific LNG Pty Limited

Value: In excess of AU\$1 billion

Location: Queensland, Australia

Duration: August 2011 to August 2014

Scope:

- Engineering (720 km), procurement and construction (510 km) of a large diameter, x70 high pressure gas pipeline between the Surat and Bowen Basin CSG fields and Curtis Island
- with launcher/receiver station, mainline valve, future tie-ins and large number of crossing



IPLOCA Excellence in Project Execution Award 2016 AUSTRALIA PACIFIC LNG PIPELINES PROJECT

Project challenges

- One of the largest, longest and most complex pipelines constructed in Australia
- Multiple stakeholders from diverse backgrounds
- Tight timeframes, vast distances and remote locations
- Challenging terrains, including numerous utility interactions and brownfield works on Curtis Island
- Stringent environmental controls
- Extreme weather conditions
- Competition for human resources, plant and equipment with major CSG projects being undertaken concurrently in Queensland





IPLOCA Excellence in Project Execution Award 2016 AUSTRALIA PACIFIC LNG PIPELINES PROJECT

Project innovations and initiatives

- Early Works and EPC contract model to build relationships and mitigate risk
- A 'one delivery team' philosophy and collaborative culture ensuring best-for-project decision making
- Initiatives such as 'Game On' to integrate and develop a high performance project team
- Early involvement in design to optimise construction and meet project challenges
- Early planning and engagement of resources to overcome competition
- Extensive community and stakeholder engagement program to ensure community buy-in from the outset





IPLOCA Excellence in Project Execution Award 2016 AUSTRALIA PACIFIC LNG PIPELINES PROJECT

Project achievements

- Industry-leading performance against KRA targets for safety, environment and quality
- Optimised construction and lasting legacy for the industry and community through early contractor involvement
- Best practice project management and a collaborative cultural framework that raises the benchmark for the industry
- Satisfied clients, staff and community stakeholders





2016 IPLOCA Excellence in Project Execution Award

2nd Runner-Up



Punj Lloyd
GROUP



Punj Lloyd
GROUP

Energy, Infrastructure & Defence

Nomination for IPLOCA Excellence in Project Execution - Shah Gas Development Project

Project Execution Challenges (Pipeline)

- The CRA (Corrosion Resistant Alloy) Cladded pipe construction poses challenges in construction and inspection methods, primarily due to the unique pipe material which is uncommon in the Pipeline industry of the Middle East region.
- For the first time in the world, an Onshore Cladded pipeline of this magnitude has been constructed
- State-of-the-art Automatic TIG Welding Machines were used
- Punj Lloyd developed a Welding Strategy specific for implementation in the SGD Project
- Punj Lloyd was able to achieve excellence in project execution, for which the Client company announced a bonus to the company
- Defect rates were controlled to less than 1%

Welding Strategy

- Welding Process – **Mechanized GTAW** (mainline), **Manual GTAW** (others)
- Joint fit-up (for mainline and tie-in joints) – using **specialty made Internal Clamp** made of material compatible to Inconel 625 with provision for back purging
- Back purging for Root pass – with **99.99% pure Argon**

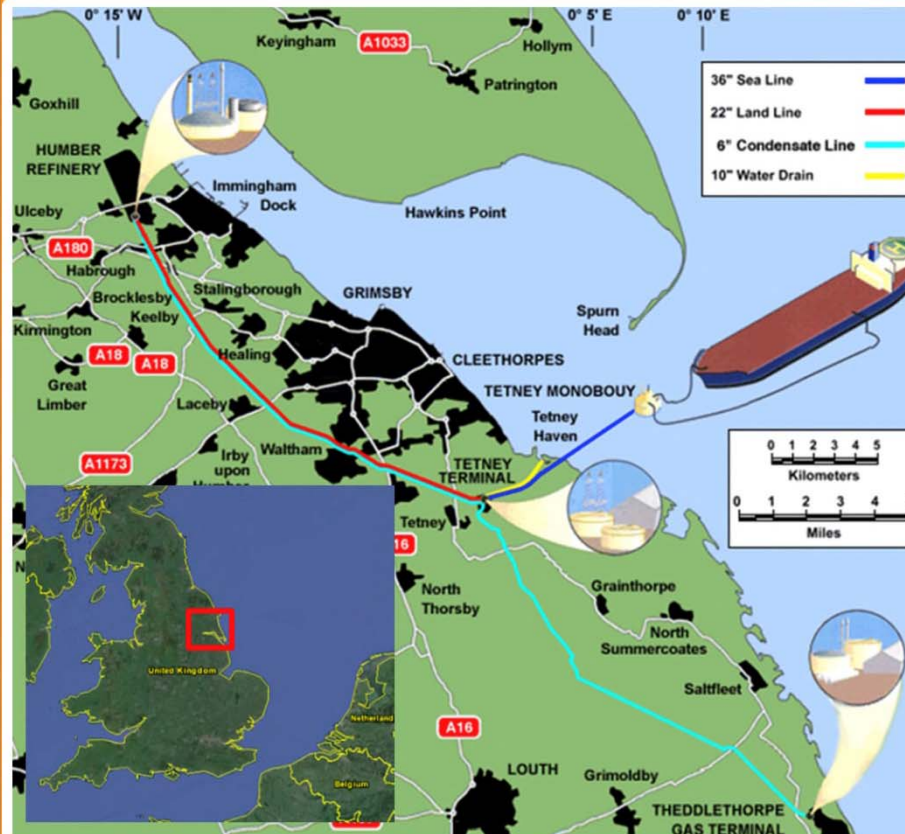




2016 IPLOCA Excellence in Project Execution Award

3rd Runner-Up

Tetney Sealine Replacement Project



- Tetney Terminal operational from 1971
- 2 to 3 crude oil cargoes each week
- 85% of Humber Refinery through the Monobouy
- Execution window 8-5-2015 till 12-7-2015
- Execution window 65 days

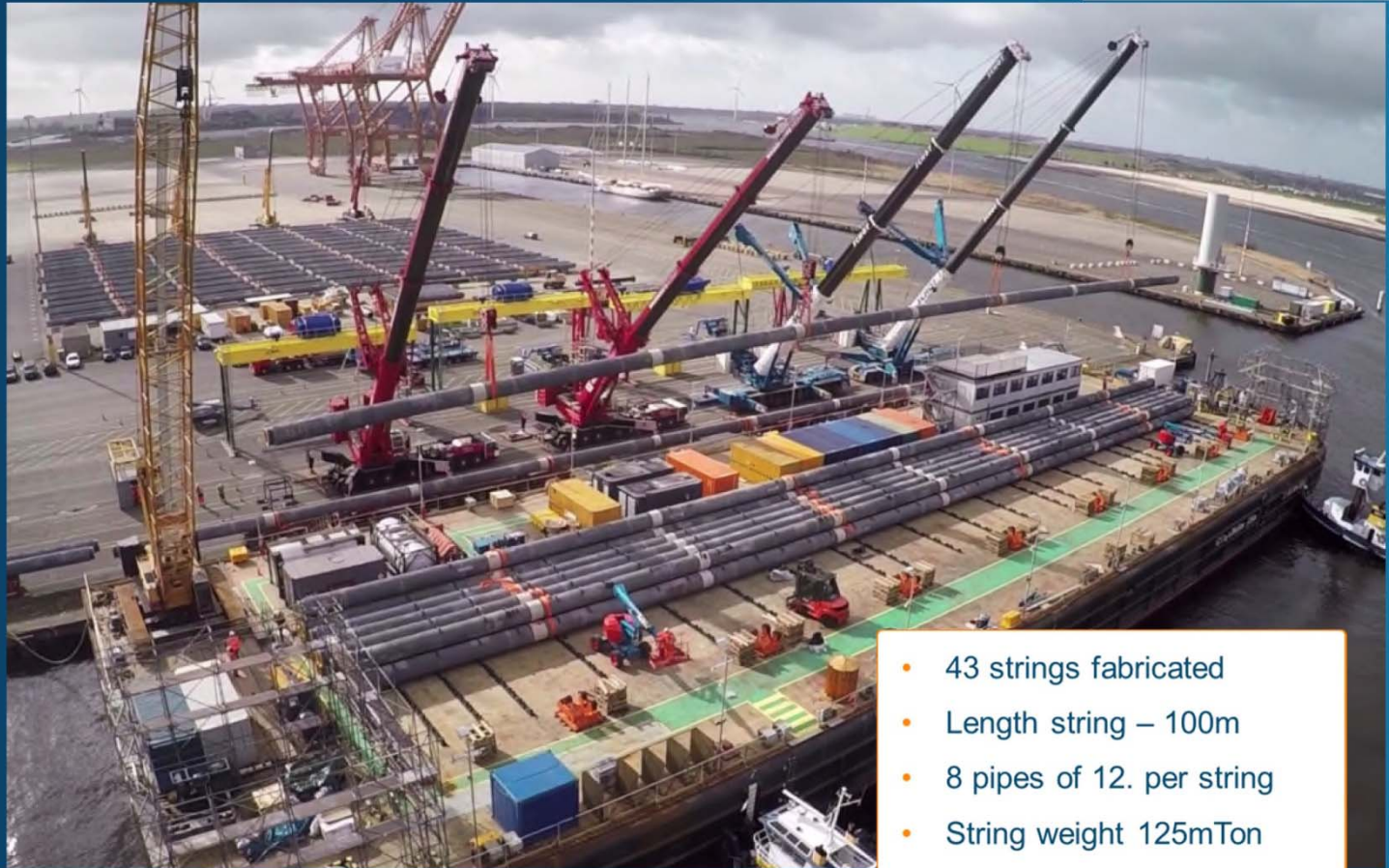


Main Project constraints

- **Environmental**
 - Access restricted via offshore only
 - Available working area submerged during high water
 - 7m tidal range
- **Preparation & Execution**
 - Short preparation time
 - Beach only accessible after 1st march
 - Existing pipe operational until 8th May
 - New pipe operational 12th July
 - Only 65 days pipe not operational
 - Robust execution method to minimize risk delay

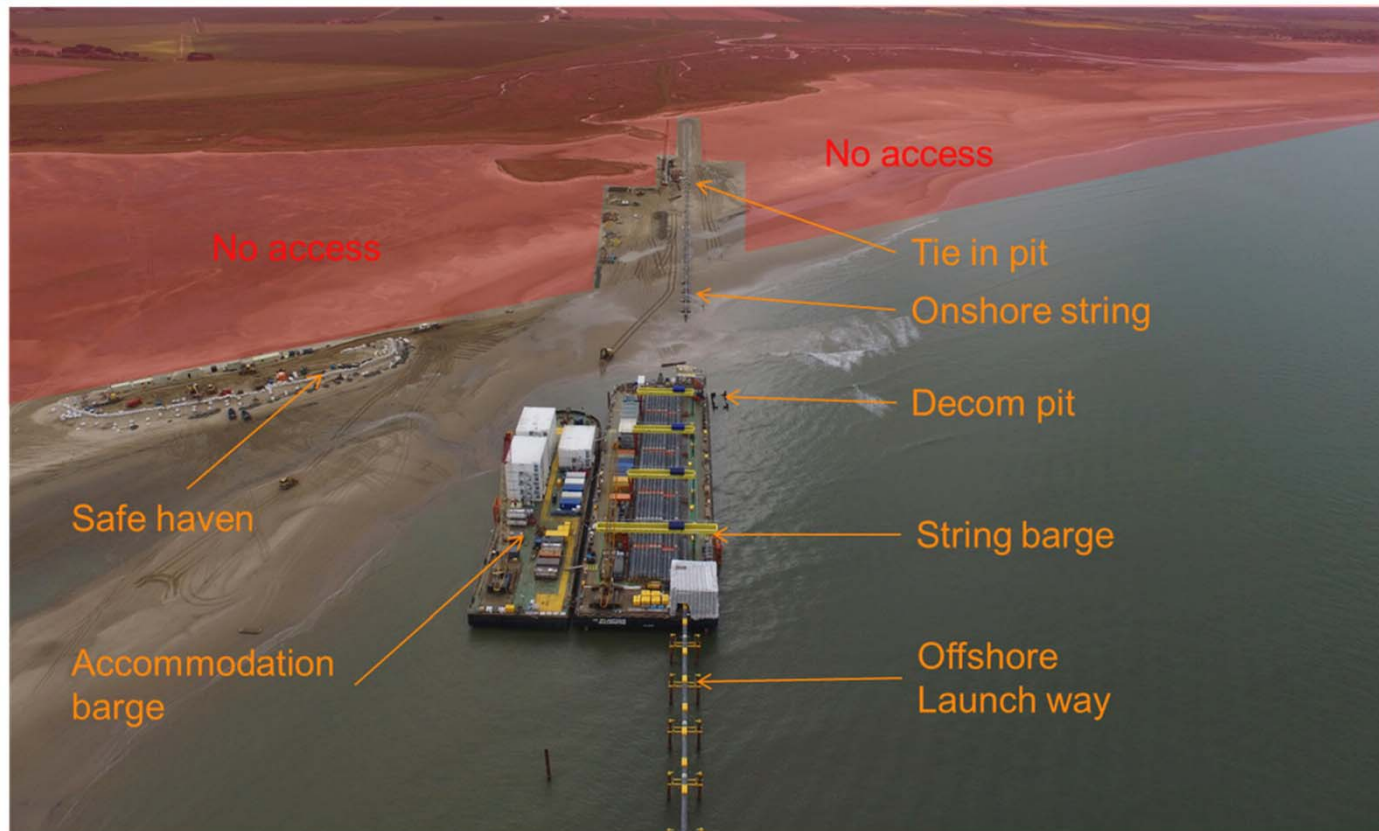


1. Pipe string preparation in Amsterdam



- 43 strings fabricated
- Length string – 100m
- 8 pipes of 12. per string
- String weight 125mTon

Overview beach



5. Offshore pipe pull

Overview marine during pull





2016 IPLOCA Excellence in Project Execution Award

Winner



IPLOCA EXCELLENCE IN PROJECT EXECUTION AWARD 2016
McCONNELL DOWELL

FOURTH TRANSMISSION PIPELINE PROJECT STAGE 2 – THAILAND

**McCONNELL
DOWELL**
CREATIVE CONSTRUCTION™

**DRIVING
PROGRESS**

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IPLOCA Excellence in Project Execution Award 2016 FTP2 PROJECT



Fourth Transmission Pipeline Stage 2

Client: PTT Public Company Ltd

Value: AU\$270 million

Location: Rayong to Kaeng Khoi, Thailand

Scope:

- 70 km of 42" x70 high pressure gas pipeline
- 3 km of thrust bores
- 20 km of horizontal directional drills and direct pipe installation
- 18 block valves
- 2 end-line facilities
- Mid-line scraper station



IPLOCA Excellence in Project Execution Award 2016 FTP2 PROJECT



Project challenges

- Aggressive one-year completion target
- Work spread over 300 km and across 50 discrete worksites
- Multi-cultural workforce peaking at 2,800
- Concurrent construction with six HDD rigs, two direct pipe rigs and six thrust boring rigs
- Significant safety, logistical and community stakeholder challenges
- Brownfield environments adjacent to busy highways, utility services, watercourses and residential and commercial dwellings
- Restricted and environmentally sensitive worksites with poor ground conditions
- Stringent site rehabilitation requirements



IPLOCA Excellence in Project Execution Award 2016 FTP2 PROJECT



Project solutions and initiatives

- Integrated culture and one-team approach using McConnell Dowell's proven project management systems
- Comprehensive safety culture-building program adapted to Thai culture
- Strong, collaborative client relationships to align project objectives and address challenges
- Effective, ongoing community engagement program to minimise disruption
- Thai supervisory staff leading the workforce by example in their commitment to safety, the environment and quality performance
- Rapid mobilisation of McConnell Dowell's plant and equipment to meet schedule
- HDD, thrust boring and direct pipe installation methods used to suit worksite conditions



IPLOCA Excellence in Project Execution Award 2016 FTP2 PROJECT



Project achievements

- Exceptional safety performance with over 4 million man hours completed LTI free
- Satisfied client with a high quality project completed on time, within budget and adding significant value to the Thai economy
- Minimal disruption to the community and satisfied community stakeholders
- Self-performed works using world's best practice methodologies and latest technologies
- Effective rehabilitation of worksites and no significant reportable environmental incidents



IPLOCA Awards

Details on winning entries
available online at
www.iploca.com

