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At Work For You[®]

BRAND
ENERGY & INFRASTRUCTURE SERVICES[®]

DCV Balder

R&M Curacao, Caribbean

Challenge

Heerema was facing some challenging steel repairs on the bottom side of the deckbox of the crane vessel Balder, for which they required urgent access assistance in order to maintain Lloyd's certification.

The Balder is a deep-water construction vessel, owned by Heerema Marine Contractors in Leiden (Netherlands). It was built in 1978 by Mitsui Engineering & Shipbuilding in Japan as a semi-submersible crane vessel. Currently, the crane ship is being renovated.

The plates marked in green had to be replaced within 1 month period after the request, otherwise the crane vessel's operating licence would expire (Lloyd's certification).

► Full 3D Engineering concept

Location

R&M Curacao, Caribbean

Customer

Heerema Marine Contractors

Challenge

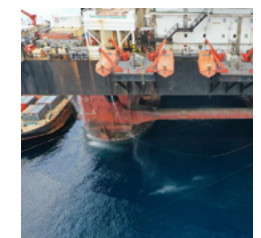
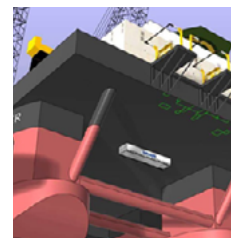
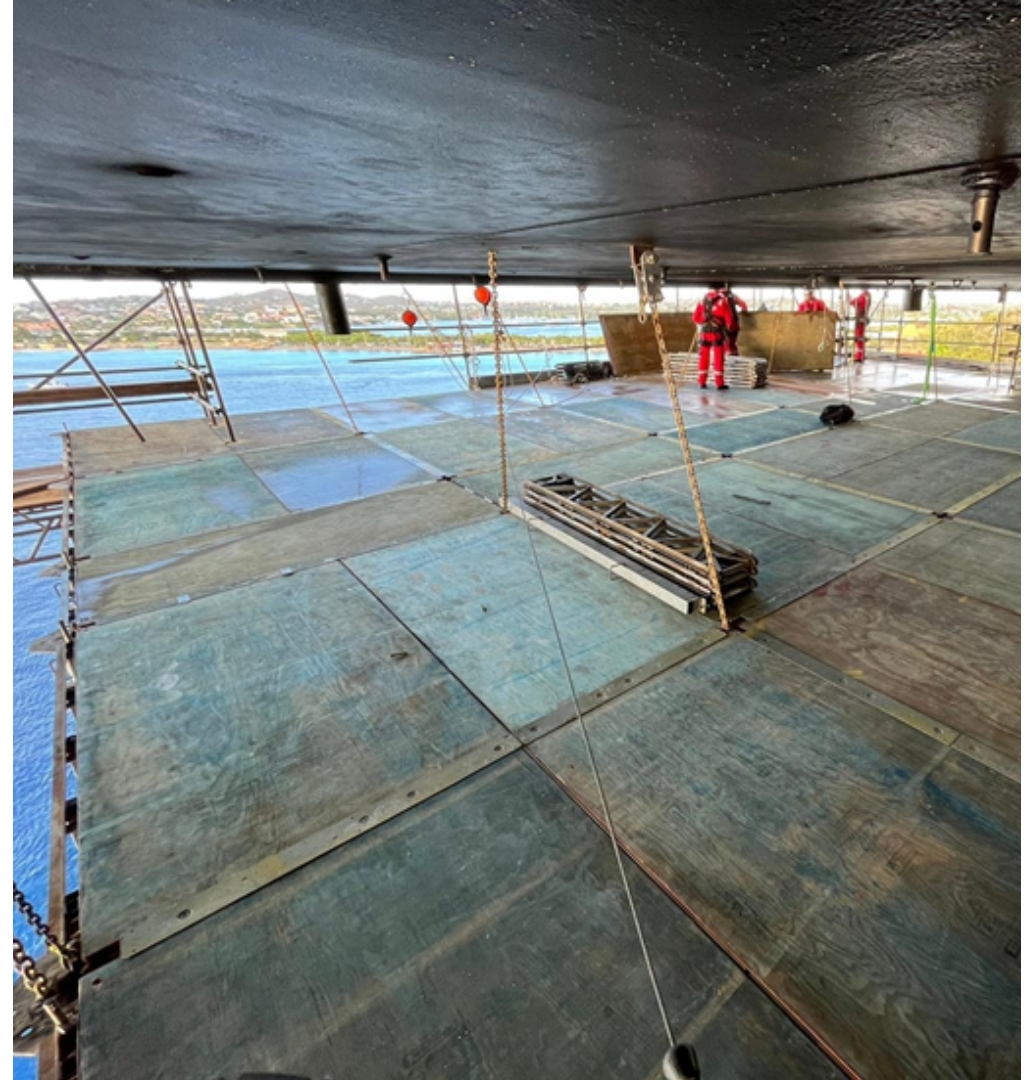
Steel repairs on the bottom side of the deckbox of the crane vessel Balder.

Solution

QuikDeck® Suspended Access

Date

2022



DCV Balder

R&M Curacao, Caribbean

Solution
Engineering had intensive cooperation with the customer to quickly find a solution as a feasible design and the possibility to safely hang QuikDeck® under the deckbox.

To reach the lower deck, a design was prepared using QuikDeck. The biggest challenge was the very short lead time. Engineering was directly involved in the customer consultation. From the very first meeting, a full 3D Engineering concept was devised to start the building process. Materials and builders had to be sent directly, because the crane ship was in port in Curacao.

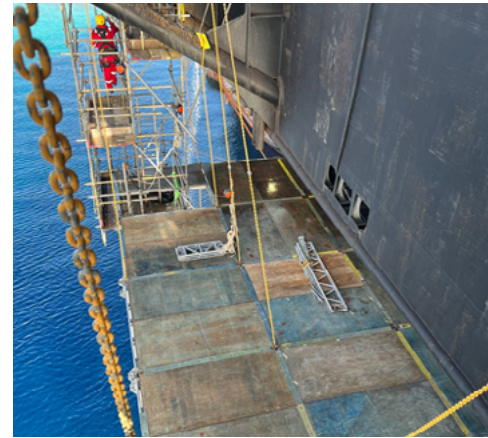
There was also no facility under the deck for hanging the QuikDeck. Engineering worked intensively with the client to find a suitable and quick solution. Welding padeyes to the underside was not an option, as one could not access the deck from below. Therefore, the choice was made to make openings in the deck from the inside and to lower specially made padeyes through the deck. Holes were also made at some locations where the chain for the QuikDeck system could be

suspended from the inner structure. The locations of the padeyes were carefully determined by Brand and Heerema Engineering, allowing QuikDeck to be built very quickly and above all safely.

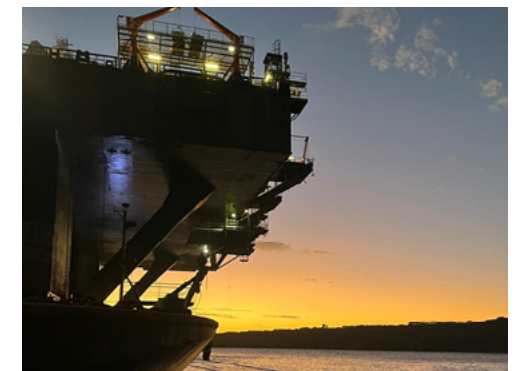
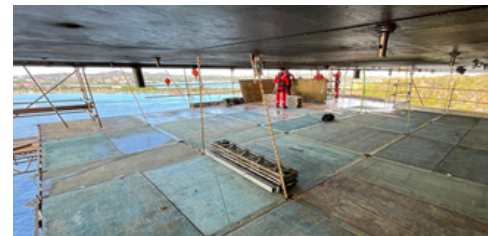
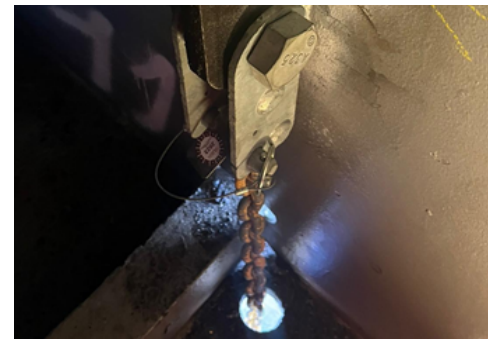
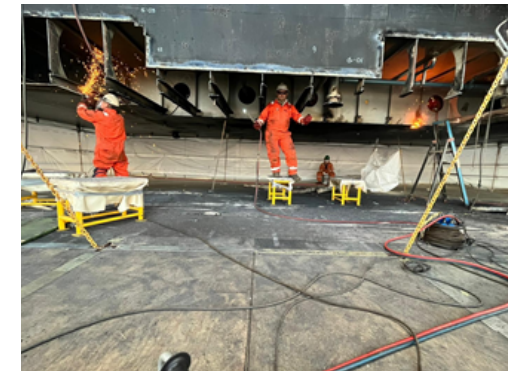
Suspension point chain secured on the inside of the existing inner deckbox structure. Chain passed out through a predetermined hole, to make this possible, the '3D engineering approach' was really of great value. Pre-installed suspension points on bottom side of the deckbox with chains.

A Tubelock suspension tower made it possible to create the starting platform for QuikDeck. The first QuikDeck bay was built on the lowest scaffold lift. After this, the system could be unfolded and hung on the predetermined suspension points. Ultimately, suspension towers were built to make the entire QuikDeck deck. QuikDeck starting platform on top of Tubelock bay.

End result; job situation. A satisfied customer



Engineering worked intensively with the client to find a suitable and quick solution.



Integrity Improvement Project Babbage

The client has had numerous coating contractors on the ageing asset using a variety of different surveys methods, reporting techniques and with numerous reactivate remedial coating campaigns - but were no further forward in the development of a maintenance plan.

The client wanted to collate all existing data with a view of developing a long-term strategic maintenance plan. Following the review, there will be opportunistic elements for fabric maintenance worksopes targeting the highest priority areas.

The scope of work consisted of

- › Provide offshore surveyors to carry out detailed integrity survey.
- › Determine intervention level using the European RE scale.

► Integrity Management System

- › Importing existing client R2s coating related data.
- › Calculation of surface area from detailed design drawings.
- › Engineering analysis/data input.
- › Develop a long-term strategic maintenance plan.
- › Present finding to key stakeholders.

Location

Babbage

Customer

ODE Ltd

Challenge

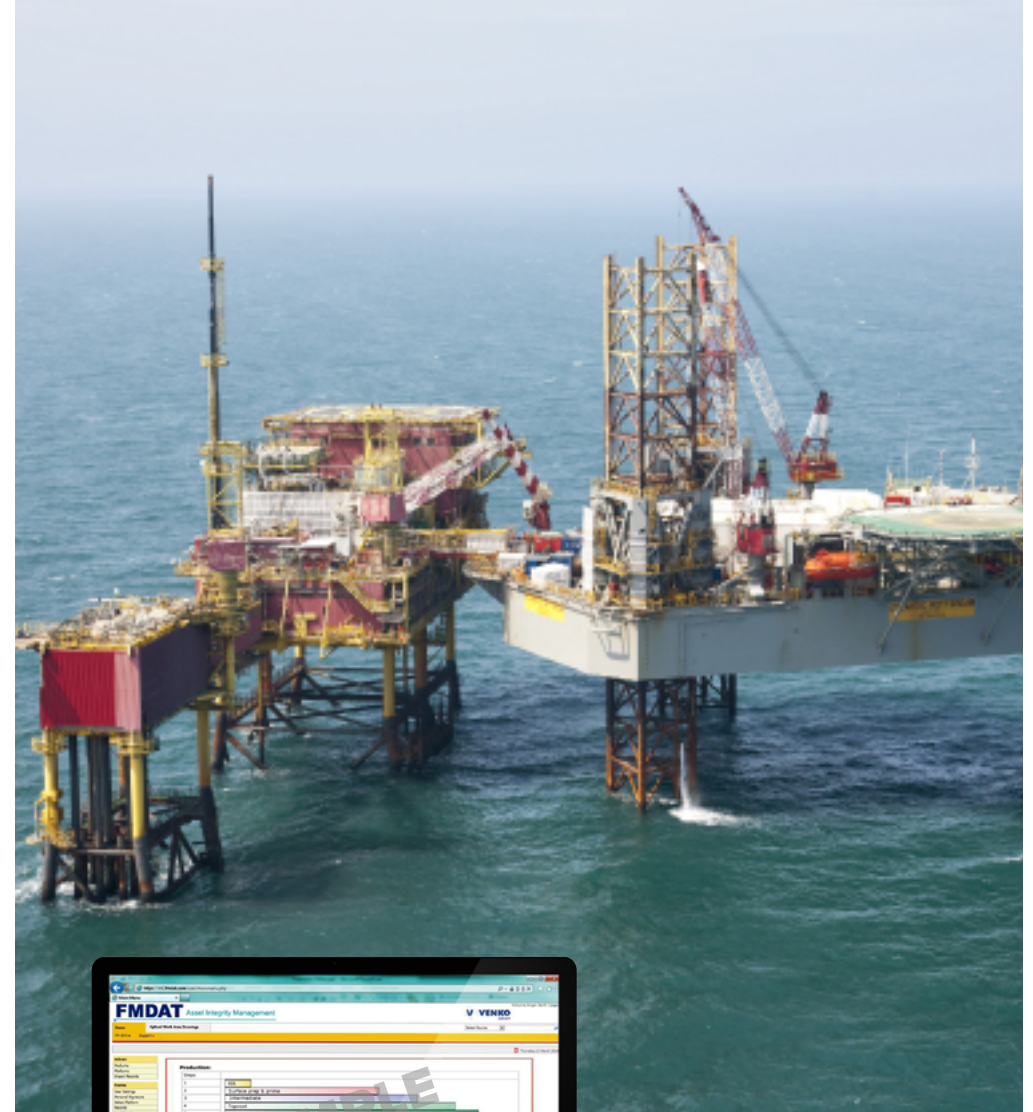
Creation of a Long-Term Strategic Maintenance Plan

Solution

Smartfmdat

Date

November 2019 – Ongoing



smart/fmdat
Fabric Maintenance Management 2.0

Integrity Improvement Project Babbage

Solution

Brand offered **Smartfmdat** for a 'Life Time Integrity Management Strategy', which is a simple to use, web-based app for the management of corrosion via coating condition surveys and painting campaigns. Our impressive software is perfect for the creation of long-term maintenance plans whilst providing full cradle to grave traceability.

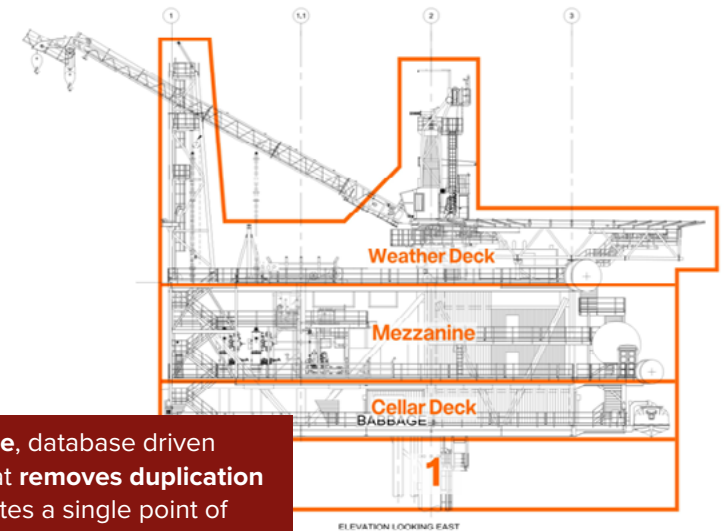
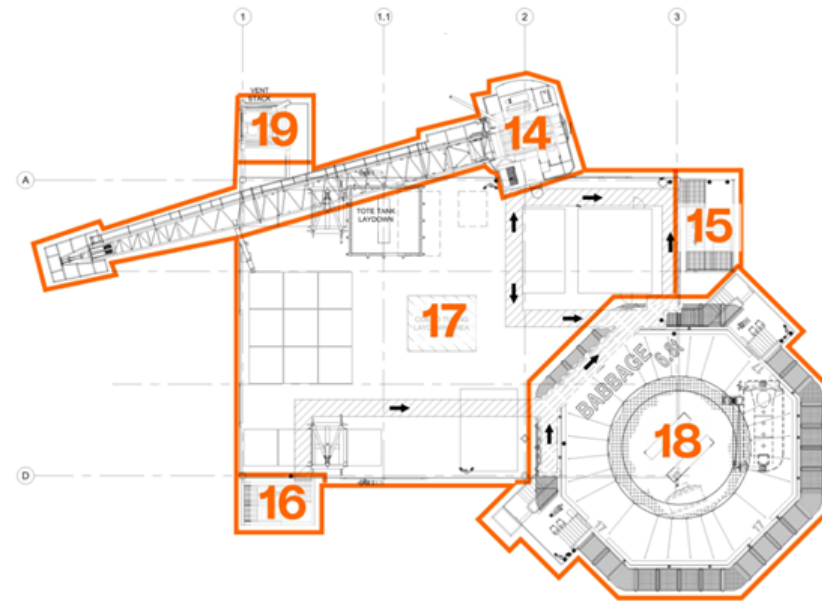
Value Creation

Using our unique Integrity Management system we have helped reduce hours spent on unnecessary coating maintenance.

Benefits of Smartfmdat include:

- + Subcontractors use the system ensuring data is always updated and owned by the owner / operator.
- + Easy user accessibility; immediate information from anywhere that has a suitable internet connection.
- + Optimum control of budget by ensuring funds are correctly allocated.
- + Simple user-friendly interface via PC/ tablet.
- + Protecting customers sensitive data with the best encryption standards available (256Bit).

- + Integration with other industry lead tools; like Maximo and SAP.
- + Improved progress reporting.
- + Track real-time job progression & h ups.
- + Live line requirements & incorporat of black trades work, e.g. dropped object surv.
- + Import plan directly into Smartfmda link zones or records to work orders.
- + Tracking with RFID and QR Codes.
- + Progress reporting including S-Curve and progress tracker along with timesheet and manhour reporting.
- + Your data is your own, delivered to you at any time via Excel, or a Full MySQL database, ready for integration to any other supported database.
- + Our in-house team of developers ready to provide 24/7 technical support and updates.



Smartfmdat is an **online**, database driven application. **Smartfmdat removes duplication** of many tasks and creates a single point of access to monitor corrosion and manage the execution of coating systems, passive fire protection and installing all types of insulation. **Benefit by having complete control of data for maintenance planning and scheduling.**

Offshore Wind Farms UK

Asset management inspections identified the requirement for remedial works to three offshore wind farms and two substations in the United Kingdom.

Brand was responsible for on and off site management of the works - provision of all resources (plant, equipment, materials and labour) required to deliver inspection and repair works during the 3 year contract.

The scope of work consisted of:

- › Remedial coating repair works.
- › Cathodic protection inspection.
- › Specialist repair to all failed welds on grout tubes.
- › General integrity condition inspections.
- › Minor maintenance works to tertiary and ancillary systems e.g. grating clips, greasing of hinges.
- › Statutory inspection to latchways systems.

► **On & Off site management**

- › Bolt integrity inspection and tensioning.
- › Removal of all grating in order to access structural steelwork.
- › Provide all access arrangements – including scaffold, rigging, containment and rope access.
- › Advanced First Aid / Emergency Response.

Location

3 Offshore Wind Farms, UK

Customer

E.ON Climate & Renewables

Value

>900k per annum

Challenge

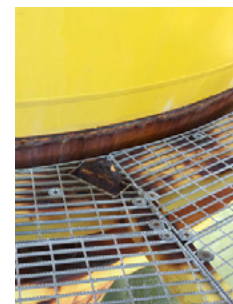
Remedial works – on & offshore

Solution

Integrated solution led approach

Date

2018 – 2021



360 degree repair to coating failure to circumferential weld – main body of monopile.

Offshore Wind Farms UK

Solution

Brand offered an integrated service solution approach for the management of the workscope utilising our network of offices across the United Kingdom. Multi-skilled competent personnel were able to cover all workscopes providing an integrated inspection, repair and maintenance model that delivered exceptional results to our customer. By increasing the number of skills available within a team but reducing the number of personnel being deployed. Where corrosion had been severe to the failed grout tube welds, a specialist composite repair product was used. All work instructions were planned, co-ordinated and executed using our unique integrity management system SAM.

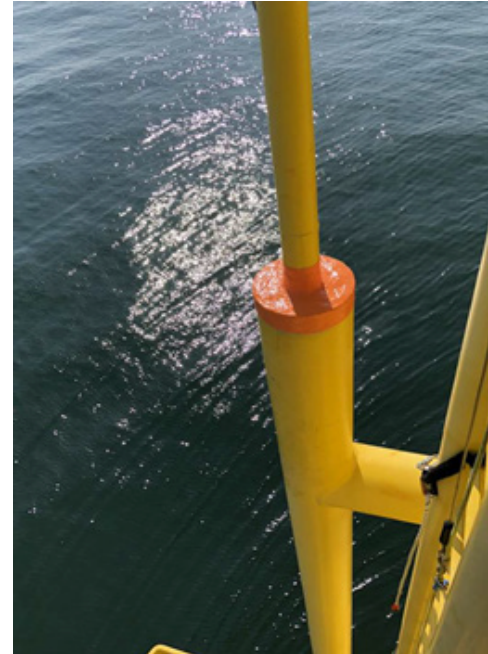
This system allowed the client to review and monitor daily progress on all work scopes and ensuring a fully traceable electronic close out to completion.

Value Creation

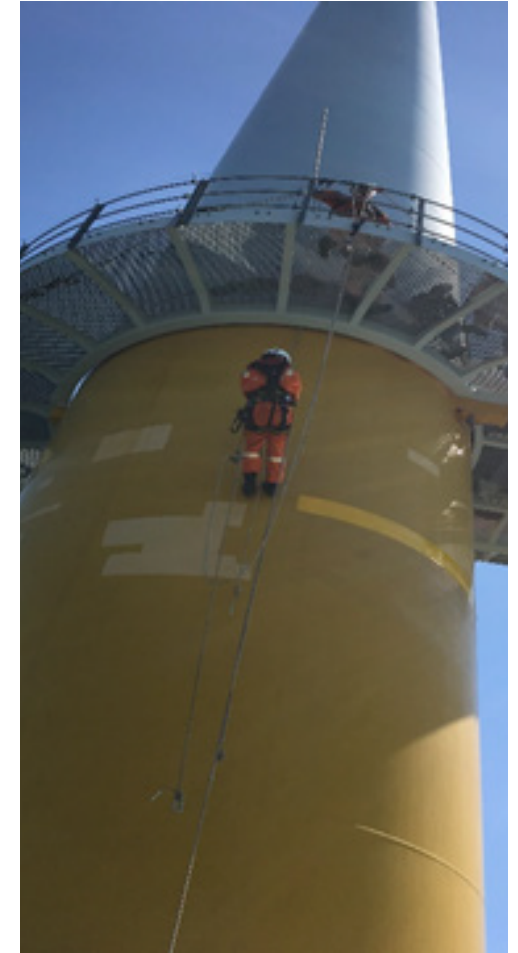
The contract has been carried out safely, within budget and no damage to asset / plant / equipment. Using multi-skilled competent personnel to carry out multiple work scopes, Brand completed work within designated timescales.

Using our unique Integrity Management system we have helped reduce hours spent on unnecessary maintenance. Providing technical experts have the specific knowledge to resolve the most complex technical challenges efficiently and effectively. We ensure integrity inspectors have expertise and experience enabling them to identify and evaluate coating failures, breakdown, PDO's and integrity threats.

We maintain both Brand and client safety cultures.



Our SAM software was utilised for total quality assurance management; from initial surveys to the final inspection records.



Rampion OSP Completion Phase Newhaven

The Offshore Substation Platform (OSP) was installed by the customer in April 2017. At the time of installation a number of critical systems were incomplete by the turnkey contractor. The customer took the decision to complete these scopes of work offshore under its own direct supervision.

Following a competitive tender, Brand were awarded the contract – only 3 weeks in advance of the start date.

The scope of work consisted of:

- › Removal of all grating in order to access structural steelwork.
- › Removal of all weld spatter, pitting, slag and handling marks.
- › Removal of saline contamination from surface to be prepared and coated.
- › Treatment of all field welds and black steel currently without protection.
- › Re-instatement of damaged top coat (where necessary).

- ▶ **Contract award was only 3 weeks in advance of start date**

- › Removal of all swarf-contamination and re-instatement of new topcoat (where necessary).
- › Provide all access arrangements – including scaffold, rigging, containment and rope access.

Surface preparation was, in the main, by grit blasting with a small amount of manual surface preparation.

Location

Newhaven

Customer

Rampion Offshore Wind Ltd

Value

>2m

Challenge

Over 500 repair orders

Solution

Integrated solution led approach

Date

April 2018 – October 2018



Maintaining both Brand and client safety cultures was essential.



Rampion OSP Completion Phase Newhaven

Solution

Brand offered an innovative integrated solution led approach to allow prompt liquidation of the work scope during the OSP completions. Combined access methodology was by scaffolding, modular towers and rope access for inboard and outboard. Multi-skilled competent personnel were able to cover all access workscopes including encapsulation subsequently reducing POB.

Where corrosion had been severe and to stop water from pooling resultant holes and deck pits inside, the TX areas were repaired using a specialist composite repair. These were subsequently coated to full specification.

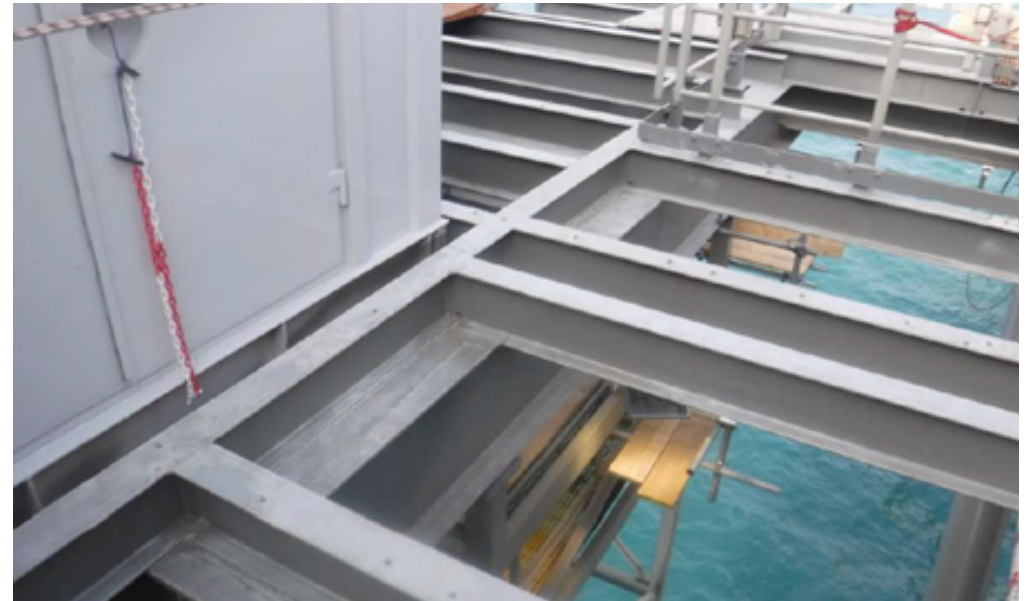
All work instructions were planned, coordinated and executed using our unique integrity management system SAM. This system allowed the client to review and monitor daily progress on all work scopes and ensuring a fully traceable electronic close out to completion.

Value Creation

The scope has been carried out safely, within budget and no damage to asset / plant / equipment. We used multiskilled competent personnel to carry out the multiple work scopes. Completing work within designated timescales whilst providing technical advice and assistance on repair methodology. Brand delivered target drive commercial arrangement savings with benefits to the project. Over 800 remedial defect repairs were completed. Our in-house scaffold design engineers & designers with knowledge of regulations, requirements, codes required were invaluable.

Brand provided a comprehensive range of aluminum access tower scaffolds and podiums ideally suited for light-duty maintenance and fit-out applications – whilst ensuring safe working conditions at height.

Our SAM software was utilised for total quality assurance management; from initial survey in to the final inspection records.



Remedial Coating Repair Project North West, UK

The Offshore Substation Platform (OSP) was installed offshore in 2010 and during its time as an operational asset, the topside coating systems have shown signs of degradation.

Corrosion was present across the asset on the majority of the topside external equipment and module housing. The scope categorised the defects based on integrity priority of repair based on safety and risk to asset operation.

The overriding desire was to halt the existing level of priority 1 and 2 corrosion and protect the equipment from further damage using appropriate paint product and installation methodology.

Scope of Works

- › Priority 1 – classed as high asset risk, where there was evidence of water ingress inside the modules or where there was a potential safety concern if the corrosion is not arrested.

- ▶ **Multi-skilled competent personnel to cover all access worksopes**

- › Priority 2 – where the observed corrosion was likely to lead to future water ingress inside the modules if not repaired.
- › Priority 3 – all defects that at this time have not been identified as high risk to water ingress or onward safety concern.

Location

North West, UK

Value

<150k

Challenge

Repair & maintenance to water ingress points

Solution

Integrated solution led approach

Date

April 2019 – May 2019



Remedial Coating Repair Project North West, UK

- › Removal of all grating in order to access structural steelwork.
- › Removal of all saline contamination from surface to be prepared and coated.
- › Provide all access arrangements (including scaffold, rigging, containment and rope access).
- › Surface preparation was by mechanical tools.

Solution

We offered an innovative, integrated solution led approach to allow prompt liquidation of the priority 1, 2 and some 3 repair work scopes. Combined access methodology was by scaffolding, modular towers and rope access for inboard and outboard. Multi-skilled competent personnel were able to cover all access workscopes including encapsulation subsequently reducing POB.

A single coat brushed application was used to maximise efficiency during the short programme.

Utilising our knowledge and experience from the Oil & Gas industry, where corrosion had been severe and to stop

water ingress, resultant holes and deck pits on modular areas were repaired using a specialist product Stopaq for a long-term solution.

Our Integrity Management software was utilised for total quality assurance management; from initial survey in early 2019 to the final inspection records. All work instructions were also planned, co-ordinated and executed using our unique integrity management system. This system allowed the client to review and monitor daily progress on all work scopes and ensuring a fully traceable electronic close out to completion.

Value Creation

Utilising our 40 years of knowledge and experience in the Oil & Gas industry - the scope has been carried out safely, within budget and no damage to asset / plant / equipment.

Using multi-skilled competent personnel to carry out multiple work scopes, we completed the work within the designated timescales.

By providing technical advice and assistance on repair methodology, we completed all priority 1 & 2 defect repairs – and delivered savings by completing priority 3 repairs.

We provided a comprehensive range of aluminum access tower scaffolds and podiums ideally suited for light-duty maintenance and fit-out applications – whilst ensuring safe working conditions at height.

Overriding desire was to halt the existing level of priority 1 and 2 corrosion and protect the equipment from further damage.



Remedial Coating Repairs

Southern North Sea, UK

The customer asset management inspections identified that some transition piece assets had seen a deterioration of the coating system during the construction phase. Areas of repair had been identified and tended to be mainly on the boat landing fenders.

Brand was responsible for on and off-site management of the works. Provision of all resources (plant, equipment, materials and labour) required to deliver the inspection and repair works.

Scope of Works

- › Approx. 400 minor paint repair requirements identified (chips/shallow gouges etc.) across the whole site.
- › Survey of the existing boat landing fenders.
- › Steelwork preparation prior to coating for corrosion protection.

► **Summer Campaign**

- › Application of appropriate coating in line with agreed specification.
- › General integrity condition inspections,
- › Sign-off certificates and quality assurance to demonstrate compliance with specification.
- › Removal of all grating in order to access structural steelwork.
- › Provide all access arrangements (including scaffold, rigging, containment and rope access).

Location

Offshore Wind Farm, Southern North Sea, UK

Value

>110k

Challenge

Specialist access & remedial coating repair before handover to O&M

Solution

Integrated solution led approach

Date

2018



Remedial Coating Repairs

Southern North Sea, UK

Solution

Brand offered an integrated service solution approach for the management of the work-scope utilising our local office in Great Yarmouth, Norfolk, United Kingdom.

Multi-skilled competent personnel were able to cover all work-scopes providing an integrated inspection, repair and maintenance model that delivered exceptional results to our customer. By increasing the number of skills available within a team but reducing the number of personnel being deployed.

Our SAM software was utilised for total quality assurance management; from the initial surveys to the final inspection records. All work instructions were planned, co-ordinated and executed using our unique integrity management system SAM.

This system allowed the client to review and monitor daily progress

on all work scopes and ensured a fully traceable electronic close out to completion.

Value Creation

The contract has been carried out safely, within budget and no damage to asset / plant / equipment.

Using multi-skilled competent personnel to carry out multiple work scopes.

Completing work within designated time-scales.

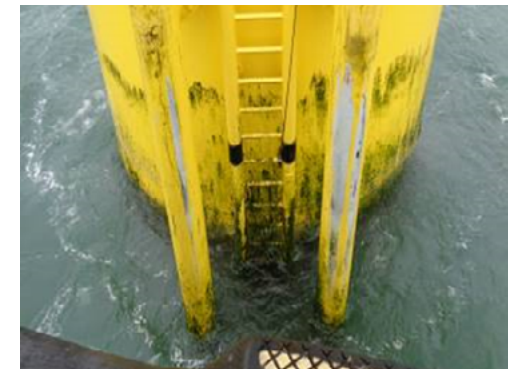
Using our unique Integrity Management system for efficient QA QC Reporting. Delivered target driven commercial arrangements savings benefits to the project.

Provided inspectors who had expertise and experience enabling them to identify and evaluate coating failures, breakdown, PDO's and integrity threats.



Example damage to Ladders.

Brand was responsible for on and off-site management of the works.



Example damage to Fenders.

2019 Turnaround Gannet Alpha NNS

Awarded only 6 weeks in advance of the start date, fabric maintenance scope of work consisted of erection of scaffolding to allow access to carry out surface preparation and coating repairs to the underside of the helideck in and outboard sections, ALQ's, TLQ's and the staircases to the LQ decks which included removal of PDO's within each of these areas.

An initial team of 4 scaffolders commenced erection of inboard scaffolding in April 2019 prior to the flotel arrival in May. This allowed the full 35 FM team to commence inboard works whilst the outboard access was being erected.

Surface preparation was, in the main, by grit blasting with a small amount of manual surface preparation. Where corrosion had been severe; resultant holes were repaired using epoxy composite repair. These were subsequently coated to full specification.

► **Fabric Maintenance Scope - Scaffolding & Coatings**

Location

Gannet Alpha NNS

Customer

Shell

Challenge

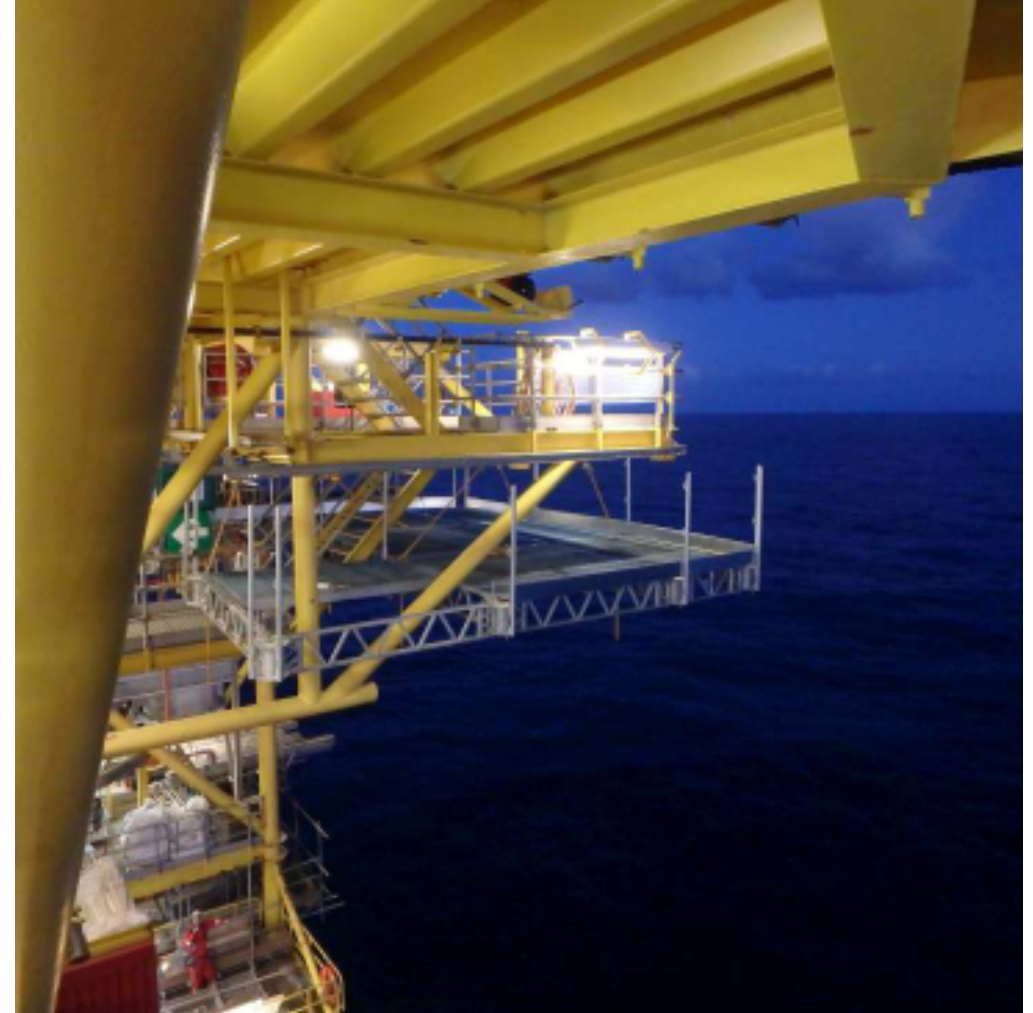
Challenging the normal scaffolding approach & short lead time

Solution

Integrated added-value solution - saving 10 operatives for 3 weeks

Date

April 2019 – July 2019



2019 Turnaround

Gannet Alpha NNS

Solution

Brand offered an innovative integrated solution led approach to allow prompt liquidation of the work scope during the turnaround. Access was TubeLock for inboard and outboard areas to ALQ/TLQ, and QuikDeck® for the outboard area of the Helideck. Multiskilled competent personnel were able to cover both access workscopes subsequently reducing FM POB.

Our SAM software was utilised for total quality assurance management; from initial survey in Dec 2018 to the final inspection records. Production/ progress was produced automatically via SAM. An auto produced S-Curve and completed progress available by updating of inspection records. It was the first major trial using the new updated software which included an atex tablet for, 'on the job' recording photographs and coating details (dft, climatics etc).

Value Creation

The scope has been carried out safely and within budget. Using multi-skilled competent personnel to carry out multiple work scopes. Brand completed work within designated timescales, whilst providing technical advice and assistance on repair methodology. Maintaining both Brand and client safety cultures was essential.

“QuikDeck and TubeLock were incredibly important to Shell as both had delivered safety-timecommercial savings benefits to the project and would continue to do so going forward. Utilising the access systems deployed presents a huge opportunity for Shell to reduce POB during time critical campaigns”

Client Representative commented

PC Platform Staircases

Sole Pit Clipper SNS

Introduction of Van Thiel (TubeLock) Access System Scaffolding on the Shell Sole Pit Clipper SNS.

Scaffolding the traditional way

The Clipper, like most offshore installations, relies heavily on scaffolding for project scopes and maintenance. The Clipper has at most times 100 – 150 certified scaffolds erected and standing, and some are left erected to become “long-term” scaffolds.

During the last 30 years on the Clipper there have been issues around long-term scaffolding, as there is on most ageing assets.

During 2019, Brand introduced a new way of doing things. It's called 'TubeLock', it's very close to traditional tube and fitting but has numerous advantages.

TubeLock

Available in 8 different lengths of tube and slightly lighter than the traditional

► South Staircase (1 & 2) Lower & Upper Section

tube used. The tube is also unique as it has a twist screw fixing system to fix tubes together (pictured). Picture. TubeLock system interlocking tubes – joining method, twist & lock. This saves time in joining tubes end-to-end and it also has a greater safe working load than the traditional sleeves used in conventional tube and fitting. The longest length of the TubeLock system is 4 meters thus making it perfect for confined process areas and easier to transport via bundles for crane lifts.

Location

Sole Pit Clipper SNS

Customer

Shell / NAM

Challenge

Challenging the normal Scaffolding approach

Solution

Introduction of TubeLock Access System

Date

August 2019



PC Platform Staircases

Sole Pit Clipper SNS

Another great advantage of the TubeLock system is the wedge couplers, these do not have nuts and bolts to corrode, the fitting is tightened by a wedge system, thus we have no issues around corrosion of threads, minimizing issues around long-term scaffold projects.

Training

With the TubeLock system being so close to tube and fitting, NASC have deemed it a non-system product. This lets scaffolders with CISRS cards competent to erect and dismantle TubeLock with just familiarization training supplied by the parent company.

With the above being just a few of the benefits, the decision was to introduce the system onto the Shell Sole Pit Clipper.



TubeLock ... EN-74 compliant & 25% faster than conventional tube & clip!

Project One

The first scopes to be covered by the TubeLock access system were on the ongoing CUI FM project.

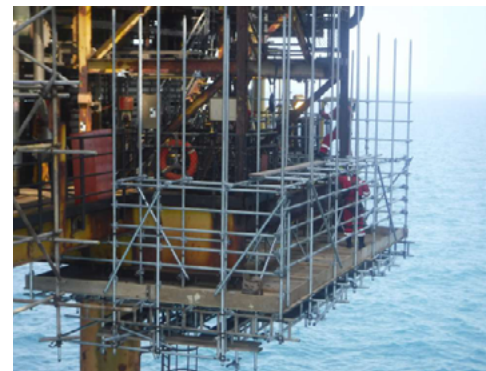
A large staircase on the PC platform needed to be taken out of service and encapsulated to enable FM works to be undertaken. To enable this to be taken out of service two scaffold staircase towers needed to be erected to enable access to all levels. The original estimates for these had been proposed in a traditional system scaffold (Layher/CUPLOK®/All round). These are traditionally very quick but more expensive to hire and lacking the flexibility of TubeLock (base out sizes, loadings and flexibility).

It soon became apparent that the hire charges and extra design costs around these systems would be a false economy. It was therefore decided that the scaffolds on the project would be erected using TubeLock.

The scaffolds were design scaffolds and with tube and fitting they are traditionally labour intensive. The hours allocated to the erection of the staircases were left as per system scaffolding to gauge the advantage, if any, that using the TubeLock system would give the teams.

Staircase 1 & 2 PC stairs.

Erect hours were 180 hrs a piece – both scaffold erections came in with a saving of 26% against tube and fitting. This equates to 46.8 manhours per tower saved. Savings on the dismantle will also be accumulated as the project progresses.



PC Staircase	Tube & Fitting labour estimate (Hrs)	TubeLock actual hours to erect (Hrs)	Man-power savings (%)
Temp Staircase East Side	180	133	26
Temp Staircase South Side	180	133	26



PC Platform Staircases

Sole Pit Clipper SNS

Project Two

For the south staircase lower section & upper sections on the Clipper PC platform, a large staircase was to have fabric maintenance undertaken on the south side of the PC platform. To enable 24 hr working and encapsulation of the worksite a design scaffold was undertaken.

The base out of this outboard scaffold was complex and involved beam work to erect a sound foundation. Total hours of erection for this project using standard offshore norms for tube and fitting stood at lower section 363 hrs (inclusive of beam base out and temp roof for lower level) and 403 hrs for the upper section. All works was outboard on the scope and the teams used advanced handrail methods to enable erection times to be maximized during high winds or bad out of limit sea states. Trackers were kept for the erection times on both of these scopes to compare timings to regular tube and fitting.

The above information clearly reflects that there are cost efficiencies to be had

Initial Findings on introduction of TubeLock on Shell Clipper ...

using TubeLock scaffolding. The above projects are early days for the teams undertaking the erection of these scopes and with further familiarization during everyday use (now being used on all maintenance and structural work scopes) on the Clipper should bring further savings with manpower hours.

The above projects will be erected long-term and realistically will not be dismantled until spring 2020. With the works being long-term, further benefits will be achieved from not having to lubricate scaffold fitting or the potential for injury on the seized scaffold fitting dismantle.

The teams onboard have fully embraced this product and our client will now benefit from the full change out of the rest of the 300 t of tube and fitting for TubeLock.

PC Staircase	Tube & Fitting labour estimate (Hrs)	TubeLock actual hours to erect (Hrs)	Man-power savings (%)
Lower Level	363	286	22
Upper Level	403	328	19



Special construction on K14-FA1 platform

Aardolie Maatschappij B.V., NL

BRAND built a special scaffolding structure to support drilling work on Nederlandse Aardolie Maatschappij B.V. (NAM)'s main platform K14-FA, and provided access services for the major maintenance activities.

K14-FA1 is one of the oldest gas production platforms of NAM, and has been in use since 1976. The platform consists of compression and production sections: the compression section collects the gas, pressurises it and then ships it at a volume of around 4.5 million m³ per day to the gas treatment plant at Den Helder.

Support scaffolding

The Ensco 122 drilling unit was installed over the wells of production section K14-FA1P to drill a new well. During drilling, gas may be released which has to be disposed of via a flare system on the main platform. The pressure in the vent pipe between the drilling unit and the platform may be anything up to 30 kN/m². BRAND installed support scaffolding to contain this pressure.

Last Paint Work (LPW)

At the same time, BRAND designed and constructed the various scaffolding required for the major maintenance of the K14-FA1C compression platform, including painting and replacing existing plating, under contract to Venko Offshore. All scaffolding is sealed with deltaplane tarpaulins and the scaffolding floors are boarded to stop grit and paint residue getting into the sea. BRAND also fitted the two compression platform exhaust structures with scaffolding for the major maintenance activities.

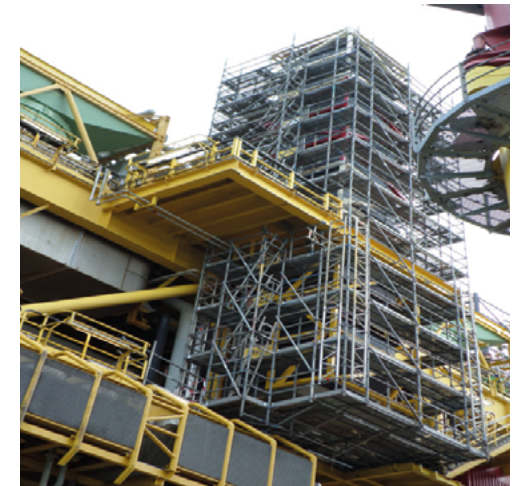


Project
K14-FA1

Customer
NAM

Challenge
High pressure in vent line between drilling unit and platform. Major maintenance with environmental provisions.

Performance
Install support scaffolding. Hanging and contained extension scaffolding.



Major paint job on K13-A NL

There are around 130 offshore installations for extracting oil and gas in the Dutch section of the North Sea. About 25 of these platforms are owned by Wintershall Noordzee, a subsidiary of the German company Wintershall Holding AG and part of the BASF Group.

Wintershall's oldest platform is the K13-A, which was built in 1974 and was the first platform in sector K13 of the North Sea. Gas reservoirs generally run dry after 15-20 years, and the K13-A platform now also serves as a transit station for gas from other platforms.

BRAND installed the scaffolding for the painting work on the riser at jacket level and for building the complete staircase on the east side (ground floor living quarters as far as the helideck). The scaffolding, constructed mainly of Tubelock, was delivered in phases totalling around 64 t.

Assembly on the waterline

All this scaffolding was in the 'complex' category, which means that BRAND's

engineering department had to draw dimension in accordance with the Scaffolding Directive. The scaffolding is sealed with tarpaulins to protect the environment. The scaffolding by the riser was the biggest challenge, as it is located below the jacket at waterline level. Installing this was planned in periods when weather conditions were relatively calm.

Safety-conscious

Safety requirements for offshore activities are high. Working safely means preparing well, conducting Task Risk Analyses (TRAs) daily and issuing job permits, and conducting a Last Minute Risk Assessment (LMRA) just before starting work. All BRAND's technicians attend a specific offshore course, including training in corporate first aid, EHBO and firefighting. The BRAND technicians deployed on platform K13-A are well experienced in offshore projects!



Project
K14-FA1

Customer
Wintershall Noordzee BV

Challenge
High pressure in vent line between drilling unit and platform. Major maintenance with environmental provisions.

Performance
Install support scaffolding. Hanging and contained extension scaffolding.



Engineering success factor in building Allseas test frame

Vlissingen, NL

To test the lift system of the **Pioneering Spirit**, the largest offshore construction ship in the world, owned by Allseas, Volker Staal and Funderingen designed a special test frame. The engineering department of BRAND came up with ingenious access solutions for this project which accelerated the turnaround time.

The turnaround times for a range of welding and positioning actions in modifying the test frames (approx. 55 m high in two sections) were very short.

Prefab scaffolding

BRAND designed and calculated prefabricated scaffolding for these activities. This scaffolding was then constructed and stored precisely in accordance with the drawings. When this prefabricated scaffolding was lifted into place, they were first anchored to the structure by a cherry-picker, providing direct, safe access to the scaffolding so that the scaffolding operatives could dismantle the scaffolding further if required. In the engineering phase, BRAND worked from

the space available in the different phases and the positions of the uprights, enabling scaffolding to be separated precisely at a given point so it could be re-engineered for a subsequent phase.

BRAND developed efficient solutions with the client, exchanging information quickly such as accurate construction drawings (AutoCAD), and clear information on the work to be performed ensured perfect preparations and even better results, so the project could be completed as fast as possible and to the client's complete satisfaction.



Location

Vlissingen, NL

Project

Pioneering Spirit, Vlissingen

Customer

Volker Staal en Funderingen

Challenge

Short turnaround time

Performance

Developing prefabricated liftable scaffolding



Major maintenance on offshore platforms

North Sea, NL & UK

BRAND supported the Barge Campaign project in 2012. This extensive job included the major maintenance on 36 manned and unmanned offshore platforms in the Dutch and English regions of the North Sea.

The client ONEGas is a partnership between Nederlandse Aardolie Maatschappij and Shell Expro. Venko was hired by ONEGas to provide painting, sheeting and insulation work; and Venko subcontracted the accessibility works to BRAND. The project is expected to run until the end of 2016.

This is a challenging job because each platform has to be treated from top to bottom, i.e. down to the waterline.

Around 300 t of scaffolding

One of the platforms covers 32,000 m². Tubelock scaffolding was used plus rope access. Once assembled, the scaffolding was first used to remove obsolete components and structures; then to enable the painting to be done safely.

The scaffolding was sheeted to catch the blasting grit for protection of the environment.

Insulation work was characterized by a strict schedule. On surfaces which were difficult to reach, we removed, checked and installed heat insulation on fittings, valves and flanges.

Acoustic sheeting

A hundred offshore workers from a number of contractors are based on the Jackup Barge "Atlantic Rotterdam", a mobile platform with living accommodation. There are three large compressors running for the painting 24 hours a day, so BRAND installed scaffolding with special acoustic sheeting, so noise levels in the accommodation were acceptable.



Project

ONEGas Barge Campaign

Customer

Venko

Challenge

Complex scaffolding, installation at waterline level and coordinated planning with 24-hour services.

Performance

Complete drawings and calculations, good planning throughout and adhere to shift patterns.
+40% productivity, -50 €/m²



Complex North Sea project

North Sea, NL

BRAND started work on a special project in the North Sea, under contract to Venko Offshore to create a complex set of scaffolding to enable the painting campaign on TOTAL E&P Nederland's K6CC platform to proceed.

TOTAL E&P Nederland is involved in prospecting for and extracting natural gas. TOTAL produces around 10% of all the natural gas Dutch households use from its 22 offshore platforms and four (subsea) production installations in the Dutch segment of the North Sea.

The whole project had to be completed in just 150 days. Extra work was carried out in preparation for a planned shutdown of the platform. BRAND brought in around 300 t of scaffolding into the project, including equipment for two large suspended scaffolding structures under the islands, suspended scaffolding under the bridge and scaffolding on the helideck; and, of course, the various production locations on the island. As space was limited, BRAND put up a number of secondary structures to store materials.

Safety first

The platform is manned by eight to ten people at all times, but there could be up to 90 people a day working on the platform during the painting campaign project. TOTAL and BRAND took a number of steps to ensure everyone knew what had to be done and what the safety aspects involved were: TOTAL issued new job permits for all work activities each day, and toolbox meetings were held on site each morning, using BRAND's LMRA (last minute risk analysis) chart to a large extent.

Project

TOTAL K6CC Painting Campaign
North Sea

Customer

Venko Offshore

Challenge

Short turnaround time
Limited storage space



Performance

Thorough preparation was key. As space was limited, BRAND constructed a number of secondary scaffold structures (storage scaffolding) to store materials. Tool box meetings were held on site each morning to reinforce health & safety, movement and planning for the day.

