

3C News

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A WORD FROM THE MANAGING DIRECTOR



In recent years, the oil and gas industry has been afflicted by complex challenges and uncertainty. As we enter the second quarter of 2017, 3C Metal is cautiously optimistic for the future but we understand that there are still many pressures facing our clients. In order to adapt to the aftermath of what has been a trying couple of years for the industry, 3C Metal will continue to offer our clients innovative solutions that will drive efficiency and reduce costs.

Despite a still challenging market, 3C Metal's core activities in the

oil and gas industry remain strong. Among many, our project highlights include the engineering and installation of a managed pressure drilling (MPD) system onboard the Seadrill West Capella drillship in Tenerife, Spain; and several major upgrade works onboard Ocean Rig's Skyros drillship. We are also making headway with our diversification efforts by pursuing opportunities in mining, renewable energy and gas transport. Another great achievement for the company has been our involvement in the construction of the new waste-to-energy plant (converting organic waste into usable bio-methane) in Cape Town, South Africa.

As we grow as an organization we will continue to invest in our biggest asset - our people. We recognize that the key to our success is the collective efforts and dedication of every individual, from every department, of every entity. We are taking action to ensure we are working harmoniously across our sites; sharing knowledge, ideas and information for the betterment of the company and our

clients. We will continue to offer permanent technical support and skill development to our teams to ensure our success and long-term sustainability.

With that in mind, I would like to extend my sincere gratitude to 3C Metal and Belmet employees for their efforts, hard work and dedication during challenging times. Your commitment, safety consciousness, budget and schedule-driven approach throughout all phases of ongoing and prospective projects is contributing to their award and successful completion. It has also resulted in our strong safety record, which we will strive to maintain. Keep up the good work!

To both our clients and employees, I hope you enjoy reading about our highlights. Please let us know if you have any feedback. Your input is greatly appreciated to help us improve our safety, service and efficiency.

Philippe Boy
Managing Director

A WORD FROM THE OPERATIONS DIRECTOR



The current climate in the oil and gas industry is producing extremely challenging market conditions, primarily affecting and constraining budgets and schedules for all of 3C Metal's clients. In order to help mitigate these impacts, 3C Metal is making efforts to enhance our accuracy during project evaluation phases and progressing with technical and engineering

assessments to ensure our clients are given a competitive advantage for their next tender, bid or upgrade linked to contractual obligations.

Several key clients have been offered gratis upfront laser scanning surveys and pre-engineering during scope evaluation phases. 3C Metal has sent several teams of Laser Scanning Engineers and Project Managers to accurately assess project requirements onboard. By taking detailed dimensions, point-cloud data and gathering all necessary technical information early on, 3C Metal has been able to take this data from site and define accurate bills of material and streamline the installation process. By also doing the upfront basic engineering, we position ourselves to be as aggressive as possible in terms of material selection, which benefits both the overall cost and delivery.

This type of forward-thinking has allowed 3C Metal to be weeks ahead of traditional project timelines. An example of the success of this strategy was the MPD installation onboard the Seadrill West Capella, detailed on pages 4 and 5. The laser scanning and pre-engineering allowed the material procurement and fabrication to commence only two weeks upon formal confirmation of the project. By controlling the engineering and class approval in parallel to prefabrication and installation, the project was able to be delivered and integrated efficiently and accurately.

We will continue to exercise our ingenuity to assist our clients in this challenging period. We thank our clients for the ongoing support and opportunities to be able to do so.

Dejan Zigic
Operations Director

SEADRILL'S WEST CAPELLA MPD SYSTEM IMPLEMENTATION A SUCCESS



3C Metal was awarded a contract by Seadrill for the integration of a managed pressure drilling (MPD) system for the West Capella drillship in Tenerife, Spain.

The concept for this project was to provide the design, prefabrication, installation and class approval of a modular MPD system. The design had to allow for the future possibility of moving the modules to another rig with minimal time for reactivation. This brought many challenges that needed to be addressed including access, installation of Weatherford equipment into the modules, maintenance access and rig integration.

3C Metal worked closely with Seadrill's project team for the design. In the initial stages of the project, 3C Metal deployed a team to carry out 3D laser scanning of the vessel. The laser scanning focused on several key areas including aft of the mud process module, where the new modular design was to be located. From the data acquired from the laser scan, 3C Metal was able to design the 15 high

pressure (HP) and low pressure (LP) piping runs that integrated seamlessly into the rig and around the equipment surrounding the modules. The laser scanning also aided the design of a new deck extension, a spreader skid and four new DNV type approved 2.7-3 modules that had been integrated with the Weatherford MPD equipment. From this the team identified and ran the electrical, pneumatic and hydraulic services to the equipment.

3C Metal's electrical partners, Electrowave, managed the design for the integration of new UPSs, additional transformers, direct tie-ins to the rig's PAGA system, communications, electrostatic discharge and power supplies. Multiple junction boxes and distribution boards were installed around the modular design to satisfy ATEX zone two ratings requirements

and still allow disconnection if necessary.

The schedule requirements proved to be the biggest challenge of the project with the engineering, prefabrication and shipping to be done within 12 weeks. By carrying out the laser scanning and pre-engineering ahead of project award, 3C Metal was able to commence with the material procurement and fabrication two weeks upon formal confirmation of the project. Prefabrication was carried out at several of 3C Metal's specialized workshops. The four modules and 60% of the HP and LP piping was prefabricated in Cape Town, with assistance from Belmet's Namibia facility. Several HP lines, the deck extension, the spreader skid for housing the four modules, and several other small walkways and platforms were completed in 3C Metal's Dubai



workshop. Consumables and hydraulic material supply came from France.

To have the first system integration testing (SIT) phase, it took approximately 2,350 man-days over a 10 week period, beginning in late December 2016. The number of personnel averaged at 36 and reached a peak of 52. With the rig being awarded a new contract with Total in

Cyprus, there were numerous ongoing operations while the installation was being carried out. Careful planning was required to make sure all parties were making progress and working efficiently but, most importantly, performing the work with the highest degree of safety. Working on both the rig and the shipyard for outfitting the modules with the required MPD package was a

challenging but beneficial time-saving exercise. The end result was a fully-functional MPD system, successfully integrated with zero injuries incurred. The fast-track nature of this project, in terms of the supply, design and delivery, embodies the capabilities of 3C Metal and the time and cost-effective solutions offered to clients.



3C METAL COMPLETES MAJOR UPGRADE WORKS ONBOARD OCEAN RIG'S SKYROS DRILLSHIP

3C Metal has successfully completed several major projects for Ocean Rig's Skyros drillship for its current Koambo contract with Total.



3C Metal completed five major scopes including the zero discharge installation, well test package, spooler bridges, Intervention Workover Control Systems (IWOCs) structures and SenTREE subsea test tree (SSTT) structures. The projects were delivered and integrated offshore in Angola. Various smaller scopes were also completed such as HP piping scopes, including a well test line, frac lines and completion test lines.

The zero discharge installation and well test package projects required engineering, design and submission to class (DNV) for the structural installation of the Halliburton and Expro equipment as well as electrical and piping requirements between the rig and third party equipment. 3C Metal was also contracted to do the inter-connecting piping and electrical connections for the Halliburton equipment.

3C Metal designed, prefabricated and installed seven removable spooler bridges to create additional deck space on top of the riser bay. The bridges were manufactured and shipped from Dubai. The modular design allowed for easy removal, installation and storage of these bridges without sacrificing a riser bay, which is often the case with more traditional designs.

The IWOCs structures weighed in total more than 56 tons and required 846 man-days for installation. The project involved engineering, prefabrication and installation of the structures for the well completion equipment in the forward moonpool area. The works included placement of the banana sheaves in the moonpool area under the drill floor. The laser scanning and 3D modelling done by 3C Metal helped to determine the optimal placement and direction of the reels to be installed on the structures.

The SSTT structures weighed a total of 28 tons and required 919 man-days for installation. The structures were prefabricated in South Africa then shipped in pieces to be assembled onboard. The size of these structures and lack of space presented a large challenge for the reassembly and final installation. Through detailed engineering and pre-planning, 3C Metal was able to overcome this challenge and achieve a successful installation.

Altogether, the works carried out on the Skyros involved more than 276 tons of steel. 3C Metal achieved more than 10,000 man-days onboard with zero lost time injuries (LTIs).

BELMET MARINE CARRYING OUT MAINTENANCE AND INFRASTRUCTURE UPGRADES FOR SOUTH AFRICAN PORT

Belmet Marine was recently awarded a maintenance contract by De Beers Group Services in Port Nolloth, South Africa. De Beers Group Services are currently managing a supply chain in Port Nolloth for mainly offshore diamond mining vessels operating in Namibia.



The project involves the maintenance of over 600 offshore containers. The award follows the commencement of an infrastructure rehabilitation project of Port Nolloth by Transnet National Ports Authority (TNPA). Port Nolloth has operated under a 10-year lease agreement to De Beers Group Services.

Belmet personnel are currently onsite, using the previously established site office and accommodation. Belmet has commenced work to equip the site with the necessary infrastructure and facilities to carry out a proper maintenance and tracking program in Port Nolloth. The infrastructure and facilities will eliminate long and expensive logistic lines to Cape Town and reduce maintenance and transport costs drastically. Belmet is committed to using local sub-contractors and employees as far as possible and to providing training where ever it will be necessary.

Site development started in late 2016 with excavations, filling and compacting of the soil for a paved area on which three sheds will be erected. The sheds will be used as a workshop with an overhead crane facility, a blasting shed and a painting shed. Currently inspections are taking place in the De Beers Group Services yard itself within the laydown areas for receiving goods and dispatching goods. When the sheds are operational, the full maintenance circle, visual inspections, repairs, non-destructive testing, load testing, blasting and painting, will be carried out using these facilities. This will decrease the cycling time and increase the operational readiness of the offshore containers which will reduce time and costs.



3C METAL HELPS TO DELIVER AFRICA'S FIRST MAJOR WASTE-TO-ENERGY PLANT

The first major waste-to-energy plant in Africa was completed in January 2017 in Cape Town, South Africa. The New Horizon Energy plant will convert everyday household refuse into recyclables, biogas and carbon dioxide.



The plant will process on average 500 tons of waste per day which amounts to almost 10% of Cape Town's waste. Normally this waste would end up in landfills. The biogas will be marketed as an alternative to LPG and diesel, and the liquefied carbon dioxide will be used in industry, agriculture and waste-water treatment.

3C Metal was contracted by Fountain Civil Engineering to fabricate and install the various piping systems onsite. The piping systems included nominal bore (NB) stainless steel substrate piping, NB stainless steel biogas piping, NB heating piping with a heating manifold and instrumentation and various other smaller scopes.

To reduce the cost, 3C Metal prefabricated most of the piping in 3C Metal's Cape Town workshop which reduced onsite installation time and personnel costs. With the view to continuous improvement in efficiency and cost reduction, 3C



Metal made the decision to qualify personnel on scaffolding erection and inspection prior to the project start in order to provide an in-house service, which led to reduced costs and quicker turnaround time.

The scope of work also included hydrostatic pressure testing as well as a low-pressure gas leak test of the biogas lines, using an inert gas and low pressure gauges.

Personnel onsite included a supervisor and welders, fitters, scaffolders and a pressure test team. More than 6000 man-hours were completed onsite without any LTIs.

After the completion of the initial contract, 3C Metal South Africa was awarded the equipment and piping installation for the biogas and carbon dioxide treatment plant onsite. The project is currently underway. With more biogas facilities planned for South Africa, 3C Metal is excited to be part of this sustainable alternative to landfill sites.



3C METAL COMPLETES EPC CONTRACT FOR TIGF'S NEW DEHYDRATION UNIT

3C Metal has successfully completed an engineering, procurement and construction (EPC) contract for TIGF's new Dehydration Unit located on the site of Lussagnet, in Southern France. The site is now up and running.



The project took nine months to complete, from award to commissioning, and involved upgrading the units of gas treatment by adding a column of dehydration and its separator downstream to increase the site's processing capacity.

The detailed design and construction of the complete unit included different functions such as gas counting and analyzing, installation of various valves and a building for pumping station triethylene glycol. 3C Metal managed the civil works, instrumentation, electricity, automation, site

communication, pressure testing (130 bars) and piping in compliance with French Government standards. In total, more than 1000m of piping, ranging from 1 to 24 inches in diameter, was constructed inside a gas plant unit in service.

The project involved 7,200 hours of prefabrication and 16,000 hours onsite, with sub-contractors included. Thanks to the contribution of the team, the project was completed on time, with zero health and safety incidents, zero LTIs and to the complete satisfaction of TIGF.

3C METAL SUPPORTS CHILDREN'S EDUCATION IN DISADVANTAGED CAPE TOWN COMMUNITIES

3C Metal South Africa is strengthening its ties with local not-for-profit organization, Wordworks, in order to support young children's education in underprivileged communities.



3C Metal's involvement with Wordworks began in 2012. The organization supports early language and literacy development in young children, up to eight years old, by working closely with parents and schools. Wordworks staff and volunteers deliver programs and resources that provide children with the extra learning support they need to reach their potential.

3C Metal South Africa General Manager, Michael Birch, said 3C Metal is

exploring ways to increase support for Wordworks in an effort to give back to the community.

Mr Birch said, "3C Metal is committed to supporting the communities in which we live and work by extending the benefits of our success to worthy causes.

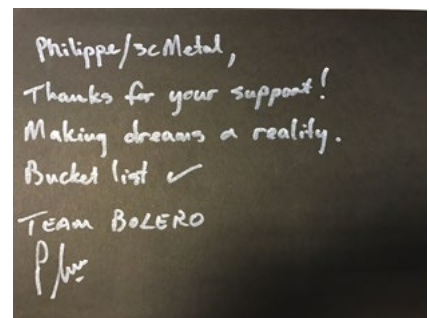
"Wordworks strives to ensure young children are given the best possible start to their education by equipping them with the tools to succeed and 3C

Metal is proud to be associated with this work. We look forward to continuing our support in the future."

3C Metal is working closely with Wordworks to explore new ways to assist their cause. Current plans include staff volunteering, the sponsorship of tutor mentoring programs and regular donations. 3C Metal also plan to work more closely with particular schools in which Wordworks delivers their programs.

BOLERO CREW PLACE THIRD IN CAPE TO RIO

After nearly one month at sea, the Bolero Crew crossed the finish line in the Cape to Rio Yacht race, claiming third position in their category. The Cape to Rio is the longest continent-to-continent yacht race in the Southern Hemisphere - starting in Cape Town, South Africa, and ending in Rio de Janeiro, Brazil.



On 26 December 2016, the crew of four set out on their endeavor across the ocean. The crew, who were racing in the 'cruising' category, consisted of Belmet's Managing Director Pieter Kroon, his wife Magdaleen Kroon, Gavin McLeod (the skipper) and Tara Lambourne.

They braved the South Atlantic Ocean for 26 days and traveled more than

3200 nautical miles. Throughout their journey they weathered squalls, survived in very confined spaces, slept in water-drenched bedding and split their spinnaker in two. But the crew persevered, crossing the finish line on 22 January, claiming third place.

When asked what the most memorable moment of the journey was, Mr Kroon

said, "The last 36 hours when we realized we could get a podium finish. Working hard on the sailing, steering, surfing the yacht - whatever it took to stay ahead of our competition. Then finally crossing the finish line realizing what we have done and achieved and could achieve in the future."

DUBAI TEAM BUILDING IN ‘THE LOST CITY’



In February, 3C Metal Middle East completed their team building activity at one of Dubai’s most iconic locations – Atlantis Hotel and Aquaventure Waterpark.

The Events Team at Atlantis hosted an activity for the 3C Metal Middle East office, called ‘Spy on the Lost City’. The activity required staff to work in teams to navigate through a course covering areas of the hotel and waterpark. At each checkpoint a task had to be completed in order to receive the next clue. Some tasks required team coordination while

others required creativity. One task required team members to slide down the resort’s Leap of Faith waterslide, dropping them six stories down a 90 degree incline and through a tunnel beneath the aquarium’s shark lagoon. The activity was inspired by an American TV show, The Amazing Race, which featured episodes at Atlantis, the Palm.

FRENCH RUGBY TEAM SPONSORED BY 3C METAL



3C Metal are proud to sponsor French rugby union team Section Paloise from Pau.

The team compete in the Top 14 – the highest level of the French league system. Managing Director Philippe Boy was presented with a signed jersey from Conrad Smith. Smith is the team’s center player and a two-time Rugby World Cup winner with the New Zealand All Blacks.

3C METAL WELCOMES NEW EMPLOYEE

The latest senior and managerial appointments

3C Metal would like to extend a warm welcome to Ernst Labuschagne

Ernst Labuschagne joined 3C Metal in January as the Group HSE Manager, based in South Africa. Ernst has more than 10 years’ experience in the management of health, safety and environmental issues. Six years of his experience has been in oil and gas shipyards and offshore operations.





France



UAE



Malaysia



Namibia



South Africa



FRANCE

3C Metal / 3C Supply
3210 Route de Larvath
64150 Sauvelade
France
T: +33 (0)5 59 67 64 67
F: +33 (0)5 59 67 65 55
E: office@3cmetal.com
E: office@3csupply.com

SOUTH AFRICA

3C Metal South Africa
9A Electron Street,
Triangle Farm
Stikland 7530 Bellville
South Africa
T: +27 21 949 63 46
F: +27 21 949 63 47
E: office@3cmetalsa.com

3C Belmont Services
16 Sacks Circle, Bellville South
South Africa
T: +27 21 949 63 46
F: +27 21 949 63 47
E: office@3cbelmet.com

Belmet Marine
Atomic Street
Triangle Farms, Bellville
7530 Cape Town
South Africa
T: +27 21 948 5682
F: +27 21 948 0517
E: info@belmet.co.za

NAMIBIA

Belmet Marine
Engineering Namibia
29 Second Street East
Industrial Area
9000 Walvis Bay
Namibia
T: +264 64 274 500
F: +264 64 274 501
E: info@belmet.com.na

UAE

3C Metal Middle East
Plot No. MO 0629
Jebel Ali Free Zone (JAFZA)
P.O. Box 261998
Dubai
United Arab Emirates
T: +971 (0) 4 8830682
F: +971 (0) 4 8830683
E: office@3cmetalme.com

MALAYSIA

3C Metal Asia Sdn. Bhd
PLO 231 (PTD 151818)
Jalan Kencana Emas 2
Kawasan Perindustrian
Tebrau III
81100 Johor Bahru
Malaysia
T: +60 (0) 7-351 3040
F: +60 (0) 7-351 3279
E: office@3cmetalasia.com



3cmetal.com