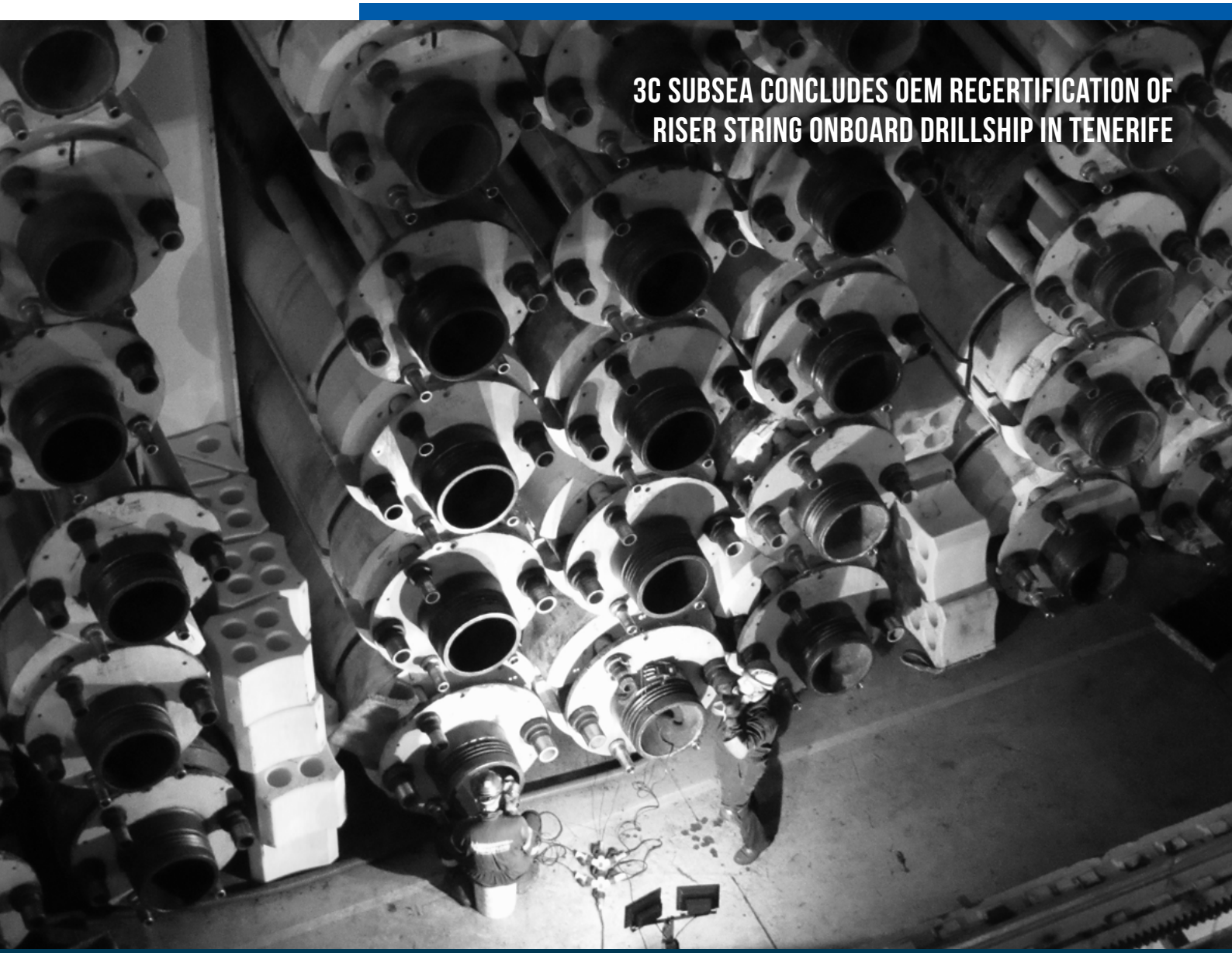
3C News



3C SUBSEA CONCLUDES OEM RECERTIFICATION OF RISER STRING ONBOARD DRILLSHIP IN TENERIFE

INSIDE THIS ISSUE

ISSUE 10 | Q2 2018

BURNER BOOM STRUCTURES DELIVERED BY 3C METAL ASIA

A project for two burner boom structures for a semisubmersible rig has been delivered by 3C Metal Asia.

OPTIMIZATION OF EXHAUST VENTS ONBOARD A SEMISUBMERSIBLE

3C Metal Asia recently carried out a project to optimize the position of exhaust pipes onboard a semisubmersible rig.

BELMET DELIVERING DIAMOND MINING TOOLS

Belmet's association with De Beers Marine goes back a number of years and the company has continued to focus on delivering reliable tools to ensure repeat business.

CONTENTS

A WORD FROM THE MANAGING DIRECTOR

Having weathered a period of deceleration across the oil and gas industry, the first quarter of 2018 brought a slight increase in confidence with somewhat firmer oil prices and increased activity levels. The market is still tough for oil services companies and challenges remain, but we are optimistic about the prospects on the horizon for 2018.

Moving forward, it is 3C Metal's priority to tap into pockets where we see activities increasing. Our commercial focus will be on general offshore rig upgrades, high specification projects, EPC projects, MPD integrations and projects for the next generation of 20,000 psi high pressure, high temperature (HPHT) field developments. Onshore drilling also represents a big market for us, particularly with our growing activities in North America and in the Middle East. We will also continue to explore avenues for development into other sectors such as power generation, marine, mining and renewable energy.

In order to win new work and achieve sustainable growth, we need to position ourselves to be as competitive in our commercial approach as possible. 3C Metal has continued to expand its global reach, not only by establishing new entities, but also by developing strategic partnerships that will help maximize the services we can offer our existing and potential clients. Remaining flexible, reactive and adaptable for our clients requires close collaboration between our entities in order to offer innovative engineering solutions, value-for-money and the shortest delivery times.

Since its establishment late last year, we are now able to utilize the capabilities of our new entity, 3C Metal USA, to deliver optimized results for our projects. A recent example (featured in the previous newsletter) was the integration of an MPD system for Seadrill's ultra-deepwater semi-submersible, the West Capricorn, in the Gulf of Mexico. The project was carried out by three 3C Metal entities - 3C Metal Middle East, Belmet Marine and 3C Metal USA – with subcontracted work carried out by local USA companies. This set-up allowed us to increase our responsiveness to the project – offering cost and time advantages. Moving forward, we will continue to focus on growing these activities in the USA and the Gulf of Mexico.

As we strive towards achieving another year with zero LTIs, our emphasis on safety continues. Our present Group target is set at three million man-hours LTI free. We are working towards building a consistent safety culture across our entities, training our staff to recognize their responsibilities in ensuring our workplaces remain free from harm.

I hope you enjoy reading our highlights for the quarter. I encourage you to contact 3C Metal should you wish to learn more about our capabilities.

Philippe Boy
3C Metal Managing Director

A WORD FROM THE OPERATIONS MANAGER OF 3C METAL ASIA

After a few years of relatively calm activity since we established our local presence in the Asia Pacific region, 3C Metal Asia has gone through an intense first quarter this year. We are delighted that 3C Metal's services, quality and efficient project management are helping to expand our local customer base. Over the last few years, 3C Metal Asia has been awarded several intricate and fast track projects. As you can read further in this newsletter our engineering and local fabrication capabilities have allowed us to turnover some complex and diverse structural and piping assemblies in a very short time. We are very proud that the excellence of our installation team has again been recognized in a very challenging environment. The team on semisubmersible ENSCO 5006 was able to complete the exhaust pipe modification with zero incidents while the rig was in operation in Australia. The region also seems to be slowly recovering from the downturn and we are seeing an increased number of contracts being tendered and awarded, especially for deepwater which was almost stopped for the last few years. 3C Metal Asia is actively involved in assisting our clients with budgets and plans for potential upgrades required for those contracts. Managed Pressure Drilling is a growing trend and our past experience on various equipment set-up and rig types allows us to provide innovative and cost-effective solutions. We look forward to completing the ongoing projects in the upcoming months and will keep on promoting the 3C Metal difference to bring the highest value to our customers.

Jordan Laurans
Operations Manager 3C Metal Asia

BURNER BOOM STRUCTURES DELIVERED BY 3C METAL ASIA

A project for two burner boom structures has recently been completed by 3C Metal Asia. This was not only a challenging project on the technical and fabrication side, it had to be delivered under a fast-tracked schedule.

The burner boom structures were developed for a semisubmersible rig. The client commissioned 3C Metal Asia to provide the engineering, supply and fabrication of the two structures, the associated piping and all the necessary elements to connect it and integrate it onboard.

Each boom measures 85 feet long with a burner head capacity of one ton. Each boom was fitted with nine lines for oil, gas, water, ignition and deluge services. 3C Metal also completed the rigging arrangement design and provided all necessary equipment (turntable, padeyes, shackles, slings, turnbuckles, fish plates, etc.) for the integration of the booms on the rig.

This project was originally quoted with a lead time of eight weeks but was fast-tracked to six weeks as the rig was to set sail. The 3C Metal Asia team worked around the clock to ensure the client's delivery date was met.

OPTIMIZATION OF EXHAUST VENTS ONBOARD SEMISUBMERSIBLE

3C Metal Asia recently carried out a project to optimize the position of the exhaust pipes onboard semisubmersible ENSCO 5006. The new design had to take into account wind conditions to direct the exhaust away from any working areas.

The project involved the engineering, fabrication and installation of exhaust vent extensions. A 3D laser scan survey was conducted prior to the engineering and fabrication. The scan was pivotal for this project as it allowed 3C Metal to identify clashes in a busy section of the vessel. There were multiple vents and piping to consider for the design phase. From the data collected, 3C Metal was able to prefabricate most of the structures with only a few site welds needed for the installation.

The final installation involved more than ten tons of materials. The four exhaust vents were extended by more than seven meters. Each extension comprised of a supporting structure and a 20 inch pipe extension. The overall project was a success, with the extensions integrating seamlessly on the existing structure of the rig.

3C SUBSEA CONCLUDES OEM RECERTIFICATION OF RISER STRING ONBOARD DRILLSHIP IN TENERIFE

In the first quarter of 2018, 3C Metal South Africa's specialist division, 3C Subsea, concluded Original Equipment Manufacturer (OEM) recertification of a marine drilling riser string onboard a drillship in Tenerife, Spain. The work was carried out in parallel with various other scopes planned by the drilling contractor over the same period.

The recertification scope for 83 marine drilling risers was carried out onboard while the drillship was in port in Tenerife, ahead of the rig moving to location in the Mediterranean region to begin the next drilling contract. 3C Subsea deployed a small multi-disciplined team to carry out the scope well within the client's required time frame.

3C Subsea worked closely with the OEM to offer the client a cost-effective and superior service onboard the rig, addressing all aspects of the recertification scope, including onsite project management, riser cleaning, dismantling, visual, dimensional, surface NDT, volumetric UT, minor repairs and reassembly. OEM requirements were maintained throughout and OEM certification was issued.

The 3C Subsea Project Manager onboard added much value, establishing a schedule for processing risers that integrated well with the rig's other planned maintenance activities. The Project Manager planned the sequence of the various processes in an efficient manner, maximizing opportunities for access to the riser bays during periods of limited access or high activity in that area of the rig.

Safety was prioritized due to the conditions associated with working with intricate equipment at heights in the riser storage bays. The project was completed successfully with no LTIs.

This project showcases 3C Subsea's ability to interact with the OEM and drilling contractor to achieve a cost-effective riser recertification program, executed safely and within challenging time and operating constraints.

IWOCS PACKAGED DELIVERED FOR SEADRILL'S WEST GEMINI

3C Metal has completed an Intervention Workover Control Systems (IWOCS) package for Seadrill, onboard the West Gemini. By utilizing the 3C Metal and Belmet facilities in South Africa and Namibia, the project was delivered with reduced cost and time constraints.

Seadrill requested the engineering, fabrication and installation of the IWOCS package. The main components of the project included pad eyes in the moonpool and DNV witness load tests; a platform for the GE deployment winch on the port side Xmas Tree stand; a modified platform in the center of the moonpool to land the IWOCS winch; modifications of the existing lines (LP and HP) to accommodate the IWOCS structure; and full electrical installation.

As the project required an accelerated prefabrication schedule, 3C Metal utilized the various 3C Metal and Belmet workshops located in South Africa and Namibia. By splitting the work between these locations, transport and shipping time was reduced thereby reducing the cost of freight.

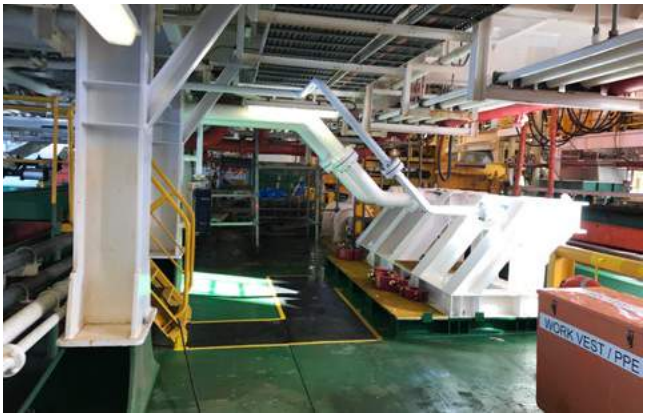
The majority of the preparation and prefabrication was done in Namibia. The final structural installation was done while the rig was in transit to Angola and installation of the equipment was done within a few days of the rig arriving in Angola. The final joining of the platforms was done by Belmet in Namibia. 3C Metal managed the DNV certification of all the relevant technical documentation as well as inspection and witnessing during the prefabrication.

The 3C Metal team efficiently installed the structures and piping across the vessel. Weight of all the structures was 16 tons. The project required a team of 24 personnel and 424 man days to deliver. The project was successfully delivered with zero LTIs.

In addition to the IWOCS package, 3C metal also assisted Seadrill with modifications to their mud process module, modifications related to the zero discharge system (required by Angolan regulatory authorities and contractual requirements), as well as the installation of Expro upper completions equipment.

3C METAL MIDDLE EAST COMPLETES MPD SYSTEM INTEGRATION ONBOARD WEST SATURN

In March 2018, 3C Metal Middle East completed the integration of a Managed Pressure Drilling (MPD) system onboard Seadrill's West Saturn drillship.



The project commenced in Tenerife, Spain, with the main MPD equipment, including four modules, installed before the rig's departure. The installation of the piping to the MPD manifolds was done while the rig was in transit to Brazil. The installation was finalized upon the rig's arrival.

The project required more than 220 tons of structures and piping, which was prefabricated in 3C Metal's workshops, then shipped and installed onboard the rig. The team spent 105 days onboard - representing 1,759 man-days (21,108 man-hours) of work. The full package including design, supply and prefabrication was reviewed and approved by ABS.

This project is an example of 3C Metal's ability to deliver high quality products while proactively managing and controlling the main challenges of the project. Through a demonstrated commitment to the highest quality standards and processes, 3C Metal has once again proved itself to be a reliable contractor for keeping clients' rig systems approved and certified by the class authority.

3C METAL SOUTH AFRICA PROVIDES MECHANICAL ASSISTANCE TO KIMBERLY-CLARK

3C Metal South Africa was contracted to provide design, fabrication and mechanical assistance and installation during the project SPIN CT21 for Kimberly-Clark, Epping Mill in Cape Town, South Africa.

Kimberly-Clark South Africa is a subsidiary of the US-based Kimberly-Clark Corporation, known for their popular household consumer brands.

The shutdown in March was scheduled to perform various modifications and upgrades to Kimberly-Clark's Epping mill in Cape Town. 3C Metal South Africa had four-off mechanical teams involved, executing the required modifications planned to improve the Kimberly-Clark Huggies® Tucker unit's operation. This mainly involved disassembling, mechanical fitting (drilling, taping, etc.) and re-assembling work.

Another two-off 3C Metal teams were allocated to fabricate and install a new hoist structure, along with the necessary strengthening of a mezzanine deck where the installation took place. The design analysis and final sign-off on fabrication drawings were coordinated by 3C Metal prior to the start-up of the shutdown. The overall work was spread over day and night shifts with a team of 20 skilled personnel.

3C Metal South Africa has been Kimberly-Clark's preferred mechanical contractor since November 2017, with projects involving design, pre-fabrication, installations, machining work, rigging and providing mechanical resources. For all of these projects, 3C Metal South Africa has consistently provided high-quality services and fulfilled all HSE and quality requirements.

BELMET DELIVERING DIAMOND MINING TOOLS

Belmet's association with De Beers Marine goes back a number of years and the company has continued to focus on delivering reliable tools to ensure repeat business.

Having built two previous crawler mainframes for De Beers, Belmet is currently building a new one that is due for delivery in Q2 2018. Some of the project work undertaken by Belmet for De Beers includes sensitive confidential designs that have required R&D engineering, product testing followed by a quick ramp up for additional units.

In addition to this Belmet recently completed the fabrication and delivery of guide rails and a lattice structure for one of De Beers' vessels. These were built and assembled on site in Cape Town and transported to the quayside for final erection before being lifted onto the vessel at the Sturrock Drydock. The project was initiated in September last year and delivered to the quayside in January 2018.

Belmet's Port Nolloth facility, established in 2016 for De Beers Group Services, is fully up and running. This facility maintains, inspects and repairs offshore baskets and an automated system tracks the movement of the baskets to monitor the repairs undertaken. The facility was established to mitigate the need to send baskets to Cape Town for repairs.

Belmet's facility in Namibia is also undertaking work for De Beers, producing 196 DNV-certified baskets. With the Manufacturing Survey Agreement in place with DNVGL, Belmet Namibia are able to eliminate delays in manufacturing and offer a faster production cycle. This results in accelerated timeframes for De Beers.

Belmet's enduring relationship with De Beers Marine has been sustained by its drive to consistently deliver world-class, innovative products.

WELDING INNOVATIONS AT 3C METAL SOUTH AFRICA

3C Metal South Africa recently completed the refurbishment of a sealing face with 50kg of Inconel. The refurbishment was completed using using Pulsed Gas Metal Arc Welding (p-GMAW).

The refurbished part was a chromium-molybdenum (CrMo) steel that was originally surfaced with Inconel and then sent for post weld heat treatment (PWHT). When in service, Inconel wears down over time and requires refurbishment.

3C Metal South Africa undertook the repair component by removing the damaged layer of Inconel so that only 1.5mm of the original cladding remained. The layer was then rebuilt with carefully controlled welding parameters and techniques.

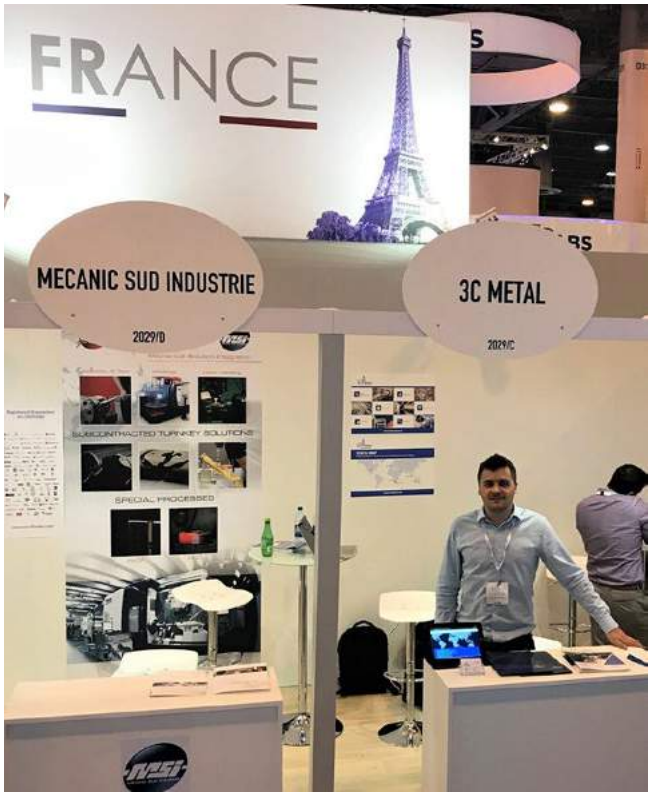
The goal was to perform a repair that would result in complete layer-to-layer bonding and not to create a new heat affected zone (HAZ) in the steel - which would require another PWHT for the entire component.

This type of repair work is often referred to as a cold repair and requires highly skilled welders, and tightly controlled welding procedures in order to ensure complete fusion (with enough heat) and not a new HAZ in the steel (without overheating).

3C Metal South Africa is proud to report that 50kg of Inconel was deposited in three days with only three small areas requiring minor touch-ups near the final machining of the sealing face.

3C METAL EXHIBIT AT OTC 2018

3C Metal recently took part in the 2018 Offshore Technology Conference (OTC) in Houston, USA. The flagship event is the largest global event for the oil and gas sector and this was the first time 3C Metal exhibited.



The conference was held from 30 April to 3 May, at the NRG Center. In attendance was 3C Metal's senior management including Managing Director, Philippe Boy.

During an EVOLEN sponsored breakfast event held at the conference, 3C Metal, along with Total, were invited to present to industry delegates. Mr Boy delivered the presentation, introducing 3C Metal's strategy for development in the USA.

3C METAL MIDDLE EAST'S DRAGON BOATING CHALLENGE

In February, 3C Metal Middle East took part in their annual team building event – a build-a-boat and dragon boating experience. The event was hosted by local dragon boating company, DragonFire, at the Sheraton Hotel in JBR, Dubai.

Staff were divided into three teams – red, blue and yellow. For the first activity each team split into two groups and were tasked with constructing one-man boats using cardboard boxes, duct tape and pool noodles. The groups worked against the clock to design and assemble the boats within an hour. Then it was time to put the vessels to the ultimate seaworthy test – a 100 meter paddle race at the nearby beach. Only two of the six boats were able to float for the full journey, with the winner from the yellow team earning a time advantage for the dragon boat challenge.

Dragon boat racing originated in ancient China and is a team paddling sport that relies on technique but most importantly synchronization. It proved to be the perfect team building challenge for 3C Metal Middle East. The red, blue and yellow teams boarded the three dragon boats and after a training session, went head-to-head with a race to the finish line. In the end the blue team were victorious and claimed the gold medal, with the yellow team claiming silver and bronze going to the red team. To end the day the group headed to the Sofitel Hotel for a buffet dinner and drinks to celebrate.

3C METAL MIDDLE EAST'S BUDDING GARDENERS

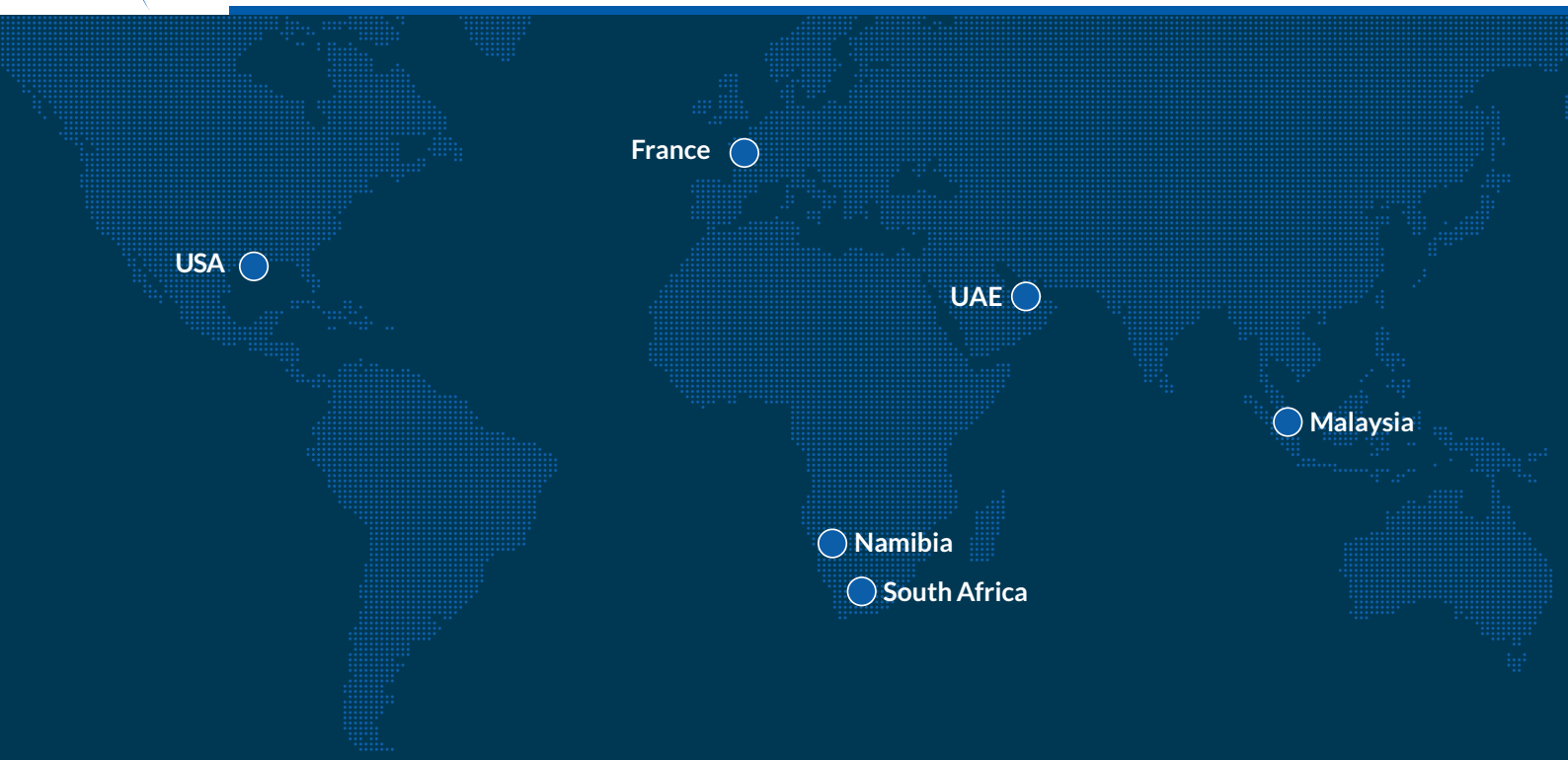
3C Metal Middle East's workshop staff aren't afraid to get their hands a little dirty, but this time it's for a different cause. For the last year or so, some of the staff from the workshop in Jebel Ali, Dubai, have developed a bit of a green thumb, putting together a make-shift herb and vegetable garden.

To help with their blossoming interest in gardening, 3C Metal Middle East recently provided staff with several terracotta pots as well as mixing soil and spades. The garden currently grows tomatoes, eggplants, okras, pumpkins, mint, oregano and cabbages.

3C METAL WELCOMES NEW EMPLOYEE

The latest senior and managerial appointments

Robert Bekker joined 3C Metal late last year as the Group HSE Manager, based in South Africa. Robert has extensive experience in the management of health, safety and environmental issues and has worked in Egypt, Iraq, Nigeria, Angola as well as South Africa. He has worked in steel fabrication, shipyards, onshore oil and gas drilling and well completion, offshore operations and LNG plant construction and maintenance projects. His experience covers HSE training development, OHSAS 18001, ISO 14001 IMS system design and implementation and auditing.



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 Subsea
16 Sacks Circle, Bellville South
South Africa
T : +27 21 949 63 46
F : +27 21 949 63 47
E : office@3cmetalsa.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 Perindurstrian
Tebrau III
81100 Johor Bahru
Malaysia
T: +60 (0) 7-351 3040
F: +60 (0) 7-351 3279
E: office@3cmetalasia.com

USA

3C Metal USA
Suite 595
5100 Westheimer
Houston
TX 77056
USA
T: +1 713 808 9651
F: +1 832 831 3487
E: 3cmetalusa@3cmetal.com

3cmetal.com