

# BUSINESS REVIEW

## MARINE & HEAVY ENGINEERING

Malaysia Marine and Heavy Engineering Holdings Berhad (MHB) is a globally trusted energy industry and marine solutions provider for a wide range of heavy engineering facilities and vessels.

MHB has more than 40 years of track record of delivering integrated and complex solutions to international oil and gas clients. We are recognised for our global expertise in deepwater support services, offshore conversion services and LNG carrier (LNGC) repair and dry docking. MHB owns and operates a regional Centre of Excellence – a learning centre that produces technically expert workers for the industry. MHB also owns and operates one of the region's largest marine and heavy engineering facilities and is the only yard in Malaysia that is capable of constructing complex deepwater offshore mega structures and possesses dry docking facilities.

Backed by an exceptional track record, a highly-skilled workforce and world-class facilities, MHB is able to provide innovative solutions to meet the complex demands of the energy industry - safely, on time and within cost.

Further details on Marine & Heavy Engineering  
<https://www.misc.com.my/solutions/marine-and-heavy-engineering>



## KEY HIGHLIGHTS



Launched the new  
**Dry Dock No.3**

in December 2020



Excellent HSSE culture with

**12.8 million**  
of safe manhours

delivered and zero Loss Time Injury (LTI)

## FINANCIAL PERFORMANCE



Revenue

**RM1,568** million



Operating Loss

**RM100** million

Heavy Engineering -

**Awarded a 'call-out' contract**



from Carigali-PTTEPI  
Operating Company  
Sdn. Bhd. (CPOC)

Marine Operations -

**Secured 6 en bloc agreements**



**Continued expansion**

into offshore windfarm sector



**PANDAI OTHMAN**  
Managing Director and CEO,  
Malaysia Marine and Heavy  
Engineering Holdings Berhad

## MARINE & HEAVY ENGINEERING

### MANAGING DIRECTOR AND CEO'S REMARKS

In 2020, MHB found ourselves in the eye of a perfect storm, as we contended with the twin challenges of the downturn in the oil and gas sector and the COVID-19 pandemic. Our business was impacted by oil majors' CAPEX cut during the year, which led to the deferment of several large-scale projects. As at December 2020, MHB's backlog of ongoing offshore projects are stretched out till 2024 which includes a major engineering, procurement, construction, installation and commissioning (EPCIC) works for PETRONAS Carigali Sdn. Bhd. (PCSB)'s heaviest and largest offshore platforms in the region known as the Kawasari Gas Development Project.

The government's imposition of a Movement Control Order (MCO) on 18 March 2020 led to almost a month-long closure of our yard operations to ensure the safety of our workers despite being designated as an 'essential services' business. We initially resumed yard operations at limited capacity, and then ramped it up to full capacity soon thereafter. Disruptions in the supply chain led to project delays, as

did border lockdowns which limited our access to foreign specialist workers. Our people navigated a tough year to catch up with time lost during this period to deliver on our key projects for the year.

A seminal milestone was the start-up of our new Dry Dock No. 3 (DD3) operations at the end of 2020. The addition of another dry dock that complements our two dry docks and one floating dock has significantly augmented MHB's capacities to conduct repair and refurbishment services on vessels and other marine and oil and gas facilities. Please refer to the side bar accompanying this Business Review on how DD3 has placed MHB on a path to ensure sustainable future growth.

We took advantage of the slowdown in our projects to accelerate our automation and digitalisation initiatives in line with our goal to become a data-driven organisation. MHB was able to swiftly pivot our business to achieve better data-led visibility and insights and drive greater value within the spectrum of marine and heavy engineering related solutions and services we offer. The process and technology improvements we implemented have enabled us to derive significant benefits in terms of time and cost savings. You can read more on our improvements in the Business Review section.

As MISC gears up to implement its new Sustainability Strategy 2021–2025, MHB has identified potentially lucrative opportunities within the new growth area of renewable energy in line with the

Group's sustainability agenda. In more recent years, the offshore windfarm sector has gained momentum in tandem with the global energy transition movement. Towards capturing growth opportunities in the offshore windfarm sector, in late 2019 we had entered into a global collaboration agreement with Smulders Projects Belgium NV (Smulders), a leading European offshore windfarm foundations and substations fabricator.

Under this partnership, MHB will provide services to fabricate and assemble works in Asia for offshore windfarms. As at end 2020, we have gained traction in the offshore windfarm sector by jointly participating with Smulders in pursuing several projects in Taiwan and Japan.

We have stepped up on green initiatives throughout our operations. In particular, we had entered into a Memorandum of Understanding with PETRONAS Power Sdn. Bhd. for the installation of solar rooftop solutions at MMHE West Yard in Pasir Gudang in 2019 as part of our ongoing cost optimisation and energy conservation programme. We progressed with this project in 2020 and have identified seven buildings that will be installed with a total of 8 Megawatt peak (MWp) solar power capacity. Expected to be fully functional in 2021, these solar panels will generate cost savings of RM8.5 million in the next 21-year period.

On another front, we encourage our people to adopt the zero-waste lifestyle and to reduce plastic waste generation through the 'Bring Your Own' campaign. We have limited the use of polystyrene at our yards by encouraging our people to bring reusable containers and water bottles to work to takeaway food and drink from the canteen instead of using polystyrene or single-used plastic containers.

As we move into 2021, we will leverage on our proven strengths and consistent track record to sustain our operations and growth. A key focus will be to catch up on our projects to sustain our business recovery. The addition of DD3 places us in a strong position to secure more projects in the future and we will leverage on our expanded capacity with more competitive offerings in a challenging market.

We have in hand a healthy orderbook of projects to look forward to which we expect to deliver on time and on budget. Towards gaining greater cost benefits, we plan to further our investment in equipment and technology upgrades and also in the automation and digitalisation space to enhance our repair and refurbishment services and engineering

capacities, as we continue to improve our project deliveries. With regards to the marine side of our business, we are exploring viable opportunities in the industry.

We are cautiously optimistic of recovering our footing in 2021, as we steady our course after the passing storm of 2020. We have learnt much from the challenges of the past year and will apply the outcomes of the lessons learnt to drive our operational efficiencies by implementing new and innovative ways of working. Our ability to adapt swiftly will ensure the long-term sustenance of our business.

#### PANDAI OTHMAN

Managing Director and CEO, Malaysia Marine and Heavy Engineering Holdings Berhad



#### MARKET REVIEW

The COVID-19 pandemic caused a drastic drop in global oil demand which led to crude oil prices plummeting. This occurred on the heels of the initial crash in the oil market as a result of the price war between Saudi Arabia and Russia and existing supply glut. Exacerbating the situation were lockdown measures imposed worldwide to curtail the spread of the COVID-19 pandemic. The intensely challenging landscape led to energy majors significantly downsizing their capital spending and revising their investment plans to counteract the negative financial impacts.

Global LNG demand and trade were not spared from the ramifications of the COVID-19 pandemic. However, LNG demand fared relatively better compared to oil demand throughout the year. Trade increased in the second half of 2020 especially during the winter to cater to greater demand from Far East consumers.

Within the volatile operating environment, MHB focused on resource optimisation to reduce our operating cost and steadfastly pursued business opportunities in other segments to replenish our order book. We intensified our efforts in the execution and delivery of our ongoing projects to ensure competitiveness for ongoing and future bids.

#### KEY DEVELOPMENTS

Although there were some initial setbacks off the back of the pandemic and the MCO imposed by the Malaysian government, MHB continued with ongoing contracts and projects, and secured a new contract.

During the year, the Heavy Engineering segment was awarded a three-year 'call-out' contract from CPOC for the provision of offshore brownfield modification works. The contract is part of an umbrella agreement pertaining to onshore fabrication and offshore modification services for CPOC facilities located within the Malaysia-Thailand Joint Authority (MTJA) area.

We continued with EPCIC works on the Kawasari Gas Development Project, and recorded progress of 30.35% for 2020 for PCSB. The project is slated for completion in 2024. Another project which is progressing as scheduled is the Bekok Oil Project, an EPCIC project also for PCSB. Project progress works stood at 58.02% and it is scheduled to be completed in 2021.



A notable accomplishment in 2020 was the successful sail away of PCSB's Bokor Phase 3 Re-Development Project Central Processing Platform (CPP) Topsides at the Baram Delta in Miri, Sarawak. Weighing at 18,995 metric tonnes, the project was delivered with zero LTI. The hook-up, offshore pre-commissioning and commissioning works are currently ongoing and targeted to be completed in the first quarter of 2021.

We also completed the fabrication engineering, bulk material procurement, construction and onshore commissioning epC works on the Pluto Water Handling Module for TechnipFMC. The module which weighs at 1,688 metric tonnes was sailed away in the fourth quarter of 2020 with zero LTI, to be installed on Woodside Energy Ltd.'s existing Pluto Alpha Gas Production Platform, located on the North West Shelf of Western Australia, offshore Western Australia.

In the first quarter of 2020, we completed the construction, installation and integration of floating storage and offloading (FSO) external turret, *FSO Golden Star* for Sao Vang and Dai Nguyet Development Project, offshore Vietnam. The work scope of the contract awarded by Promor Pte. Ltd. included construction and commissioning of the external turret. We completed the 1,110 metric tonnes external turret on schedule and with zero LTI.

We also sailed away the Bergading Mercury Removal Unit (MRU) Modules under the Bergading CPP-MRU Integration Project for Hess Exploration and Production Malaysia B.V. with zero LTI. The modules were installed and integrated into the existing Bergading CPP in the North Malay Basin. In the

fourth quarter of 2020, we successfully achieved the 'Ready for Start-Up' milestone as planned, and we have targeted for the remaining work to be completed in 2021. We also completed the hook-up and commissioning (HUC) works for Tembakai Non-Associated Gas (TNAG) offshore wellhead facilities (OWF) as scheduled during the second quarter of 2020.



A significant milestone for the year for the Marine Business segment was the addition of Dry Dock No. 3 (DD3) to our existing facilities of two dry docks and one floating dock to conduct repair and refurbishment services on vessels and other marine and oil and gas facilities. With the addition of DD3, our dry docking capacity has expanded to provide multiple comprehensive works on LNGCs, floating production storage and offloading (FPSO) units, FSO units and oil rigs. Please refer to the side-bar accompanying this Business Review for more information on DD3.



A total of 12 LNGCs were repaired during the year. Additionally, we secured six en bloc agreements as part of the 61 projects on our books. Throughout 2020, we served 22 new clients comprising 13 domestic clients and 9 international clients. The latter hail from Brunei, United Kingdom, Singapore, Greece, Korea and United Arab Emirates.


A key area of focus for MHB in 2020 was the automation and digitalisation of our operations. We enhanced our project monitoring by integrating a spectrum of digital initiatives which enabled us to effectively monitor and control project progress as well as identify potential issues quickly and implement remedial actions in a timely manner.

## SUSTAINABILITY


We continued with our sustainability efforts to create value for our various groups of stakeholders as follows:

Sustainability Pillar	Initiatives and outcomes
<b>Shareholders</b> 	<p>We have maintained strong relationships of trust with our shareholders by proactively communicating company updates on a regular and timely basis. Throughout the year, we provided real-time reports on MHB's share price, presentations, annual reports, announcements and press releases to shareholders on MHB's corporate website.</p> <p>As a result of movement restrictions, we held our Annual General Meeting in a virtual setting, with 80 shareholders attending. We also maintained two-way communications with close to 35 analysts, fund managers and shareholders throughout the year through regular one-on-one meetings, small group sessions and analyst briefings.</p>
<b>Customers</b> 	<p>We believe in proactively engaging with our customers and obtaining their feedback with the intention of improving on our customer service. During the year, we requested feedback from our customers at the completion of each project cycle through the MHB Customer Engagement Survey. A total of 75 feedback forms were received from our customers, providing constructive comments and recognitions of our yard's strategic location, good facilities, experienced managers and supervisors, and excellent communications with the project team and workers.</p> <p>We also maintained continuous engagements throughout the year via other channels such as the International Project Management Conference 2020 where we exchanged ideas and knowledge. MHB also hosted 32 clients during their visits to the MMHE West Yard in Pasir Gudang, Johor to showcase our company's strength and capabilities while providing an interactive platform to highlight technology and operational innovations. Our clients were involved in numerous quality, health, safety, environment (QHSE) related events such as the HSE Appreciation Day, which underlined our commitment to maintaining high levels of safety and quality throughout all our projects.</p>

Sustainability Pillar	Initiatives and outcomes
<b>Governance and Business Ethics</b>  	<p>The MHB Code of Conduct and Business Ethics (CoBE) follows the example set by PETRONAS as our guide towards conducting business ethically and sustainably. We introduced the MHB Anti-Bribery and Corruption Manual which is closely aligned with the CoBE towards enhancing our commitment in upholding a 'Zero Tolerance Policy towards Corruption'.</p> <p>We implemented a number of programmes and measures in line with our commitments. We held the MMB Virtual Subcontractors and Vendors Engagement (SAVE) session to inform and educate our value chain on our stance towards anti-bribery and corruption. We implemented virtual integrity and compliance programmes throughout all our business and service units to enhance our people's awareness and knowledge. In order to build a strong culture of governance and ethics, we enforced the Anti-Bribery Key Performance Indicator (ABKPI) in 2020. We also revised the MHB Corruption Risk Assessment (CRA) in line with our governance push.</p> <p>Towards ensuring compliance with privacy requirements legislated by the Personal Data Protection Act (PDPA), we conducted an awareness programme during the year for all our employees and third-party vendors and suppliers. We updated our internal and external stakeholders on our revised policy by uploading the PDPA Declaration form submission on our internal portal and through HR for our employees, and on our website and MHB's vendor registration web page for third parties.</p> <p>We maintained excellent HSSE performance levels, and our efforts were lauded by the Malaysian Society of Occupational Safety and Health (MSOSH) which honoured MHB with the Occupational Safety and Health (OSH) Gold Class 1 award denoting our good OSH practices.</p> <p>To ensure high levels of vendor performance that can support MHB's own customer service aspirations, we conduct regular assessments of our vendor performance. During the year, 94.9% of our vendors scored between 'average' to 'good' on the Vendor Assessment Result.</p> <p>In 2020, we have received a number of ISO certifications which are the ISO 3834-2: 2005 Quality Requirements for Fusion Welding of Metallic Materials, the ISO 29001: 2020 Quality Management System for Petroleum, Petrochemical and Gas Industry and the EN 1090-1: 2009 + A1: 2011 Execution of Steel Structures and Aluminium Structures.</p>
<b>Employees</b>  	<p>We conducted workshops and training sessions to update and discuss matters such as lessons learnt, international standards (ISO) updates, and the value of ethics and integrity. Focused capability development programmes were also conducted for our technical staff. Regular campaigns highlighting QHSE and integrity, as well as events to celebrate and appreciate MHB employees were also held virtually throughout the year.</p> <p>A total of 104 drills were conducted to increase our employees' alertness and response during emergencies. These included evacuation drills, oil spill drills and firefighting drills. As well as that a series of 13 enforcements were held throughout the whole company involving QHSE matters and evaluating employees' performance through the Performance Management System.</p> <p>Employee engagements were maintained through interactions between employees and MHB's top management. These included 'Leadership Engagement: Townhalls and Walkabouts' to foster and encourage two-way communication. We also had periodic engagements with our employee union through activities such as HSE Management Committee meetings.</p> <p><b>Adapting to COVID-19</b> The shift to new norms under the COVID-19 pandemic resulted in heightened sanitisation and hygiene routines. Towards assisting and supporting our people to transition to the new SOPs, we supplied refillable bottles of hand sanitisers throughout the yard. We also disseminated 55 memos, 30 awareness posters and one 'Living Info Pack' to create more awareness of the virus and how to stay safe within our workplaces. A total of four COVID-19 mass preliminary screening of symptomatic assessments were held during the year as and when required by stakeholders. As at end of December 2020, a total of 7,093 people, including our employees, clients and subcontractors were screened.</p>

Sustainability Pillar	Initiatives and outcomes
<b>Environment</b>  	<p><b>1. Green Seal @ Green Office Partnership</b> During the year, the MHB Kuala Lumpur Office received recognition as a Green Seal Office, with another seven of our offices currently undergoing the process to obtain this certification. The Green Seal recognition was obtained after the implementation of various measures within our workplaces that strives to advance environmentally sound practices. These include purchasing and using Forest Stewardship Council (FSC) approved paper, the activation of sleep mode on computers after 30 minutes of inactivity, setting printers and copiers to the default setting of double sided printing and maintaining a total of 74 recycling bins throughout all MHB premises.</p> <p><b>2. Energy Savings</b> MHB's energy savings programme aims to reduce the yard's carbon footprint with regards to Scope 2 emission (indirect emissions) resulting from the use of electricity. As at end of 2020, Scope 2 emissions comprised 79% of MHB's greenhouse gas (GHG) emissions. Besides installing solar rooftop solutions which are targeted to be fully functional by 2021, we also replaced conventional compact fluorescent lights (CFL) with light-emitting diodes (LED) to benefit from energy saving. We have switched a total of 5,775 units of light bulbs in the yard to LED. In order to reduce the unnecessary use of electricity, we installed 113 motion sensors in the toilets located at our offices as well as on the streetlights in the yard.</p> <p><b>3. Waste Management</b> Our waste management programme employs the 4R (Refuse, Reduce, Reuse and Recycle) approach to embed the recycling culture within our people. We have reduced our domestic waste through programmes such as the banning of polystyrene and encouraging our employees to bring their own reusable containers to take packed food and beverage for breakfast and lunch. In 2020, we collected 5,352.17 metric tonnes of domestic waste.</p> <p>We have in place a Scheduled Waste (SW) Management programme for the storage and disposal of SW in compliance with local regulations and yard procedures. In 2020, we renewed our regulatory approval to store SW of more than 20 metric tonnes and upgraded the management process at our temporary SW storage area.</p> <p><b>4. Water Conservation</b> Recognising that water is a limited and scarce resource, we have in place an awareness programme that focuses on water conservation. Among the measures implemented are the regulation of the minimum level of water inside the flush tank and switching from twist-type taps to push-type taps. We recorded 497,177 m<sup>3</sup> freshwater consumption in 2020.</p> <p>We fully support the Johor state government's Johor Sustainable Development Plan 2019–2030, of which environmental sustainability and water conservation is one of its eight key thrusts. In line with this, MHB participated in the World Water Monitoring Day Celebration 2020 held by the Johor state government.</p>



Sustainability Pillar	Initiatives and outcomes
<b>Communities</b> 	<p>In 2020, we contributed to the wellbeing of communities through the following means.</p> <p><b>1. Community Programmes</b>                      We implemented various community centred programmes which benefitted some 1,409 individuals. The programmes were conducted by 56 MHB employees who volunteered 2,863 hours of their time in their efforts to give back to society.</p> <p>Among the programmes were the sponsorship of the PETRONITA Virtual Orchid Run, and donating RM5,000 to the Ministry of Defence's Engineering Division Welfare Fund (Tabung Kebajikan Bahagian Kejuruteraan).</p> <p>Towards nurturing a future generation of creative thinkers, we conducted the Art of Science programme in collaboration with EcoKnights. Key highlights included a Waste to Arts Workshop, an interactive online class that focused on utilising waste and recycled household items into valuable art that was held via Google Meet. A total of 30 students and teachers from Sekolah Menengah Kebangsaan Dato' Penggawa Timur (SMKDPT) attended the event.</p> <p>We also implemented the MHB Go Green programme in replacement of the previous MHB Knights of Nature Youth Camp. The new programme featured a more refined and impactful approach to raise environmental awareness amongst the younger generation. We crafted a full-fledged environmental education programme for SMKDPT consisting of environmental activities focusing on issues related to air, water and waste management to be rolled out over a period of two years.</p> <p><b>2. COVID-19 Assistance</b>                      Towards assisting MHB's own employees and subcontractors that were undergoing difficulties due to the pandemic, we held an e-Donation drive which raised a total of RM43,063. We also conducted COVID-19 tests for a total of 50 individual subcontractors. As well as that, we contributed personal protective equipment (PPE) for medical front liners at Hospital Sultanah Aminah and Hospital Permai, Johor. We also contributed 1,050 packed meals to medical front liners, that were prepared by nine canteen operators from MMHE West Yard, Pasir Gudang. Basic food supplies were donated to 33 underprivileged families from Kampung Orang Asal Seletar in Kampung Pasir Putih, Pasir Gudang.</p>

## MOVING FORWARD

In view of the ongoing recovery of oil demand and price coupled with the drawing down of oil supply, a rebalanced oil market is imminent. Deferred projects in 2020 are expected to be revived and sanctioned by oil majors in 2021 on the international and domestic fronts. Although the oil market is on the path of recovery, the rate of global COVID-19 vaccines availability and distribution will either derail or accelerate the progress. Should oil prices continue to climb slowly, the timing of capital spending by oil majors remains uncertain.

LNG demand is anticipated to continue on its growth trend and to account for larger market share in 2021. The increasing demand for LNG is due to its different market dynamics compared to the oil market. Tanker ton-mile and oil trade should recover in tandem with improvement in oil demand upon the successful deployment of vaccines to the world population. Increase in economic activities from impending unrestricted mobility across the globe should also improve containership trade.

As we step into the year ahead, MHB is starting the year with an orderbook of approximately RM1.9 billion in projects. Coupled with our foray into the offshore windfarm sector, we remain optimistic in making the most of opportunities

available in the near-term future. The expanded capacity we now enjoy with DD3 will play a key role in our medium-term expansion and business growth. Although we expect the operating environment to remain challenging in the interim, we will employ a prudent approach in assessing our strategic growth opportunities.

## HERALDING A NEW ERA OF GROWTH AT MHB

In December 2020, MHB logged a significant milestone in our strategic growth journey by commencing operations on our newly completed Dry Dock No. 3 (DD3). DD3 complements our existing assets of two dry docks and one floating dock to conduct repair and refurbishment services on vessels and other marine and oil and gas facilities.

The 350-metre long, 80-metre wide and 14-metre deep dry dock has the capacity to cater to all vessels sized up to 400,000 dwt. DD3 can also accommodate the concurrent co-docking of smaller vessels when it is not in use for LNGCs, FPSOs or FSOs. The dry dock comes fully equipped with supporting facilities such as cranes, workshops, special equipment, offices and substation docks.

The first vessel to enter MHB's newly built DD3 was the vessel CSAV TOCONAO, a container vessel owned by one of our long-term collaborators, Zodiac Maritime. The TOCONAO arrived to undergo repair

and maintenance works at our new dry dock. Since the beginning of our collaboration with Zodiac Maritime in 2001, we have successfully completed a total of 25 dry docking repairs on their vessels utilising our dry dock, land-berth and quay facilities.

Our additional dock space has sharpened our competitive edge and put us ahead of the curve amongst our regional peers in the marine repair industry. This investment will enable us to capture more value in the years ahead to cater to the needs of clients who require works conducted on their vessels.

Since MHB's incorporation, we have successfully completed more than 3,800 marine repair works, including several life extensions and upgrading solutions for various vessels owned and operated by local and international clients. We are committed to continue delivering high-quality, value-added and cost-efficient services to our clients, and possess a comprehensive track record of more than 34 FPSO, FSO, and floating storage units conversions.