

# INSIDER

## First EPC Waste-To-Energy Plant Project in Thailand

Our track record in the successful completion of several EPC projects in Thailand was pivotal to the award of the Rayong waste-to-energy project to us.

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### FEATURED PROJECTS

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CCPP Project | Wood-ExxonMobil  
CRISP Brown Field Packages #3 & #5 | Nghi Son Refinery & Petrochemicals ("NSRP") DCSM 2019  
| SIDEM 50 MIGD Desalination Project |  
Sembcorp Solar Nova Phase 3 Project

### INSIDER SPECIAL

Mr Ronnie Lim shared his inspiring experience in Insider Conversation | Find out which mobile applications JEL's millennials are using in Insider Picks

RISE TO THE CHALLENGE



# MD's Message on COVID-19 Pandemic

With the escalating severity of COVID-19 outbreak globally, Managing Director Masao Akamatsu reached out to all the employees of the JEL Group of companies with a video message on 27 March 2020. He conveyed his well wishes and encouraged all to be resilient and united in overcoming the crisis.



Dear colleagues

I know that many of us are worrying as we hear the news on the serious impact of COVID-19 on the global health and economy. Some are affected by the unprecedented steps taken by the respective governments to contain the coronavirus. I would like to support and comfort our colleagues who are dealing with lockdowns and stay-home notices. Our well wishes and thoughts are with you.

We cannot be complacent and must always stay vigilant. Across the group, as health and safety of everyone are our top priorities, we have taken prevention and business continuity measures, including temperature screening, boosting personal and workplace hygiene, social distancing through staggering work and lunch hours, safe distancing at workplaces, and wherever possible, flexible work arrangements. While some measures are universal, others vary, depending on the nature of work, and the local laws in the countries where we operate. I urge all of us to continue taking care of ourselves so that we can protect our families, friends and communities.

Looking back at my past business experience for more than 30 years, I have never seen such a crisis affecting the globe of this scale. We are surely in one of the most difficult moments we have ever experienced. In certain countries, we have encountered shutdowns or stop-work orders due to the crisis. Our business will be affected if the crisis continues to escalate but we are doing our level best to mitigate the effect.

Despite the challenging circumstances, I am heartened that all of us are staying calm and continuing our operations. I would like to commend our colleagues at the project sites as well as those supporting the sites for your ability to adapt during this difficult time. This is crucial for our long-term success as the group of companies and I thank all of you for your patience, perseverance and respectable efforts to continue delivering to our customers.

This crisis will take the will, unity, resilience and the discipline of everyone to get through. Together, we can rise to this challenge and overcome this. I wish you good health and courage. Thank you and be well.

# COVID-19 Measures

We have followed the advisories from the local governments and taken steps to curb the spread of the virus, including:

- Issuance of personal body thermometer to each employee and body temperature to be taken twice daily
- Issuance of facemasks to all employees
- Social distancing of at least one-metre from each other
- Suspension of all social and recreational events
- Working from home
- Temperature screening and health declaration of visitors
- Monitoring of employees' travel history
- Stay-home notice of 14 days for employees who returned from overseas
- Deferment of all overseas business trips, unless approved by management

We are taking adequate precautions for our workers and subcontractors to ensure that they are well taken care of when they report for work. Control measures have been tightened at our work sites both in Singapore and overseas through the COVID-19 awareness program. Measures such as hygiene and cleanliness controls and temperature monitoring have been implemented so that operations can continue without respite.

We are checking the body temperature for all workers at all work sites daily and have suspended all activities which require mass gatherings such as tool-box meetings—a requirement which we have rolled out at all project sites. Hand sanitizers and face masks are also readily available for use.



A strong Health, Safety and Environment ("HSE") culture, that is something we truly believe. Joined by the senior management, our group of HSE representatives came together for the seventh HSE conference on 5 February. In his opening address, Managing Director Mr Masao Akamatsu reiterated the importance of a strong HSE culture, which should embody the qualities of a possessing safety mindset, trust, resilience as well as striving towards a sustainable solution by empowering people to learn from mistakes and problem solve.

Worth noting, JEL Group achieved a record 51.7 million man-hours from all projects executed in year 2019. This was an exponential increase from 12.6 million man-hours achieved in 2009, reflecting the size and number of projects handled by JEL group of companies, from our core businesses—construction, EPC and maintenance projects. The one-day conference accorded us the opportunity to revisit the incidents, which took place during the year, and the lessons learned from the experiences.

Mr Akamatsu encouraged all to "walk the talk", affect change through our actions and foster a strong safety culture for the long-term success of the company. We do not rest on our laurels as it is our belief that one accident is too many.

PT Jurong Engineering Lestari ("PTJEL") has successfully transited to ISO 45001:2018—the new international standard for occupational health and safety, from the previous OHSAS 18001.



Mr Muhammad, HSE Manager from Equator Engineering Sdn Bhd ("EESB"), reckoned that inculcating safe work habits rather than allowing objects to fall from height onto safety nets would garner better outcomes.



Ms Kusuporn, HSE Manager from Thai Jurong Engineering Ltd ("TJEL"), recounted how the various safety measures initiated by JEL Corporate HSE Committee, including JEL Mandatory 12 Safety Rules, were adopted and implemented in Thailand. These safety rules were communicated through posters, banners and other educational tools to raise awareness and for safety compliance.

With awareness and action at top of our mind, our safety efforts did not go unnoticed. We credit every person's contributions to the collective recognitions presented to us.

It was a proud moment for Central Java power plant project team when a Certificate of Commendation was presented by the owner, PT Bhimasena, to PTJEL representative in recognition of their remarkable efforts for surpassing 4.8 million safe man-hours without any loss time injury.

TJEL team for BST expansion project achieved 1.5 million safe man-hours without any loss time injury. The milestone was celebrated together with the plant owner, BST, and EPC contractor, TKT.

# JEL GROUP HSE Conference 2020

Mr Thomas Chee from Jurong Engineering (Overseas) Pte Ltd ("JELO") explained the Behaviour Based Safety (BBS) program conducted at Brunei BFI project. BBS helps to anticipate incidents and take precautionary actions through observing and recording unsafe acts and behaviours at work.



Technology and safety are also closely intertwined. JEL Maintenance Pte Ltd ("JML") team presented an innovative method of employing virtual reality (VR) technology in one of their recent projects. This equipment enabled the team to simulate the environment, plan the work sequence and formulate effective work method to eliminate hazards and risks.

In closing, Mr Osman Head of HSE department highlighted various HSE statistics as well as accident trend for the last 10 years. Zero accident is not just an aspiration. Collectively, we can keep our people from harm at all our workplaces.

# Safety Awards



Our team for Tanjong Jati power plant project was lauded by Sumitomo Corporation for our contribution towards crossing 10 million safe man-hours without any loss time injury



# i-JEL Campaign

The inaugural “i-JEL” is a campaign to nurture the spirit of innovation and to recognize the efforts from our employees to improve work processes. We received 42 entries from various entities. The top 3 winners, selected by our panel of judges, walked away with cash prizes presented by Managing Director Masao Akamatsu during the recent annual group dinner.

## Mr Sandeep Jain



The ability to turn around the project in shorter duration and with lower costs was what Mr Sandeep Jain, Project Manager at JEL Maintenance Pte Ltd (“JML”), focused on when he headed the Jurong flare adequacy project.

“It was an arduous task to replace the 16-ton flare seal. At 150 metres high, it is one of the tallest in Singapore. We challenged ourselves to look beyond the usual approaches, leading to the use of virtual reality technology (“VR”). The benefits of VR are especially relevant for this project as the access to survey the site was difficult during flaring. With the aid of the advanced tool, we were able to immerse in the environment and simulate the critical

work processes from the dismantling of existing flare seal, disconnecting pipes at height to installing the new seal,” said Mr Jain.

The team studied the scope in detail, fine-tuned the processes and conducted multiple rehearsals because there was little room for errors during the plant shutdown. The design of the temporary

work platform was changed completely after repeated trials using head mounted tablets and VR for the original designed platform was not spacious enough for one person to move around as appeared on the drawing. This prevented possible ramification. The replacement project was handed over to client 3 days earlier than the scheduled date.

Our client, Nghi Son Refinery and Petrochemical LLC (“NSRP”), faced challenges in obtaining accurate field reports due to the voluminous activities of over 4,000 tasks and multiple packages to be completed within the planned shutdown window of 40 days. To do so effectively, JML architected a mobile application ‘J-STORM’, aptly referred to Shutdown, Turnaround, and Outage Resource Management. The design was shared with a software vendor, who then developed the scalable application that could work on multiple platforms, including iOS and Android.



J-STORM captured the granular level of details, encompassing on-field activities including progress updates, resources deployed, constraints at the interval in every 30 minutes etc. This smart application allowed the team to further dissect the data collected, perform analytics as well as generate meaningful reports such as the progress of earned

value in the form of S-curve, delayed activities and lookahead plan.

JML launched the application on a pilot basis at the NSRP project in Vietnam with a plan to roll out across all our projects by customising the features according to the scope of each project. Since the data is captured and stored in the cloud,

it can be monitored from remote location and deposited in data bank for future proposals and estimation. Through this cutting-edge application, we continue to validate the enabling of technology to raise our competitiveness—in this case by marshalling field project data value map in our operation.

## Mr Venkataraman Sridhar

The glass-fused steel (“GFS”) water tank was a first for JML. Prior to this, water tanks were constructed using the conventional welded steel, which required the deployment of scaffolding and cranes, and a longer duration as steel plates were bolted together piece by piece.

On why glass-fused steel was chosen, Mr Sridhar, General Manager of JML, explained, “This was an EPC project to construct a water tank with 1,150m³ storage capacity for a pilot plant project in Brunei. JML evaluated the options available in the market and decided on glass-fused steel tank as the advantages

Many of our projects boasted improvement in processes, with ideas originated from our front-line employees. For some projects, these new processes also translated to higher profits. While the specificity is unique to each project, we hope i-JEL campaign will be a platform where we can build new processes that can be adopted and implemented elsewhere, within the Group.



far outweighed the welded steel tank in both operational and financial aspects. We were able to complete the construction of the tank within one month—this was done with very minimal usage of scaffolding and cranes. We also managed to substantially reduce the construction costs by about 40%!”

Another benefit for our customer was that the GFS coating came with a 10-year warranty from the manufacturer and was highly resistant to corrosion. Aiding its efficacy was the ease for maintenance as the individual panel for a section could be easily removed and replaced.

## Mr Subbaiah Pillay Ayyappan Pillay

The gondola was used after assessing the relevance of the equipment to install electrical cable tray and cable from top of a building to ground floor for a project located at Penjuru Road.

“We deliberated between gondola and mast climber—the gondola stood out as it was a better fit in terms of the project requirements. It’s easier to assemble and operate a gondola as compared to the heavy duty mast climber which would require a bigger storage space. Gondola is also known for the added safety measures



for working at height, which will provide our workers the confidence to work because of the long size platform and safety railings,” said Mr Subbaiah who was the site manager for this project.

Unfettered by norms, gondola was used as the convenient and cost-effective

alternative to scaffolding, resulting in a massive saving of S\$70,000 for the project at Penjuru Road. The rental for the rope suspended platform was only a fraction of the scaffolding erection cost, and more importantly, it enabled the team to shorten the project schedule.



# First EPC Waste-To-Energy Plant Project in Thailand



From the onset, although there are similarities to a conventional power plant, we know that certain processes and systems are specific to a waste-to-energy plant, which would be a primitive experience for JEL Group. In Thailand, we have been at the forefront of constructing power plants through our extensive design, procurement and precision in execution capabilities. Our track record in the successful completion of several EPC projects in Thailand, including the biomass power plant at Lamphun, were pivotal to the award of the Rayong waste-to-energy project to us.

Located at Amphur Mueang in Rayong province, the power plant is being built next to the refuse-derived fuel (“RDF”) production plant owned by Global Power Synergy Public Company Limited (“GPSC”). RDF converted from waste will be used as fuel for power generation. We are collaborating with Hitachi Zosen Corporation—a leading supplier of waste-to-energy solutions—who is providing the basic engineering of the RDF boiler pressure parts and the boiler structure

as well as supplying the stocker waste combustor and exhaust gas treatment equipment. In response to the Thai government’s campaign to create a sustainable waste management leveraging on the waste-to-energy technology, the project when completed, will be capable of ramping 9.8 MW power output for 6,700 households in Rayong province.

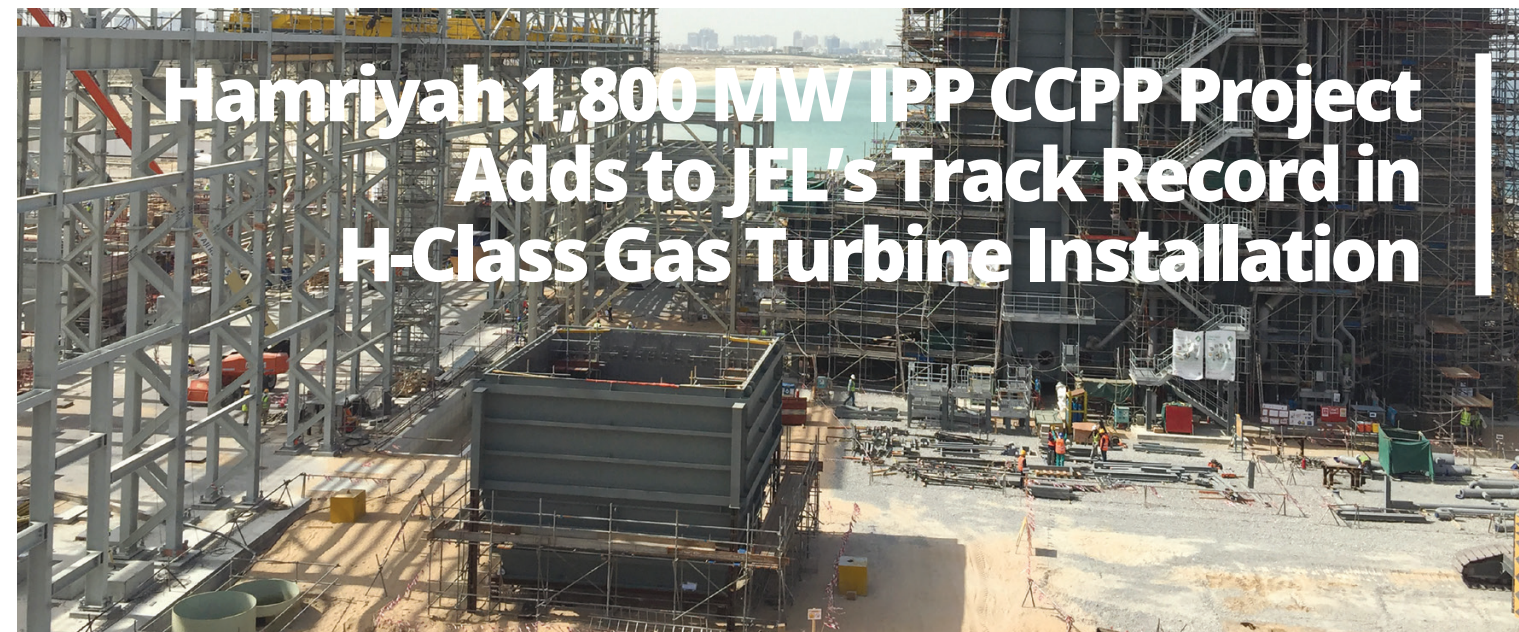
The allocated site for the power plant used to be a rubber plantation. Our team spent a fortnight to clear the rubber trees. During the soil levelling for the site to be at optimal condition, we found the soil to be highly resistive. To overcome this, a section of the soil was replaced with imported soil of less resistivity and the ground design was altered to meet the grounding design requirement.

The agility to move and react quickly is crucial in conjuring the success of any development project. As there was no precedent, our team had to conduct extensive sourcing for equipment and systems unique to waste-to-energy power plant in Singapore, Thailand and India

while factoring in the reliability of the vendors and technical specifications.

The EPC scope of work required the collaborative efforts from different roles and functions for seamless coordination and execution. During the execution phase, there were frequent changes to the basic and boiler designs which inevitably delayed the project schedule. Notwithstanding this, the team was able to resolve the issues through regular clarification meetings, providing solutions which resonate with client and vendors, and expediting the progress to make up for the time lost.

We achieved remarkable progress—the first pile was completed within 3 months of site preparation, paving way for the completion of major foundations followed by boiler structure installation which started in February 2020. We will continue to adopt customer-centric initiatives to provide value-added solutions for our customer.



# Hamriyah 1,800 MW IPP CCPP Project Adds to JEL's Track Record in H-Class Gas Turbine Installation

The team wasted no time and plunged into work upon securing the project. Our relationship with Tecnicas Reunidas was underscored by past projects, including Bangladesh Ashuganj North combined cycle power plant and more recently the RAPID package 3, where we had worked closely together to deliver the envisaged outcomes. The award of two contracts for the construction of Hamriyah 1,800 MW combined cycle power plant, respectively the HRSG installation and BOP common unit mechanical erection as well as the turbines package – comprising the erection of 3 combined cycle blocks of gas and steam turbines, generators and transformers, have allowed us to further strengthen our collaboration with Tecnicas Reunidas.

Erecting GE’s state-of-the-art H-class gas turbines calls for precision and seamless coordination. Honed by experiences in the installation of H-class gas turbines from past and on-going projects in which we have gained the breadth and depth of the requirements, we are now better equipped to work on them systematically. The project will bring the total number of H-class gas turbines erected by us to a record of 11 units.

Having said that, it is not just following through the process, but to be able to see things from different angles and to overcome the challenges before us. One such challenge was the need for our labour camp to comply with the European Bank for Reconstruction and Development (“RBRD”) standard. Our team responded by assigning a senior personnel to enforce various measures including educating workers to tidy up their rooms and adopt good personal hygiene practices. In light of the COVID-19 outbreak, we have stepped up precautionary measures, including monitoring the temperature of every

worker twice a day, disinfecting offices and labour camps regularly and sharing of latest information on COVID-19 through notice board.

The dexterity of our team managed to avert disruptions which could have happened due to the space constraints for equipment placement and material storage inside the turbine hall. By working out the detailed works and material transportation schedules, we were able to facilitate the processes smoothly.

We commenced the first column erection for HRSG in October 2019. To date, we have completed the module erection, erection of various drums and stacks as well as the base for gas turbine generator Block 1. Aided by our current workforce of around 300 workers, whom most had helped in the completion of our Kuwait project, we will continue to work diligently towards achieving the various project milestones.

We have been tasked to perform civil and building works for the Hamriyah 1,800 MW Independent Power Plant—the first large scale combined cycle power plant under construction in Sharjah. This marks our re-entry into Sharjah, the third largest city in the United Arab Emirates after a hiatus of nearly two decades. The contract was awarded by our existing client, Tecnicas Reunidas whom we have forged a strong relationship, stemming from earlier projects completed in recent years. This is a strong endorsement of our capabilities to meet project requirements across territories.

Tecnicas Reunidas teamed up with GE, and the consortium will be responsible for the full spectrum of EPC services. The new plant which is currently underway is

approximately 150 meters away from the existing 500 MW Hamriyah open cycle power plant, in the Arabian Gulf coastal town of Hamriyah. Harnessing the thermal efficiency of a combined cycle technology, this new plant will be equipped with 3 units of GE’s advanced 9HA.01 gas turbines, steam turbines and heat recovery steam generators (“HRSG”), all to be supplied by GE.

Entering a market can be challenging in numerous ways. We faced a confluence of issues in our venture to Sharjah including new client in the aspect of civil works and new environment and territory. For example, there was an inadequate supply of local manpower due to the shortage of skilled labour. Consequently, we had to recruit workers from overseas.

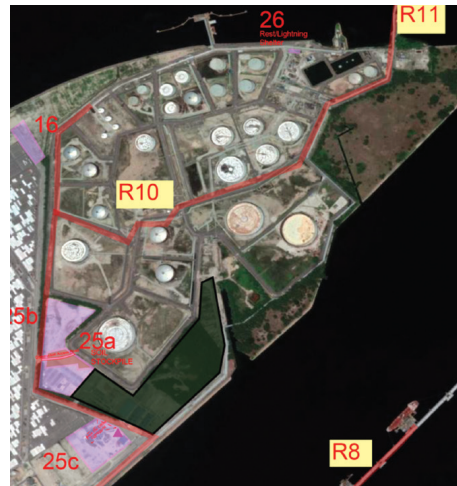
Due to the stringent safety requirements imposed by the owner and client, we had deployed more safety supervisors to ensure compliance of the safety rules and processes. Climate posed another challenge as our workers had to grapple with the scorching heat during summer. We had complied with local law and stopped work for 3 hours in the mid afternoon during the hottest months from June to September. To counter the threats of heat stroke and heat exhaustion, cooling stations and rest areas were also provided to ease the intense heat.

We have completed the foundation for all 3 units of HRSG, while the on-going civil works for balance of plant as well as the architectural and building works for the two storey administration block are progressing well. We applaud the efforts from the team which have contributed significantly to the 350,000 man-hours of civil works achieved. With the experiences amassed from past projects, we are committed to fulfill our responsibilities and meet the project schedule.



# JEL Maintenance Updates

JEL Maintenance Pte Ltd (“JML”) was awarded a contract by EPC main contractor, WOOD PLC, for the fabrication for and construction of the large scale expansion of ExxonMobil’s Chemical and Refinery Integrated Singapore Project (“CRISP”)—brown field packages #3 and #5. Our continuous service, following the successfully completion of several earlier projects for ExxonMobil, has further cemented our ties with the customer. Works for packages #3 and #5 in the respective Pesek refinery and Jurong refinery are progressing well and on track to be completed by the middle of 2021. Our main scope encompasses fabrication,



**Package #3: PESEK Refinery Scope**

construction and testing of piping—ranging from 4” to 16”, hot-tapping, steel structure pipe racks, equipment, painting and insulation works. In terms of execution of



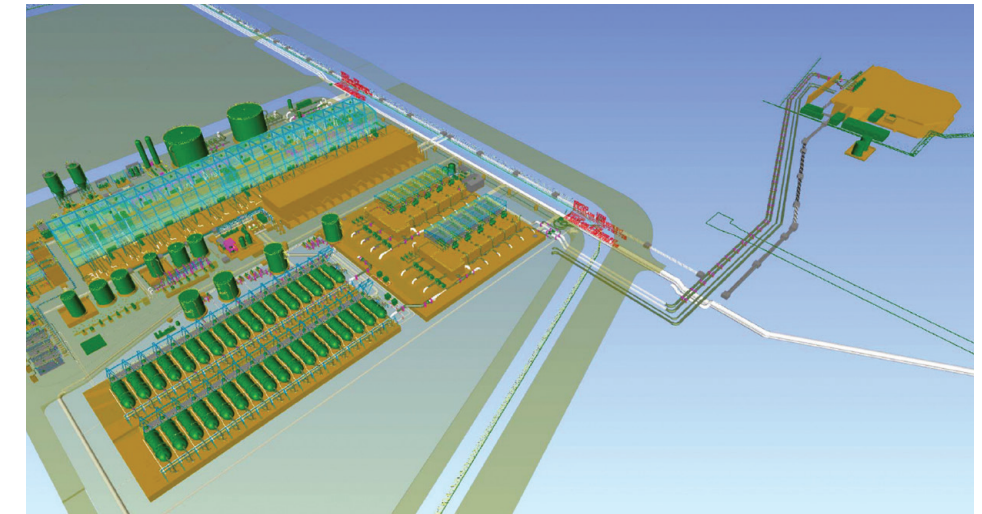
**Package #5: JURONG Refinery Scope**

works, 500 manpower are expected to be mobilized at the peak of the construction phase.

It was a big step in JML’s foray into Vietnam with the completion of the Defect Confirmation Warranty Shutdown Management (DCSM) package for Nghi Son Refinery and Petrochemical Plant (“NSRP”)—the largest of its type in Vietnam. The scope was massive, requiring 1,200 manpower and involving 77 equipment, 671 valves overhauling, 121 piping modifications, refractory, scaffolding and insulation works. These tasks were completed within a tight timeframe from 1 August 2019 to 15 December 2019. Our team was praised by client, NSRP, for our outstanding performance in executing the most critical part of shutdown activities, especially the replacement of 80-ton flare seal drum using 600-ton crawler crane and CCRR-Catalyst replacement works. It is worth to highlight that JML’s latest invention, “J-STORM”—our latest invention and an application developed for real time progress monitoring and amassment of data-driven insights through the use of iPads—has earned us an accolade from the client.



There has been notable success in JML’s efforts to broaden its energy business—the award of its second desalination project from SIDEM Veolia to perform mechanical and electrical installation works for the Al Dur 2 independent and water power plant project in Bahrain. Consisting of two independent production lines to be constructed in two phases, the plant will be capable of generating 1,500 MW per annum of gas-fired power upon completion. Simultaneously, the desalination component will have a capacity of 50 million imperial gallons water (227,300 m³ per day) through sea water reverse osmosis technology.



JML has been chosen to execute the mechanical scope, comprising 4,721 MT of equipment and 85,000 dia-inches of piping works as well as related electrical works

involving 280 km of cabling. Work has begun in August 2019, and our scope is slated for completion by September 2020.

The completion of JML’s first solar project in Singapore marked its successful debut in this new frontier. Assigned by Sembcorp Solar Pte Ltd (“Sembcorp Solar”), our team has successfully installed 9.67 MW PV solar power panels spread over 165 HDB blocks in Jurong, Singapore. The 50 MW project was split into 3 packages: Scope-A, Scope-B and Scope-C, with JML handling Scope-B along with the system integration. The team displayed adroitness to overcome the rigorous working conditions including 1) high roof with limited access, 2) lifting and foundation works without causing inconvenience to HDB occupants and 3) frequent changes to work schedules. Great emphasis was placed on safety to ensure compliance to requirements for working safely at height. Our 70-man team worked relentlessly to achieve completion in December 2019 and sustained a remarkable 218,000 incident free man-hours. This project also accorded JML the opportunity to develop the “PV Build-to-Edge” concept, which helped to boost productivity by 35%. Built using detailed design and calculation, the 3D model was presented to government authorities, and subsequently adopted and applied in all three packages.





# JEL Staff Party—Cosplay Night

The evening was surreal at Concorde Hotel on 7 February 2020. Movies came alive as fictional characters animated this year's annual dinner, where JEL staff showed up suited in dazzling attires, mimicking cosplay characters.

At the prelude party, there were plenty of fun activities specially curated for the guests—photo booth, caricature mugs, claw machines and bling booth props. As part of our preventive measures for Covid-19, all attendees partook in the temperature screening at the registration booth before entering the party.

One of the evening's highlights was the special opening performance, starring Managing Director Masao Akamatsu and the members from our Sports and Recreational Committee, who were decked out in their fanciest costumes as Super Mario, Wonder Woman, The Mask, Princess Leia and other superheroes. The dancers grooved to the music with their charismatic choreography and ended the dance with a striking pose. While everyone was immersed in the good vibes, Mr Akamatsu presented the Health, Safety and Environment (HSE) awards to the top project teams in recognition of their safety achievements.

Dinner commenced with the customary "Lo Hei", with everybody tossing "yu sheng" (raw fish salad) to symbolize prosperity and good fortune for the year. JEL is fulfilling its vision as a leading construction and engineering company, thanks and credits to the hard work from our existing and retired staff who helped us come this far. The retirees, who had joined us in the celebration, received a token of our appreciation from Mr Akamatsu.



The ballroom was filled with excitement during the interactive games and the prize draws. We caught a glimpse of the hidden talent of our colleagues, who put up stellar singing and dancing performances to loud cheers and laughter from the audience. The catchy dance beats of the song, "Gangnam Style", lifted everybody from their seats, pushing the party to a high. The parade by Minions together with their partner-in-crime, Gru, was another one of the evening's highlights—we just could not get our eyes off them. No prize for guessing the winner of the night for "Best Dressed Table Contest"—Team Despicable Me!

The night ended with pride as we sang the JEL song in unison. In a rare moment, Mr Bob Tan, the chairman of JEL, gave a heartwarming speech, recounting the transformational growth of JEL over 15 years. What an epic night!



In this issue, we talked to Mr Ronnie Lim, General Manager for Construction Centre, who shared his inspiring experience in JEL.

As I look back to nearly four decades with JEL, it has definitely been an enriching journey. It was a steep albeit exciting learning curve when I was posted to Indonesia for my first overseas project assignment during my second year with the company. My job also brought me to far-flung places in Asia and the Middle East, where I had been exposed to many challenging projects. Throughout my career with JEL, I am fortunate to have had the opportunities to interact with past and present Managing Directors of JEL, and learn the ropes from my superiors and colleagues.

I was the project manager of the Amran cement plant expansion project in North Yemen. Plagued by security issues, the project due for completion by 2005 was dragged on till 2008. During a group discussion in the office cabin on July 2007, a bullet penetrated through the ceiling and ricocheted off a steel cabinet before spinning on the floor about a feet away from me and my site manager. We learned later that there were riots and commotions in many parts of Yemen triggered by the government's decision to raise fuel price. It quickly became apparent to us the severity of the situation when another stray bullet missed one of our engineers inside an office cabin the next day. What ensued was the declaration by our client, IHI, of a force majeure. We were directed to commence total demobilization.

On 3 August, we successfully evacuated our first batch of 55 personnel followed by a few more batches. Throughout the evacuation, the safety of our 400 personnel was our primary concern. Hence, we were in a dilemma when we were informed of the startling move by client to resume site work halfway through our demobilization.

From my perspectives, a good leader

- is responsible and strong, leads with his heart and good governance
- leads by example with empathy and through engagement

- has excellent people management skills and is able to command his team, and
- has foresight and ability to lead change.

The industry is evolving rapidly and competition is undeniably more intense than before. Needless to say, clients want cheaper price but today, with the high and often unpredictable expenses arising from steeper material and labour costs, it is increasingly difficult for construction companies to grow or even maintain a decent profit. Other challenges include the shrinkage in skilled labour force, shorter project schedules and the considerably more complex projects. These could impact our cashflow and lead to higher risks and possibilities of contractors incurring liquidated damages.

To strengthen our construction business, we are constantly identifying areas for improvement and areas where technology can be introduced to extend our value offerings and stay ahead of competition. Leveraging on various software, such as computer-aided design (CAD), building information technology (BIM) and virtual reality system (VR), we are able to "fast track" the construction process where engineering and construction works can be proceeded concurrently and more closely integrated.

The crux lies in project execution. Just as important is planning, which is the basis for control. Without plans, effective control is impossible. Essentially, the success of a project is reflective of the precise yet flexible planning and control efforts of the management and project team in achieving the desired results. For a project to be profitable, we need to be adept in execution and etched with a growth mindset. Other factors are

- good leadership
- well organized and motivated team
- good planning and control process
- cohesive team work and perseverance
- effective communication and evaluation
- continuous learning and implementation, and
- constant practice of JEL Core Values.





**Millennials are considered the most tech savvy of the current generations in the workplace. We asked our young staff for their recommendations on the mobile applications that add value to their daily life or work.**



**ClassPass**  
Android & iOS

It is a fitness workout application which provides its users a wide range of fitness activities such as boxing, Yoga, HIIT, meditation and more.

There is a large pool of studios with diverse classes at every hour of the day. It is easy to book classes with just a click and is suitable for any individual. I no longer have excuse for not exercising, especially with these fun classes.



**Koh Pei Ying**  
Engineer  
ED



**Phyo Thet Zaw**  
Project Engineer  
EPC

It securely synchronizes login passwords across devices on all platforms with plenty of essential features for free.

As I use more online services, it is getting difficult to remember the passwords. Whether I am at the site or head office, I can access to my credentials regardless of the laptop or phone that I am using. I am not tied to the specific ecosystem due the flexibility of this app.



**Bitwarden  
Password Manager**  
Android & iOS



**Pinterest**  
Android & iOS

Pinterest is a social network where people can share images associated to their interests and find inspirations and ideas from other's sharing.

I get inspirations from Pinterest as there is a wide range of topics—home decor, gardening, travel, food, etc. The platform allows me to save the ideas to boards to keep them organized and easy to find.



**Sophie Tan**  
Creative Executive  
CAD

Please submit your answers together with your name and email address here: <https://goo.gl/JxrJpV>.

Five randomly picked entries with all correct answers will each win NTUC Vouchers worth \$30, sponsored by the Corporate Affairs Division.

1. How many man-hours did JEL group of companies achieve from all the projects executed in 2019?
2. What does J-STORM stand for?
3. How many H-Class gas turbines would JEL have erected after the completion of Hamriyah 1,800 MW IPP CCPP Project?
4. Name the team who won "The Best Dressed Table" contest at the recent staff party.
5. Why was JEL placed in a dilemma in the midst of total demobilisation from the Amran cement plant expansion project in North Yemen?

Special thanks to all the article contributors and editorial team members. Every reasonable care has been taken to ensure the accuracy of the information printed in this bulletin. No responsibility can be accepted therefore. For enquiries and feedback, please contact us:

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