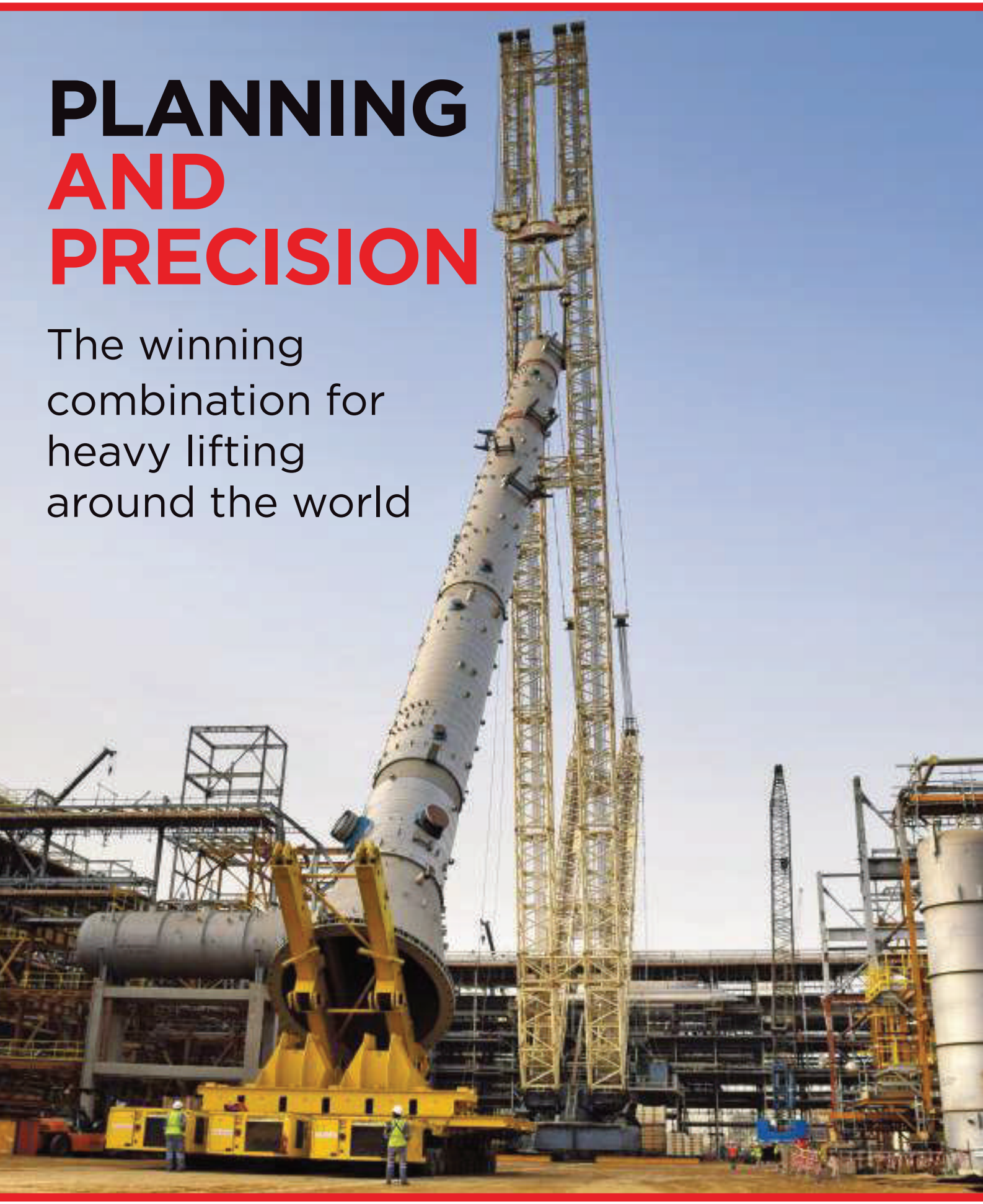
Al Jaber Heavy Lift

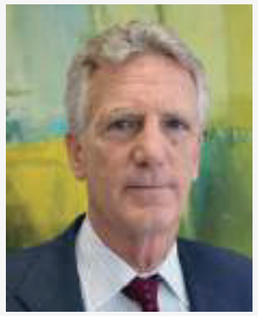
Safely onwards and upwards

HIGHLIGHTS



PLANNING AND PRECISION

The winning combination for heavy lifting around the world



WELCOME

We are delighted to welcome you to this ground-breaking issue of Highlights. These pages will take you inside the projects we have undertaken locally, regionally and internationally as well as showcase our continued record in safe heavy lifting and transportation services.

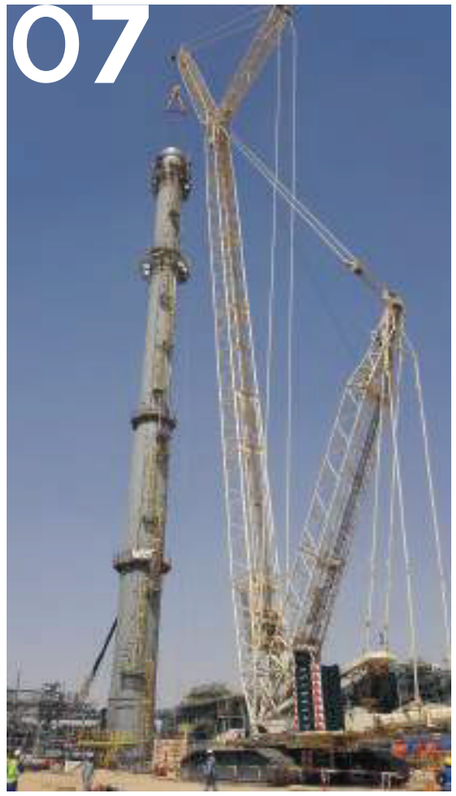
It has been a time of firsts in many ways for the entire Al Jaber Heavy Lift (AJHL) teams. We broke ground in new locations, including several projects in Indonesia. We navigated the introduction of VAT in the Middle East and we equipped ourselves with new equipment to play a stronger role in the markets of the future, particularly in South East Asia and Oceania. But throughout all the new, the teams have consistently demonstrated their commitment to preparation, precision and excellence. For this, and their on-going contributions across our range of services, we are filled with pride and look forward to continuing our journey for many years to come.

It is the performance of our teams in thorough planning and precise implementation that has been the driving force behind securing some incredibly prestigious projects and complex contracts. From Oman to Australia, Bahrain to Indonesia, AJHL has deployed the talents of the entire team to lift more tonnage, with more precision, than ever before.

Of paramount importance has been our readiness to engage with upcoming market trends. In alignment with the Vision goals proposed by the Governments of the GCC countries, we have already demonstrated our ability to manage the increase in non-oil GDP revenue projects, especially in the fields of infrastructure and tourism. But, following the increase in oil price, there has once again been a growth in the number of current and up-coming multi-million dollar oil based projects and AJHL continues to prove to be an invaluable partner in these contracts.

Throughout all of our endeavours, safety and cutting edge performance remain our top priority across the entire organisation. It is very clear that this approach is highly appreciated by our clients and we look forward to building upon this trend as we forge ahead to further achievements, markets and successes.

Alexander Mullins
Executive Director
Al Jaber Heavy Lift Group

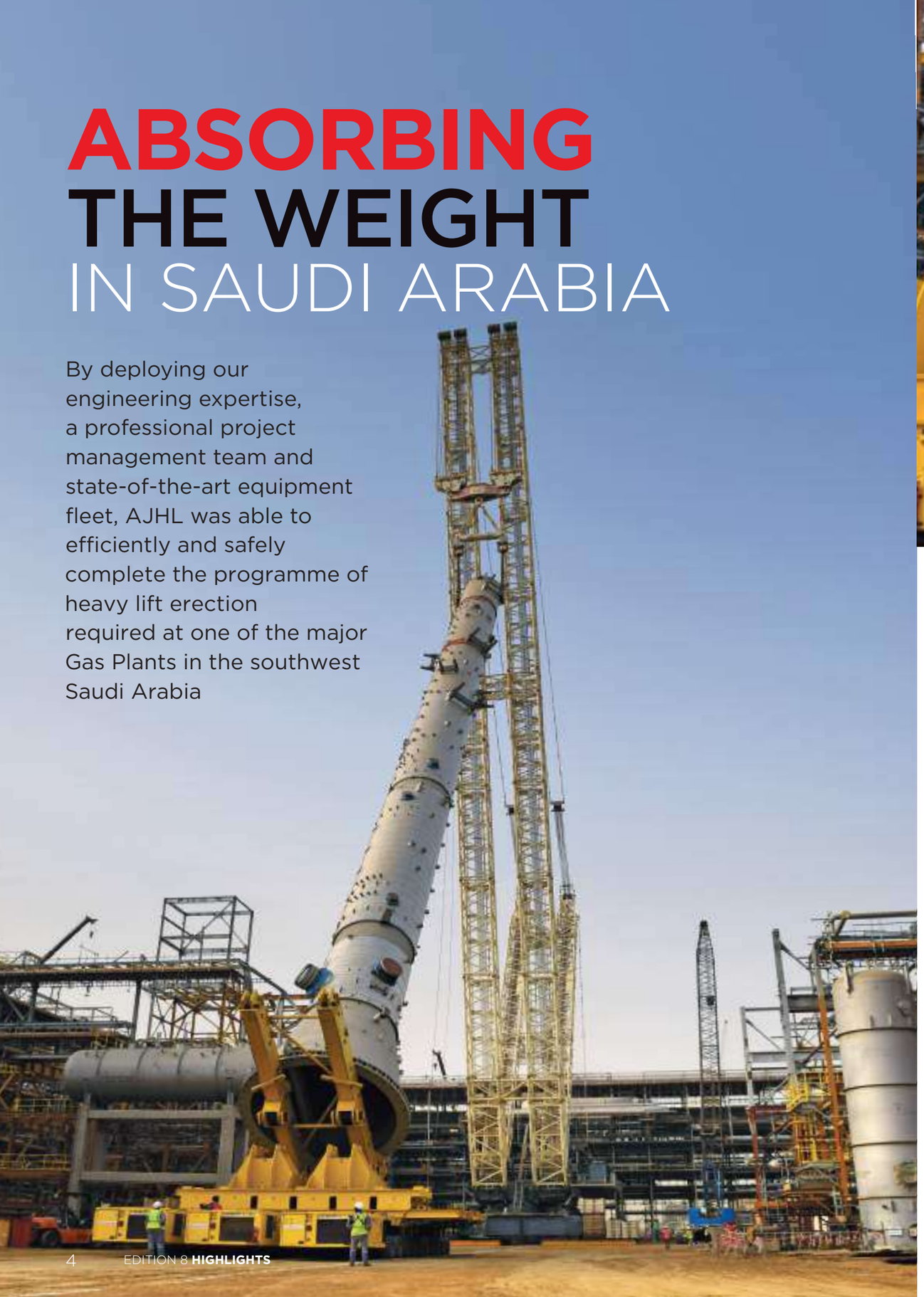


FRONT COVER IMAGE: Erection of an 989Te Absorber Column using the 3,200Te capacity DEMAG CC8800-1 Twin Crane and tailing frame in Saudi Arabia. *See page 4 for the full story.*

IN THIS ISSUE

ABSORBING THE WEIGHT IN SAUDI ARABIA

By deploying our engineering expertise, a professional project management team and state-of-the-art equipment fleet, AJHL was able to efficiently and safely complete the programme of heavy lift erection required at one of the major Gas Plants in the southwest Saudi Arabia



The winning combination of heavy lifting expertise, engineering experience and precise project management capability were the key to AJHL being awarded the contract for one of the major Gas Plants in the southwest Saudi Arabia

The total weight of the lifts in the AJHL work scope for this endeavour, currently the largest gasification plant of its kind in the world, was almost twice the weight of the Eiffel Tower. Of the 165 lifts under AJHL responsibility, the heaviest was the 989Te absorber column.
AJHL took this opportunity to present, for the first time at a Saudi Aramco project, their tailing frame technology with SPMTs in combination with a Demag CC8800-1 Twin as the main crane. This showcased that lifting of high columns can be achieved very efficiently without needing two cranes operating in tandem to top and tail the lift.

> The total tonnage lifted during the project was almost twice the weight of the Eiffel Tower

As always AJHL are proud to showcase proven and innovative solutions to perform projects safely and on schedule.

A DEGREE OF CHALLENGE

Having secured the contract for the project and identified the most appropriate equipment to be used, the team set about anticipating the specific challenges they would face and to develop methodologies to overcome them.

PREPARED FOR ANYTHING

Nevertheless, as time efficiency was of the utmost priority to meet the objectives of the client, several key steps and additional studies were also necessary to be completed within of our Quality Assurance Procedures, in real time during the project, in order to prevent delays, including the interface of transportation from port to under hook which was not in our scope. Fortunately, the AJHL quality procedures and documentation identified that the absorber had rotated on its own axis during transportation to under our hook by the third party transporters and was offset by 8 degrees. However, with innovative thinking and expertise, AJHL engineers managed to avoid any resultant delays by formulating a method to re-orientate the load with the available equipment resources on site.
AJHL once again demonstrated their ability to work as a seamless coordinated team across all aspects of their work scope including the interfaces with other subcontractors. The professionalism of the twenty person crew, their pre-planning, analysis, risk assessments and quality documentation allowed them to maintain schedule, advise the client effectively and communicate their progress every step of the way.

NATURAL REACTION
SAUDI ARABIA

AJHL were awarded the responsibility of lifting 70 equipment items ranging from 50Te to 400Te and including an 80 metre high flare stack during the construction of a prestigious Gas Plant in the eastern province of Saudi Arabia.
After evaluating the most effective methodology in the context of site conditions and schedule constraints, it was determined that four crawler cranes comprising a Liebherr LR 1750 (750Te), Demag CC2800-1(600Te), Demag CC2500-1 (500Te) and Demag CC2400-1 (400Te) would be the ideal choice for this scope of works.
Out of the 70 proposed lifts, a significant focus of attention for the AJHL team was on the challenge of erecting the 370Te Thermal Reactor for which the manufacturer specified strict requirements to maintain a 2 degree slope between the saddles.
This required the design of a purpose built spreader beam which could also take into consideration the fragile joint of the conjoined Thermal Reactor assembly.
This was one of many examples of innovative decision making by the AJHL team on site in order to provide flexible solutions to the client which resulted in safe and timely completion of the scope of works.

TIGHT
AS A DRUM
BAHRAIN

With a tight time frame of only nine months, managing the heavy lifting and transportation for the Aluminium Expansion Project was always going to require careful planning and precise methodologies.
Right from the bidding process AJHL approached the project with a unique vision to develop innovative solutions that would allow the team to work within the tight schedule.
The initial concept proposed by the client comprised various erection techniques including jacking, skidding and gantry cranes. However, these methodologies did not offer sufficient manoeuvrability and flexibility to achieve the schedule.

As a result of new, in depth evaluations by the AJHL engineering team, it was determined that the 200 heavy equipment lifts, which weighed from 10Te to an 83Te Silo roof, could be completed well ahead of schedule using just three cranes, a 600Te capacity Demag CC2800-1 crawler, a 280Te capacity Hitachi SCX2800 crawler and a 300Te capacity Liebherr LTM 1300-1 telescopic crane.
Site transportation constraints were also resolved by the choice of 20 axle lines of SPMTs with two PPUs which enabled the crew to handle the diverse variety of sizes and shapes safely and well within the client's schedule.

Quick thinking and a bold new approach resulted in a full lift completion well within the client's tight schedule.

LIFTING
COLUMNS
BAHRAIN

AJHL was called upon to manage the heavy lifting element of a very high profile Gas Expansion Project in the Kingdom of Bahrain.

A NEW LOCATION

Given the extensive experience and performance record of AJHL within the oil and gas industry across the Middle East, AJHL were well positioned to undertake this project.
For this particular gas expansion initiative, AJHL worked with the client from the initial stages of the project to explore the relative benefits of various methodologies from which the most appropriate course of action could be selected at the earliest stages.

ON-SITE CHALLENGES

AJHL was contracted to install approximately 100 pieces of heavy equipment, from the 18Te Fin-Fan Coolers to the 303Te Deethaniser column.
One of the major challenges was to mobilise all the required heavy cranes from Saudi Arabia via the causeway link which was accomplished smoothly thanks to the full cooperation of the relevant authorities.
In order to complete the required lifts within the planned timeframe, AJHL proposed the use of four heavy cranes working within co-ordinated parallel lifting schedules in multiple locations to navigate the very congested site more efficiently and accelerate the lifting processes.

A TIGHT REPLACEMENT QATAR

In a three step project, AJHL demonstrated their expertise at removal, transportation and installation.

AJHL is extremely proud to have been awarded a contract to perform the turnaround for the removal and replacement of a 213Te Propane Offspec Drum in a live gas plant in Qatar, within a strict turnaround period of 15 days.

Given the precision required in such a critical replacement project, it was essential that the client retained a partner who was able to handle the extensive planning and choreography required, and it was exactly this expertise that the client knew could be provided by AJHL.

For this project there were three key stages that the AJHL team would need to manage and execute perfectly.

Firstly, AJHL needed to safely remove the old Propane Offspec Drum from the foundation whilst keeping it clear of the existing firefighting structure, which is why a 600Te capacity Demag CC2800 crawler crane in SSL 54m configuration was chosen as it has a minimal footprint on site and could be positioned to keep the equipment separated allowing other shutdown works to continue.

The old drum was then transported through the plant and the adjacent industrial city area to the scrap location using sixteen double SPMT axle lines.

Finally, the Demag CC2800, equipped with a superlift attachment, was used to lift the new 213Te Propane Offspec Drum safely onto its foundation.

Detailed planning and execution methodology made this task an impeccable win for the client and the project was safely completed well ahead of schedule.

BRIDGING
THE WAY ACROSS
QATAR

AJHL was delighted to be called upon to execute the installation of a 63 metre long pedestrian bridge in Qatar. The scope of this prestigious project also included the planning, engineering and project management.

FORGING AN EFFICIENT SOLUTION

The initial client proposal suggested the installation should be performed in three different sections. However, AJHL was able to draw upon their engineering expertise and present a solution based upon Accelerated Bridge Construction (ABC) principles. This methodology significantly reduces the impact on regular traffic and enables construction of the bridge safely at ground level in a remote location as a single 460Te piece. Upon completion the bridge is jacked up, transported to the final location and installed.

Given the close proximity of the installation to several busy commuter roads and commercial districts, it was even more crucial for AJHL to devise a plan for safe transportation that would minimise any impact on commuters.

The new concept proposed by AJHL was supported by a variety of detailed engineering presentations and procedural methodologies that explained the benefits of every element of the operation and the suggested course of action.

In order to execute this proposed operation, the twenty person AJHL team utilised a variety of engineering studies and consulted complex methodologies to break the project down into four specific stages, each of which was designed to maximise safety and efficiency.

In stage one, the bridge was fabricated off-site by others and then jacked up approximately 8 metres by AJHL using eight BLS2006 jacks (each having SWL 200Te) on eight jacking towers with hoses and sensors, one EVO power pack and a Hydraslide power pack for the jacking system and assisted by a 100Te capacity Demag AC100 mobile crane for assembly of components. The jacking up process utilised 1,400 jacking blocks made of HEB140 with bolt connections among them, structurally connected to ensure alignment.

It was determined that 2 nos of double 20 SPMT axle lines were the best choice for this task and they were assembled and mounted with the transport structure which was bolted onto the trailer bed at the same time as the jacking operations.

Due to the efficient use of AJHL resources, the bridge was ready to be transported by their SPMT trailers in only two days.

Whilst manoeuvring each set of double trailers underneath the bridge, the team was able to exactly position and bolt the transport structures onto the bridge with millimetre precision as per the approved engineering studies.

The bridge was then transported over 600 metres from the assembly area to the installation location. Despite the necessity to manoeuvre around various curves, this only took approximately six hours with an additional two further hours for the removal of the trailer assembly resulting in the installation of the bridge well within the permitted 24 hours.

ON SITE INSTALLATION

Once the bridge had been transported and removed from the trailers, the AJHL team set to work jacking down the bridge onto its foundation.

AJHL were not only able to innovate a new, highly efficient solution that completely transformed the client's timeline but they were able to execute this entirely new operation without compromising any safety procedures and implementing the whole scope of works well within schedule with zero incidents.

Although the main road needed to be closed to the public during the night of installation of the 63 metre long pedestrian bridge, the innovative strategy set forth by AJHL meant that it could be re-opened again within eight hours of closure thereby minimising any risks or movement to motorists.

INNOVATIVE SOLUTIONS
QATAR

AJHL have successfully completed the replacement of several Tube Heat Exchangers for a blue chip oil & gas client in Qatar.
The client scheduled their gas plant shutdown for maintenance purposes within an extremely tight time frame to mitigate their revenue losses from gas production downtime. Hence day and night shift working was mandatory and this posed significant additional risks to be overcome during our scope of works. As most of the Tube Heat Exchangers were inaccessible for lifting by crane from their working position, the AJHL engineering department designed a combination of special temporary structures, saddles and skid systems to either slide the Tube Heat Exchangers from the upper levels of the 25 metre high structure to locations where they could then be lifted down to a trailer using a Demag CC2400-1 crane or, if the working position was at the lower level, skidded directly onto self-propelled modular transporters (SPMTs).
Due to the significant technical constraints including, for example, the extremely limited space available for placement of the platforms and jacks, the AJHL engineering team had to work closely with the consultants, the equipment manufacturers and the mechanical contractors to capture all the relevant technical aspects and prepare the integrated execution methodology accordingly, including method statements, risk assessments, design and the quality documentation for the client approval processes. Nevertheless, despite the obstacles, replacement of the Tube Heat Exchangers was carried out safely and ahead of schedule to the extreme delight of the client.

FINISHING AHEAD OF SCHEDULE OMAN

Innovative engineering and highly efficient project management allowed AJHL to impress the client by finishing this scope of works significantly ahead of planned schedule.

NO ROOM FOR ERROR

The key focus of this project was the installation of a 508Te reactor onto a 23 metre heigh concrete platform in a major refinery in Oman; a lift that would require millimetre tolerances. It was absolutely essential that sufficient pre-planning, efficiency management and methodology studies were conducted on every aspect. Imperative to the successful completion was a series of comprehensive rigging studies which were undertaken using Auto CAD and cranimation computer programs to reveal the most appropriate crane selections, as well as the most cost effective methodology.

FROM START TO FINISH

AJHL began the project with an assessment of the critical aspects required and submitted a final proposal of action to the client that would successfully co-ordinate and implement the planning, lifting and installation of two reactors at different locations, whilst also advising on ground bearing pressures to accommodate the crawling stresses imposed by the cranes during lifting. The pre-planning strategic research resulted in the selection of a Demag CC8800-1 crawler crane mainly due to its 1,600Te lifting capacity and its short erection time. The crane was configured with 295Te of superstructure counterweight, 60Te of lower counterweight and 102m of main boom with the 675Te hook block. This gave the crane a maximum lift capacity of 692Te at the calculated lift radius, which offered ample safety margin for additional load capacity during the lifting in case the beams on the load were heavier than originally anticipated. A 500Te capacity Demag CC2500-1 crawler crane was proposed and selected for tailing purposes.
AJHL coordinated regular meetings with the client to assess the scheduling status of the project, any safety concerns and the technical issues on site. The AJHL team designing the project execution also found it necessary to take into account the special requirements of working in the ultra-high summer temperatures that could impact the personnel, the equipment as well as precision measurements.

COMBATING CHALLENGES

Moreover, the site location and the nature of the lifts meant that the stability of the loads were often threatened by high wind factors, causing potential delays and safety risks. The AJHL team had dealt with situations like this before and so they were well able to apply tested protocols to mitigate the risks at each level. To maintain appropriate ground pressure, which was absolutely crucial for both safety and efficiency, mats were used throughout the manoeuvring of equipment.

Despite facing many challenges, the scope was ultimately executed safely and successfully creating another highly satisfied client.

Few industries rival the oil and gas sector when it comes to the precision, accuracy and strength required for any installation of heavy equipment.

MAJOR
REFINERY
United Arab Emirates (UAE)

AJHL played a significant role in the expansion of a key oil refinery in the UAE.

The purpose of the project was to add a new condensate processing train which would increase the refinery capacity by 50%. Ultimately, this expansion would raise the daily oil production from 140,000 to 210,000 barrels per day.

As international heavy lift experts in the oil & gas industry, AJHL was the ideal choice to manage this project from the outset.

The work scope included the installation of 6 heavy vessels weighing from 100Te to 676Te. Therefore, a range of crawler cranes were provided including a 3,200Te capacity Demag CC 8800-1 TWIN, a 650Te Demag CC 3800-1 and a 280Te capacity Hitachi SCX 280, all crawler cranes, to complete the engineered installation activities. Also, a team of 18 personnel were deployed to provide project management, engineering and operational services.

It was determined that the 676Te, 68 metre high Isohexanizer lift would be carried out with the Demag CC8800-1 Twin crawler crane in SSL 99m configuration as the main crane and the Demag CC3800-1, 650Te capacity crawler crane in SSL 36m configuration for tailing. However, although the assigned CC 8800-1 base elements could be mobilised from a site within the UAE, it was necessary to bring the TWIN attachment components from Saudi Arabia where they were being utilised with another CC 8800-1 belonging to AJHL. However, significant time was saved during the mobilisation by careful attention to the arrival sequence for the components to ensure constant feed to the rigging process without unduly overcrowding the small and somewhat congested storage area.

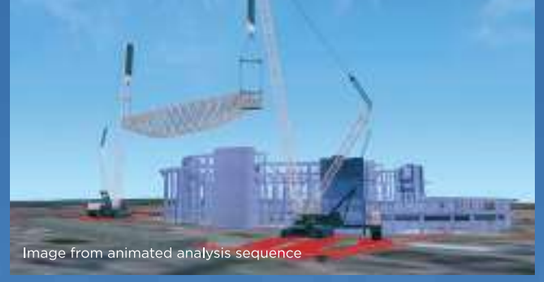
The winning combination of meticulous planning and client coordination by the teams helped AJHL to finish the job on time as per the planned schedule, and with zero LTI.

PERFECT HARMONY
UAE

Sometimes a project offers the chance to work on a truly iconic build that will rate alongside those in major capitals around the world.
That is exactly what happened when AJHL was awarded the contract to install the two Mega Trusses plus the related lifts for the new Dubai Arena. This giant indoor concert venue, nestled right in the heart of Dubai beside the cosmopolitan City Walk, would eventually seat 20,000 people and aim to offer the same gravitas and performance value as other internationally famous entertainment venues such as The O2 Arena in London, The Qudos Bank Arena in Sydney or the Staples Centre in Los Angeles.
The role of AJHL in the project included comprehensive engineering studies, bespoke strategic planning, transportation, jacking and lifting of the 2 mega trusses each 125 metres long and weighing 896Te.

THE APPROACH
The transportation and installation of two Mega Trusses was the immediate discussion to be resolved. A variety of studies were conducted during the planning stages to ascertain the most effective course of action to be applied. Initially, as the trusses would be fabricated near the main Arena building, the first option appeared to be to undertake a single lift, but on closer examination, due to site conditions, this action was deemed to lack the appropriate levels of safety and efficiency. In an innovative move and in compliance with international best practices, AJHL then proposed using alternative equipment as the two 125 metres long trusses could be efficiently and safely fabricated at ground level and lifted one after the other and it was agreed that two cranes working in tandem would be the fastest, safest and most cost effective option. In the ensuing feasibility study AJHL also included proposals for the ground bearing pressure to ensure the heavy crawling pressure released from the equipment could be accommodated during travelling and lifting.

THE EXECUTION
It was a testament to the experience and professionalism of AJHL that they were able to comprehensively undertake all the necessary precautions for lifts, known in the heavy lift industry as tandem lifts. This complex and highly sophisticated lift practice requires two highly experienced crane operators working in perfect synchronization, coordinated and instructed by one supervisor. Moreover the duty charts were reduced by 25% in line with international regulations for good practice.
Only by working in perfect harmony can it be ensured that the load is evenly distributed throughout the lift and the trusses lowered onto a hydraulic jack with surgical accuracy. The two 896Te Mega Trusses, along with eight secondary trusses ranging from 72 to 198Te, were weighed and transported to the lifting area using 40 axle lines of SPMTs in readiness for installation using two Demag CC8800-1 (1,600Te) cranes. The AJHL in-house designed adjustable rigging tackle including spreader beams and lifting chains were deployed to simplify the rigging arrangements which needed real time levelling adjustments during the lift.
This, combined with the long radius of the Demag CC 8800-1s, their small footprint and quick lifting ability, greatly maximised the efficiency of the integration process. The use of high capacity cranes was also of central importance as it made it possible to construct larger modules, raise them in fewer lifts and save considerable time.
By utilising their proven track record of performance in construction support, the whole AJHL team was not only able to streamline the project for the client, but also ensure that any potential hindrances, including intense heat and high winds, could be dealt with efficiently through highly effective project management procedures. Having achieved nearly 50,000 incident free man hours on-site, AJHL was proud to have played their part in the construction of the newest premier downtown venue in Dubai.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MANAGING
TIME AND TIDE UAE

When AJHL was contracted to undertake the marine loadout of a 30 metre high offshore WHT-5 Deck module weighing 3,617 Te in a coastal yard in the UAE, the immediate priority was to ascertain how to ensure that the execution strategy adhered to the necessary safety measures created by the unique location and specific needs of the project.

The initial task for the AJHL team was to break the project down into three key stages i.e. loading of the module onto the trailer configuration, transportation from yard to jetty and finally the loading onto the barge.

Each aspect of the scope of work was then evaluated utilising a variety of engineering and methodology studies to measure the efficiency and potential risks of each option. AJHL engineers were then able to present detailed Computer Aided Design (CAD) drawings to the client that displayed the technical and safety attributes of the proposal.

OVERCOMING CHALLENGES

The major hurdle to be overcome by AJHL was the need to plan sufficient load spreading across the support beams to ensure that the SPMTs could take the full load uniformly whilst ensuring that the overall width of the SPMTs configuration was minimised to fit within the limited space available between the supporting legs.

By developing inclusive engineering packages comprising safety and quality procedures, method statements, risk assessments and transportation studies, the team ensured the work was conducted safely and in full compliance with local and international standards and regulations. The overall result was a timely, cost-effective and, above all, safely executed solution for the client.

> Our lift designers presented detailed CAD drawings to the client that displayed the arrangement of trailer loading, proposed configurations and ground requirements

CALMING
THE WATERS
UAE

Due to the successful transportation and installation of several Catenary Anchor Leg Mooring (CALM) buoys for a major client in the UAE, AJHL was the obvious choice to transport and lift their largest yet, a 17 metre diameter, 320Te CALM buoy including its associated Pipe Line Ending Manifold (PLEM).

THREE PART HARMONY

In particular, the confidence of the client was enhanced by the proven capability of AJHL to offer the necessary lifting, transportation and marine engineering services.

PLANNING MAKES PERFECT

AJHL determined that the best solution was to deploy SPMTs for pick up from the inland fabrication yard and transport 10 kilometres to a coastal yard for lifting into the water by one of their newly purchased 650Te capacity Demag CC 3800-1 crawler cranes.

> Despite the tight timeframe the AJHL team was able to expertly manage the limited space in the fabrication yard and successfully navigate the obstacles posed on the public roads.

FUELING
THE FUTURE
UAE

The excellent track record of AJHL in executing professional loadout services for fabrication yards is just one reason of many for the repeat contract awards in this sector and why AJHL were chosen again by this client.
This scope of works included loadout of several jackets that ranged up to 60 metres long and up to 50 metres high with weights from 600Te to 950Te.
The loadouts required various combinations of SPMT axle lines and up to 4 power packs for transportation to the barge which was ballasted according to calculations approved by accredited third party authorities.
By establishing close relationships that promote efficient collaboration, AJHL are able to make every client feel confident that their goals will be achieved safely in a timely manner and that their expectations will be exceeded every time. This was another triumphant blend of such professionalism and cooperation between the client, AJHL engineers, the site operational team and everyone on board.

Many of the load outs included jackets that ranged in length from 60 meters and in height from 50 meters, as well as weights from 600 to 950Te

TRANSFORMING
INSTALLATION
SINGAPORE

AJHL was contracted to manage the transportation and installation of twelve 118Te transformers including cable drums, ancillary equipment and accessories to enhance the power generation capability at an industrial estate in Singapore.
In fact, the scope of work for this contract went far beyond just transportation and lifting. AJHL was required to oversee the loading and receiving of cargo at the port, provide storage at AJHL yard facilities and escort the equipment over land to the job site. This included obtaining all relevant authority approvals for road access, preparation of engineering studies, route surveys as well as executing the jacking and skidding requirements.

COMBATING RISKS

As standard practice for every project undertaken by AJHL, extensive risk assessments were conducted prior to commencement of the work scope. This culminated in a Job Safety Analysis (JSA), which covered every aspect of the contract and was subject to client approval prior to commencement.
AJHL reinforced this preparation with a pre task talk attended by all members of the team.

CHALLENGES FACED

The main challenge to be overcome was related to the road conditions. It was determined that the road was not strong enough for the load and, therefore, it was reinforced and soil tested to ensure that it was fully capable before starting the transportation to the site.
The site for the project was extremely congested and a recently built structure within the installation area prevented entry to site or the required turning of the 10 axle lines of conventional modular trailer plus prime mover. Therefore, AJHL implemented a solution by transferring the transformers from the conventional trailers to 6 lines of SPMTs outside the gate which enabled entry as well as turning of the transformers, using a turntable, before commencement of the jacking and skidding installation phase.
As a result of all these safety precautions, the project was implemented with zero incidents and to the utmost satisfaction of the client.

CONNECTING PEDESTRIANS
WESTERN AUSTRALIA

In Perth, Australia AJHL used SPMTs for the movement of two 110 metre long bridge trusses from the fabrication yard to the jetty and subsequently onto barges where the SPMTs jacked the bridge trusses down onto support frames. The client involved AJHL from the earliest stages of planning to ensure the availability and capability of the SPMTs for their project. A transport study was carried out to make sure that it would be feasible to execute the works from the proposed temporary infill access pad. Ground bearing and specifications for levels were closely coordinated to remain within the equipment operating parameters. The timing of the moves was absolutely crucial in order to be planned to coincide with tides and weather conditions. Based upon the transport study and in coordination with the requirements of the client AJHL deployed 24 axle lines of SPMTs configured as 2 sets of 6 axles and one platform of 12 axle lines (two 6 axle lines side by side) with spacers. A key requirement of this project was to ensure that no hydraulic failures or leaks whatsoever occurred to potentially pollute the river running through Perth, one that AJHL was proud to easily fulfil.

The services were provided in a very professional manner and in full compliance with the relevant site HSE and our Quality Control Procedures. AJHL completed the works on time, without any incident and to the utmost satisfaction of the client.

FORWARD PLANNING
NORTHERN AUSTRALIA

In order to facilitate the construction of much-needed energy plants, AJHL is often contracted to provide expert heavy lifting support to a contractor at the earliest planning stages to ensure the optimum project solutions. On this occasion, AJHL was involved with the technical evaluation planning and bidding several years before construction was due to begin. AJHL were able to offer preliminary lift studies and a detailed approach to installation planning taking into account the tropical climate of Northern Australia as well as the access issues due to the remote location. Once accepted in principal by the client the AJHL engineering team were able to select the most appropriate range of equipment and configurations to suit the specific challenges of the location and meet the needs of the client.
The initial stage of the project involved the delivery and assembly of 2 crawler cranes in long boom and luffer configuration. Ground bearing pressure, levels and access were closely co-ordinated to remain within the equipment operating parameters.

The first crawler crane, a 250Te capacity Hitachi Sumitomo SCX2800-2 required a 60m main boom and a 40m luffer for flexibility. The second crawler crane, a 500Te capacity Demag CC2500-1 equipped with full superlift required a 60 metre main boom and 54 metre luffer on AJHL supplied steel mats for optimum support.
Mobilisation from Port Hedland and Perth was managed with the use of quality assured transporters, which was vital, as the distances of haul were in excess of 2,000kms.

EXPANDING ENERGY

WEST PAPUA INDONESIA

Due to their extensive expertise AJHL is often called upon to undertake projects in some of the most remote places in the world, many of which require the shipping of their heavy lifting equipment over vast distances.
On this occasion, AJHL was awarded the contract to assist in the construction of an LNG Train Marine and Bulk of Facility jetty in the Papua Barat (West Papua) Province of Indonesia.
This would involve extremely precise planning in order to successfully coordinate the arrival of several heavy cranes as well as their operators and support team to the allocated work site on schedule.
AJHL deployed 6 cranes with capacities ranging from 90Te to 500Te for this long term contract. All the cranes were loaded onto a landing craft at the AJHL Singapore waterfront yard for marine transportation to Sorong port from which they were transhipped by landing craft to the site jetty.
Prior to mobilisation of the cranes to West Papua, project protocol required them to undergo rigorous inspections by four independent parties in accordance with the project directives.

AJHL were able to successfully synchronise delivery and installation of the relevant cranes and personnel, ready to start the heavy lifting of the expansion on time and subsequently executing the works safely without downtime.

CONTENDING WITH ROUGH WEATHER

INDONESIA

AJHL is establishing itself as a major player in helping Indonesia add power generating capacity to its grid, as demonstrated by its central role in the construction of a new power plant in the country.
This long term project was centred on the delivery of 2 cranes and appropriate accessories, as well as the fully trained and certified team to run them, to install multiple items of heavy equipment and related accessories for a coal fired power station.
Firstly, the team were required to coordinate the shipping of the crawler cranes, a 600Te capacity Demag CC2800- 1 and a 400Te capacity Demag CC2400-1, from Singapore to the project site jetty by barge; this was the first international shipment to the site for a direct overseas vessel.
Having endured the rigours of a voyage by ship in challenging weather conditions due to the monsoon season, the AJHL site team then had to contend with the extremely rough weather on site, including torrential rain and lightning. Nevertheless, the team ensured smooth customs clearance of the cranes on arrival as well as re-affirming the suitability and stability of the ground conditions at the crane lift positions in order to commence rigging procedures.
They also arranged for the immediate availability of experienced technicians and the required spare parts to ensure that the cranes were ready to work in optimum condition on schedule.
The biggest challenges in this region are often related to weather and it is a testament to the calibre of AJHL that they are able to comprehensively address these potential obstacles and prepare adequately for every eventuality.

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TRAINING
FOR SUCCESS

Training is regarded by AJHL as integral to the development of a safe, efficient and multi-skilled workforce and an essential element of the AJHL work philosophy.
AJHL applies the highest levels of commitment to personnel training and development as a cornerstone of their company ethos. This is central to our ability to offer a safe, efficient and multi-skilled workforce that is able to handle diverse situations and to deliver innovative solutions to complex projects. AJHL personnel are all trained and externally certified to appropriate levels which comply with international standards. This ensures that AJHL teams are capable of handling expensive and delicate equipment and that they are fully aware of the consequences and impact on project schedules if not handled correctly.

AJHL has sophisticated and well equiped mobile training units and training rooms in all our headquarters, hubs and branches. AJHL also has an integrated Quality, Health, Safety and Environmental (QHSE) system designed around the requirements of ISO 9001-2015, OHSAS 18001-2007 and ISO 14001-2015 that ensures the needs and expectations of customers are met. These accreditations allow AJHL to optimise the quality of their services and, therefore, maximise customer satisfaction on every project.
Management and staff are committed to comply with and continually improve the effectiveness of the quality management system within the integrated framework for establishing and reviewing quality objectives.

REACHING FOR NEW HEIGHTS
LOYAL PERFORMANCE

Syrian born **Ahsan Janoud** may have already marked his 25 year anniversary at Al Jaber, but it is unlikely to be his last major milestone within the heavy transport industry.

Currently a Project Manager for heavy transportation, Ahsan is not only a mentor-figure to many of the employees he manages, but also a visionary who continues to grow and evolve with the industry in which he has made his career.
A dedicated and bi-lingual (English & Arabic) individual, Ahsan began his long deployment with the Al Jaber Group as a heavy duty driver in 1996 and subsequently worked his way up to become a Driver Foreman for several prestigious oil & gas and construction projects.
In the year 2000, Ahsan joined AJHL as a senior heavy duty driver for the prime movers used to tow the fleet of conventional modular trailers. It was during this tenure that he developed a love of heavy lifting and transportation projects including heavy loadouts and began to foster an understanding of the complexities of its undertakings, as well as a deep knowledge of the necessary experience and expertise to manage complex heavy transport projects. From here, his certification achievements grew along with his responsibilities, rising from driver to Foreman and into his current role as Project Manager, while also obtaining awards and certifications in project management, project training and safety procedures along the way.
At every step Ahsan has demonstrated his reliability and trustworthiness, as well as a first-class work ethic, and it is this tenacity and determination that has enabled him to work his way quickly up the AJHL career ladder. Crucially, he has also used his knowledge and experience in developing the skills of AJHL technical operatives, enabling them to reach their full potential and moulding them into a competent and professional work force.
Ahsan is a key team motivator with a vast wealth of experience and a leader who is able to enhance the skills of his teams to meet and exceed the expectations of clients, ensuring that they deliver a top-level performance on every project.
AJHL are extremely grateful for his significant and long term contributions and will continue to work with him to maximise his full potential and that of his fellow team members in due course.

Al Jaber Heavy Lift

Safely onwards and upwards

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