

# SARENS

NOTHING TOO HEAVY, NOTHING TOO HIGH





MINIMIZING DOWNTIME IS KEY

## WITH STATE OF THE ART EQUIPMENT AND VALUE ENGINEERING, WE OFFER OUR CLIENTS CREATIVE SOLUTIONS.



Sarens has been providing exceptional heavy lift and specialized transport services for over 60 years, building a thriving enterprise that now touches every continent with offices in more than 65 countries and dedicated employees who embody the spirit of the company's motto – nothing too heavy, nothing too high.

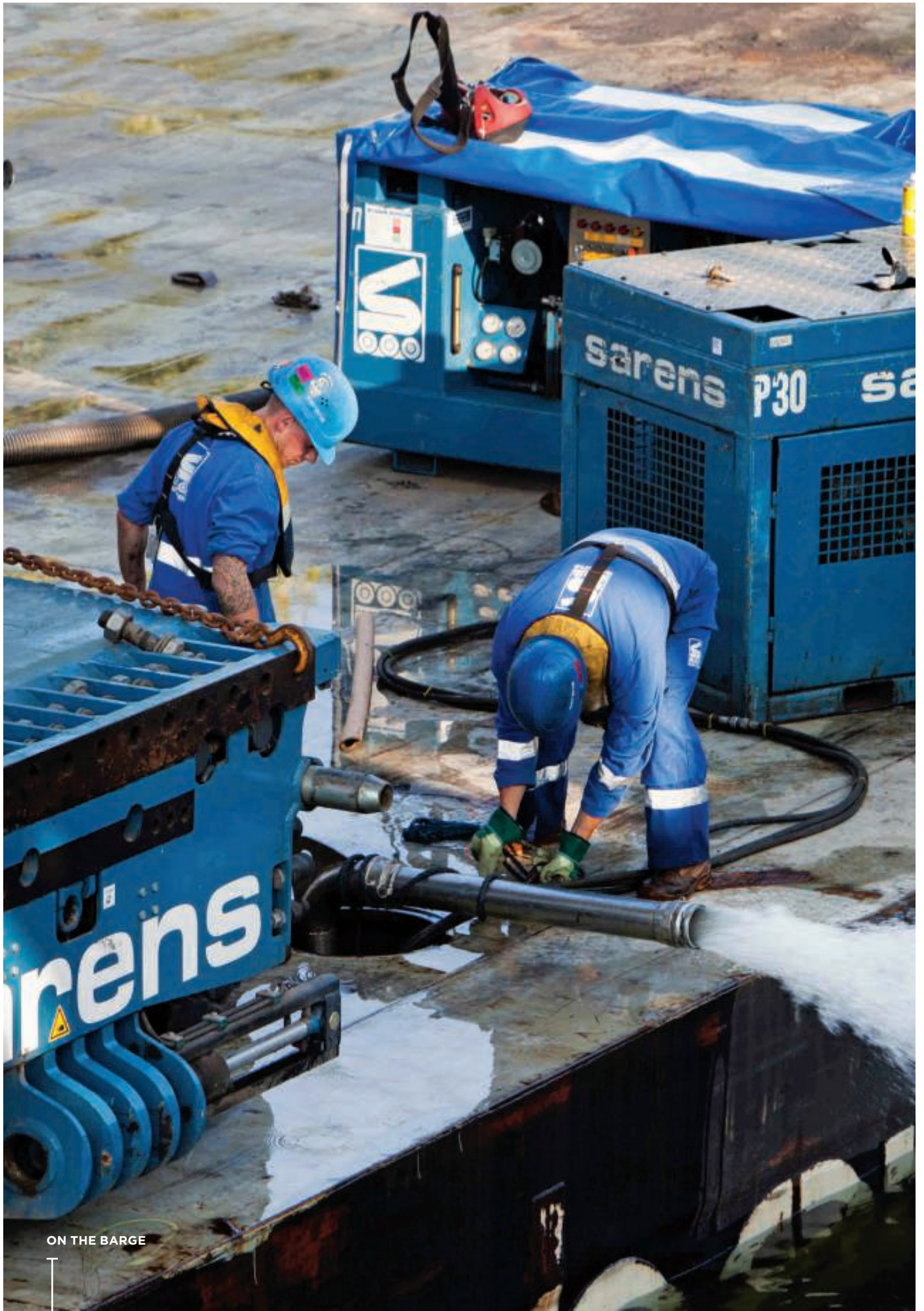
The success of Sarens as a specialist of the extraordinary is built around an unwavering commitment to safety, engineering creativity and operational excellence. Add state of the art design tools to one of the world's largest inventories of cranes, transporters and specialty rigging equipment, along with a team of highly skilled professionals and it becomes clear why Sarens has evolved into a worldwide leader in heavy lifting and engineered transport.

Sarens is the perfect example of how a family business has succeeded in carving out a position for itself on the world market in

just several decades. From the 1940's when Sarens performed forestry work, to our first crawler and telescopic cranes in the 1950's, to today, with one of the largest cranes in the world, our SGC-140 – our work history shows that we consistently and successfully respond to the diverse and specialized challenges of our clients.

As a technically innovative, solution-driven company, customers have always relied on us for their heavy lifting and special transport needs. With over 125 highly qualified engineers working at locations across the globe, we provide innovation for the greatest possible value and immediate solutions. With a team of engineers and operational staff who are well acquainted with the unique challenges of today's projects and one of the world's largest and most diversified fleet of equipment, Sarens is prepared to provide the right solutions for your next heavy lifting and transport project.





ON THE BARGE

**OUR NOBLE MISSION IS TO BE THE GLOBAL LEADER AND MARKET REFERENCE IN CRANE RENTAL SERVICES, HEAVY LIFTING, AND ENGINEERED TRANSPORT FOR OUR CLIENTS.**

Sarens has been the market leader for over 60 years. Our success lies in our entrepreneurial spirit and our continued dedication to our job. However, taking heavy lifting and engineered transport seriously is for us not just a matter of DNA and a family tradition but, most importantly, a choice.

At Sarens, we will continue to build our future on the foundations of our rich past but we ensure our clients that we will always stay ahead of the game when it comes to heavy lifting and engineered transport. We will keep braking ground and securing that your project is delivered in the fastest, safest, and smartest way.

*Brilliant Solutions*

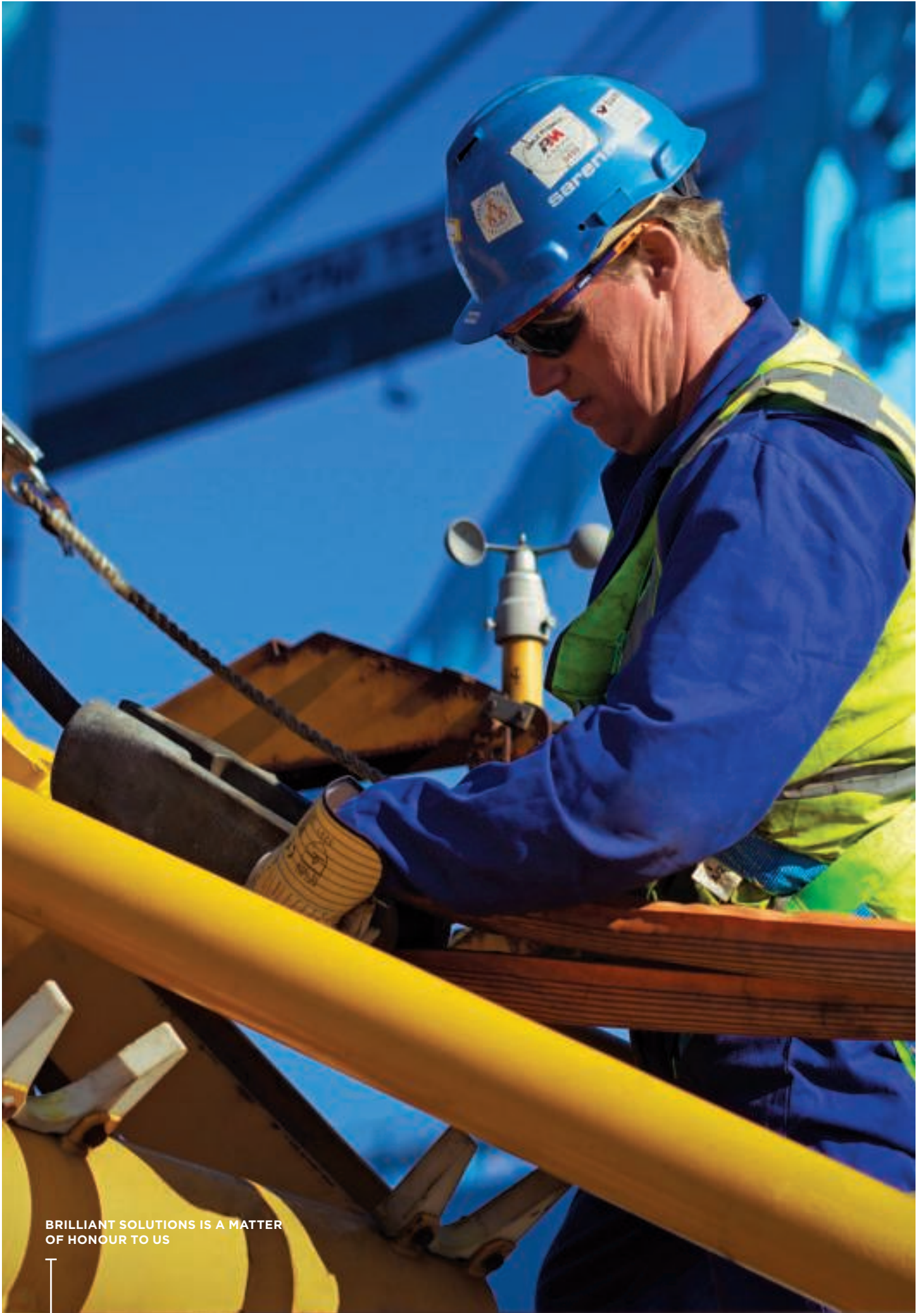
*Love for Tradition*

*Dedication to Safety*

*Global Spirit*

*Zeal for Excellence*





BRILLIANT SOLUTIONS IS A MATTER  
OF HONOUR TO US



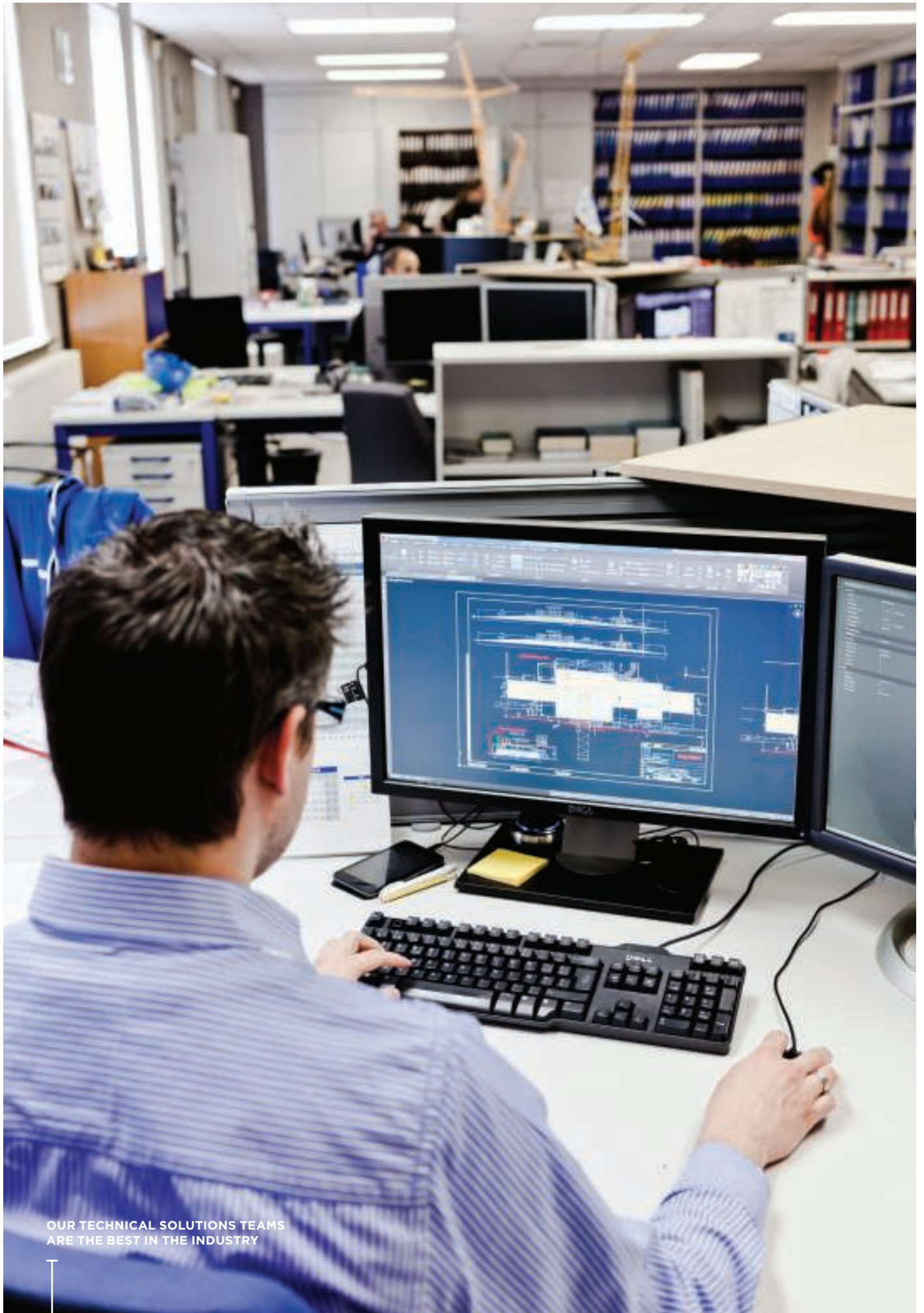
## THE QUALITY OF OUR PEOPLE IS THE CORNERSTONE OF OUR ABILITY TO SERVE OUR CLIENTS.

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For decades, Sarens has been known for having one of the world's largest and most diversified fleet. However, what inspires over 4.195 Sarens professionals who make a difference all over the world is the trust of our clients. Our engineers, project managers, and field staff lead the heavy rigging and specialized transport industry in technical excellence, innovation, safety, and professionalism.

We invest tremendous resources in identifying exceptional people and developing their skills with continuous education and certifications – and we proudly create an environment that fosters their growth as leaders.





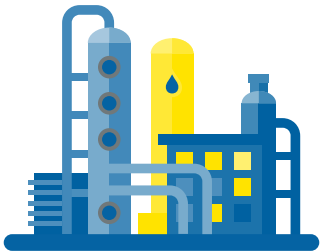
OUR TECHNICAL SOLUTIONS TEAMS  
ARE THE BEST IN THE INDUSTRY



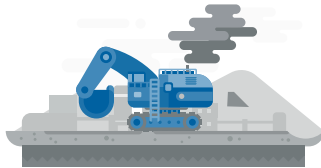
# WE ARE POWERED BY KNOWLEDGE AND EXPERIENCED IN EVERY INDUSTRY WE SERVE.

Our work is based on a rigorous understanding of the industries we serve. Whether it's transporting turbine rotors at a nuclear power plant, relocating a tunnel boring machine or providing engineered lift and transport solutions for accelerated bridge construction, we have the resources and the knowledge to provide innovative solutions for your next project.

Sarens' field of expertise includes the following key markets.



OIL & GAS



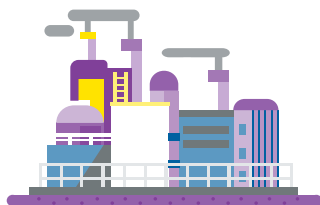
MINING



OFFSHORE & MODULAR YARDS



CIVIL WORKS



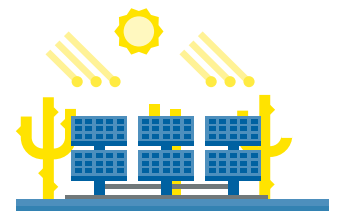
GENERAL INDUSTRY



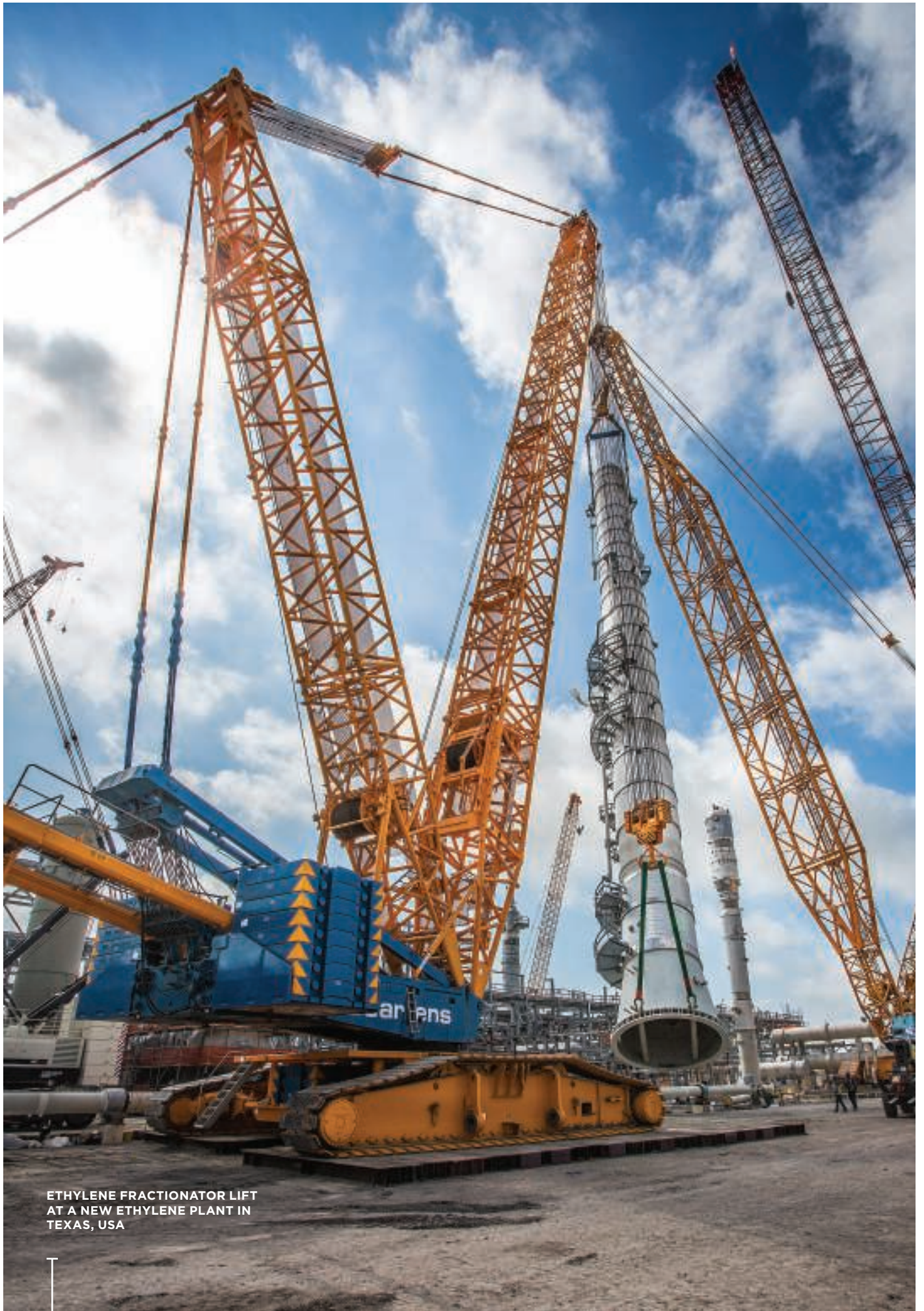
ONSHORE & OFFSHORE WIND



THERMAL & NUCLEAR POWER PLANTS



SOLAR



ETHYLENE FRACTIONATOR LIFT  
AT A NEW ETHYLENE PLANT IN  
TEXAS, USA



## MINIMIZING DOWNTIME IS KEY

The oil & gas sector is one of our core markets involving the construction, refurbishment and maintenance of oil & gas plants and refineries. Site conditions often vary so when executing the lift of a 1.300t reactor, a 125m splitter column or the transport of a 15.000t topside module, we provide efficient and tailor-made solutions. Our continuous efforts in the technical development of lifting and transportation equipment enable us to further minimize plant downtime.

### LNG HEAVY LIFTS DARWIN, AUSTRALIA

Sarens completed the final Sea Lifting Works as part of the Ichthys Project Onshore LNG Facilities in Darwin – performing the barging and lifting of 3 modules with a maximum weight of 408t, gangway towers and LNG, LPG and condensate loading arms at Blaydin Point, Northern Territory.

To achieve this milestone in the construction of the LNG plant, Sarens assembled one of its 1.250t crawler cranes, a Terex CC6800 as the main crane positioned on the lifting barge together with a 350t crawler crane for loading assistance of the modules. The mobilization of the barges and equipment was preceded by intensive and detailed engineering to determine accurate project planning, lifting points, crane positioning, lifting period between the tides, ballast calculations, sea fastening, stowage plans, etc.



### CILACAP RFCC PROJECT INDONESIA

For the installation of a 1.140t regenerator at the Cilacap RFCC Project site in Indonesia, Sarens used the biggest crane in its fleet: the SGC-120 or Sarens Giant Crane with a maximum capacity of 3.200t. From its single position, the SGC-120 was able to lift more than 12 items, thus providing the most efficient solution, having the least impact on the clients overall schedule and budget.

Given the technical and operational challenges of the project, a highly qualified workforce was selected from different geographical Sarens entities to carry out the project which was successfully completed without any incident occurring.





RELOCATING A TUNNEL BORING  
MACHINE IN QUEENSLAND  
AUSTRALIA



## FULL-SCOPE PROJECT MANAGEMENT

Sarens has been supporting the mining industry on a global scale for decades and has built a strong reputation in supporting modularization in new plant construction as well as relocating heavy mining equipment on existing sites.

Today's large-scale refineries are built by assembling process and pipe-rack modules which are manufactured at remote locations around the world. Whether it's providing equipment handling and load-in services at the manufacturing yard, load-out and inland transport services or heavy lifting and installation works on site – we provide the most efficient methods on a global scale.

### CRUSHER RELOCATION, UTAH, USA

Working in one of the world's largest open pit mines, Sarens performed the relocation of crusher equipment in Bingham Canyon, Utah. Transporting eight pieces of custom built mining equipment 7,2km down into the mine along a haul route with 10% grades required careful planning and flawless execution. Several components travelled on separate transport configurations with electrical connections already in place between the units, demanding absolute precision in operation of the equipment. Sarens met this challenge by performing a tandem transport utilizing the superior maneuverability of selfpropelled modular transporters (SPMTs) to the fullest extent and in the hands of two highly experienced SPMT operators. To complete the relocation project, Sarens utilized 68 axle lines of SPMTs and multiple prime movers to ensure safe transit of critical plant components.

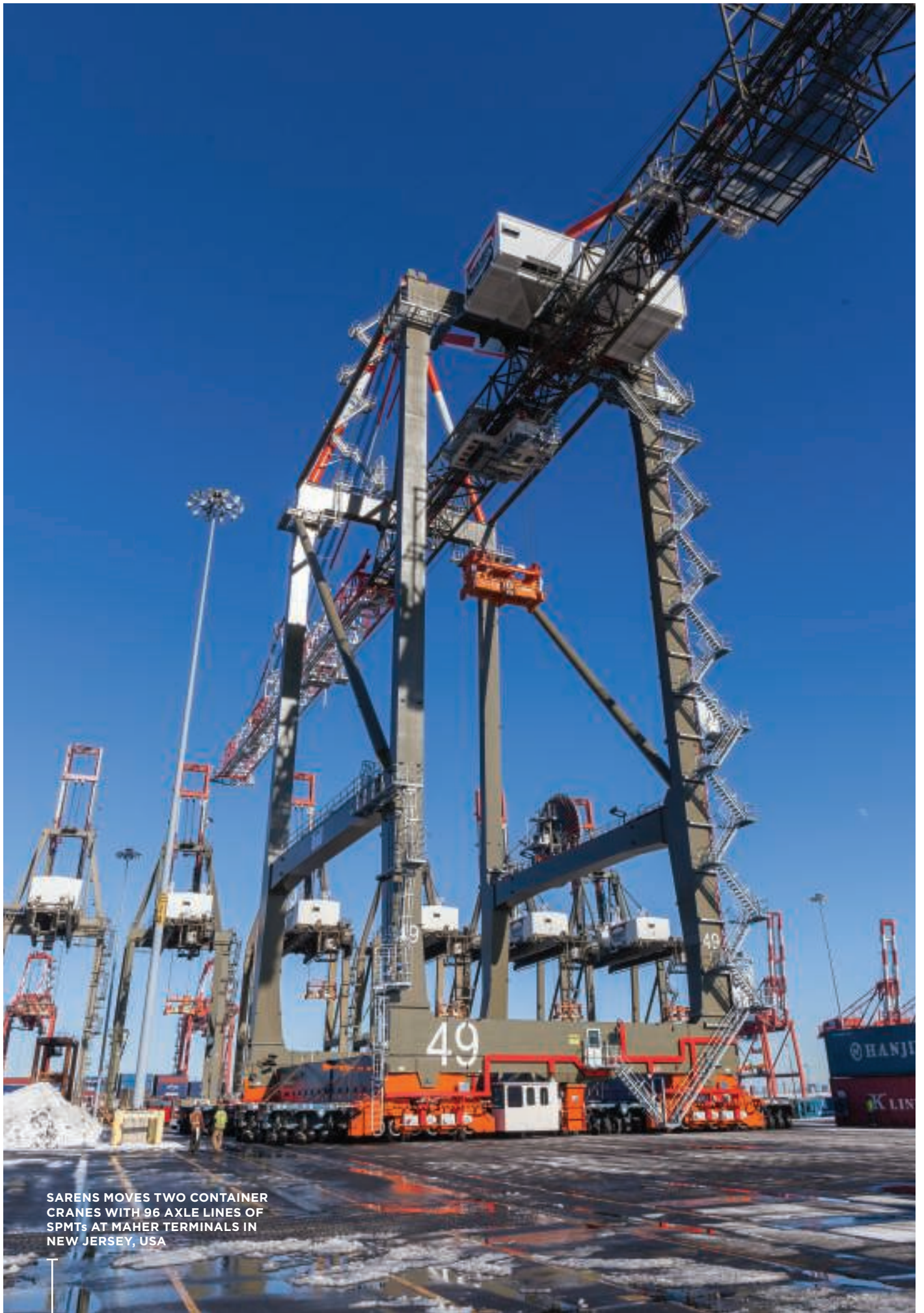


**“WE ACHIEVED WHAT MANY BELIEVE TO BE IMPOSSIBLE”**

Together Rio Tinto Kennecott and Sarens safely accomplished moving completely commissioned conveyor drive stations 7,2km down a 10% grade to their final installation point. Through extensive planning and close coordination we achieved what many believe to be impossible.

Jared A. Barlow

Rio Tinto Kennecott, Project Manager – Engineering Services



SARENS MOVES TWO CONTAINER CRANES WITH 96 AXLE LINES OF SPMTs AT MAHER TERMINALS IN NEW JERSEY, USA

## **OFFERING CREATIVE AND COST-EFFECTIVE SOLUTIONS**

For over 40 years, Sarens has been providing manufacturers, owners and operators of cargo handling equipment with a wide range of services including assembly, relocation, refurbishment, maintenance and engineered dismantling of various cargo handling equipment. Successfully completing projects around the globe, Sarens has forged partnerships with top manufacturers that have led to creative solutions for lifting and transporting material handling machinery through challenging terrain and conditions, while developing a professional approach that encompasses safety, engineering creativity and operational excellence.

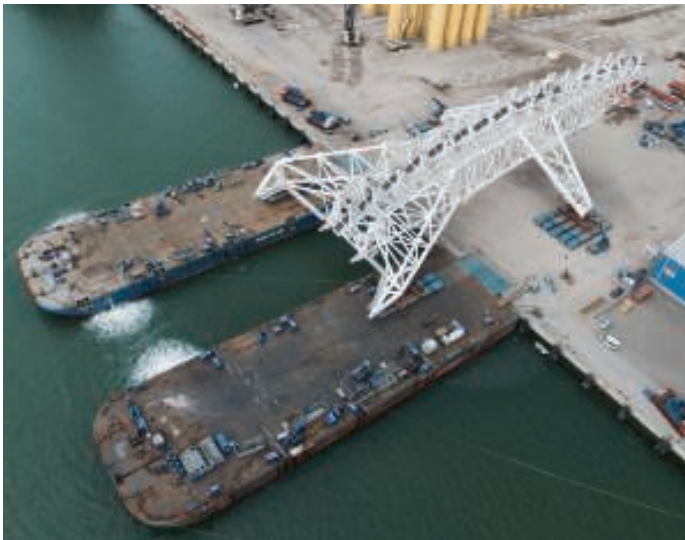
### **PIONEERING SPIRIT ROTTERDAM, THE NETHERLANDS**

Sarens performed stinger loadout & lifting beam installations for the world's largest vessel, Pioneering Spirit. The operation entailed the jacking up of the stinger using Sarens' CS5000 jacking system, which allowed the construction to be finalized. The then completed stinger was transferred using Sarens' barges Paula & Jan, using a total of 168 axle lines.

The success of this project is the result of an intensive and successful cooperation between two world-class companies, both proud of their skilled and dedicated staff.

### **MODULE FABRICATION LAEM CHABANG, THAILAND**

One of the prestigious projects for the module yard industry performed by Sarens was the Ichthys LNG module fabrication at the Laem Chabang Port, Thailand. This project being the biggest project in the module yard fabrication industry in 2014, involved the use of 63 crawler and hydraulic cranes with capacity of up to 1.600 tonnes. The project which was undertaken for STP&I, was compliant with all Sarens' and customers' Quality, Environmental, Health and Safety standards which resulted in zero Lost Time Case (LTC).





INSTALLING 75T CONCRETE PROPS  
AT THE LEE TUNNEL IN LONDON, UK





## RAPID MOBILIZATION WHEN TIME MATTERS



Over the past decade, Sarens has been involved in many civil construction projects around the globe, providing transport and lifting activities for steel assembly work and the installation of complex roof structures for event arenas and industrial buildings. Sarens also has a rich history in accelerated bridge replacement and installation, using a range of alternative rapid replacement technologies.

### CHAMPLAIN BRIDGE MONTREAL, CANADA

Sarens specially designed the Floating Foundation Installer (FFI) to perform the challenging installation of footings for the New Champlain Bridge, in Montreal.

An advanced GPS system was used to position the FFI and the footing accurately. Additional adjustments were made using the FFI's turntable, which allowed workers to rotate the part when necessary. The part was lowered and put into place with a hydraulic cable and pulley system and hydraulic jacks. Final positioning checks were made with the GPS and precision prisms, located on each footing. The FFI then returned to the dock and repeated the entire operation with the next footing.



### PYLON BRIDGE CROSSING GHENT, BELGIUM

Sarens transported and installed the New Wear Crossing bridge over the River Wear in Sunderland, North East England. The project entailed rolling the pylon onto twin barges using 52 axle lines of SPMT and then rotating those to a larger seagoing barge using SPMTs and ballasting the barges. The sheer size and weight of the pylon along with the schedule made it extremely complex and required detailed in-house engineering expertise. Once the pylon was secured, the team had to manoeuvre it along tight canals, under a series of low bridges, and into the Port of Ghent. During the journey, Sarens operators had only about 30cm of margin on all sides of the pylon to clear the bridges.





HEAVY LIFTING OPERATIONS AT  
THE CATHÉDRALE NOTRE-DAME DE  
ROUEN IN NORMANDY, FRANCE

Sarens offers transport, lifting and assembly services to many general industries. This includes many new-built civil construction activities providing cranes for steel assembly work and installation of complex roof structures for football stadiums and industrial buildings as well as the loading, lifting and transport of heavy components such as airplanes and proton therapy equipment.

### SHUTTLE ENDEAVOR, CALIFORNIA, USA

Sarens proudly took on the challenge of transporting the Space Shuttle Endeavour on its 26th and final mission – a 22km journey from Los Angeles International Airport through the congested streets of America's second largest city to the California Science Center. To support the transport, Sarens used 20-axle lines of Kamag self-propelled modular transporters and four power packs. Weighing in at 68t, with a wing span measuring 23m from wing tip to wing tip, 38m from nose to tail and 17m from ground to top of tail, the sheer size of Endeavour necessitated extensive preparations. Nearly 2.800 man-hours were logged in pre-move engineering and coordination activities, including route surveys, obstacle identification, transport drawings and numerous meetings with public and private agencies. As a result of Sarens' detailed planning effort and the maneuverability of the SPMTs, obstacle and tree removal along the haul route was minimized and this once in a lifetime project was completed successfully.



### ARENA 92 STADIUM NANTERRE, FRANCE

Over the last several decades Sarens has been involved in many new-built civil construction activities around the globe providing cranes for steel assembly work and installation of complex roof structures for football and event stadiums.

One of these projects was the lifting of mega beams and roof structures for the Arena 92 stadium in Nanterre.

The venue is a multi-use domed stadium and holds a fixed roof and offers three separate configurations. In its rugby configuration, it will have a capacity of 32.000, for concerts, it will be able to seat 40.000 and finally, a movable stand will allow it to be used for indoor sports, with a capacity as low as 5.000.





ERECTING WIND TRURBINES WITH A  
CC8800-1 WITH BOOM BOOSTER AT  
WINDPARK NOORDOOSTPOLDER IN  
THE NETHERLANDS

## ONSHORE WIND POWER

Sarens' global presence, its large crane fleet and its broad experience in the transportation, lifting and installation of wind turbines, makes it a valuable partner in the wind power sector, both on and off shore. On shore, Sarens provides every level of lifting solutions, from bare crane rental to turnkey projects with an all-in TCI (Transport, Craning, and Installation) service coverage.

## OFFSHORE WIND POWER

We complement our full-scope project management with providing onshore and offshore logistics such as the loading and unloading of extremely heavy wind turbine parts, logistics management and timely delivery of the different parts to the offshore site. Our partnerships with harbor operators ensure a one stop shop solution for all harbor logistics, resulting in time and cost-efficient solutions for our customers.

### LAMBS HILL WIND FARM MIDDLESBROUGH, UK

Sarens installed four MM100 2MW wind turbines at the Lambs Hill Wind Farm which is located near Middlesbrough in North East England.

The project included the lifting and installation works as well as carrying out the mechanical completion of the four turbines. Sarens brought in one of its LTM11200-9 cranes from Belgium to successfully execute the project. The blades and hub were first assembled on the ground and then lifted together.

### THORNTON II WIND FARM, BELGIUM COAST

Sarens installed and executed phase II of the Belgian offshore wind project, Thornton Bank. The project consisted of 30 turbines of 6MW each. Sarens performed all onshore logistics, such as unloading supply vessels, transport to and from intermediate storage and loading parts on board of the Jack Up Barge Neptune at the logistic hub in Ostend. The preassembly and loading on board of the rotor with a diameter of 126m was the most spectacular lift. However the heaviest part is the nacelle with a weight of 352t at a radius of 33m.





SARENS PERFORMS A STEAM GENERATOR REPLACEMENT AT THE ULCHIN NUCLEAR POWER PLANT IN SEOUL, KOREA

**FOR NEARLY 40 YEARS, THE POWER INDUSTRY  
HAS RELIED ON SARENS FOR THE SAFEST  
AND MOST ADVANCED HEAVY LIFT AND  
ENGINEERED TRANSPORT SOLUTIONS.**

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**THERMAL POWER**

**Sarens provides a total concept approach for gas and coal-fired power plant projects, including heavy lifting and engineered transport. New lifting and transport techniques are constantly being introduced to enable the transportation, removal, assembly and installation of large and heavy components. Sarens is also experienced in the installation of key energy producing equipment such as turbines and generators.**

**NUCLEAR POWER**

**For nearly 40 years Sarens has been a valued partner to nuclear power plant owners and**

**operators around the world, supporting contractors and critical plant component manufacturers throughout plant life cycle activities.**

**From new construction, to major component replacements, plant upgrades through to facility decommissioning, Sarens has safely executed the most challenging of projects.**

**With industry leading engineering expertise, specialized rigging equipment and a highly skilled workforce, Sarens continues to offer the nuclear power sector creative and cost effective solutions, delivering high quality results under demanding time and operational constraints.**

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**FLAMANVILLE, FRANCE**

Sarens installed the dome on the reactor building at the nuclear site of Flamanville, a third generation EPR reactor. This spectacular operation in terms of both tool size and positioning accuracy required one of the most powerful cranes in the world: the SGC-120.

At a height of 200m (twice as high as the Statue of Liberty) and a 130m radius, “Big Benny” lifted the dome of the Flamanville EPR reactor building, which weighs 260t and has a diameter of 43m.





SOLAR POWER PLANT IN TEXAS,  
USA





## SOLAR POWER

For the construction of solar towers, Sarens uses its heavy luffing tower cranes which consist of a modular system and can reach up to considerable free standing heights with different jib lengths. As these types of cranes only require a small ground area, it makes them the ideal solution for solar projects.

### UPINGTON, SOUTH AFRICA

The Khi Solar One power plant in Upington (South Africa) is Africa's first concentrated solar power project, producing 50 MW of energy. Covering an area of 140 hectares, more than 4.000 solar mirrors will reflect the sun's rays onto one single point on the solar tower and boil the water inside which then creates steam. For the installation of the 200m solar tower, Sarens used a self-climbing heavy luffing tower crane (HLTC2405L), enabling the crane to evolve jointly with the construction of the solar tower itself, with a 78 meter boom jib, lifting 22t at the end of the jib on a hook height of 290 meters and fixed 4 times into the solar tower construction.



# SARENS IS A RECOGNIZED WORLDWIDE LEADER IN HEAVY LIFTING AND ENGINEERED TRANSPORT.

With state of the art equipment and value engineering, Sarens offers its clients creative solutions to today's heavy lift and transport challenges. With offices in more than 65 countries and dedicated employees, we are well prepared to support your next project.



**9**  
REGIONS



**65**  
COUNTRIES



**4195**  
EMPLOYEES

## EQUIPMENT

### CRANES



HYDRAULIC CRANES



LATTICE BOOM CRANES



HEAVY LIFTING TOWER CRANES

### TRANSPORT



CONVENTIONAL TRAILERS



MODULAR TRAILERS



SPMT's

### TECHNICAL SOLUTIONS EQUIPMENT



BARGES



GANTRIES



JACKING SYSTEMS



STRAND JACKS



TWIN BARGES

## GLOBAL PRESENCE







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