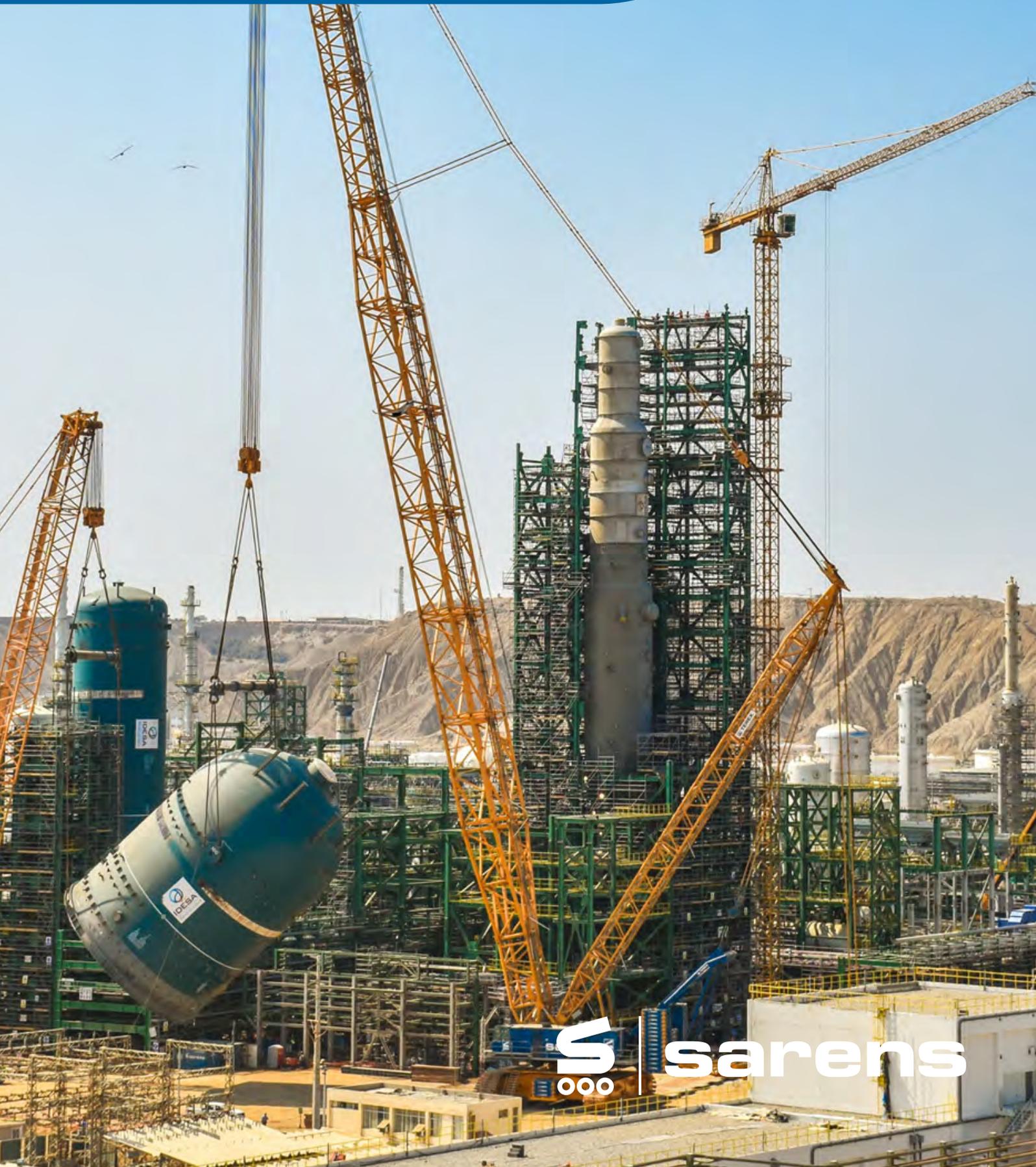


# OIL, GAS, AND PETROCHEMISTRY





NOTHING TOO HEAVY, NOTHING TOO HIGH

# ABOUT US

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

At Sarens, we have the noble mission to be the reference in crane rental services, heavy lifting, and engineered transport for our clients. With state-of-the-art equipment and value engineering, we offer our clients creative and intelligent solutions to today's heavy lifting and engineered transport challenges.

We are able to offer our clients ready-made innovative solutions thanks to our subsidiaries around the world. With more than 100 entities over 60 locations operating without borders, we are the ideal partner for small-scale to mega-scale projects.

Safety and excellence in all we do are paramount to us. We strive continuously to establish a safe environment for our personnel, the client's employees and the equipment we operate and handle.

While we continue to build our future on the foundations of our rich past and successful methods, we ensure our clients that we will stay ahead of the game with innovative approaches for your heavy lifting and specialized engineered transport needs. We will keep breaking ground and secure that your projects are delivered in a safe, and cost-effective way, while making sure everything is on time.

Sarens' engineering, project and sales teams comprehend today's high standards in the petrochemical, oil and gas industry. With safety as the utmost goal, our specialists focus on providing efficient solutions "from factory to foundation".

Whether it is a reactor of 1.300T, lifted by a crawler crane, an 1.390T splitter column of 125m in length lifted by a tower system or even the transport of a topside module of 15000T, Sarens provides tailor-made solutions for all your heavy lifting and heavy transport needs.

New lifting and transport techniques are being introduced by our engineering department in close co-operation with our clients. This allows us, as a team, to execute modularization and assembly of heavier components, leading to safer projects with significant cost and time savings.

Sarens has the capacity to deploy over 120 employees per project. This is one of the elements in our way of working that make us stand out in the international market.



# OUR SERVICES

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Being a dedicated partner of the oil, gas, and petrochemical industry since the 80's, Sarens has been providing excellent solutions to all clients, with expertise and diligence.

We provide several services to secure every project is executed to perfection:

- All projects can be planned with Front End Engineering Design (FEED) to minimise unexpected costs.
- On site, our engineers provide tailor-made solutions and expertise for every built.
- For efficient construction and planning, we can provide a modular approach to the project. This can offer a cost and time-saving solution.
- We can arrange and coordinate the flow of parts and material from factory to foundation, so there be no worrying about transportation to the site.
- We provide heavy lifting and heavy haulage solutions globally
- We have unparalleled experience in shut-downs on an international level.
- After construction, we offer maintenance activities to all our clients.
- Turn around and revamp management of existing facilities and sites.

Key benefits from Sarens services include:

- Working according to SHEQ (Safety, Health, Environment, and Quality) policy
- Innovative lifting and transport techniques
- In close co-operation with our clients throughout the project
- Significant cost and time savings
- Major project manning
- High standards

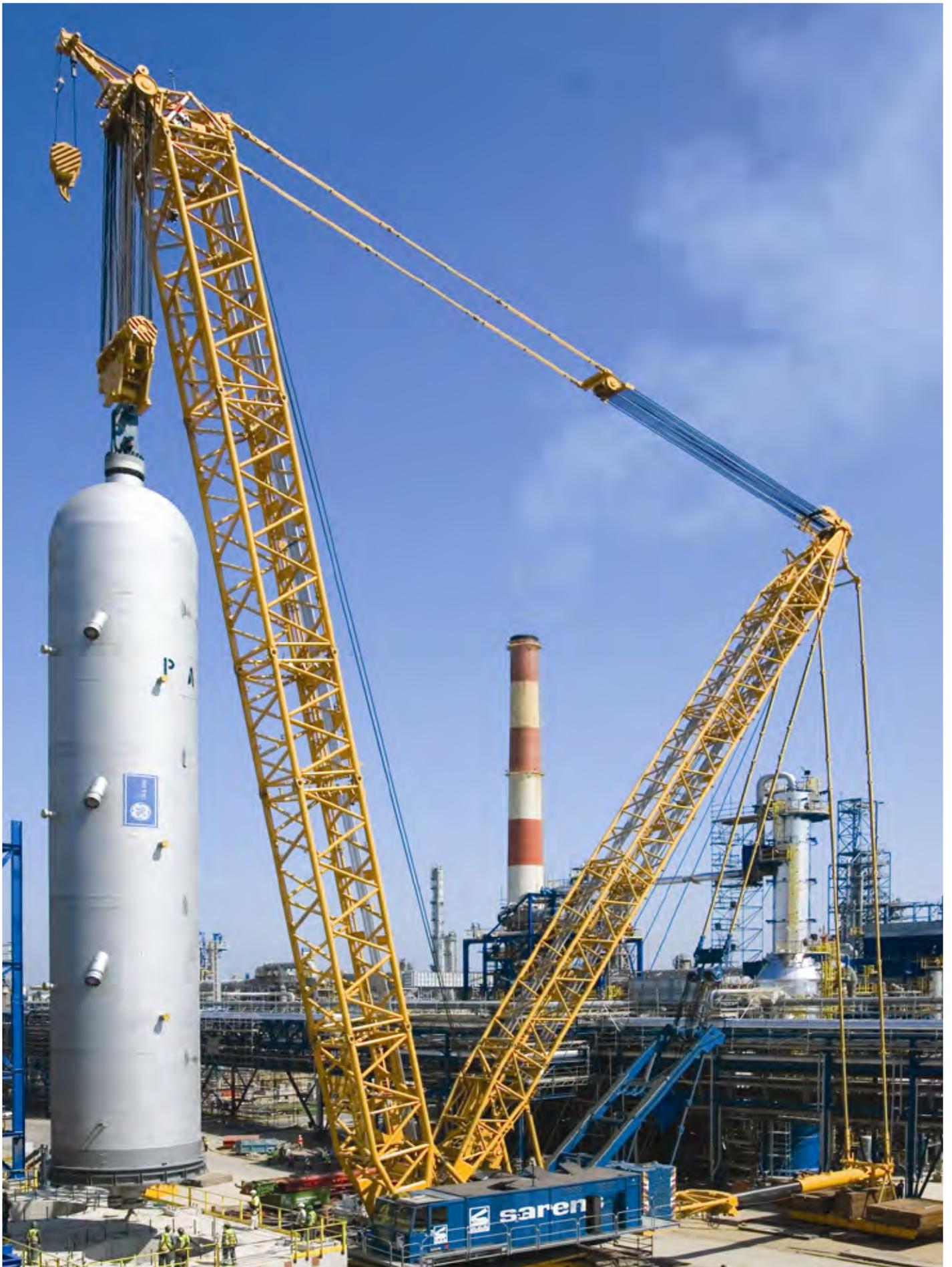


# OUR EQUIPMENT

Sarens uses the following equipment for project execution:

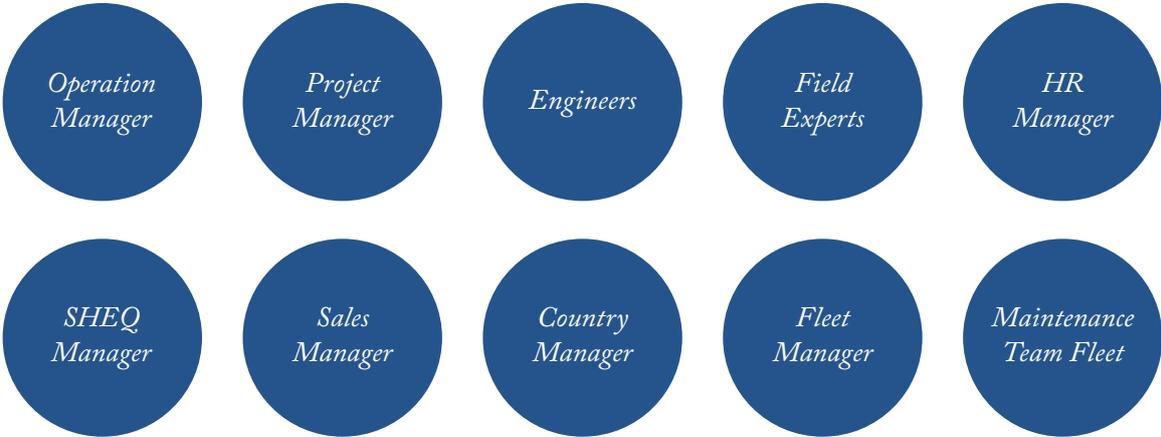
- Gantry lifting systems
- Lattice boom cranes (up to 3.200tons capacity)
- Telescopic cranes (up to 1200tons capacity)
- Self-propelled modular trailers, SPMTs (>1000 axle lines worldwide)
- Strand jacks
- Skidding
- Barges
- Tower cranes





# OUR PEOPLE

At Sarens, we play a key role in the oil, gas, and petro chemistry market and support our clients in the most efficient way. We rely on our people to ensure every project is executed in a structured, safe, and efficient manner. We employ engineers, lawyers, finance experts, field personnel, safety and quality advisors, and sales consultants.



## WHO DO WE EMPLOY

To secure a quality-service for our clients, our team consists of a variety of professionals. We have well-established hiring procedures that guarantees us qan arsenal of dynamic and qualified experts from all around the world.



## WE IMPROVE OUR TALENT

Sarens also provides constant training to employees. In this way, all of our representatives are skilled to supply Sarens with the benefits of the latest methodologies in the field both on a back-office and an on-site level. We believe in continued education and, to that end, we have our own Learning Management System, and provide SWOT analyses in our Assessment and Development centre. Through the growing opportunities we provide, our employees work in a framework of constant improvement.



# CASE STUDY I

## CORPUS CHRISTI, DALLAS, TEXAS, USA

Sarens recently formed a collaborative working relationship with Kellogg, Brown & Root (KBR) of Dallas, Texas, to support the construction and expansion activities at an oil refinery in Corpus Christi, Texas. Sarens USA provided its expertise to manage all facets of the heavy lifting requirements of the project.

The Corpus Christi project has two parts; first part requires the lifting and installation of two massive reactors plus a staircase module and platforms performed while refinery production was taken offline. The second part is lifting and installing 58 modules and two main equipment pieces during the life of the contract.

To successfully complete the lifts on time and within budget, Sarens initially mobilized three cranes from its fleet. A Terex® RT90 rough terrain crane arrived on site early to assist with crane set-up and perform general lifting duties throughout the duration of the contract. Sarens also mobilized two of its high-capacity crawler cranes for lifting and installing two large hydrocracker reactor vessels and a gasoline depentanizer.

A 350T capacity Liebherr LR1350S crawler crane arrived at the Port of Galveston from Australia and was transported to the jobsite. The LR1350S was brought in to support the critical lifts of the hydrocracker vessels and depentanizer.

Delivering the muscle for the bulk of the heavy lifting project, Sarens mobilized one of its 1600T class Terex® CC8800-1 lattice boom crawler crane models. For the meticulously planned lifts, the Terex crane had to be equipped in its super-lift configuration and with enough boom and counterweight to position an object weighing more than 583T at a set radius of 34m.

For a refinery processing hundreds of thousands of barrels of crude every day, plant downtime registers in the millions of dollars per day in lost revenue, so Sarens and KBR planned the component lifts and installation to keep production losses at a minimum.

There was one point during the lift contract, however, where the plant was scheduled for a five-day turnaround, this gave Sarens the opportunity to complete some of the heavy lifts and take advantage of a time when

activity at the rest of the site was at a minimum.

After installing the hydrocrackers, it was time for the heavy work, the installation of the depentanizer, which measured 80m tall and weighed 583T.

The depentanizer was horizontally lifted by both cranes, while the LR1350S rotated about 120 degrees and kept radius. The CC8800-1 followed the smaller crane's rotation and boomed up to bring the top of the depentanizer closer to the crane. Then the CC8800-1 hoisted up, while the LR1350S followed by crawling sideways with free slew.

Everything went incredibly smooth and all the preplanning paid off. At the peak of the turnaround period, we had 15 Sarens team members working together to make sure everything went as planned.



# CASE STUDY II

## PROPYLENE REFTIFYING TOWER TRANSPORT, TEXAS, USA

Sarens executed the transportation of an 81m-long propylene rectifying tower from one part of Texas to the other; a trip of 391T over land and water. The propylene rectifying tower diameter was 5,2m, the total height 7m.

The equipment we used for the job were the split K-25 trailers, their amount of axles were permitted for transporting the long tower to its destination. Pulled by prime movers, the tower was transported from the factory to San Leon, which took 10 hours in total.

At San Leon, the 81-meter tower was moved onto a barge, which carried it to Port Arthur. The propylene rectifying tower was then unloaded with the same K-25 trailers and prime movers, to be hauled to its final destination, a plant in Port Arthur 11,5km away.

The challenges in this move was finding a quay where we could load in and load out this immense structure.

Also finding suitable routes to move through and getting the right permits were challenges Sarens overcame.

It took over 5 months to establish a route for the entire project. The move was done in six days, this was exactly on time at the refinery due to flawless Sarens planning and engineering expertise on heavy transport cases.





# OUR PROJECTS

**LOCATION:** Sasolburg, South Africa  
**EQUIPMENT:** CC2800-1, AC650, LTM1400, AC300, 54 axle lines SPMTs

Sarens is providing turnkey supervision, transportation and installation of all equipment over 20t in Sasolburg. In six months 3.150T of pipe rack modules, vessels, and equipment were installed. The installation of the equipment within an operating petrochemical plant was a great challenge. The site has a limited foot print and the plant is high and compact to accommodate all the equipment.

**LOCATION:** Antwerp, Belgium  
**EQUIPMENT:** CC 2800-1, CC 6800, 24 axle lines SPMTs, telescopic cranes (60T till 300T), floating crane Brabo

The Black Diamond Project in Antwerp, Belgium, included the lifting of five columns (54T and 40m till 350T and 85m) and one sphere (347T and 20m diameter). Sarens was responsible for the transportation, lifting, grouting, and surveying of the vessels. Sarens supplied cranes for lifting the columns and installing platforms for the expansion of a petrochemical plant.

**LOCATION:** Mers El Hadjadj, Arzew, Algeria  
**EQUIPMENT:** : CC6800, LR1750, SCX2500, CC2500, SPMTs

Sarens executed engineering, heavy transport, and lifting work for a production unit in an ammonia and urea plant situated in the industrial zone of Arzew. Combined forces of techniques, experience, and local market knowledge led to the successful realization of this project. Several loads (e.g. 440T with length 50m, 501T length 50m, 533T length 70m, etc) were transported from the harbour to the site and lifted into position. Once this project finalized, the unit will produce 7.000T granulated urea and 4.000T ammonia on a daily basis.

**LOCATION:** Melbourne, Victoria, Australia  
**EQUIPMENT:** LR1350

Sarens successfully completed the heavy lifting works for the major maintenance turnaround of ExxonMobil Altona Refinery which is now back in operation after it was shut down for six weeks. The turnaround improved energy efficiency and reduced greenhouse gas emissions. The operation contributed to the general improvement of the plant reliability and performance.

**LOCATION:** Cilacap, Indonesia  
**EQUIPMENT:** SEG-120, CC 2800, SCC 4000

One of the largest cranes in Sarens' fleet, the SGC-120, lifted a regenerator in Indonesia. This 1.150T load was lifted at a 72m radius, thus making use of almost the full capacity of the crane. A 543T C3 splitter of 92m length was installed as well by the SGC-120 at a 70m radius, while swivelling over a 21m high pipe rack.

**LOCATION:** Bourgas, Bulgaria  
**EQUIPMENT:** CC 2800-1, LR 1600/2, Sartower, skidding system, 60 axle lines SPMTs

Sarens transported two enormous fuel reactors with SPMTs from the port of Bourgas to an oil refinery. The vessels (1.400T each, 57m long, and 9m high) were transported through the center of the city of Bourgas. Street and traffic lights and high tension cables were removed to allow the vessels to pass and the project was especially timed in the touristic low season. After a transport of 38 hours, which was admired by many people on the streets, the vessels arrived on site for the installation. They were lifted with the Sartower equipped with a skidding system and two tailing cranes. To construct the Sartower with four 70m high towers, every element of the Sartower was needed, as well as two 40m long beams.

# KEY FACTS

## SARENS IS THE 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

### CRANES



GIANT CRANE



HYDRAULIC CRANES



LATTICE BOOM CRANES



HEAVY LIFTING TOWER CRANES

### TRANSPORT



CONVENTIONAL TRAILERS



MODULAR TRAILERS



SPMTs

### CUSTOMISED EQUIPMENT



SKIDDING



BARGES



GANTRIES



JACKING SYSTEMS



STRAND JACKS

## GLOBAL PRESENCE



NOTHING TOO HEAVY, NOTHING TOO HIGH





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