

Heavyweight News 22

Dear reader,

A year with great projects has passed, another great year awaits. Looking back at the past months we are pleased with our realizations and looking forward to exciting new projects.

We will see to a continuous growth, expanding relationships and establishing new partnerships. New Sarens entities have been set up in Indonesia, Singapore and Bolivia to name a few. The California-based Sarens entity Rigging International becomes a full member of the Sarens Group and changes its name to Sarens USA.

Sarens is also proud to show you our new equipment in this Heavyweight News: the in-house designed Sarens Modular Barge and Sarbogies were introduced during a bridge construction project in Ivory Coast.

We are also satisfied that our continued safety efforts pay off, as proven by the new ISO9001 certification for Sarens in Malaysia, Vietnam, Australia, Belgium, Norway and Poland. Sarens in France, USA, Australia, UK, Norway and Poland also received their OHSAS18001 certification. In addition to this Sarens in UK, Norway and Poland received their ISO14001.

Please enjoy reading this selection of our worldwide accomplishments.

Wim Sarens - CEO Sarens Group



Sarens Projects

LOCATION

CHERNOBYL -
UKRAINE

EQUIPMENT USED

CC 8800-1

CHIMNEY REMOVAL

Sarens participated in the New Safe Confinement Project at the Chernobyl Nuclear Power Plant in the Ukraine. The purpose of the project is to fully contain the damaged nuclear reactor building and prevent the reactor complex from leaking further radioactive material into the environment for the next 100 years. Unit 4 of the reactor building will be encased in a massive arched steel structure. Before this could happen, the old chimney had to be removed with the help of Sarens' CC8800-1 in its almost full configuration. After the stabilization of each of the 7 tube parts, the chimney could be removed by sections, each weighing approximately 55t. Any miscalculations could cause a cloud of radioactive dust, but this challenging operation was brought to a successful end. The complete old chimney was removed safely.



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Sarens Projects

LOCATION

NIJMEGEN - THE NETHERLANDS

EQUIPMENT USED

2 x barge; SMLT parts; 16 Strand Jacks; ballast pumps; 18 hydraulic winches

SARENS CHANGES CITY SKYLINE

Sarens recently installed a new bridge across the Waal river in Nijmegen, the Netherlands. The bridge, named De Oversteek (The Crossing), is the third bridge over the river and its construction was necessary to relieve the expanding city's traffic.

The main span of the arch bridge, with a weight of over 7,500t and a length of 280m, was first assembled on site and then lifted about 10m using 16 Strand Jacks SWL 650t. Two barges were positioned under the bridge, which were de-ballasted to gradually take over the load in the Strand Jacks. These barges moved the bridge onto its pillars at a height of 12m. After a closure of only 10 hours, the river reopened sooner than expected for shipping traffic. More than 10,000 people followed the spectacular operation. This new bridge changed the skyline of this city permanently.



LOCATION
EQUIPMENT USED

ANTWERP - BELGIUM
CC 2800-1; CC 6800; 24 axle lines SPMT's; telescopic cranes (60t till 300t); floating crane Brabo

Sarens Projects

DIAMONDS IN ANTWERP

The Black Diamond Project in Antwerp, Belgium, included the lifting of 5 columns (54t and 40m till 350t and 85m) and 1 sphere (347t and 20m diameter). Sarens was responsible for transport, lifting, grouting, and surveying the vessels. Sarens supplied cranes for lifting the columns and installing platforms for the expansion of a petrochemical plant.



LIFTING SILOS

Sarens Projects

LOCATION
EQUIPMENT USED

GEEL - BELGIUM
AC 50; LTM 1095; SCC 1000; LTM 1150; LTM 1250; LTM 1350; LR 1350; LTM 1400; AC 700; LTM 11200

In August Sarens Belgium carried out the lifting of 4 PET silos with weights between 8 and 92t. 3 cranes first lifted the silos onto trailers and placed them at the destination into steel structures. In April the project “Silo construction Ellimetal” began, including the assembly and installation of 3 aluminium silos. One silo weighed 45t and the two largest ones were 92t with a diameter of 13,5m and a total height of 40m. As the silos are built out of different circular sections, Sarens' SCC 1000 lifted each finished section so it could be welded. When the crane's maximum capacity of 20t was reached, an LR 1350-LN was added to work next to the Sany crane. After the vertical assembly of the silos, they were positioned horizontally for finishing works and transport.



LOCATION
EQUIPMENT USED

ZWANKENDAMME - BELGIUM
AC 700; LTM 1070; LTM 1095

Sarens Projects

NEW BRIDGE OVER THE TRACKS

To have a better access to the port of Zeebrugge a new steel arched bridge was installed, one of the heaviest of its type with its 90m length and 550t weight. The installation of the bridge was executed above the train tracks during weekend nights to minimize interference for train traffic. After a rising storm caused a cancellation during the originally scheduled weekend, the bridge was successfully installed during the following weekend.



Sarens Projects

LOCATION
EQUIPMENT USED

PORT OF HENDERSON - AUSTRALIA
CC 2800 -1; hydraulic cranes from 20t to 160t

HENDERSON

Sarens Australia Mobile Crane Division (MCD) was awarded the work to dismantle a gantry tower in the Port of Henderson. It was one of the first major jobs of our in 2013 established mobile crane rental division where a lattice boom crane, mobile cranes, engineering, transports and MCD project management and supervision was involved. Sarens Australia's management is proud of the West Australian motivated MCD team that is always willing to go the extra mile.



LOCATION
EQUIPMENT USED

HUNTER VALLEY (NSW) - AUSTRALIA
54 axle lines SPMT's; hydraulic jacks

Sarens Projects

HUNTER VALLEY SHOVEL RELOCATION

Sarens Australia performed the relocation of a 1,250t shovel at one of the mine sites in Hunter Valley, New South Wales. The shovel had been transported over a bridge and slopes up to 8%! Load distribution on the bridge and creation of sufficient traction on the slopes were the key factors that made this transportation successful. A creative engineered setup of hydraulic jacks was used to distribute the load of the shovel on our trailers. This project is another major reference for Sarens' mining operations in Australia!



LOCATION ABIDJAN - IVORY COAST
EQUIPMENT USED Sarskid 310; Sarbogies; 8 x CS 250; barge SMB;
4 x 8t winches

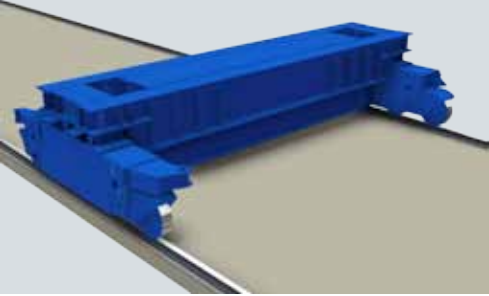
INNOVATIONS IN ABIDJAN

Sarens collaborated in the first bridge project after the end of the war in Abidjan, Ivory Coast. This bridge links the city with the airport and measures 1.5km in length. It consists out of 30 spans, all made out of 2 pre-constrained 1,000t concrete beams. The beams were made on site and then installed by Sarens. First the beams were skid transversally to place them onto Sarbogies. Next they were moved by the bogies and thus loaded onto a modular container barge (Sarens Modular Barge). The last step, after being jacked up by CS 250, was the installation of the beams onto their piles. All 60 elements with a weight between 979t and 1,026t will be installed this way.



Innovation Sarbogies

Another innovation used for the first time during this project is Sarbogies. Thanks to its high concentrated capacity and a nominal load of 600t, this is a new alternative for skidding.

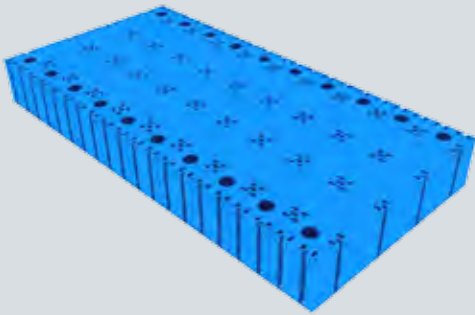


Sarens Projects



Innovation Sarens Modular Barge (SMB)

During this project Sarens used its brand new Sarens Modular Barge (SMB) for the first time. This modular barge consists out of 20' and 40' units which can be connected to adapt to the size of a channel or the width of a lock. The modular structure also allows for a cost-effective mobilization thanks to the certified container sized dimensions of the modules, which makes them stackable just like containers.



Sarens Modular Barge is in-house designed by Sarens' engineering team to be used for all kind of inland water operations. SMB makes it possible to perform barge operations in waters that are difficult to access by waterway, for example lakes or inland rivers. Furthermore Sarens Modular Barge possesses very high structural capacities compared to other alternatives.



LOCATION CILACAP - INDONESIA
EQUIPMENT USED SGC-120; CC 2800;
SCC 4000

SGC AT WORK IN INDONESIA

The largest crane in Sarens' fleet, the SGC-120, lifted a regenerator in Indonesia (depicted right). 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 lenght was installed as well by the SGC-120 at a 70m radius, while swivelling over a 21m high pipe rack.

Sarens Projects



LOCATION WASIT - KINGDOM OF SAUDI ARABIA
EQUIPMENT USED SCT; CC 8800-1; 3 x CC 2800-1; 2 x CC 2400-1

THE SUN KEEPS ON SHINING IN SAUDI ARABIA

Sarens has completed 3 out of 4 tower lifts of the Wasit project using its 3,600t capacity Sarens Climbing Towers (SCT). The tailing was executed using the CC 8800-1 already present on site. The tower lifts were a major milestone of this large project scheduled to finish by June 2014. The remaining SCT lift will take place in February.

Sarens Projects



LOCATION METHIL - UNITED KINGDOM
EQUIPMENT USED LR 11350; LR 1600-2; CC 2800-1; 2 x LR 1160

SOLAN JACKET PROJECT

Sarens UK assisted with the construction of the Solan Jacket and Topsides at the Fife Energy Park fabrication yard in Scotland. Sarens provided four heavy lift cranes plus two support cranes to assemble the jacket components and roll up the side frames to form the main structure. The critical lifts are being executed by Sarens UK Ltd on a Contract Lift basis, with Sarens providing engineering expertise, lifting operation planning and supervision, specialist lifting tackle and extensive quantities of load spreading matting to accommodate the restricted bearing capacity of the ground in the area. With some of the structures being 100m long and 40m wide planning the lifting operations requires detailed engineering and careful execution on site, to ensure each crane carries the correct share of the load at all times. The disposition of the weight between the lift points means that the loads are not equally shared between the cranes, hence different capacity cranes and configurations have to be utilised at each location, which further complicates the operations.

Sarens Projects



LOCATION	LOBITO - ANGOLA
EQUIPMENT USED	8 x Strand Jacks; 24 x ballast pumps

SOUTH NEMBA JACKET LOAD-OUT



Load-out of an offshore jacket, with a weight of 5,800t and a length of 120m, in the harbour of Lobito, Angola. The jacket was pulled on to a 165m barge, using 8 Strand Jacks SWL 180t. The barge needed to be ballasted during the load-out for both load compensation and tide compensation, for which 24 ballast pumps were used. On day 1 the jacket was pre-pulled to the quayside over a distance of 40m. On day 2 the actual load-out onto the barge was performed, over a distance of 120m, which was successfully completed in about 14 hours.



LOCATION	ULSAN - KOREA
EQUIPMENT USED	8 x 650t Strand Jacks; 8 x 300t quay jacks; 8 x 300t break-out jacks



SKIDDED LOAD-OUT IN KOREA

Load-out of a 17,800t topside with Strand Jacks, quay jacks and break-out jacks. As Sarens' client had only a limited time frame available between the ship's arrival and the load-out, our biggest challenge proved to be the installation of all our equipment within a very short period. Sarens' team succeeded in preparing approximately 300 strands of the Strand Jacks within one day instead of the usual five! After a smooth preparation the load-out was executed successfully and 4 hours faster than planned.











LOCATION	VLISSINGEN - THE NETHERLANDS
EQUIPMENT USED	36 axle lines SPMT's

TRIPODS FOUNDATIONS FOR GLOBAL TECH OFFSHORE WIND FARM

For the German offshore wind project Global Tech I Sarens supplied all cranes and SPMT's for the construction and transport of wind turbine foundations in Vlissingen. The pictures show a tripod foundation of 900t which will support Areva turbines in water depths of 40m. Each turbine produces 5 MW of electricity. Production starts at a wind speed of 14 km/h and the peak power output of 5 megawatts will be reached at 45 km/h. During severe storms the turbine switches off for safety at 90 km/h.



	LOCATION	SLIEDRECHT - THE NETHERLANDS
	EQUIPMENT USED	60 axle lines SPMT's; 4 CS 600; 16 load cells; AC 700; 2 x LTM 1400-7.1; 2 x Sarens custom-built stooling



TRANSPORT OF PIPE LAY-TOWER

Sarens was contracted by IHC to assist with the building of two pipe lay towers in Slidrecht. Sarens' scope was to jack-up the tower section (495t), place the tower on custom-built Sarens stools, load-out on a barge and load-in the tower section at the quay. Also included in the scope was the installation of two tensioners, weighing of the completed tower (1,154t) as well as the load-out on the barge to bring the completed tower to its vessel.



HEAVY LIFTING AND TRANSPORT IN GDAŃSK

Sarens Projects

LOCATION	GDAŃSK - POLAND
EQUIPMENT USED	24 axle lines SPMT's; floating crane 350t; barge; skidding system; LR 1600/2; CC 2800-1; 2 x LMK 100; AC 500; LTM 1250; LTM 1160; LTM 1100; AC 100; LTM 1070; AC 50

Sarens Polska supplied multiple cranes and SPMT's for the drilling of a tunnel under the Dead Vistula river in Gdańsk. The tunnel is the longest underwater tunnel in Poland with a length of 1.3km. It will be a crucial part of the inner ring of Gdańsk connecting the airport, the seaport and the city center. This is the first underwater tunnel in Poland which uses one of the biggest Tunnel Boring Machines in the world.



LOCATION	MONTERREY - MEXICO
EQUIPMENT USED	CC 2800; LR 1400-1

Sarens Rental

MONTERREY STADIUM

Sarens is executing heavy lifting works for the construction of a soccer stadium in Monterrey City. Sarens' involvement included full engineering, design and lifting procedures for the installation of the roof support structures. The lifting of these 60t structures at 50m height was accomplished using a CC 2800, assisted by a LR 1400. Sarens' scope also involved site supervision and rigging personnel for the duration of the contract. The LR 1400 was on site from March 2013 until December 2013 and the CC 2800 is expected to finish on time by the end of March 2014. The finished stadium will be able to house over 50,000 soccer fans.



LOCATION	UM QUASAR - IRAQ
EQUIPMENT USED	GOOSENECK 9 AXLE

HEAVY TRANSPORT IN IRAQ

Sarens Iraq transported a 150t generator over 512 km between Um Quasar and Al-Najaf. In total 3 transports were executed.



LOCATION	RED WING (MN) - USA
EQUIPMENT USED	Gantry; Outside Lift System; 12 axle lines SPMT's

Sarens Projects

STEAM GENERATOR REPLACEMENT

Sarens USA was awarded the contract to replace two steam generators at Prairie Island Nuclear Generating Plant near Red Wing, Minnesota. The scope of work included detailed engineering for the removal and transport of the old generators and transport and installation of the new generators. Each component was split into two pieces for the work, resulting in the execution of four separate lifts using equipment that was designed specifically for the project.



LOCATION	CONVENT (LA) - USA
EQUIPMENT USED	24 axle lines SPMT's

Sarens Projects

STACKER/RECLAIMER PROJECT

Sarens successfully offloaded, transported and erected one coal-handling stacker/reclaimer for Raven Energy in Convent, Louisiana. This work highlighted the superior transport capabilities and manoeuvrability of Sarens' SPMTs, as nearly 20 heavy components had to be transported over the Mississippi River levee to the erection site.



SARENS USA ISO/OHSAS CERTIFICATION

Through dedication to quality management, Sarens USA successfully completed its triennial ISO 9001:2008 recertification in 2013. In addition, Sarens USA also earned an OHSAS 18001 certification for its Occupational Health and Safety Management System.



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Sarens Projects

LOCATION

ANDROS ISLAND -
BAHAMAS

EQUIPMENT USED

Sarbas

SARBAS IN THE BAHAMAS

Sarens erected a 1 MW wind turbine at a US Navy base in the Bahamas. The self-erecting crane system Sarbas is designed to assemble wind turbines working in extreme weather conditions, for example earthquakes or hurricanes.



Sarens Projects

KITIMAT MODERNIZATION PROJECT

LOCATION KITIMAT (BC) - CANADA

EQUIPMENT USED 2 x LR 1600; 72 axle lines SPMT's

Sarens' scope of work on this project includes hauling and erection of modules and other over-dimensional items. Some of these modules were erected during the month of November 2013, the heaviest of which was 270t at a radius of 20m. These modules were received at ship side with (2x) 18 axle line SPMT's, transported to a laydown area and then moved to the crane for installation. Sarens' work continues on this project, which has great importance to the client and the greater community of Kitimat.



Sarens Projects

LOCATION

RIO DE JANEIRO - BRAZIL

EQUIPMENT USED

Lifting gantry; 4 Strand Jacks;
32 axle lines SPMT's

ENEVAL BRAZIL

Assembly of FPSO modules.

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