

# Heavyweight News 17

Dear reader,

In this latest edition of Heavyweight News we proudly present a sample of the projects our teams executed. In addition to our project activities we are pleased to bring forth a number of exciting changes to the Sarens group: the addition of three new business units (Sarens Lithuania, Sarens Kaliningrad and Sarens Iraq), the launch of a new website, an ISO certification for several business units and the entry of a new shareholder, Waterland. This independent venture capital company will support Sarens' ambitious international expansion plans in the coming years. With growth comes renewed focus on business support processes and systems, equipment acquisition (Sarens invested 160M EUR in new equipment this year), training, and a continuing commitment to Safety & Quality wherever Sarens operates.

Enjoy the projects in this edition of Sarens' newsletter and remember – nothing too heavy, nothing too high.

Wim Sarens - CEO Sarens Group



LOCATION VLADIVOSTOK - Russia  
EQUIPMENT - SPMT's; SARspin;  
LR11 350

## PRESIDENT MEDJEDEV KEEPS CONTROL ON OUR TIGHT SCHEDULE!

Sarens participated in the installation of a bridge over the Eastern Bosphorus Strait. The bridge will connect "Russky Island" with the Nazimov Peninsula and will have a span of 1.104m. 370t bridge sections were transported by SPMT's and lifted with an LR11 350 and SARspin (hydraulic alignment device incorporated in slinging concept). The giant concrete pylons of the bridge had an elevation of over 300m above sea level. President Medjedev visited the job site during crane activities.

The bridge is to be commissioned in July 2012, just in time for the APEC Summit held in Vladivostok in September 2012.

LOCATION SARGANS – SWITZERLAND  
EQUIPMENT USED - PC6800; SARspin

## THE SWISS MOUNTAINS DURING SUMMERTIME

Switzerland, like many countries, has embarked on major projects designed to replace ageing infrastructure. In Sargans, the replacement of a highway bridge proved to be a challenge as the highway crossed a railway and a local road, both of which needed to remain operational for a maximum period of time. To make this possible, Sarens proposed to install a PC6800 lattice boom crane as a sort of bridge over the local road on 4 foundations; this enabled this road to remain open for as long as possible. A second challenge that had to be met was the fragility of the old bridge and the strict restrictions on the positioning of the new bridge. To meet these challenges, Sarens developed a new lifting system: the SARspin, consisting of 4 cylinders that can be monitored, lengthened or shortened individually to allow for a maximum control of the load.



LOCATION - PONT BACALAN - BORDEAUX - FRANCE  
EQUIPMENT USED - barge Louis (100 x 33 x 7,6 m); 4x tower jacking system CS600; 64 axle lines SPMT's



## MAIDEN VOYAGE OF BARGE LOUIS

The seagoing barge Louis (class I; unrestricted navigation) left the shipyard for its "Maiden Voyage" from Italy to France. 2 stacked bridge sections were lowered down after each other and secured onto the barge deck for this 3 week trip.

The first voyage was between San Giorgio Di Nogaro (IT) and Bordeaux (FR). The first bridge section was loaded onto the barge using SPMT and jacked up on the barge deck to over 8m height. The second section was loaded under the first section using the same SPMT's. The installation started upon arrival in Bordeaux.

Positioning works of both bridge sections took place at the beginning of August. Sister barge "Paula" is under construction.



LOCATION - SASOLBURG - SOUTH AFRICA  
EQUIPMENT USED - CC2800-1; AC650; LTM1400; AC300; 54 axle lines SPMT's

## TURNKEY PROJECT

Sarens is providing turnkey supervision, transportation and installation of all equipment over 20t in Sasolburg. In 6 months 3.150t of pipe rack modules, vessels and equipment were installed.



The installation of the equipment within an operating petrochemical plant was a real challenge.

The site has a limited foot print, and the plant is high and compact to accommodate all the equipment.



LOCATION - PILANESBURG – SOUTH AFRICA  
EQUIPMENT USED - CC2800-1; AC650; LTM1400

## STYLDRIFT ROYAL BAFOKENG PLATINUM, HEAD GEAR PROJECT

Precautions were required to operate at heights of approximately 85m because of the close proximity to the Pilanesburg airport.

Both headgears were pre-assembled (31 lifts) on the ground prior to being erected. The main headgear centre tower comprised of three distinct modules and the services shaft of four modules.

The total weight of the two headgears amounts to an estimated 1.200t.

“The work was performed by 15 people to an exceptionally high standard from a planning and execution perspective. Above all, the safety standards were commendable” says Royal Bafokeng Platinum senior project manager, Tom Sertic.



## FIRST ACTION IN SAUDI ARABIA : TANDEM LIFTING OF A 200T GIRDER



LOCATION - JUBAIL - SAUDI ARABIA  
EQUIPMENT USED - LR1280; LR1300

In Saudi Arabia the Sarens Group successfully placed two large girders in the construction of a new tubular steel products factory. Both girders, 51m in length and weighing in excess of 200t, were transported to site and lifted into their final position utilizing a tandem lift configuration.



LOCATION - MERS EL HADJADJ, ARZEW - ALGERIA  
EQUIPMENT USED - CC6800; LR1750; SCX2500; CC2500; SPMT's

## NORTH AFRICAN BOOST

The Sarens Group 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 is finalized, the unit will produce 7.000t granulated urea and 4.000t ammonia on a daily basis.





LOCATION - BUMAR - GROBBENDONK  
EQUIPMENT USED - 2 x 16 axle lines SPMT's;  
4 x CS250t; twin barges Karel & Victor; tugboat Petrus

## TRANSPORT & POSITIONING OF A BRIDGE PART

In a first phase, the large bridge section was loaded at the fabrication facility in Ghent, transported to and unloaded at the site 80 km further on in Grobbendonk. After final assembly, the bridge with a total weight of 650t and length of 100m, was jacked up 9 m, loaded onto the barges Karel & Victor using SPMT's and sailed from the jacking place, over more than 2 Km, before being set down in its final position over the "Albert Channel".



LOCATION - GHENT - BELGIUM

EQUIPMENT USED - SGC 120

## THERE IS MORE THAN ONLY BELGIAN BEERS AND CHOCOLATES!

Sarens' SGC-120, a "true" and in-house designed crane, is the new standard in heavy lifting and designed according to European and American standards. The crane is named "Big Benny" after one of the 5 family shareholders, who was the driving force in the construction of this giant. This was unveiled by our Operations Director Carl Sarens (son of Benny Sarens) to the Belgian staff on a sunny but cold Sunday morning.

Sarens' newly custom-made super heavy lift crane with jib will make its debut in Arizona this fall for the construction of a high tech facility. The crane can lift 3.200t and can move by the mm over 360 degrees around its double ring base. Assembly of the crane will take place in the USA (Arizona) within approximately six weeks after some 200 containers have arrived in the US this September.



LOCATION - NAMUR – BELGIUM

EQUIPMENT USED - TC2800-1; twin barges Karel & Victor

## CONCRETE REPLACES OLD IRON

The pre-war era railroad bridge across the river Meuse needed to be replaced by a more modern looking bridge.

This is where Sarens came in to lend a hand, using one of its TC2800-1 positioned on top of our twin barges. Per phase 3 iron bridge parts weighing 160t each were replaced by their concrete successors of 305t per piece.



LOCATION - GHENT – BELGIUM

EQUIPMENT USED - 2 x LTM1130-5.1;  
LTM1150-6.1; LTM1160-5.; AC200-1;  
LTM1400-7.1; LTM1500-8.1; AC700

Sarens pulled 750m of pipeline with a total weight of 750t in a trench below street level. The cranes were positioned every 35m (= 35t per crane) in a straight line on a narrow access way paved with steel driving plates. To complete this job the pipeline had to be pulled both horizontally and vertically in an arch, with a maximum height of 9m. In order to do this, the middle cranes needed to lower the boom by approximately 6m.



LOCATION - HOBOKEN - BELGIUM

EQUIPMENT USED - Kamag 2 x 24 axle lines SPMT's new generation (48t gross capacity); 8 weighing cells 500t and hydraulic jack system

## NEW GENERATION OF KAMAGS LAUNCHED

Two transformer modules (1.250t), ordered for the London Array offshore wind farm in the UK, were built at the Fabricom yard in Hoboken. Both modules were weighed with the Sarens weighing system to make an accurate centre of gravity report, needed for the offshore lifting. After weighing, the 2 modules were transported and rolled on a seabarge.



The major challenge existed in overcoming the different water levels, since not only a tidal range of approx 6m had to be overcome, but also a totally different water level at the departure quay compared to the arrival quay. The only reasonable solution was to elevate our twin barges Wim & Tom with an extra 1.70m to ensure smooth cycling from the quay onto the pontoon.

Knowing that maintenance operations always have a severe impact on terminal activities, Sarens can proudly say that the two transports have been executed in 6 days instead of the planned 9 days.



LOCATION - ANTWERP - BELGIUM

EQUIPMENT USED - Barges Wim & Tom; tugboat Petrus;  
72 axle lines SPMT's

## ANTWERP WORK HORSES ON THE MOVE

Nothing too heavy, nothing too high! "Nothing too technically challenging" would perfectly add to many of our projects, for example the transportation of two Kalmar cranes (1.250t, 72m high), workhorses of Antwerp's container terminals.





LOCATION - SLIEDRECHT  
THE NETHERLANDS  
EQUIPMENT USED - 2 x 30 axle  
lines SPMT's; barge Karel & Victor

### READY TO GO?

Sarens supplied a temporary support and construction material for a loader. The loader (1.480t) was transported by SPMT's and driven over the temporary bridge to the barge. Sarens also organized the water transport from Slidrecht to Kinderdijk.

LOCATION -  
ROTTERDAM  
THE NETHERLANDS  
EQUIPMENT USED - CC2500-1

### PENTHOUSE READY FOR OCCUPATION

Erection of the penthouse roof structure for a newly built hydrogen plant in the Rotterdam Botlek area. The roof structure with a surface of 21x17m and a weight of approx. 190t was placed on the 25m high radiant furnace. The roof itself has its top elevation on 31m.



LOCATION - LA PRÉVOTERIE (DROUPT-SAINT-BASLE) - FRANCE  
EQUIPMENT USED - LTM11200-9.1; LTM1100; AC100-4; LTM1060-2

### “WASP” CRANE BOOSTS WIND TURBINE ERECTION SPEEDS

Sarens erected 18 wind turbine generators type MM92 at a hub height of 80m. By using a telescopic crane LTM 11200-9.1 that can mobilise on site between wind turbines in only half a day, erection sequences of up to 3 turbines per week can be reached! The Sarens complete project approach, involving all project management, engineering and HSEW, relieved the client from all time and planning risks.



LOCATION - ILBERSTEDT - GERMANY  
EQUIPMENT USED - 2x 12 axle lines and 2x 14 axle lines SPMT's;  
skidding system

### PLACING OF 2 MOTORWAY BRIDGES (900T) WITH SPMT'S AND SKIDDING SYSTEM

Two bridges built in the construction area behind the foundations, were transported and laid down on the Sarens skidding system by means of Kamags before the closure of the railroad track. In a 30h time window, the Kamags were rebuilt on the railroad level. In combination with the skidding device on the back, the two 900t bridges were moved onto their final position.



### NEW CHALLENGES IN POLAND



Sarens Polska acquired the company Zuraw Grohman with 160 cranes and 180 people. This puts Sarens into the number 1 position in the Polish crane market. A special transport division is also added.



LOCATION -ORLEN - PLOCK - POLAND  
EQUIPMENT USED - AC 650

### TAILOR MADE

Sarens Polska did the installation of a tank to take out gas (weight 44t @ 40m) at the powerplant in the Orlen Refinery, which is the largest in Poland.

Sarens assembled in total 39 x G90/78m towers. 24 were installed in Pelplin and 15 in Taciewo.



LOCATION - PELPLIN - TACIEWO - POLAND  
EQUIPMENT USED - LTM11200-9.1



nothing too heavy, nothing too high



ASIAN DRAGONS IN ACTION!

LOCATION - MAP TA PHUT - THAILAND

EQUIPMENT USED - LR1800; CC2500




This Thai lift of 607t was executed by LR1800 with CC2500 tailing. A Goldhofer SPMT with 32 axle lines was used for the transportation from Map Tu Phut port to the lifting position. This installation is part of Thailand / PTT's commitment to increase fuel quality standards and reduce the fuel emissions in the Asia region.



HIGH POINTS IN INDIA

LOCATION - DAHEJ – GUJARAT - INDIA


EQUIPMENT USED - CC2800-1; CC2400



Erection of a rectifier Tower Column (total weight 253t) at Opal DFCU & AU project. The CC2800-1 was used as the main crane and the CC2400 as tailing crane.


LOCATION -DAHEJ – GUJARAT - INDIA

EQUIPMENT USED - CC2800-1; CC2400



Erection of 02 Pipe Spools at Opal DFCU & AU project. Spool weight 130t & length 42m. Critical lift due to its unique bend design and for alignment with the column.







LOCATION - HOBOKEN - BELGIUM

EQUIPMENT USED - CC8800-1; LR1600/2 24 axle lines SPMT's

During the summer of 2011 Sarens performed the upending operation of the steel jackets for Thornton Bank II and III offshore wind farm. The jackets of 600t heavy and 55,5m high were assembled horizontally. The main crane CC8800-1 and tail crane LR1600/2 lifted the jackets to bring them to a vertical position. After this they were ready for transport with barges and the offshore installation in the North Sea for the Thornton II & III offshore wind farm. On these jackets a total of 48 Repower 6MW windturbines will be installed in 2012 and 2013. Smulders Foundation has built these structures for client Dredging International for installation at the CPO Thorntonbank wind farm in Belgium.



DANCING JACKETS



LOCATION - BULAHDELAH - NEW SOUTH WALES - Australia

EQUIPMENT USED - LR1400-2 SDB; SCX2500

CROSSING THE MYALL RIVER

Sarens unloaded 180 x 82t Super “T” beams into storage, reloaded them with the SCX2500 and installed them from 14 locations with the LR1400-2. The work was completed by only dismantling once to relocate from the south bank of the Myall river to the north bank.





LOCATION - SOLNA - SWEDEN                      EQUIPMENT USED - SMLT; Strand Jacks

The Swedbank Arena is Sweden's new national soccer stadium, with a capacity of 50.000 seated sports fans and up to 65.000 concertgoers. Sarens lifted 4 roof girders using 56m high SMLT lifting towers and Strand Jacks. The girders are approximately 500t each (+/- 50t) and 130m long. Sarens AS, Norway performed both engineering and operational activities.



LOCATION - SALT LAKE CITY – UTAH - USA  
EQUIPMENT USED - 96 axle lines SPMT's and a custom-built support system

RECORD SETTING BRIDGE MOVE IN NORTH AMERICA

Sarens' Rigging International performed a record setting rapid bridge move in North America, moving the 354 foot long, 3.8 million pound Sam White Bridge using self-propelled modular transporters during an overnight closure of the heavily traveled I-15 freeway. With several thousand spectators lining the freeway to witness the record setting move, the structure was transported from the temporary construction site and positioned over the eight lane freeway in less than five hours.



STORAGE MODULE TRANSPORT AND ASSEMBLY



LOCATION - JENSEN BEACH – FLORIDA - USA  
EQUIPMENT USED - 6 axle lines SPMT's and Sarens JTR 500 Gantry System

Sarens' Rigging International provided transport and assembly services for the installation of 14 Horizontal Storage Modules (HSM-H) at the St. Lucie Nuclear Power Plant. The HSM-H units added on to an existing array of modules that store spent fuel rods from nuclear reactors. The base units, weighing approximately 184,000 pounds each, were transported from the barge to the storage site using self-propelled modular trailers and then lifted and set into place using a gantry system.



LOCATION - CUYUTLAN - MANZANILLO  
COLIMA - MEXICO  
EQUIPMENT USED - Sarlift; Faun 20t

BRIDGING MEXICO’S INTERIOR

Assembly of 600 beams for the railway overpass in Manzanillo.



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