Nothing too heavy, nothing too high

A 100 ton Demag crane in the early 1960's


Sarens has built the company from a family business into an international group with revenues more than €430 million

Hendrik Sarens, group and heavy lift division director of Sarens and president of the Belgian crane association recently gave Cranes & Access an exclusive interview, during which he talked about the company and its cranes.

Today Sarens is a Flemish heavy lift and specialist transport company with annual revenues of more than €430 million. But it all began with Frans Sarens - 'granddad Sarens' - a farmer who supplemented his income by using his horse and cart for forestry works and transporting trees in order to help support his 12 children during the period between the two World Wars.

By 1955 the business was growing as his children joined him, so a company 'NV Ondernemigen Sarens-De Coster and Children' was formed in Steenhuffel, Belgium. De Coster was Frans Sarens' wife, her name was added purely for sentimental reasons and was later dropped resorting to just Sarens. The company invested heavily in the latest cranes and transportation equipment from the start and worked on many prestige contracts. One of its earliest was the construction and dismantling of Expo'58 in Brussels and an early mobile lattice crane was a 120 tonne Manitowoc 3900. The young business was also quick to go international, becoming market leader in Belgium but with a strong presence in France and the Netherlands, treating an area from Paris to Amsterdam as its domestic market.

Sarens is still a family owned company dealing in all aspects of international heavy lifting and specialist transport. Its board of directors is made up of five, third


Hendrik Sarens

generation family members - Hendrik, Ludo (ex-chief executive and now chairman of board), Jan, Benny and Marc. Two other third generation family members also work in the company together with a growing number from the fourth generation including Wim (Ludo's son) who is now chief executive.

"My generation is now starting to pull back a little to let the next one - our sons and daughters - get more involved," says Hendrik Sarens. "It is often said that the company is the best kept secret because we prefer a low profile and only occasionally will we give interviews. We prefer to focus our efforts on building long-lasting relationships with clients, customers and engineering companies around the world."

Sarens is one of four European-based global heavy lift and transportation companies along with Mammoet, ALE and Fagioli. Over the past few years other rivals have designed and built their own mega lift cranes, allowing them to tender for the increasingly heavy lifts in the nuclear, petro-chemical and oil markets. Possibly to counter this and to grow its presence in North America, Sarens acquired California-based heavy lift company, Rigging International in June 2009. As well as establishing the company in North America, the purchase was key in the development of its own SGC-120 super lift crane.

"Rigging International already had plans for a new crane when we bought the company," says Sarens.


The company invested heavily in new cranes and transport equipment for the construction and dismantling of Expo'58 in Brussels

"This was our first crane designed and built in-house so we worked together and made further changes and improvements and the end result is excellent."

"We obviously looked around at the other big lifters in the market but decided that the crane must be able to rotate through 360 degrees i.e. a ringer design, all components had to fit into a standard 40ft container and lifting should be with winches. The SGC-120 was designed for main boom lifting, however its first contract in the USA required a lightweight fixed jib which had to be designed very quickly. This we did and it carried out 22 major lifts from one fixed position. A feature that really helped during the project was its small footprint and 20 tonnes per square metre ground pressure. Without this crane we would not have been able to tender for the contract. We obviously have other solutions that could have done the lifts, but the client specified a single crane position with no movements."

"The 3,200 tonne double ringer crane is doing exactly what is expected and worked for four months without any breakdown or unscheduled stops. If we do build another, there would of course be improvements, because you learn that a design can always be improved, but we are very pleased with the result," he says. Sarens also said that it is working on a system to relocate the SGC-120

without dismantling the ring and a heavy duty jib is also under development.

Sarens declined to confirm if a larger crane was being developed, but with both Mammoet and ALE having introduced larger versions of their cranes, it is clearly in mind - driven by the increased lifting capacity requirements of new contracts. However the nuclear disaster in Japan has caused several countries to question the future of nuclear power and several projects involving mega lift cranes have either been put on hold or cancelled.

"Some countries are still looking at building nuclear plants but many are not," says Sarens. "Abu Dhabi is planning six plants and we are busy working on two in Korea. Russia is also planning several and although there is not much work for us in China at the moment, it is planning a further 12."

But is there a need for these mega lift cranes?

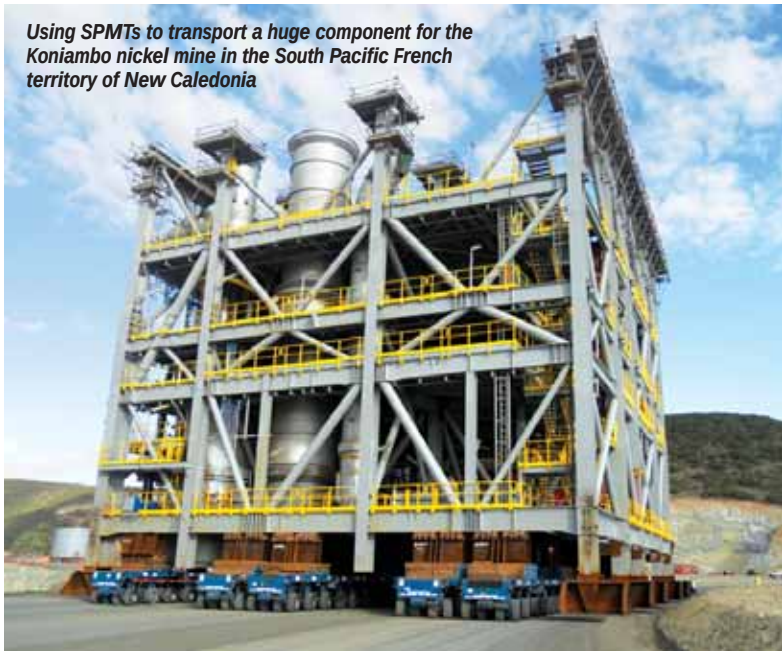
Whatever the construction - nuclear power stations, refineries or petro-chemical plants - components are getting bigger and bigger, as clients want to reduce transportation, erection time and costs. But which comes first, the increased crane capacity or the larger components?

"Both are increasing gradually and even if we do not have the required crane capacity we can use alternative lifting methods such as towers. As the cranes' become larger, they can take over from the towers - moving them to lift the even larger capacity components and so on. Lead times to build these big cranes is between three to four years, so you are always taking a risk because this is longer than the contract lead time. Unfortunately, planned projects do not always come to realisation - the Japanese nuclear disaster put a stop to many contracts which contractors were gearing up for."

Is there a maximum capacity for these cranes?

"I don't know if there is any limit. I can remember when my father bought his first crane, a 20/22 tonne Gottwald AMK45 telescopic which everyone thought was the limit. Then a 40 tonne was launched, then a 60 tonne and an 80 tonne and each time we thought this must be the limit. But Krupp then built the GMT120 a 120/140 tonne crane, followed by a 200, 500, 600 and 700 tonner. Today we have the 1,200 tonne Liebherr LTM112000 but is this the biggest, we will never know?"

The Sarens SGC-120 is currently working on its first contract - the construction of an enormous production hall in a steel works - in Phoenix, Arizona. The crane positions 160 metre long beams weighing 325 tonnes each at a radius of 156 metres



Using SPMTs to transport a huge component for the Koniambo nickel mine in the South Pacific French territory of New Caledonia

Sarens likes big Terex crawler cranes – it has five CC8800 and one CC9800

"The number of manufacturers of larger lattice boom cranes is limited, so we generally go for either Terex or Liebherr. We also have Sany 600 tonners and this is the biggest capacity non-European crane we have. When it comes to smaller cranes we have a wider range of suppliers, including Terex, Liebherr, Tadano, Kato, Faun, Grove and Bendini. There was a time when Demag Terex was the leader for lattice booms and Liebherr for telescopic but both have added new models so that today they have a very good range of both types of crane."

"We also have smaller Chinese telescopic cranes up to 80 tonnes and crawlers up to 120 tonnes from two or three Chinese manufacturers, but seldom use them in Europe. They are primarily for sites in the Middle East and Africa where it is an advantage not to be too 'high-tech'. If something goes wrong in Africa it is a problem to get it fixed as there are very few dealers and facilities. You can still open the engine compartment of a Chinese crane and see what is going on."

Safety is paramount

"Safety is one of the most important issues today and we have a large number of staff involved in this area of the business. About 5km from our Wolvertem, Belgium head office we have a training centre which we run together with the Flemish authorities, giving people both new skills to get back to work as well as 'on the job' training. We provide the cranes, forklifts and trucks and the government authority manages the facility. After training this brings unemployed people into the business. Every person within the company has a minimum of two training days per year."

"Accidents happen when people work with equipment. To totally eliminate accidents is impossible, but we aim to reduce them to the minimum. An erection crew can still

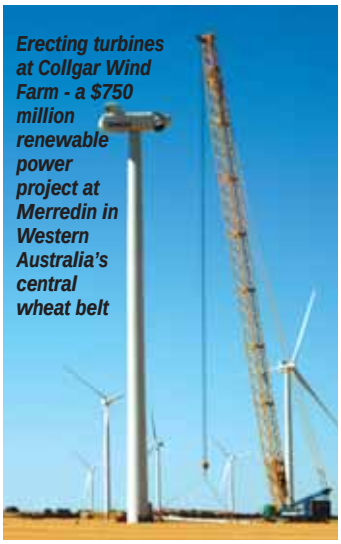
A Terex CC2800-1 lattice truck crane working from a barge placing a concrete road section

do things the wrong way which is why we spend so much on training and safety. While there may be differences in the level of safety in countries around the world, it is dependent on the industry. The nuclear sector is the strictest, followed by oil, gas and then civil engineering work. An oil refinery in Africa is probably being built by clients from America or Europe so they have the same high safety requirements. We implement the same level of safety whatever the industry and wherever we are working throughout the world."

Wind

One sector where there are too many accidents is in the erection of wind turbines. Sarens is a member of ESTA which is holding the first wind safety summit in Hamburg in March.

"Manufacturers such as Terex and Liebherr are already aware of the increased number of accidents and have reviewed the wind speed conditions for its equipment when erecting wind turbines. Maximum wind speed should be based on the exposed wind surface of one tonne metre for one metre square or area.



Erecting turbines at Collgar Wind Farm - a $750 million renewable power project at Merredin in Western Australia's central wheat belt

As a general rule, if the crane has an 11 tonne capacity, the wind surface of the item being lifted should be no more than 11 square metres.

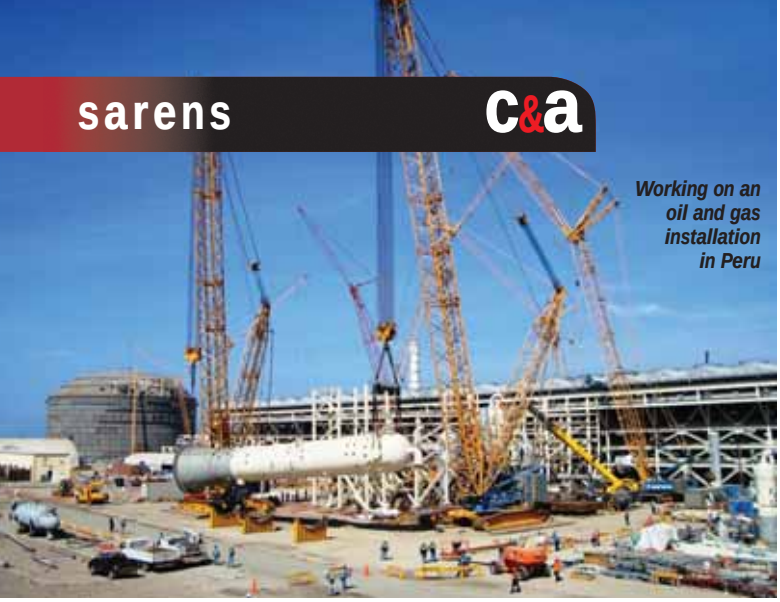
"But wind is not the only problem. A lot of accidents occur when relocating the crane. If you dismantle a lattice boom crane to move between sites it is a minimum of three days. However if you track it semi-rigged this can be reduced to one day, but there are associated risks in moving such a crane including not putting down enough load spreading mats, the quality of the access roads which need to be wider and more stable than for trucks etc. There is always a cost factor and corners can be cut to reduce the time or costs," he says.

"The conference will involve all parties - manufacturers of the wind turbines and cranes as well as the crane operators and wind turbine erection companies - so we hope to make everyone aware of a situation that cannot continue and start by outlining general conditions that should be taken into account by all parties."

"With the instant news reporting today, most accidents are very visible and companies have to learn to cope with the publicity in the right way. The more we know about how and why the accident happened the more we can learn from them and avoid them happening in the future. At Sarens we have always been very strict on

The Sarens SGC-120 allows the company to compete with the other European-based global heavy lift and transportation companies

A novel solution for erecting offshore tubines



Working on an oil and gas installation in Peru


SPMT boom unloading in Australia

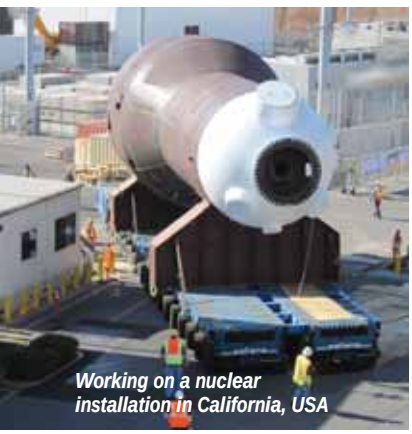
the allowable working wind speed with the lattice boom cranes - such as the CC2800, TC2800, LR1600 and LG 1550 – which we use."

What about cranes such as the Grove GTK1100?

"Years ago I remember Krupp introducing the 500GMT which used a Goldhofer wheeled chassis and extendible outriggers at the front and back. It was a very strong 500 tonne crane and I think Krupp built and sold about nine so it was not a big success. Like the new Grove GMK the crane was too specialist for us. For wind turbine erection there is usually a lot of space to set up the crane, but this makes it difficult to use the crane on a congested site such as in a refinery. Most of our cranes are multi-functional and can work in many different applications."

Equipment and markets

Sarens currently has around 1,500 mobile and crawler cranes in its fleet - a figure that is increasing - and has 15 cranes with lifting capacities of more than 1,000 tonnes. It says it will buy both new and young second hand cranes and has a good network of contacts, with many crane companies/dealers and manufacturers dealing directly with the company.


Working on a nuclear installation in California, USA

Company revenues doubled between 2006 and 2009 to more than €400 million and although there was a slight dip in 2010 when several major contracts finished, the growth has resumed with about €430 million achieved in 2011.

"We have suffered a little from the global recession," says Sarens, "although we have noticed that tender prices are now coming under more pressure."

As well as its major lifting projects Sarens offers contract lifts and straight crane hire without operators. In Europe it offers all three but in other areas it varies from country to country. Cranes available for 'local' rents range from 35 to 500 tonnes and most of its larger crane activities are coordinated from group head office and from some regional head offices.

In North America, Rigging International specialises in nuclear and special lifting systems - lifting towers and strand jacks - as well as the relocation of container cranes. Sarens has added cranes to its activities but this sector is currently performing very poorly and it has no intention of developing it further. North America is however very buoyant for special projects such as bridge skidding and relocation and very heavy lifts using towers.

The company has also done work in China usually for European or American contractors, but while it has 100 depots in 50 countries it still has no office in China.

"The times we have worked in China we have supplied cranes from either Australia or Europe. Generally the Chinese like to do the work and buy large cranes themselves," says Sarens. "We do a lot of work and are very busy in India however although it was difficult to get established in the beginning. We now have an office there with 40 cranes, including a CC8800. In total the company has five CC8800s and one CC9800."

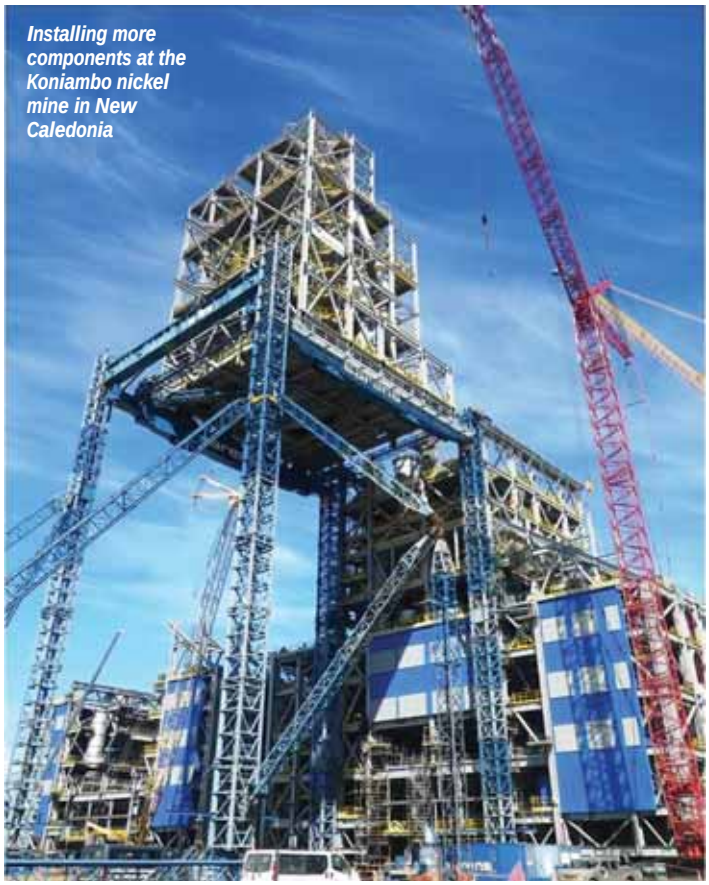
"We had to build the SGC-120 ourselves because cranes of that size are not available. Liebherr's new 3,000 tonne LR 13000 is a very good crane, with specific advantages. We keep an eye on all the new cranes that are launched but they have to earn their keep. Very heavy lifts can be carried out by tower or mast systems. For a single heavy lift the tower is the cheapest, but for numerous lifts from a single position a crane is cheaper."

Purchase plans this year?

Sarens purchased its fifth Terex CC8800 in January this year and has more lattice boom and telescopics on order, both for replacement and fleet expansion although no specifics were given.

"Our strategy for the future is to expand strongly into new countries. We will not be building any more of our own cranes this year, but the logical step will be to move to the next generation of big cranes. We are busy designing the heavy jib for the SGC-120 at the moment."

"The major change we have seen over the last 30 years, apart from the fact that cranes and lifts have increased in capacity, is that it takes more time to plan and prepare for the lift than actually carrying out the lift. Today clients bring in external consultants to check the procedures and calculations etc so it takes a long time before you get the green light. Overall this is not such a bad thing, because having an independent check further improves safety."


Installing more components at the Koniambo nickel mine in New Caledonia