

# Sarens prepares launch of world's largest crane

**Sarens, the Belgium-headquartered heavy lift and transport engineering specialist, is preparing to launch its SGC 250 – a ring-based heavy lift crane boasting a maximum lifting moment of 250,000 tonne/metres. David Kershaw reports.**

Sarens' giant new SGC 250 crane has completed most of its test lifts and will be ready to enter service in the first quarter of 2019, said ceo Wim Sarens.

It will be mobilised to the Hinkley Point C nuclear power plant project, where it will remain for a minimum of four years.

The SGC 250 is the natural successor to the SGC 140 (maximum lifting moment of 140,000 tonne/metres) that was launched in October 2017 and is working at the Tengizchevroil TCO project in Kazakhstan.

The new SGC 250 has a maximum lifting capacity of 5,000 tonnes. The main boom, measuring up to 160 m long, can be supplemented with a 100 m long, heavy-duty jib. "In absolute technical terms, it is, at this point in time, the largest crane in the world in terms of size and capacity.

"We are aware that these classifications are difficult to make because various factors are taken into consideration but, when the combination of size and capacity are considered, the SGC 250 is a winner for now," said Wim Sarens.

## Flexible relocation

The ring design allows for flexible relocation between lifting sites, as well as providing a compact and stable platform for performing super-heavy lifts. It also has a compact footprint and low ground-bearing pressure.

Construction of EDF's Hinkley Point C is being led by the Bouygues Travaux Publics and Laing O'Rourke Construction



joint venture. Wim Sarens said the SGC 250 was developed following a successful bid to provide heavy lifting works at the project.

"One of the main reasons for choosing this crane was the minimal lifting impact on site, and that is why the lifting moment matters," explained Wim Sarens. The crane can stand far enough from the area at which construction is happening to allow other works to continue. "That is important, as otherwise the site would have



a lot more disruptions and delays."

Another reason for the SGC 250's selection was the successful track record of the SGC 120 and SGC 140. Notably, the SGC 120 has been working on a nuclear power project in France.

"It is an environment that has specific safety rules and quality controls. It was not only the machine, but also the Sarens organisation and our procedures around using the crane that were ultimately taken into account when the developers chose our proposal."

## Design

Wim Sarens added: "The design and specifications of the SGC 120 and subsequent models, the SGC 140 and the SGC 250, were made in-house by our Sarens Engineering team. The construction was also completed in house. We order the components from a selection of companies in Europe."

Boosting the SGC 140's maximum lifting moment by 110,000 tonne/metres was no mean feat. To create this latest model, the diameter of the ring was extended, resulting in a more stable lifting base. The boom system was upgraded with heavier components, with the design tweaked to aid erection and assembly.

"From the existing components of the SGC 140, only the back masts, winches, drive units and hook blocks were retained. Most of the components needed to be significantly upgraded," said Wim Sarens.

He added that the SGC 250 will set the standard for heavy-duty cranes, and has the potential to be mobilised to a variety of jobs once its role at Hinkley Point C is complete. These are likely to be newbuild nuclear power plant projects and large FPSO modular installations, as well as the next generation of petrochemical newbuilds and upgrades.