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Greater Demand for Super Heavy Lifters



Nuclear power station construction in the USA, China and elsewhere is driving demand, as had activity in the petrochemical, ship building and offshore energy equipment construction industry worldwide. The big news is that end users have independently designed and built super heavy lift cranes, even though some of the mainstream crane manufacturers are active at the top end of the heavy lift arena.

Design approaches vary, from types most similar to conventional cranes – Mammoet, Lampson, Sarens – to variations that are less so. For example, ALE, Bigge use strand jacks or no counterweight.

Bigge Crane & Rigging in the USA has its 125D AFRD, which it describes as the world's largest capacity crane at radius. Bigge gives the capacity of the ARFD as 7,500 US tons on 300 feet of main boom and 4,000 tons with 560 feet of main boom. Fixed jibs will be available in excess of 1,000-ton capacity and 200 feet long, according to Pete Ashton, vice president of major projects.

In heavy lift cranes since the 1970s, USA-based Lampson International's Transi-Lift cranes are familiar at nuclear power plants around the world, says Kate Lampson. The largest Lampson, the LTL-3000, has a capacity of 3,000 tons. The Transi-Lift system is a patented configuration that combines the heavy lifting capacities of stiff leg derricks and ring mounted lift equipment with the mobility of a conventional crawler crane.

With its origins in the USA at subsidiary Rigging International, Belgium-based international specialist Sarens' contender is the SGC-120 announced in 2010. With 3,200-tonnes capacity at 30 meters radius and 1,000 tons at 80 m., the ring-based unit lifts with winches like a conventional crane, as do the Bigge, Lampson and Mammoet offerings. Like the ALE and Mammoet models, it was designed for flexible worldwide transportation in standard shipping containers.

The reported lead time to build these cranes is between three and four years, which means always taking a risk because this is longer than the contract lead time. Planned projects do not always come to fruition. For example, the Japanese nuclear disaster put a stop to many contracts which contractors were gearing up for."

Also adding time to the development process, some clients bring in external consultants to check the procedures and calculations. Overall this is not such a bad thing because having an independent check further improves safety.