

## PRODUCT FOCUS: GOLIATH

### THE CUSTOMER

STX Offshore & Shipbuilding is a South Korean shipbuilding company and the world's fourth largest company in this field. About 700 ships have been built over the last 40 years. The Jinhae Shipyard is located in a 1,000,000 m<sup>2</sup> site within the Jinhae National Industrial Complex in the south of the country. It is emerging as a key production facility of high value-added ships such as LNG carrier and very large container ships.

### THE TASK

Productivity and space utilization had to be maximized at the Jinhae Shipyard. The solution: the semi-tandem construction method, in which 4 to 5 ships are built simultaneously on the same dock from which 2 to 3 ships are simultaneously launched. STX made a breakthrough in shipbuilding technology through the Skid Launching System (SLS), which is an independently-developed shipbuilding method performed on land. SLS is a cutting-edge construction technique where a ship is built on land, instead of a dock, and moved to the barge for launch. The Goliath turns and transports large and very large ship segments reliably, safely and precisely.

### THE CRANE

The load capacity of this Goliath amounts to 1500 tonnes with a gauge of 128 m. The upper trolley bears a total of 1000 tonnes, while the lower trolley alone can lift 750 tonnes. The crane replaces two old 300 tonne Goliath cranes; furthermore, it is equipped with a two-rail travel mechanism so it can use the two existing rails per side (the yard did not want to invest in a new track). The total weight of the crane amounts to approx. 4800 tonnes, the girder height to 11 m. The erection of the crane was a work in itself. The crane had to be erected during ongoing operation of the yard – by means of a floating crane on the waterside of the dry dock to ensure minimum disruption to shipbuilding.



As floating cranes with sufficient capacity and hoisting height are available in Korea, it was actually possible to supply and erect the crane in seven pre-fabricated parts. The rough erection of the crane lasted only 7 days.

### WHAT THE DESIGNER SAYS

'This crane perfectly represents a Goliath: it is huge and strong. His performance is efficient and precise. This is what we expect from a Goliath. Nothing more and nothing less.'



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