

Walsum Power Plant's new Block 10 – Germany



Power plant construction using the VSL Strand Lifting System



▲ The VSL Strand Lifting System has been used at Walsum Power Plant.

The VSL Strand Lifting System has been used in power plant construction for nearly 40 years. In August 2007, VSL was appointed for the construction of Block 10 at

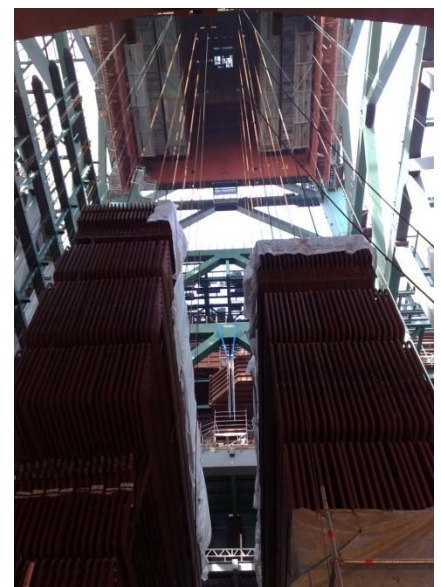
the coal-fired power plant in Duisburg-Walsum, Germany. The power plant supplies electricity to the Niederrhein Railway and provides steam for a paper mill, the Walsum coal mine and community heating.

The 100m lift of the huge suspension grillage then took just two days.

Block 10 has a net efficiency of more than 45% and highly efficient filters. This contributes to reductions both in emissions and in the amount of resources used.

VSL's responsibilities on the construction site covered the lifting of steel sections, the pressure parts and some of the pipework. Installation of VSL's equipment started in November 2007 for the lifting of the heaviest section: a 1,100t suspension grillage with a tower crane on top.

Bad weather and strong winds meant that the lift had to be postponed until February 2008.



▲ Modules were lifted in bundles.

Scope of works performed and equipment used

Suspension grillage

4 SLU-330/550 strand lifting units
2 EHPS 2/65MSR hydraulic pumps
Control and monitoring system

Pressure parts

33 SLU-40/300 strand lifting units
1 SMU-70/300 strand lifting unit
1 SLU-70/160 strand lifting unit
8 SLU-10/200 strand lifting units
4 EHPS 4/8MS hydraulic pumps
2 EHPS 4/4HA hydraulic pumps
1 EHPS 4/1.5HA hydraulic pump

Steelwork and pipework

10 SLU-70/300 strand lifting units
2 EHPS 4/8MS hydraulic pumps



▲ Building the boiler house involved extensive use of strand lifting equipment.

Forces and horizontal levels were monitored centrally throughout the lifting operation from a control cabin at the top of the boiler.

The many boiler components had to be positioned in several operations using a variety of strand lifting equipment.

The flexibility and size of VSL's equipment meant that the different installation operations could take place anywhere in the boiler. The strands that were used for lifting the suspension grillage were then reused for subsequent lifts.



▲ Strand lifting units were installed to position over 6,000t of components.

Careful sequencing of the component assembly on the boiler house's ground floor meant that they could always be lifted into position straightaway, leaving the assembly area free to receive the next sections. This greatly simplified the logistics of the whole operation.

Loads were secured mechanically at all times during the lift using VSL's proven lifting system. Use of this technique enabled work to continue underneath the suspended load, which simplified the assembly.

VSL had an equipment capacity of 3,560t on the construction site. By the end of VSL's contract in June 2009, its Strand Lifting System had lifted more than 6,000t of components.

This was a demanding task that required ongoing planning and gave VSL the opportunity to demonstrate its flexibility and knowledge. The VSL Strand Lifting System shortens the construction times of power plants considerably and saves costs.

OWNER

Evonik Industries AG & EVN AG

MAIN CONTRACTOR

Hitachi Power Europe GmbH

Hutni Montaze A.S.

ARGE Kraftwerk Walsum Block 10

VSL ENTITY

VSL (Switzerland) Ltd. Heavy Lifting

www.vsl-heavy-lifting.com

DATE

2007

PHOTOS

VSL (Switzerland) Ltd.



▲ Lifts were carefully sequenced.



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