

**SAUDI ARAMCO, SATORP - REFINERY AND PETROCHEMICAL PROJECT  
JUBAIL, KINGDOM OF SAUDI ARABIA**

# TWIN SINGLE-LEG GANTRY CRANES FOR COKE PRODUCTION

SATORP, Saudi Aramco Total Refining and Petrochemical Co. operates a refinery and petrochemical complex that processes heavy crude oil to produce various fuels, petrochemicals and other products, like petroleum coke. It offers its products for export, domestic consumption and further processing. The company was founded in 2008 and is based in Al-Khobar, Saudi Arabia. SATORP operates as a subsidiary of Saudi Arabian Oil Company, which processes 400 000 BPSD of Arabian heavy crude oil and is the biggest coke-producing refinery in the Middle East.

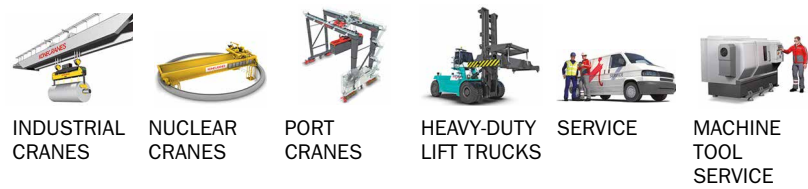
## CRANES AND THE COKING PROCESS

SATORP's coking unit uses a thermal process to convert heavy fractions into light petroleum products and coke. Petroleum coke is formed in big vertical drums by heating oil that condenses to a solid mass in the process. Subsequently water jets are used to break it up into smaller pieces that are then collected in a coke pit below the drums. At this stage, the coke must be lifted by a crane and transported to a drying pad, from which it is then moved to a hopper. The cranes handling the coke operate directly over the coke pit, in an extremely humid and caustic environment. Equipped with a clamshell type bucket, the cranes have to reliably lift 500 metric tons per hour of wet coke, 24/7.

## TWO SINGLE-LEG GANTRY CRANES

After conducting an extensive cycle analysis to determine the crane size and operating speeds, Konecranes offered two single-leg gantry (SLG) cranes. Both cranes are identical, with lifting capacities of up to 45 metric tons, a 21.5 cubic meter bucket and operate on a 42-meter span. The cranes provide a hopper-side runway rail at the grade level, which saves cost of an elevated runway structure. Built to withstand the wear and corrosion from heat, dust, moisture and constant use, the SLGs feature independent traveling cabs for improved operator visibility, air-conditioned control houses and rope over-wrap prevention.






INDUSTRIAL CRANES    NUCLEAR CRANES    PORT CRANES    HEAVY-DUTY LIFT TRUCKS    SERVICE    MACHINE TOOL SERVICE

The single-leg gantry cranes operate safely and reliably around the clock. Important components like drives and gear boxes are engineered to be durable, while load-control technologies manage critical crane functions to reduce structural stress, increase efficiency and prolong equipment life. Konecranes also provides quarterly inspections to help reduce unplanned downtime.



**SATORP, Saudi Aramco Total Refining and Petrochemical Co**  
 Al-Jubail Industrial City 2, 4048-Unit No1,  
 Al-Jubail 35741-7821, Eastern Province,  
 Kingdom of Saudi Arabia

Konecranes is a world-leading group of Lifting Businesses™ offering lifting equipment and services that improve productivity in a wide variety of industries. The company is listed on NASDAQ OMX Helsinki Ltd (symbol: KCR1V). With almost 12,000 employees at 600 locations in nearly 50 countries we have the resources, technology and determination to deliver on the promise of Lifting Businesses™.

© 2016 Konecranes Plc. All rights reserved. 'Konecranes', 'Lifting Businesses' and  are either registered trademarks or trademarks of Konecranes Plc.

[www.konecranes.com](http://www.konecranes.com)