



PRODUCING HIGH-QUALITY CEMENT IN THE GROWING SAUDI MARKET

Oil is an integral part of the economy of Saudi Arabia, as the country is the world's largest producer and exporter of this valuable commodity. However, in recent decades Saudi Arabia has increasingly diversified its economy, and today it produces and exports a variety of industrial goods all over the globe. Furthermore, meanwhile Saudi Arabia battles for market share amid fluctuating oil prices, the rise of new industry segments and economic development will help define the economic significance of Saudi Arabia in the future.

In recent years, this remarkable oil producer's cement industry has been grown steadily as it has followed the demands of the booming domestic construction market, partly due to government's aggressive plans to construct

so-called 'Economic Cities'. As a result of this, the cement manufacturers are setting up new production facilities while also expanding the production capacity of existing facilities to meet the increasing demand.

Riyadh Cement Company was established after a feasibility study in year 2003 to meet the growing demand of the cement market and especially that of higher quality cement. Since 2011 RCC has been operating as a subsidiary of Saudi White Cement Company.

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THE CHALLENGE	WÄRTSILÄ'S SOLUTION	BENEFIT
Continuous and uninterrupted electricity a necessity in manufacturing business	Wärtsilä 20V32 generating sets operating on liquid fuel reliable source of electricity	Long-term reliability and operational efficiency saves costs
Riyadh Cement Company able to focus on its core competence of producing cement	EPC delivery, Wärtsilä takes care of the project up to the last bolt	Peace of mind due to a turnkey solution
Challenging ambient conditions and hot temperatures	Wärtsilä 20V32 generating sets suitable for extreme weather conditions	Reliability, high operational efficiency and uninterrupted electricity flow secures continuous cement production

From the beginning RCC was adamant in finding a solution that would provide operational efficiency in order to gain benefits for both the company itself and its shareholders. In addition, the objective for RCC was to also incorporate high technology and thus, reduction in emissions and carbon dioxide, in their daily operations. Initially, it was decided that the electric power to run the cement plant would be obtained from the local grid, but this solution wasn't feasible due to issues with the construction of transmission lines from the nearest sub-station to the plant. Furthermore, there were some issues with land usage. Because of these setbacks, RCC was forced to look for a new kind of solution in captive power plants. This raised the opportunity

After ordering an expansion, the customer has now 12 Wärtsilä engines in operation, powering the production of 10,000 tons of cement per day.

for Wärtsilä to offer Wärtsilä 32 generating sets. The power plant is run by 12 Wärtsilä 20V32 generating sets operating on liquid fuel. The plant offers flexibility of power supply combined with high operational efficiency. The solution delivered by Wärtsilä fits perfectly to challenging ambient conditions making it an optimal solution for cement manufacturing needs.

The Wärtsilä 20V32 generating set has proven

its outstanding long-term reliability through its more than 100 million cumulative running hours in installations around the globe. Six Wärtsilä 20V32 gensets delivered to RCC year 2005 have satisfied the electricity need in producing 5000 tons of cement per day. Yet, six more Wärtsilä 20V32 were delivered in 2010 as the need for another 5000 tons of cement arose.

RCC has been very satisfied with the solution delivered by Wärtsilä and the EPC contract provided significant value to the company in multiple ways. The EPC contract set RCC free from construction work and other practicalities as Wärtsilä conducted the delivery as a turnkey delivery.



MAIN DATA

Customer Riyadh Cement Company (Industrial)
 Type Wärtsilä 32 liquid fuel power plant
 Operating mode Flexible baseload
 Gensets 12 x Wärtsilä 20V32
 Total output 97 MW
 Fuel HFO
 Scope EPC (Engineering, Procurement & Construction)
 Delivered 2005, 2008, 2010