



Oil & Gas

Case History

Onshore Oil & Gas Stationary Rig

Where:

Siberia, Russia

Specified:

16 x **AvK** DSG 86 generators

Purpose:

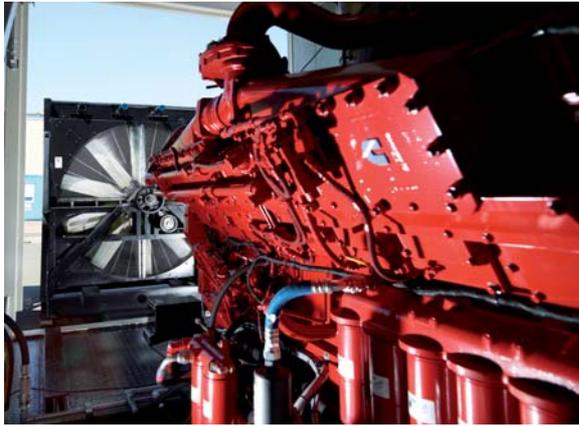
16 **AvK** generators, suitable for operation in the harsh environmental conditions found in Siberia, are driven by 16 cylinder Cummins engines to generate 25MW power for an Onshore Oil & Gas Stationary Rig.

16 **AvK**[®] generators operate at -20°C in Russia

The 16 **AvK** generators, which were especially produced to fit the challenging requirements for the Russian market, operate at a stationary rig at temperatures reaching -20°C. Not only the rig, but the **AvK** generators as well as the 16 cylinder Cummins engines were developed down to the finest detail, to be able to endure the harsh Russian climate.

This stationary rig, which was produced by Bentec, weighs around 320 tons and can drill to a depth of up to 5,000 metres. However, being located in Siberia and its arctic – like climate, makes it really challenging for all parties involved.

The AvK logo, consisting of the letters "AvK" in a bold, red, sans-serif font, with a registered trademark symbol (®) to the upper right.



Cummins generating sets coupled with **AvK** generators



A typical **AvK** DSG 86

The DSG 86 **AvK** generators are equipped with 1,600 kVA of power and rated at 690 V, 50 Hz, 4 poles, IP23, have a speed of 1500 rpm and are driven by 16 cylinder KTA50 Cummins engines. This robust land based drilling power module provides power to the stationary rig, including top drive, draw works and mud pump.

As the Russian market also demands special documents, the drilling power modules were equipped to meet all required local certificates, including API and DIN EN. This provides a clear evidence of compliance.

The harsh operating conditions mean that a standard generating set would not be suitable for this application and instead a drilling power module has been specified. The drilling power module utilises a form wound LV coil system that incorporates taped coils ensuring that the winding is both mechanically and electrically robust. This improves durability when faced with the arduous demands of a drill rig drive and electrical system.

Durability and service life are further enhanced by the double-bearing arrangement. Power factor is typically 0.7 – 0.8 for drilling power modules, instead of 0.8 – 0.9 for standard generating sets. The integrated dust filters ensure the drilling power modules perform exceptionally in the challenging environmental conditions.

Bentec is a Germany based manufacturer of high quality drilling rig systems and drilling rig components. Their current portfolio exists of various types of rigs and specific components. Their key rigs are: Euro rigs, desert rigs, arctic rigs and special rigs. Each rig has its own unique requirement, mainly based on local infrastructure and climate conditions.



www.stamford-avk.com

*As Bentec had ordered several **AvK** generators, they knew they could rely on the quality and durability of **AvK** products for these type of harsh environments.*

Bentec has embraced the Oil & Gas industry's drive into more challenging territory with the creation of high quality, cost effective and durable drilling and oilfield systems targeted at the harshest and most hostile environments. As a single source supplier of the drilling power modules and alternators, Cummins offers the customer a customised and adapted solution to meet the challenging market requirements.

The **AvK** generators were all successfully tested before installation and are now driven by the Cummins power modules at the stationary rig in Russian Siberia.

Bentec was so convinced of the suitability of **AvK** generators for the Oil & Gas sector that they placed another order, this time for 4 **AvK** DIG 130 generators delivering a total of 6,400 kVA power.

For more information on **AvK** generators or Cummins Oil & Gas products, please visit:
www.stamford-avk.com
www.CumminsOilandGas.com

