



## GAZPROM Orders KROHNE Oil & Gas Flow Metering System for Condensate Measurements



**Flow Metering System**

Gazprom, the largest gas producing company in the world, awarded KROHNE Oil & Gas B.V. a contract for building a fiscal metering system for the measurement of unstable condensate. The metering installation will be installed in the region of Orenburg in Russia about 25 km from the border of Kazakhstan. Condensate is supplied from the large Karachaganak oil and gas condensate field in north-western Kazakhstan to the processing plant in Orenburg. The region has a very continental climate with temperatures down to minus 42 deg C in the winter and up to plus 42 deg C in the hot and dry summers.

KROHNE's Oil & Gas control, flow metering and proving system will be used for fiscal metering of unstable condensate after crossing the border of Russia with Kazakhstan. The flow metering skid is based on the use of ALTOSONIC V, KROHNE's multiple beam ultrasonic flowmeter for custody transfer and fiscal metering, and will be applied for net volume and mass flow calculations. ALTOSONIC V, approved by GOSSTANDART, has been accepted by Gazprom for fiscal metering on basis of an extensive test program run by Gazprom. One 12" ALTOSONIC V flowmeter will function as a duty meter, a second 12" ALTOSONIC V serves as the reference meter for verifying the duty meter. The maximum flow capacity of the flow metering system is 2.500 m<sup>3</sup>/hr. GAZPROM was very impressed with the results of a 6 months test program as the ALTOSONIC V demonstrated a very stable and reliable behavior with non-stable condensate. Apart from its stability, the ALTOSONIC V was chosen because - unlike any other flowmeter technology - it operates completely independent of flow profile, density and viscosity over the full range with a minimal pressure loss.

The complete scope of supply from KROHNE Oil & Gas includes, apart from the ALTOSONIC V flowmeters, the inlet and outlet sections, pipework, valves, valve controllers, temperature and pressure transmitters, dual parallel densitometers, dual BS&W analyzers, an automatic sampling system, and system cabinets. The AltoSuite supervisory and flow computing systems for metering and proving are designed, developed and built by KROHNE Oil & Gas B.V. The system is used for visualisation of online process data, control, monitoring, trending of instrument values during transfer operations, generating batch loading tickets for custody transfer, alarm and event reporting, extensive diagnostics capabilities and for validation procedures. A secure operation with maximum data integrity is guaranteed together with an easy to operate human machine interface in the Russian language.



**ALTOSONIC V**

"The award of this contract further strengthens our position in the Russian market with huge opportunities in the oil and gas market, which we consider to be of highly strategic value for the growth of our company" says Graham Wilson, the managing director of KROHNE Oil & Gas B.V." A large base of ALTOSONIC V flowmeters is already successfully operating in Russia and have been for many years. We are very pleased that GAZPROM has chosen KROHNE for a turnkey flow metering solution based on our ALTOSONIC V". The fiscal flow metering system has been manufactured at the premises of KROHNE Oil & Gas B.V. in the Netherlands.

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