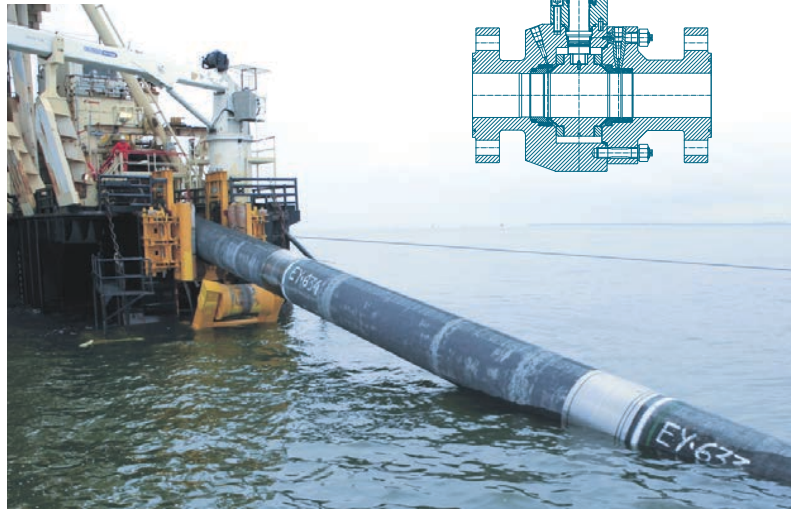


High performance valves for life

With zero leakage, a 50 year lifetime and exceptional temperature and pressure ratings, Hartmann ball valves have significantly reduced maintenance demands on the Nord Stream gas pipeline.



Nord Stream, the world's longest subsea pipeline, being lowered into the Baltic Sea

Customer statement

"Hartmann Valves provided high quality metal seated ball valves that not only meet Nord Stream's stringent safety and sealing demands, but also deliver long-term performance."



Andrea Selvi,
Maintenance
Manager,
Nord Stream



The Nord Stream pipeline transports natural gas from Russia to the EU internal market, with capacity to deliver up to 55 bcm per year, providing enough power for up to 26 million homes. Nord Stream wanted to upgrade the pipeline's valve system, to reduce maintenance demands and ensure reliable sealing on this important route. Nord Stream selected Fahlke Control Systems and Hartmann Valves to deliver a new system, complete with actuator, control unit and ball valves, which could meet Nord Stream's high safety, temperature, pressure and corrosion standards and deliver a 50+ year operational life.

Project	Upgraded valve system for Nord Stream gas pipeline
Partner	FALHKE CONTROL SYSTEMS KG
Valves	4 custom built, full bore, 2-piece ball valves (AST) plus 1 spare for testing
Material	Duplex stainless steel and tungsten carbide
Features	Double piston effect on one side provides a double barrier in the flow direction to ensure the seal is maintained, even in an emergency scenario
Operational life	>50 years
Temperature range	-26° to +39°C (tested at -39°C and +60°C; 200 cycles at working pressure)
Design pressure	250 bar
Actuator and Control Unit	4 gas actuators (Fahlke GAZ-C-1-250-SRO-T) plus 1 spare for testing
Material	AISI 316 plus O-Rings according to NORSOK standard
Features	Monitoring of electrical surge protection unit and three-fold pressure monitoring
Operational Life	>25 years

A demanding specification

Nord Stream is the world's longest subsea natural gas pipeline, stretching 1,224 km through the Baltic Sea from Wyborg in Russia to Lubmin in Germany. In 2014, Nord Stream wanted to retrofit the pipeline with a new actuator system, control unit and valves to improve sealing and reliability, extend the life cycle, and reduce the pipeline's maintenance requirement. The Nord Stream pipeline delivers much-needed gas to European homes and businesses 24 hours a day, seven days a week, so reliable equipment is essential.

With Fahlke Control Systems already operating effectively on other sections of the pipeline, Nord Stream's engineering partners CONSUB and GASCADE recommended Fahlke as project lead for the upgrade, and Hartmann Valves was selected as an ideal partner to supply the high performance valves.



The Hartmann valve ready for testing to meet Nord Stream's demanding temperature, pressure and safety standards



The system has to withstand extreme temperatures and was tested in a cold chamber

Custom valves offer maximum performance and durability

Hartmann custom-designed full bore 2-piece ball valves with a quarter turn operation. The design aimed for maximum longevity whilst minimising response time in the event of an emergency shutdown. The A-rated Hartmann valves guaranteed zero leakage, and were able to match Nord Stream's high material, sealing and SIL2 safety requirements, as well as coping with the high pressure and low temperature. After these extensive tests the products could be delivered within 10 months of the order date.

Hartmann Valves

Hartmann Valves has a global reputation for delivering high quality ball valves and wellheads for the energy industry. Our customers demand the highest standards in operational performance, reliability and endurance – even in the most challenging environments.



The A-rated custom built valves guarantee zero leakage

Partner statements

“Despite exceptionally high testing requirements, the Hartmann valves and Fahlke actuators performed well against all measures, demonstrating high durability, safety and sealing.”



Mark Gaskell,
Project/Valve
Engineer,
CONSUB
Ltd. UK



“The collaboration with Hartmann was very professional. Because of that it was possible to realize this technically very demanding project in time.”



Jens
Hadenfeldt,
Sales
Manager,
Fahlke Control
Systems



Further information/Contact:

Helmut Berger
Manager f.s.p. Sales Europe

h.berger@hartmann-valves.com
+49 5085 9801-25

Hartmann Valves GmbH
www.hartmann-valves.com

