

FACTS

NEWSLETTER ABOUT THE NATURAL GAS PIPELINE THROUGH THE BALTIC SEA

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The last pipe of Line 2 laid by Allsea's Solitaire is lowered onto the seabed with the PIG (pipeline inspection gauge) launcher attached to it. The pipeline is built in three sections, which will be welded together only after they have passed pressure testing. This is expected to take place in the spring of 2012.

The World's Largest Pipelay Vessel Left the Baltic Sea after Completing Its Work on Line 2

The Solitaire laid its last pipe for the Nord Stream project ahead of schedule

Allseas' Solitaire, the world's largest pipelay vessel, finished its work on Line 2 of the Nord Stream natural gas pipeline through the Baltic Sea ahead of schedule. The vessel laid 342.5 kilometres of each of the twin pipelines in the Gulf of Finland. "The Solitaire has lived up to all our expectations," said Nord Stream's Deputy Project Director Construction Ruurd Hoekstra. "All-in-all, the Solitaire laid some 57,000 24-tonne pipes along this key section of the route. The quality of her work was excellent, and she was even able to complete her task a few weeks ahead of schedule."

The Solitaire was laying pipe 24 hours a day, seven days a week for Nord Stream for almost a year in total. The vessel began its work on Line 1 of the Nord Stream Pipeline system in September 2010 and worked in the Gulf of Finland through the early

part of February 2011. It laid pipe at an average rate of about 2.5 kilometres a day for Line 1. During construction in December and January, the Solitaire's crew had to deal with working in challenging winter conditions.

Despite some minor weather-related setbacks, the Solitaire completed its work on Line 1 as scheduled. While working in Finnish waters, the vessel received pipe shipments from marshalling yards in Hanko and Kotka. Both ports also experienced harsh cold-weather conditions in January, although work continued as planned. The vessel stopped working on the project from February 2011 to mid-May as planned. The Nord Stream construction schedule takes many environmental factors into account, for example installation did not take place during ice conditions or during seal breeding seasons. On May 15, the Solitaire re-

entered Russian waters to resume construction of Line 2. At exactly 7.5 kilometres away from the shoreline, the vessel picked up Line 2 and continued pipe laying along the route toward Finnish waters. This 7.5 kilometre near-shore section of Line 2 in Russian waters was laid by the Castoro Sei in summer 2010. Due to favourable weather conditions, the Solitaire's lay speed averaged more than 3 kilometres a day through completion of Line 2.

At 300-metres-long, by 40.6-metres-wide, the Solitaire is the

length of three football pitches. With its massive 22,000 tonne pipe-carrying capacity, and its dynamic positioning system, the vessel was ideally suited to working on the Nord Stream Pipelines in the Gulf of Finland. "The Solitaire operates without anchors, so only the pipeline itself touched the seabed along the agreed route. This was crucial for the project in the Gulf of Finland with its historic mine lines and congested sea lanes," Hoekstra said. "Using the Solitaire helped to minimise the impact on the environment and marine traffic in this section."



The Solitaire departed the Baltic Sea shortly after laying down the pipeline.

Golden Weld Joins Nord Stream's First Line to the European Pipeline Network

Last weld joins Nord Stream's Line 1 to the European pipeline network

The direct link between the major Russian reserves in Siberia and the European natural gas market is in place: The first line of the Nord Stream Pipeline is now connected to the OPAL natural gas pipeline (Ostsee-Pipeline-Anbindungs-Leitung – Baltic Sea Pipeline Link). This golden weld was completed on August 25.

"The system is now ready for the next complex steps of bringing the pipeline on stream, which means we will be able to commission the first of the Nord Stream twin pipelines in the fourth quarter of 2011 as planned," Dr. Georg Nowack, Nord Stream project manager for Germany, explained.

"The connecting pipeline OPAL, which will pick up the natural gas from Nord Stream and transport it onward, is complete," said Bernd Vogel, Managing Director of OPAL NEL TRANSPORT GmbH, a company of the WINGAS Group which will operate the connecting pipeline. "We are prepared. The Russian natural gas can come."

The last welding seam connecting Line 1 of the Nord Stream Pipeline and the OPAL pipeline was completed on the grounds of the natural gas transfer station in Lubmin near Greifswald, where the Nord Stream Pipeline reaches the German coast.

Connected to OPAL

Over 200 staff from regional and national companies are currently working on the 12-hectare piece of land near the Lubmin port preparing the transfer station for subsequent operations. Together the participating companies are investing around 100 million euros in Lubmin alone.

In addition to OAO Gazprom, BASF subsidiary Wintershall Holding GmbH, E.ON Ruhrgas AG, Dutch company N.V. Nederlandse Gasunie and GDF SUEZ from France, all hold a stake in Nord Stream. The WINGAS Group has an 80 percent share and E.ON Ruhrgas AG a 20 percent share in the connecting pipeline OPAL.

The OPAL natural gas pipeline was already completed more

than a month ago. The pipeline has now been filled with gas and is ready to transport the Nord Stream gas onwards to the Czech Republic.

"Line 1 has already been pressure tested, drained and dried, and since August 22 completely filled with nitrogen, which serves as a safety buffer between air and gas," Nord Stream project manager Nowack explains. The next step is to gradually fill the pipeline with gas from Russia, and then Line 1 of the Nord Stream Pipeline system will be ready for operation.

Final Weld in Russia

On August 19, Line 1 of the Nord Stream Pipeline system was connected to the Russian dry part and landfall facilities located 1.5 km from the shoreline at Portovaya Bay in Russia. Two months previously, installation of PIG (pipeline inspection gauge) traps and isolation and emergency shut-down valves was completed on the Russian shore. Additionally, gas-in equipment required for the commissioning stage was installed in

July. Currently, the assembly of telemetry and automation systems is in its final stage. During the operational phase, gas pressure at the start of the pipelines will be as high as 220 bar. To guarantee that the pipeline can withstand such operational pressure, the two pipelines of the dry part on the Russian shore (of the landfall) were pressure tested to confirm their integrity and safety. The pipelines were filled with water and pressurised beyond the planned maximum operating pressure by 25 percent for 24 hours. Pressure tests were successfully completed in June.

"A large-scale and interesting job has thus been completed," said Nord Stream's Technical Director Sergey Serdyukov. Gas is expected to flow through Line 1 of the Nord Stream Pipeline System in the last quarter of this year. Line 1 will have the capacity to transport 27.5 billion cubic metres (bcm) of natural gas a year to Europe. The second of the pipelines is scheduled to become operational in late 2012, thereby doubling the transport capacity to 55 bcm.



The offshore and onshore segments are welded together in Russia.



Portovaya Bay: The golden weld took place on August 19.



Lubmin: The end of the offshore portion of Line 1 is prepared for welding.



A bird's-eye view of the German landfall in Lubmin.



The golden weld in Germany was completed on August 25.



Lubmin: The 25-metre-long, 21 tonne, connecting segment between the onshore and offshore parts of Line 1 is positioned in order to complete the golden weld.

IN BRIEF

GETTING SET WITH NORD STREAM

Starting with the 2011-2012 season, Nord Stream will be sponsoring the junior and women's first division volleyball teams of Schwerin SC, Germany.

"In Schwerin SC we have found a partner that is internationally renowned for both their athletic performance and their work with young talent across borders. Together with our environmental and cultural sponsorship commitment, this new relationship is the perfect addition to our international funding activities in Mecklenburg-Western Pomerania and the Baltic Sea region," said Ulrich Lissek, Nord Stream Communications Director.

Nord Stream's sponsorship – planned for three years to start – supports the first division women's volleyball team and the development of skilled young players.

The investment made by Nord Stream is aimed at strengthening Schwerin SC's work with up-and-coming athletes, facilitating the transition from junior talent all the way to the first division teams.

Schwerin SC will also use the sponsorship to foster athletic exchange activities for youth teams in the Baltic Sea region.

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Monitoring Results Are Positive

Reports of Nord Stream's environmental monitoring are well received

The latest results from Nord Stream's environmental monitoring programme released in July about the Swedish Exclusive Economic Zone (EEZ) show that the company has complied with – and even exceeded – the conditions set in the permit granted by the Swedish government. The purpose of Nord Stream's environmental monitoring programmes are to verify that the construction and operation of the natural gas pipeline are in accordance with permit conditions. Calculations and models in Nord Stream's environmental studies have proven accurate, and it is now estimated that the environmental impact so far has been smaller than anticipated. Nord Stream's

environmental monitoring programme includes studies in 16 different subject areas, such as impacts of the natural gas pipeline on sediment spreading, seabed recovery, mussels and fish, and seabed currents. Socio-economic factors are also included in the monitoring, such as possible impacts on shipping and commercial fisheries. Some subjects might be monitored in some countries and not in others. "We are happy to be able to demonstrate that our environmental studies, the basis for Nord Stream's permit application in Sweden, were correct and that construction work have had no negative impact on the environment of the Baltic Sea," said Lars O. Grönstedt, Senior Adviser to

Nord Stream. In August, Nord Stream published its Annual Environmental Monitoring results for 2010 in the Finnish Exclusive Economic Zone (EEZ). Monitoring was conducted on 13 subjects, which were selected based on the environmental impact assessments. The results show that the actual impacts of the construction activities in Finnish waters in 2010 were in line with, or less than, predicted and that the assessments were conservative. Monitoring activities in Finland in 2010 were conducted by six independent expert organisations. The monitoring reports are submitted to the supervising authorities overseeing the pipeline project's compliance with local environmental requirements.

Concerts in Eight Countries

The Baltic Youth Philharmonic Is on Its Fourth Tour

The Baltic Youth Philharmonic (BYP) unites 90 highly talented students from the 10 states of the Baltic Sea region. Angela Merkel, Federal Chancellor of Germany, has taken on the patronage of the entire fourth season of the BYP. Since July 1, 2011, Germany has assumed its one-year presidency of the Council of the Baltic Sea States. In her message of greeting to the orchestra, Angela Merkel writes: "The Baltic Youth Philharmonic is a wonderful ambassador for the cultural co-



Music Director Kristjan Järvi.

operation of the countries bordering the Baltic Sea." Under the baton of Music Director Kristjan Järvi, BYP began the season on July 24 with a concert in Kaunas, Lithuania, and has performed in Russia, Poland, Denmark,

Estonia and Sweden since then. The tour continues this month in Merano, Italy at the Merano Music Festival on September 6; and moves to Milano for the MiTo SettembreMusica Festival on September 8. The orchestra finishes its season on October 1 in Peenemünde, Germany at the 18th Usedom Music Festival. This year's members of the BYP were selected in February and March during a seven-day audition tour. About 400 applicants auditioned in cities in six countries for the chance to join the BYP.

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