

Commissioning of helium hub in Vladivostok

September 3, 2021

Vladimir Putin: The Amur Gas Processing Plant is a major and very important project.

Let me also say a few preliminary words.

A state-of-the-art logistics center for the servicing of helium containers is opening in Vladivostok today. We had another discussion of the details with Mr. Alexey Miller a day or two ago. Recently, the second production train and a helium liquefaction unit were put in operation at the Amur Gas Processing Plant. These two ambitious projects implemented by Gazprom are closely interlinked; as a matter of fact, the new logistics hub in Vladivostok will receive helium from the Amur GPP, making it possible to supply this helium further to consumers.

I would like to thank everyone who is working to create and develop these promising production facilities of national significance. I know that the work is performed in a well-coordinated manner, responsibly, very actively, and at a good pace. For instance, we launched the first production train of the Amur GPP just a short while ago, in June this year, and the second train is also online by this point in time, marking another large step towards expanding the Company's capacities. Without a doubt, it is imperative to maintain this high pace and this work dynamic in all projects that we are running here in the Far East and throughout Russia.

After reaching its full capacity in 2025, the Amur GPP is poised to become the world's largest complex for producing helium, a gas the demand for which is strong in many high-tech industries. The GPP will provide domestic consumers with helium and will also allow Russia to become a global market leader in helium supplies. As I have already mentioned, the logistics hub in Vladivostok will play an important role in this regard. It is from this hub that helium will be exported to, inter alia, the Asia-Pacific region.

The construction of the country's first and so far only helium hub is yet another landmark achievement for our specialists. The project gave an impetus to the creation of new advanced technologies and provided a number of related industries with work. Among other things, unique freight trucks were developed and put in serial production jointly with KAMAZ for the purposes of transporting helium, and it should be noted that the trucks are fueled by liquefied natural gas. These high-potential projects make a major and substantial contribution to economic and social development in Russian regions, generating additional jobs for highly qualified professionals. Of course, we will continue facilitating the establishment of similar cutting-edge facilities in our country. We are going to upgrade our industries and increase the depth of feedstock processing while, naturally, ensuring compliance with the most stringent environmental regulations.

Dear friends, colleagues, I thank you once again for your work and accomplishments, and I wish you further success in the future!

(To Alexey Miller) The floor is yours.

Alexey Miller: Dear Mr. President,

The expansion of capacities at the Amur GPP is synchronized with increases in gas supplies via the Power of Siberia gas pipeline. On June 9, you launched the first start-up complex for gas processing, and today we commence operations across the entire process chain of helium supplies: from the production site through the helium hub to end consumers.

The GPP's helium output will amount to 60 million cubic meters, making it the world's biggest helium production facility, which will be able to cover a third of global helium demand. Russia and Gazprom are going to rank among the leaders of the global helium market.

The GPP is a cutting-edge complex with high-tech equipment capable of achieving a helium purity of almost 100 per cent.

I cede the floor to the Director General of Gazprom Pererabotka Blagoveshchensk.

Yury Lebedev: Yury Lebedev, Director General of Gazprom Pererabotka Blagoveshchensk, speaking.

The helium unit of the Amur GPP is producing highly purified helium, which is used in medicine, scientific research, instrumentation engineering, and the space industry. At the GPP, helium is liquefied at ultralow temperatures close to the deep space temperature, i.e. minus 269 degrees Celsius. The Amur GPP uses modern technologies and equipment. For instance, spiral heat exchangers for the helium units were manufactured specifically for the Amur GPP at a joint Russian-German enterprise in St. Petersburg, Russia.

At present, the nitrogen–helium mixture recovered at the production trains is being sent into the fine purification, production & packaging unit for liquid helium. After that, helium is poured from storage tanks into special thermally-insulated cryogenic containers for its further transportation to sea ports.

Alexey Miller: Dear Mr. President,

The helium hub is 1,500 kilometers away from the Amur GPP. Thermally-insulated containers can only be carried by motor vehicles or by sea to avoid any mechanical shocks. To that end, a special service unit has been established to provide maintenance for 50 KAMAZ freight trucks. These freight trucks use air suspension and run on liquefied natural gas.

The helium hub will perform over 4,000 operations with thermally-insulated containers per year, whereas there are currently only 2,000 containers for transportation of liquid helium in the world. This means that Russia's first helium hub that we are putting onstream today is also the biggest one globally.

I now give the floor to the Director General of Gazprom Helium Service.

Lyubov Brish: Lyubov Brish, Director General of Gazprom Helium Service, speaking.

I am now standing in front of a unique facility which is unprecedented in terms of the set of the process operations it offers – Gazprom's Logistics Center for the handling of thermally-insulated containers and transportation of the Amur GPP's liquid helium, also known as the helium hub. The hub has no parallel in the history of the entire global oil & gas industry. We started building the helium hub in June 2019, and today we are already putting it onstream.

The helium hub features a comprehensive set of engineering and infrastructural solutions and employs cryogenic technologies. A helium liquefaction unit, an air separation unit for the production of liquid nitrogen and liquid oxygen, and a natural gas liquefaction unit are in operation right here at the helium hub. As a result, a whole range of cryogenic products, namely nitrogen, oxygen, helium and LNG, is produced directly at Gazprom's helium hub in the Primorye Territory. The capacity of the helium hub is aligned with that of the Amur GPP and thus stands at 60 million cubic meters per year.

An LNG-fueled KAMAZ truck has just passed behind me. The truck has now entered the station that prepares thermally-insulated containers for their transportation to the Amur GPP. The first technological procedure, which is also of crucial significance to us, is weighing. After that, helium hub operators attach flexible cryogenic hoses in order to feed liquid helium and liquid nitrogen into a thermally-insulated container. It is because we use liquid nitrogen produced right here at the helium hub that we are able to maintain the low temperatures required for the transportation of liquid helium, i.e. minus 269 degrees Celsius.

The Logistics Center is ready to handle its first thermally-insulated container with liquid helium from the Amur GPP.

Alexey Miller: Dear Mr. President, please give the order for the operation of the helium hub to start.

Vladimir Putin: Start the operation.

Varvara Semyonova: Varvara Semyonova, helium hub dispatcher, speaking.

All units are functioning properly. I am opening the valves.

The pressure and temperature are normal; liquid nitrogen and helium are received at the station for preparation of thermally-insulated containers.

Alexey Miller: Dear Mr. President,

Russia's first and the world's biggest helium hub has now been launched.

Vladimir Putin: Dear Mr. Miller, dear colleagues,

I once again extend my congratulations to you.

The Company is developing with great success in a whole variety of areas. It is not just about the volume of gas produced and sold in the domestic and foreign markets – a crucial indicator that is now maintained at record-high levels by the Company. But it is even more important that the Company is paying due attention to cutting-edge technologies, searching for new niches in the domestic and global markets, and successfully delivering on these objectives thanks to your talent and hard work.

Thank you very much! I wish you all the best!

Congratulations on today's success!