Russia's Increasing Bridging Capabilities: Military and Civil Motives

OE Watch Commentary: The wide plains of Russia with wide rivers prone to overflowing their banks, have made wet gap crossing a high priority for the Russian military for both military and civil reasons. The Russian military routinely practices wet gap crossings, such as in the recent Tsentr-2019 exercises that featured a 2.8 km wet gap crossing, conducted by six pontoon bridge/ferry systems and 14 PTS-2 tracked amphibious transports. This force permitted the crossing of more than 300 motor vehicles per hour.

Ferry Operations.
Source: Russian Ministry of Defense, https://function.mil.ru/function/mto/news/more.htm?id=12249839@egNews , CC BY 4.0

In addition to purely military activities, this capability also supports the Engineer and Railroad Troops in actively engaging in humanitarian relief activities. For example, last summer, large scale flooding isolated the city of Tulun in the Irkutsk Oblast, and the military supplied the population and rescuers with foodstuffs, medications, drinking water and other necessary materials. They were also involved with clearing obstructions, placing culverts, and the restoration of dams and roads.

One of the most high-profiled Russian bridging efforts occurred not in Russia, but in Syria in 2019. In about two days, a joint Russian-Syrian force erected a 210-meter long bridge across the Euphrates River, near Deir ez-Zor in northeastern Syria, capable of servicing 8,000 cars a day. The accompanying excerpted article from *Izvestia* explains that Russia is procuring a new pontoon bridge/ferry system capable of transporting 120 tons, or about 40 motor vehicles, or a tank and several BTRs and/or BMPs a day. The second excerpted article, from *Krasnaya Zvezda*, discusses the importance of a relatively new engineer/bridge unit in the Northern Fleet. **End OE Watch Commentary (Bartles)**

"It is easy to destroy bridges using precision-guided weapons, which the enemy also makes the first priority. In that situation, ferries and pontoon crossings will begin to play an important role."

-Military Expert Vladislav Shurygin

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-Captain Andrey Sokolov

Continued: Russia's Increasing Bridging Capabilities: Military and Civil Motives

Ferry Operations.
Source: Russian Ministry of Defense, https://function.mil.ru/function/mto/news/more.htm?id=12249839@egNews , CC BY 4.0

Source: Aleksey Ramm and Bogdan Stepovoy, "С тяжелым паром: новый транспорт переправит танки при любой погоде (With a Heavy Ferry: The New Transport Will Ferry Tanks Across in Any Weather)," *Izvestia* Online, 3 February 2020. https://iz.ru/966756/aleksei-ramm-bogdan-stepovoi/s-tiazhelym-parom-novyi-transport-perepravit-tanki-pri-liuboi-pogode

With a Heavy Ferry: The New Transport Will Ferry Tanks Across in Any Weather

In the foreseeable future, the Ministry of Defense will be able to count on the assistance of "unsinkable rescuers" to transport equipment and to eliminate the aftermath of catastrophes and emergency situations. Military personnel will use super-heavy ferries for these purposes. The innovation, which will arrive in the Engineer and Railroad Troops, will be able to transport armored vehicles weighing tens of tonnes, including tanks. In so doing, the waterborne platforms can handle strong winds, currents, and waves, the experts point out.

With its own weight of 720 tons, the ferry will transport up to 120 tons at one time, in other words, approximately 40 motor vehicles or a tank and several BTRs and/or BMPs a Military Department spokesman told Izvestiya. The waterborne platform is a unique erector set. In the travel position, its deck, which is equipped with a built-in bridge, is dismantled into several elements. There are also towing-motor components and also several sections, from which the sides, stern, and bow portions are assembled, which are equipped with special ramps for vehicles to drive on and drive off. All of the parts of the pontoon fleet are based on domestically manufactured all-terrain truck vehicles – this will permit the transportation of sections even in conditions of the lack of good roads. Having arrived at the location, the ferry is assembled directly by the personnel. Additional equipment is not required – the waterborne platform's parts unfold themselves directly in the water. It only remains for the personnel to secure them in the needed manner using special junction devices and arresting devices. The dimensions of individual assemblies are calculated so that one can easily transport the ferry on railroads to long distances…

Any pontoon fleets – are the classic example of dual-use equipment, Military Expert Vladislav Shurygin is confident. "You can't get by without it during the course of contemporary combat operations", the Expert told Izvestiya. "It is easy to destroy bridges using precision-guided weapons, which the enemy also makes the first priority. In that situation, ferries and pontoon crossings will begin to play an important role – they will be used to maintain transport links at the proper level. However, one can do this covertly, for example, at night. Furthermore, forward units will be able to use the ferries and amphibious tugs to force rivers and other water obstacles"…

Continued: Russia's Increasing Bridging Capabilities: Military and Civil Motives

PTS-2 Tracked Amphibious Transport with a Ural-43206.

Source: Marina Shcherbakova, "Если пехоте не пройти (If the Infantry Can't Pass)," *Krasnaya Zvezda* Online, 5 February 2020. http://redstar.ru/esli-pehote-ne-projti

If the Infantry Can't Pass

The Northern Fleet Bridge Company – is a comparatively young subunit, which was formed in November 2009..."It is sufficient to look at a map of Murmansk Oblast in order to become convinced how rich the region is with rivers and lakes. The bodies of water are serious obstacles for the movement of ground forces along the uninhabited portion of the Kola Peninsula and dictate their requirements for the organization of the combat training of Northern Fleet servicemen. There aren't that many alternate routes, which for example, during the course of the conduct of an exercise impedes the deployment of troops to the needed area in the specified time. And then the Bridge Company gets involved in the matter", Captain Andrey Sokolov explains. "We erect bridges across rivers, we lay roads there, where there aren't any, and thereby support the efficient moment of motor and armored vehicles to the forming up area or the conduct of the events of combat training activity. So, one can entirely objectively assess our unit's tactical and strategic significance".

The Bridge Company was involved in installing a double-track 50-meter crossing with a cargo capacity of 50 tons across the Srednyaya River, along which the movement of military vehicles was subsequently carried out, in the special logistics support forces exercise, which was conducted in August of last year. The erection of metal bridges takes approximately two days. The personnel's actions are worked out until they become second nature. Each specialist knows his direction of work.

"First of all, terrain reconnaissance occurs, we study the river, we use instruments to measure the depth and width of the channel, the speed and direction of the current and we determine the location of the proximate erection of the bridge in accordance with the standards. Later KamAZ vehicles, which are loaded with assembled metal sections, which consist of groups of supports, bridge spans, and spare parts, drive up to the bank. We unload everything on the assembly ground and begin the gradual process of assembly, determine the axis, and install the supports and the spans. This process requires the knowledge of the structures' performance characteristics, serious attention, and physical endurance, not to mention already observance of safety requirements", Captain Andrey Sokolov explains.

Wooden bridges, as a rule, remain at their location after erection. They are needed in those cases when they need to equip a crossing as soon as possible. The standard for the erection of metal bridges takes longer based upon time but, as the specialists say, it is easier to erect them from the technological point of view – they are erected and dismantled like an erector set. The dismantlement process is no less time-consuming and painstaking and even more energy-consuming in some places.

"As a rule, the length of the bridges that are erected by us total from 118 to 128 meters, but there was a 138-meter bridge in our experience", Andrey Sokolov says. This longest bridge, which was erected across the Kola River by the Bridge Company's manpower in 2017...

The temporary crossing across the river was erected from a small highway prefabricated bridge set in several days. It was capable of supported vehicles with a weight of up to 50 tons, which was also verified in practice: a column of six loaded KamAZ vehicles that were escorted by two BTR-80s passed along the bridge. The total weight of the vehicles totaled more than 100 tons.