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Future Soldier's Combat Gear Exposed

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Key features of high-tech individual combat gear for Russia's infantrymen were recently exposed. Progress in the development of reconnaissance and target identification systems has created a situation where preventing military personnel from being detected by infrared instruments is crucial, evaluates Dmitry Semizorov the CEO of TsNIITochMash – the designer and producer of weapons and special gear for the Russian military and crack police units in a special interview with tass.com.

Any modern combat helicopter, equipped with night vision instruments, is one of the infantry's worst enemies from dusk till dawn. Evading its electronic eyes is next to impossible, which has been confirmed more than once in various local conflicts. Thermal imagers and infrared instruments are used by snipers and are installed on armored vehicles and drones.

"The newly-developed fabrics we use cannot be picked up by infrared detectors. They block the heat coming from the human body. Military personnel wearing such clothing remain invisible to enemy helicopters' night vision instruments," he added.

In the near future, electronic eyeglasses and mine protection footwear may complement the Ratnik gear.

Semizorov says the transition to the Ratnik-3 gear will be gradual. Components will be replaced step by step. Some will soon be available.

"Very soon Ratnik may incorporate medical and biological condition sensors and also protective smart glasses containing a special feature for projecting information to the lens surface," Semizorov explained.

Ratnik's designers plan to create special footwear protecting personnel from landmines. "We are considering the possibility of equipping such footwear with mine detectors and of placing a minefield suppression system inside such footwear or some other part of the gear," he specified. He said boots capable of protecting a soldier from anti-personnel mine blasts have been created in principle and now they are going to be made lighter and more convenient.

"We have at our disposal certain information about the impact our product was exposed to in real combat. The helmets and armored vests turned out to be fully bullet-proof," Semizorov said, adding that the individual armored protection system was extremely effective.

The helmet protects a total area of 30 square decimeters, but at the same time remains very light – just one kilogram, which allows it to be equipped with various instruments without overstraining the soldier's neck.

The Ratnik vest's effective protection area is one of the world's largest. Its plates can stand ten sniper rifle shots fired at a distance of ten meters. The reinforced configuration of the vest provides extra lateral protection and anti-shrapnel protection for the shoulders, hands and groin. The overalls protect the whole body from the impact of bomb fragments.