

INTERCONTINENTAL BALLISTIC MISSILES

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In the 20th century, the military potential of countries was determined by the number of tanks, ships and planes, and in the twenty-first century, intercontinental ballistic missiles have become the main factor in the power of a state. They are capable of crossing the ocean in a matter of minutes and causing irreparable damage to the enemy.

First of all, the history of the creation of intercontinental ballistic missiles (ICBMs) begins in the middle of the 20th century, or more precisely in 1938, when German scientists Otto Hahn and Fritz Strassmann split the nucleus of the uranium atom, which means that a huge amount of energy can be extracted from it, which can be used both to create large explosions and to obtain a very large amount of cheap electricity. Uranium 235 is the key element of this era. Uranium 235 is so called because it has 143 neutrons and 92 protons, and the force that holds them is one of the strongest in nature.

But most importantly, when adding just one neutron, the nucleus immediately disintegrates into pieces, which leads to a chain reaction. And then scientists realized that if the aggressor, namely Nazi Germany, had the latest weapons, it would be impossible to defeat Germany. Therefore, the well-known Albert Einstein, who emigrated to the United States, hinted to American President Franklin Roosevelt that Germany should not be allowed to create a weapon that could change the course of events, which prompted all American physicists to begin studying and creating their own bomb. In 1946, the Cold War began between the United States and the Soviet Union, which led to an arms race. Initially, the concept of creating ballistic missiles arose on the basis of technologies developed during World War II, especially related to the German V-2 rocket. In 1945, after the end of the war, the USSR and the USA gained access to German missile technology. In 1955, the Soviet Union tested its first in-

tercontinental ballistic missile, the R-7, which had a range of about 8,000 km and could deliver a nuclear warhead. This event was an important stage in the missile race, demonstrating the ability of the USSR to threaten American territory. The United States also began actively developing its own ICBMs.

The ICBM got its name because it moves along a so-called ballistic trajectory. Ballistics is a science based on physics and mathematics that studies the motion of a body thrown in space, or more precisely, a thrown body, and refers to the description of the operation of ballistic missiles. Unlike conventional missiles, which are powered by an engine and move along a straight trajectory, ballistic missiles work due to the so-called "throw" into the air. Based on this, any ballistic missile, despite the fact that it is a complex device that has absorbed many high technologies, by and large consists of two main parts, namely: the accelerating part and the so-called payload. To be more precise, the missile consists of a core, a guidance and control system, a cruise engine and a warhead. The core is the central part of the missile, which houses all vital systems. The guidance system ensures the accuracy of hitting the target, which is achieved through the use of various technologies based on inertial navigation, satellite communications and trajectory correction tools. The cruise engine is usually liquid or solid fuel and many other components and technologies.

The future of intercontinental ballistic missile (ICBM) technology is an area rich in both opportunities and challenges. Taking into account rapidly developing technologies and the changing international situation, the emphasis in the development of ICBMs is shifting towards improving accuracy, speed, mobility and protection against missile defense.

Intercontinental ballistic missiles (ICBMs) play a significant role in ensuring international security and stability. They are the main means of strategic deterrence, being part of the nuclear arsenal of countries with powerful military potential.

Their presence changes the dynamics of the military balance and creates difficult conditions for diplomatic relations. On the one hand, ICBMs serve as a deterrent, but on the other hand, they are a very dangerous weapon, the use of which can lead to very terrible consequences for both people and the planet.

So let ICBMs always be a deterrent, and not be used for the purpose of destroying people and winning.