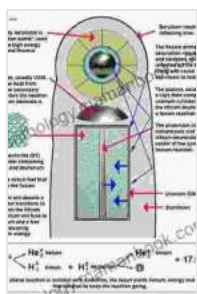


# Dark Sun: The Making of the Hydrogen Bomb

The hydrogen bomb is a weapon of mass destruction that uses the energy released by nuclear fusion to create a devastating explosion. It is far more powerful than the atomic bomb, which uses the energy released by nuclear fission. The development of the hydrogen bomb was a major scientific and technological achievement, but it also had a profound impact on the course of world history.



## Dark Sun: The Making Of The Hydrogen Bomb

by Richard Rhodes

★★★★☆ 4.6 out of 5

Language : English  
File size : 47513 KB  
Text-to-Speech : Enabled  
Screen Reader : Supported  
Enhanced typesetting : Enabled  
Word Wise : Enabled  
Print length : 768 pages



The story of the hydrogen bomb begins in the early 1920s, when scientists first began to explore the possibility of using nuclear fusion to create a bomb. In 1939, German scientists Otto Hahn and Fritz Strassmann discovered nuclear fission, and this discovery led to the development of the atomic bomb. However, the atomic bomb was not powerful enough to be a decisive weapon, and scientists began to look for ways to create a more powerful bomb.

In 1942, American physicist Edward Teller suggested that a hydrogen bomb could be created by using the energy released by nuclear fusion to ignite a secondary fission bomb. This concept was later developed by a team of scientists at the Los Alamos National Laboratory, led by Teller and J. Robert Oppenheimer. The first hydrogen bomb was successfully tested on November 1, 1952, at Eniwetok Atoll in the Pacific Ocean. The bomb, which was code-named "Ivy Mike," had a yield of 10.4 megatons, which was more than 1,000 times more powerful than the atomic bombs that had been dropped on Hiroshima and Nagasaki.

The development of the hydrogen bomb had a profound impact on the course of world history. It led to a new arms race between the United States and the Soviet Union, and it increased the risk of nuclear war. The hydrogen bomb also had a significant impact on the development of nuclear power. In the 1950s and 1960s, a number of nuclear power plants were built around the world, and these plants use the same technology as the hydrogen bomb to generate electricity.

The hydrogen bomb is a powerful weapon that has had a profound impact on world history. It is a symbol of the destructive power of nuclear weapons, and it is a reminder of the dangers of nuclear war. The development of the hydrogen bomb is a story of scientific and technological achievement, but it is also a story of human folly.

## **The Science of the Hydrogen Bomb**

The hydrogen bomb is a nuclear weapon that uses the energy released by nuclear fusion to create a devastating explosion. Nuclear fusion is the process of combining two atomic nuclei to form a single nucleus, and this process releases a great amount of energy. The hydrogen bomb uses the

energy released by the fusion of two deuterium nuclei to ignite a secondary fission bomb. Deuterium is a heavy isotope of hydrogen, and it is found in small amounts in ordinary water.

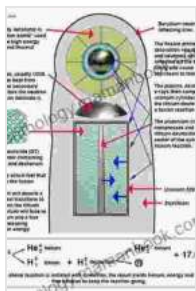
The first step in the process of creating a hydrogen bomb is to create a deuterium-tritium gas. Deuterium is a heavy isotope of hydrogen, and tritium is a radioactive isotope of hydrogen. The deuterium-tritium gas is then compressed and heated until it reaches a high temperature and pressure. At this point, the deuterium and tritium nuclei fuse together to form a helium nucleus and a neutron. The fusion of the deuterium and tritium nuclei releases a great amount of energy, which is used to ignite a secondary fission bomb.

The secondary fission bomb is a conventional nuclear bomb that uses the energy released by nuclear fission to create a devastating explosion. The fission bomb is typically made of uranium or plutonium, and it is detonated by a neutron. The neutron causes the uranium or plutonium nuclei to split apart, and this process releases a great amount of energy. The energy released by the fission bomb is used to create a shock wave and a fireball, which can cause widespread destruction.

### **The Impact of the Hydrogen Bomb**

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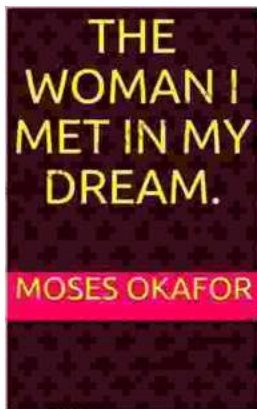


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