

China to complete artificial sun

China will be the dominant global nation in fifty years and their dedication to the nuclear world will be a basis. The US was born on Hollywood conquering the West and two world wars but they have no longer relevance.

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It was learned from the Hefei Institutes of Physical Science of the Chinese Academy of Sciences (CAS) that it will have completed the Experimental Advanced Superconducting Tokamak (EAST) which aims to explore infinite and clean energy resources of nuclear fusion by this March or April.

By then, Hefei will become the first institute in the world to have built an all-superconducting non-circular section nuclear fusion experiment facility, which is generally known as an artificial sun.

The energy resource crisis has begun to threaten the world, as oil, coal and other types of non-renewable energy resources will be used up in a century. Scientists recommend the extraction of deuterium from sea water and the ignition of nuclear fusion of this element in temperatures as high as 100 million degrees Celsius. In nuclear fusion, deuterium abstracted from one kilogram of sea water will be able to produce as much energy as that of 300 liters of gasoline.

Invention of a facility that can withstand the temperature of 100 million degrees Celsius and control deuterium and atomic fusion to ensure steady and continuous energy output is equal to invention of an artificial sun, which can provide infinite and clean energy like the sun, as sea water is virtually inexhaustible.

In 1990, the CAS Institute of Plasma Physics built China's first superconducting tokamak equipment HT-7, making China the fourth country in the world to have such equipment after Russia, France and Japan. In 2000, scientists at this institute began to build a new-generation all-superconducting non-circular section tokamak equipment on the basis of HT-7 and gave it the new name EAST.

As an upgraded product of HT-7, EAST brings China into the globally leading group in nuclear fusion research. It is also a key project of China's ninth five-year-plan. EAST started overall assembly in 2003.