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WORLD'S FIRST HYDROGEN PRODUCTION USING NUCLEAR ENERGY

- The Department of Atomic Energy has started the world's first hydrogen production plant by using the heat generated from the Fast Breeder Test Reactor at the Indira Gandhi Centre for Atomic Research in Kalpakkam, near Chennai.
- In this new method, hydrogen is produced using copper and chlorine chemicals (copper-chlorine thermochemical cycle). The plant was inaugurated by Ajit Kumar Mohanty, Secretary of the Department of Atomic Energy.
- This new technology was indigenously developed by the Bhabha Atomic Research Centre in Mumbai. This plant has been set up as a pioneer facility to demonstrate how hydrogen can be produced using nuclear energy.
- Producing hydrogen using nuclear reactor heat is a major technological advancement. Through this, clean hydrogen that does not harm the environment can be produced on a large scale in the future.
- Besides this, hydrogen has the potential to become a key future fuel alternative to petrol and diesel. Although hydrogen is produced through various methods worldwide, the new method used in Kalpakkam is considered superior because it can produce high quantities of hydrogen at lower temperatures.
- By using nuclear energy, the requirement for fuels like coal is reduced. Furthermore, the emission of environmentally polluting gases is prevented. This center will also greatly assist future research on producing commercial-scale hydrogen using nuclear energy.