Tata Steel's First of its Kind CBM Injection Initiative to Reduce Emissions | Jharkhand | 22 Jan 2022

Why in News

- Recently, as part of its continued efforts to move towards sustainable steel production, Tata Steel has initiated trials for continuous injection of Coal Bed Methane (CBM) gas into a blast furnace at Jamshedpur Works. This is the first instance in the world where CBM will be used as an injectant in a steel company.

Key Points

- The process is expected to reduce the coke rate by 10 kg/thm (tonne of hot metal), which would be equivalent to reducing 33 kg of CO_2 per tonne of crude steel. The trial will take place in the next few weeks.
- The technology, design and development of the entire system in E Blast Furnace to facilitate CBM injection is done by the in-house team of Tata Steel.
- Tata Steel's Vice President of Iron Making, Uttam Singh said that the technology to decarbonize steel on a large scale is not yet ready. Tata Steel has taken various technology initiatives including pilots and trials to explore new and scalable solutions for decarbonisation.
- This test will help in quantifying the reduction in coke rate used in blast furnace and its effect on productivity and will provide useful insights about operation of blast furnace with hydrogen based injectors. This will help in creating a roadmap for future sustainable operation of blast furnace with green fuel containing more hydrogen.
- CBM consists mainly of 98% methane with trace amounts of other gases extracted from underground coal deposits. India is endowed with abundant resources of CBM, the main source of which is the eastern region of the country.
- This test provides a promising opportunity both logistically and economically to leverage the use of CBM for injection purposes.
- Tata Steel continues to invest in breakthrough technologies to achieve the highest environmental performance standards through process improvement, efficient raw material and resource management, high utilization of by-products, lifecycle assessment of products, etc.
- Leading the cause of sustainability, the company commissioned India's first steel recycling plant in Haryana, started using electric vehicles to transport finished steel and set up India's first plant for CO_2 capture from blast furnace gas in Jamshedpur.