India approves ₹ 7280 Crore Rare Earth Permanent Magnets (REPM) Scheme

- **The Government of India has approved a first of its kind Rs. 7280 crore scheme called the "Scheme to Promote Manufacturing of Sintered Rare Earth Permanent Magnets (REPM)."**

- **REPM are one of the strongest types of permanent magnets and are vital for electric vehicle, renewal energy, electronics, aerospace and defence applications.**

- This initiative aimed at establishing **6,000 Metric Tons per Annum (MTPA) of integrated REPM manufacturing in India** which will support the **Atmanirbhar Bharat Abhiyan, Viksit Bharat @2047 initiative** and **India's Net Zero 2070 commitment.**

- The Scheme will support the creation of integrated **REPM manufacturing facilities, involving conversion of rare earth oxides to metals, metals to alloys and alloys to finished REPMs.**

- The scheme offers **Rs. 6450 crore in sales-linked incentives over five years and Rs. 750 crore capital subsidy for manufacturing.** Capacity will be given to five beneficiaries through global competitive bidding, **each getting up to 1,200 MTPA.**

- **India has the world's 5th largest rare earth reserves** yet India imports almost all of its rare earth permanent magnets, **importing around 53,700 tonnes in the financial year 2024-25.** Approximately **93% of these imports come from China**, which imposed export restrictions in 2024-25, causing significant disruptions in the supply chain which underscore the urgent need for India to develop secure, domestic manufacturing capabilities for these critical materials.

Rare Earth Permanent Magnets

- **Rare earth permanent magnets are strong permanent magnets made from alloys of rare earth elements.** They produce much stronger magnetic fields than **traditional magnets like ferrite or alnico.**

- Due to their **high magnetic strength, resistance to demagnetization and durability they are used in electric vehicles, wind turbines, computer hard drives, medical devices like MRI machines, aerospace, defense and consumer electronics.**

- These magnets are **crucial for applications requiring compact, lightweight and highly efficient magnetic solutions.**

- Examples of rare earth permanent magnets include **Neodymium magnets (used in electric vehicles), Samarium cobalt magnets (used in aerospace and defense applications) etc.**

- **Sintering is a process where magnet materials are heated to high temperatures without melting.**