

Success of the INS Vikrant

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Context:

On March 5, both aircraft carriers of the Indian Navy, INS Vikramaditya and INS Vikrant, showcased "twin carrier operations" with MiG-29K fighter jets taking off simultaneously from both and landing cross deck as Defence Minister Rajnath Singh looked on from onboard one of them.

Background:

An aircraft carrier is fundamental to command, control and coordination of operations from the sea and to project combat power ashore, over the seas or in the air.

What does INS Vikrant signify? :

1. The design work on the Indigenous Aircraft Carrier (IAC)-I, later christened Vikrant, began in 1999; however 2005-2006 were probably the most crucial years for the carrier and for India's war shipbuilding.
2. The crucial decision was on the warship grade steel, which till then was procured from Russia. After much brainstorming, it was decided that it would be developed and produced in India, a collaborative effort between the Steel Authority of India, the Defence Research Development Organisation (DRDO) and the Indian Navy. DMR grade steel was developed.
3. Vikrant is an engineering marvel. It has a total area in excess of 12,450 m² which equals to about two and a half hockey fields.
4. The 262m long and 62m wide ship is powered by four General Electric LM2500 engines generating 88 MW of power giving it a maximum speed of 28 Knots and an endurance of 7,500 nautical miles. Built at an overall cost of around ₹20,000 crore and 76% indigenous content, the ship has around 2,200 compartments, for a crew of around 1,600 that include specialised cabins to accommodate women officers and sailors.
5. Vikrant can operate an air wing of 30 aircraft comprising MiG-29K fighter jets, Kamov-31, MH-60R multi-role helicopters, in addition to indigenous Advanced Light Helicopters and Light Combat Aircraft (Navy).
6. It uses the STOBAR (Short Take-Off but Arrested Recovery) method to launch and recover aircraft for which it is equipped with a ski-jump to launch aircraft, and three 'arrestor wires' for their recovery.
7. Noting that among manufacturing activities, shipbuilding has one of the highest employment multipliers of 6.48, the economic Survey 2022-23 said that Vikrant alone engaged approximately 500 MSMEs, 12,000 employees from ancillary industries, and 2,000 CSL employees.
8. While the present Vikrant was the first carrier built in the country, India has had a long history of operating carriers. The erstwhile 19,500 tonne Vikrant was India's first carrier

purchased from the U.K., which arrived in 1961 and played a vital role in the 1971 war. Then came the 28,700 tonne INS Viraat commissioned in 1987, formerly HMS Hermes, also from the U.K. INS Vikramaditya procured from Russia and commissioned in 2013 is India's third carrier.

Dr. Shivakumar's



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