

## First ever made in India turbofan engines for cruise missiles to be flight tested by DRDO soon

The flight tests of India's first 400 kg thrust class Small Turbofan Engine (STFE) as a power plant for unmanned air vehicles (UAVs) targeted for subsonic applications are likely to begin soon, reports *Sputnik News*.

According to the report, the state-funded Gas Turbine Research Establishment (GTRE) has realised six prototype engines with 95 per cent indigenous components.

The GTRE has tested the prototype engines at Bengaluru as well as at Leh, as per the Defence Research Development Organisation (DRDO).

"The GTRE tested the engine for max power setting at Bengaluru for 90 minutes continuous operation. During peak winter, the engine was tested at Leh at (-15 degree Celsius)", a statement from DRDO read.

As per the report, DRDO, in March 2018, had invited expression of interests from Indian industries to work under technology transfer terms for manufacturing and assembly of the engine.

"Further efforts are on to flight test the engine and to manufacture the same through Indian industries," the document read further.

The DRDO, as per the report, is likely to use the engine in the Nirbhay subsonic cruise missile that it successfully test-fired last week from the Integrated Test Range (ITR) at Chandipur in Odisha.

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## India's ASAT missile test shows its capability to destroy ICBMs in outer space: experts

India's successful anti-satellite (ASAT) weapon test - also known as Mission Shakti - has demonstrated that it has developed the technological capability to destroy enemy nuclear-tipped Inter-Continental Ballistic Missiles (ICBMs) at high altitude outside the atmosphere, according to the experts, *Business Standard* has reported.

An ICBM is a guided ballistic missile with a minimum range of 5,500 km and is primarily designed for nuclear weapons delivery.

According to the report, after the test, Defence Research and Development Organisation (DRDO) Chairman G Satheesh Reddy had said that the ASAT missile has technologies developed for ballistic missile defence applications, particularly the kill vehicle.

He also said that the ASAT missile used in the test "had the capability to intercept satellites higher than 1,000 km".

According to former DRDO chief Avinash Chander, the ASAT test provided India with a new capability to intercept intermediate-range and Intercontinental-range missiles in high altitude, exoatmospheric phase.

"By destroying a target at that altitude (300 km), India has implicitly confirmed its ability to intercept longer-range missiles in their mid-course phase, when they are still outside the Earth's atmosphere before re-entry. This window is crucial to intercept a nuclear-armed medium-range or even intercontinental-range missile," the report quoted A Vinod Kumar, an associate fellow at the Institute for Defence Studies and Analyses, as saying.

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