

Mission Shakti boost for DRDO

MISSION SHAKTI, the Defence Research and Development Organisation's (DRDO) March 26 anti-satellite mission, was a high-speed precision test unlike one ever attempted before in the country.

The test gave DRDO a public connect

This is because, according to DRDO chairman Dr G Satheesh Reddy, it called for successfully maneuvering a kill vehicle travelling at 3 km per second to hit a satellite moving at 7.5 km per second. Literally, shooting a bullet with another bullet. The successful test has also raised awareness about the



DRDO chief Dr G Satheesh Reddy during a seminar.

apex defence research organisation, as Reddy revealed in a programme organised by think tank Forum for Integrated National Security (FINS) in the national capital. The chairman told the audience how a newspaper vendor called on one of his senior scientists in New Delhi's Moti Bagh to compliment him for the test. In another instance, an autorickshaw driver in the capital refused to overcharge a passenger who he discovered was a DRDO scientist.

NIRBHAY'S WAIT FOR ORDERS

THE April 15 developmental test of the DRDO's Nirbhay ground-launched cruise missile completes tests of the basic configuration of the missile, DRDO officials say.

The 1,000-km range missile was fired vertically from its launcher at the Integrated Test Range in Chandipur, Odisha, separated from a solid booster, deployed wings, started its engines and cruised through all its intended waypoints. The six-metre long missile demonstrated its sea-skimming capability — or cruising at very low altitudes — and, according to the DRDO, met all mission objectives. The missile is powered by a Russian turbofan though production variants of the missile will use an indigenous turbofan in advanced development at the Gas Turbine Research Establishment (GTRE), Bangalore. The test was the sixth for the indigenously designed and developed Nirbhay. Contrary to speculation,

it is not a nuclear weapons delivery system and is designed to carry a conventional payload of upto 300 kgs.

The DRDO now wants the armed forces to approach them with service-specific variants of the missile. Ground- and ship-based variants can be inducted within three years because it calls for minimal modifications. Air- and submarine-launched variants will take longer given the technological challenges involved.

Army and Navy officials however say the Nirbhay in its present form has a long way to go before it meets their requirements. A senior naval official called the test a successful technology demonstrator, but says the DRDO will have to increase range. "What we want is a land attack cruise missile of at least 1,500 km and above. Anything lesser than that will imperil the launch platform," the official said. The Army requires a 1,000-km range missile like the Nirbhay but says the missile in its present form will need several improvements before it can be inducted. "In case we have to use it across high mountains, the Nirbhay will need terrain contour mapping, a backup inertial navigation system, terminal guidance and steep dive capability," says Lt General P Ravi Shankar, former DG Artillery. It is clearly going to be a long wait before the first Nirbhay variant makes its debut.

DRDO Chief visits Rameswaram; promises swift action into issues at Kalam Memorial

By Anantha Krishnan M

Peikarumbu (Rameswaram): Seven months after taking over the reins of Defence Research and Development Organisation (DRDO), its chairman Dr G Satheesh Reddy visited Dr A P J Abdul Kalam National Memorial, situated at the temple town of Rameswaram, recently. Dr Reddy's visit follows a series of issues that had been plaguing the prestigious memorial, built at the resting place (kabr) of former president.

Onmanorama had earlier this year reported about the sad state of affairs of the memorial that lacked proper facilities for visitors among others.

Inaugurated on July 27, 2017 by Prime Minister Narendra Modi, the memorial had breached the 50-lakh visitor mark in January this year. Till date, the memorial has 56.30 lakh footprints with an average of 9000 visitors every day.

Following Onmanorama's report, the DRDO opened the 'brand new' toilets kept under lock by the Civil Works and Estates (CWE), its construction arm.

The Onmanorama report had triggered an outrage on social media prompting the DRDO top brass to convene a meeting of the CWE team to resolve the issue.

During Dr Reddy's recent visit to the memorial, he is said to have taken stock of every nagging issues. He held discussions with locals and members of House of Kalam as well. Interestingly, the DRDO has kept mum on the visit.

Priority Given

A DRDO official from HQ in Delhi told Onmanorama that Dr Reddy gave instructions to the memorial in-charge Sheik Ghouse that all matters of concerns should be brought to him on priority.

"Almost all issues were resolved well before his visit. Mainly the toilets and drinking water issues have been resolved now. The parking lot near the memorial is held up for want of land that needs to be transferred from the Tamil Nadu government," the official said.

He said matters related to non-payment to local contractors are being addressed on priority now.

"We have instructed to clear the balance payments to the local contractors. Some have been already been released and the remaining will be cleared soon. DRDO doesn't want to be pulled into any controversies. There were some lapses at our part that have been set right now," the official said.

House of Kalam said Dr Reddy gave a patient hearing to all concerns the family had.

"We are keen to take the national memorial to the next level. We have given our representation and Dr Reddy has promised to look into it. We are happy that the DRDO Chairman is serious about the memorial matters. The communication channels are open now," Dr Nazima Maraikayar, Founder Trustee of Kalam Foundation told Onmanorama. The family wants a souvenir shop and a canteen facility too opened at the earliest.

Phase-2 Pending

The Phase-2 work of memorial will be the next big task for the DRDO, as it will have to wade through tricky issues of land acquisition. Interestingly, Sudha Pillai, an independent travel writer based out of Bengaluru, who visited Rameswaram last week, said the memorial time should be extended.

"It would be really helpful if it is kept open till 8 pm in the night. It is always crowded and that prevents people from visiting if they are on very short trips. You need two hours to completely visit

the memorial and by the time you hit the place in the evening it is closed,” says Sudha, who was in Rameswaram as part of an international assignment. The memorial is now open from 9 am to 6 pm now.

Adv M Somasundaram, who is practising at Ramanathapuram, which is the district headquarters, feels that the development activities promised in the Phase-2 must be taken up immediately. “An auditorium, planetarium and library are among the new facilities that are still to be set up. The memorial needs more attention from DRDO and the government,” Adv Somasundaram says.

He said now visitors are parking on the highway blocking the view of the memorial.

“A proper parking facility should be in at the earliest,” he adds.

(The writer is an independent aerospace and defence journalist, who blogs at Tarmak007 and tweets @writetake.)

<https://english.manoramaonline.com/news/nation/2019/04/19/drdo-chief-visits-rameswaram-promises-swift-action-issues-kalam-memorial.html>

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Now, Russia worried over satellite debris

A Russian news agency TASS has said the debris left after India's anti-satellite weapon test might at a certain point jeopardise the ISS

New Delhi: Russia has joined the US in expressing doubts that the debris from India's March 27 anti-satellite test will not harm the International Space Station (ISS) orbiting around the earth.

While the observations by US National Space Agency Administration were papered over by the US State Department, there has been no clarification from the Russian Foreign Ministry so far.

The Russian news agency TASS has said the debris left after India's anti-satellite weapon test might at a certain point jeopardise the ISS which has three to six astronauts stationed at it all the time.

It is not as if ISS astronauts are defenceless. The ISS has thrusters of its own that enable it to shift position. It also has space capsules docked all the time which serve as emergency shelters for the astronauts. The ISS is a multi-country operation with participation from the US, Russia, Japan and some European countries.

Sources, however, pointed out that NASA administrator Jim Bridenstine had added there was no immediate danger of ISS getting hit by the debris of the “killed” Indian satellite. In case of the Russian statement, they said it came from a middle-level official at a seminar whose sole theme was on space debris. The Russian official had also added a rider on the lines of the statement by NASA by observing that the more than 100 fragments “may at a certain point” endanger the ISS.

However, according to Defence Research and Development Organisation chief G Satheesh Reddy, India had deliberately chosen a lower orbit of 283 km to avoid the threat of debris to global space assets. Moreover, there was a 125 km gap between the ISS and the killed Indian satellite. Care had also been taken to hit the satellite when it was over the Bay of Bengal while the ISS was over French Guinea, more than 10,000 km away horizontally.

“An orbit of around 300 km was chosen for the test for capability demonstration, and the purpose was to avoid threat of debris to any global space assets,” Dr Reddy had said at a press conference. “Pin-point accuracy was achieved and space debris concerns were addressed by extensive simulations,” he had further said.

<https://www.tribuneindia.com/news/nation/now-russia-worried-over-satellite-debris/760940.html>