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(Online)

## **DRDO chosen for Rs18,000-cr short-range missile contract**

Defence Research and Development Organisation (DRDO) has been selected for a Rs18,000-crore contract to supply short-range missiles to Indian Army. The decision was taken at a meeting of the Defence Acquisition Council chaired by defence minister Arun Jaitley on Saturday. The DAC preferred state-run DRDO over foreign vendors, including from Sweden, Russia and Israel for supply of the Akash surface-to-air missile system, sources said.

Akash missiles can be used for protection against incoming aircraft and unmanned aerial vehicles of the adversaries and the system would be deployed on both the Pakistan and China border, sources said.

The Army, however, is reported to have sought improved missiles that are on par with foreign ones in terms of a few specific systems and equipment. DRDO is reported to have assured incorporation of the systems suggested by the forces. Akash missiles are already being inducted into the Indian Air Force as the missiles have proved their worth.

The selection process has been slow, considering that the three foreign vendors from Israel, Sweden and Russia were in the race for bagging the contract for which the process was initiated in 2011, and trials were held in 2014. While it took nearly seven years for the selection process for a vendor for the air defence system to conclude, DRDO has also lagged behind in the indigenous development of aircraft and land warfare systems. However, the development of a range of strategic missile systems by DRDO has helped improve the capabilities of the armed forces while also saving precious foreign exchange.

The Army wanted two regiments of the missile system to be provided to the army air defence, which has been operating with obsolete equipment for a long time, with the government itself saying that around 98 per cent of it was outdated. The cabinet committee on security has already cleared a Rs17,000-crore Medium Range Surface to Air Missile project with Israel.



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## **DRDO's aero test range to be inaugurated on Sunday**

*By Madhumathi D.S.*

*The facility is an integrated test centre for the organisation's cluster of laboratories, mostly in Bengaluru*

Over a decade ago, when a new international airport for Bangalore was being planned at Devanahalli, its private developers feared that the new landing site and paths of its civil flights would clash with a World War II airfield, some 70 km away at Kolar. The Defence Research & Development Organisation was using the airfield to test its new projects.

To cut the story short, Bangalore (as it was then called) got a new civil airport in May 2008 and, in the bargain, the DRDO got a new flight testing place for itself — although much farther than Kolar.

The new Aeronautical Test Range (ATR) has been up and running for a few months. It will be formally inaugurated on May 28 by acting Defence Minister Arun Jaitley. *The Hindu* had a special preview of the range that nestles in an undulating, almost barren sprawl of shrubs and lined with hillock.

The ATR is a facility under the Aeronautical Development Establishment (ADE) which works on a range of UAVs (unmanned air vehicles). It will be an integrated test centre for the DRDO's cluster of aeronautical laboratories, most of them based in Bengaluru, according to a few scientists.

The labs primarily using the range will be the Centre for Air Borne Systems, the Gas Turbine Research Establishment, the Defence Avionics Research Establishment, the Centre for Military Airworthiness & Certification, all based in Bengaluru, and the Aerial Delivery Research & Development Establishment, Agra.



*A view of Aeronautical Test Range at Challakere in Chitradurga district, Karnataka.*

Military development labs need large spaces to fly and test aeronautical products. In November last year, the DRDO used the ATR to conduct the first successful flight of the UAV 'Tapas' 201, earlier called Rustom-2. As recently as on May 21, ADE engineers again flew one of the two early versions or prototypes of Tapas at Challakere for six minutes. Tapas is a MALE or medium altitude, long endurance UAV that can do continuously, slowly watch over a 200-km area for 24 hours. The pictures it captures will be interpreted by the Armed Forces or security.

The 20-km perimeter of the strategic facility is fenced and under radar surveillance. About 3 km inside, the DRDO has built a 2.2-km runway at the ATR for the pilotless Tapas aircraft and is due to extend it to 3.2 km in course. According to a scientist, the longer runway will enable the developer labs to bring in bigger aircraft for tests: for instance the AEW&CS (Airborne Early Warning & Control Systems) aircraft meant for surveillance and intelligence gathering from sensitive areas.

The DRDO's first two AEW&CS are built on Embraer aircraft and in future, will include much larger Airbus platforms, the agency had said earlier.

While these are pilotless planes, the ATR will also serve development of manned aircraft versions such as the LCA fighters.

For the past nine months, the ATR has been abuzz with activities. An optic fibre network, connectivity and other work have been going on. Officials said some scientists had been staying at Challakere town while teams of ADE and other engineers commuted frequently from Bengaluru.

Outside the range, about 3 km away, a 200-acre township with schools, medical and all other amenities is shaping up, making what is designed to be a world-class ATR.

## Spread over 1,000 acres, ATR cost Rs 290 cr to build

*DRDO to create green cover in arid region, boost local economy*

Ajay Singh, director (civil works and estates) of DRDO, said the country's first-of-its-kind Aeronautical Test Range (ATR), which covers an area of 1,000 acres, has been constructed at a cost of Rs 290 crore.

Briefing about the features of ATR at its inauguration here on Sunday, he said DRDO was testing unmanned aircraft in Kolar earlier. Following the construction of the international airport at Devanahalli near Bengaluru, DRDO was forced to look for an alternative location.

The state government allotted 4,090 acres for the facility. ATR has been constructed as per international standards. It is the range for research, testing, development of different types of aircraft required for the armed forces. It has a runway of 2.2 km, which can be expanded for another km.

It has a range control centre, two hangars and radar laboratory. The lab here uses technology to establish primary and secondary data related to national security. The ATR has a total of 31 buildings, including security and administration, spread over 24,000 sq m.

Singh promised that DRDO would take steps to transform the range into a green area and strive to reduce temperature in this arid region. Rainwater harvesting has already been adopted. In the days to come, technology would be used to convert the land full of bushes into a green area. Steps would also be taken to enhance local economy.

**Tapas aircraft, AEWS on display** - Captain Stephen operated the unmanned aircraft Tapas and airborne early warning systems (AEWS) as part of the demonstration to mark the inauguration of Aeronautical Test Range on Sunday, in the presence of Defence Minister Arun Jaitley.



## National security requires us to become defence manufacturing hub: Arun Jaitley

*Jaitley, who by virtue of his post of defence minister, is the Chancellor of the DIAT, said, "We are destined to have neighbours as permanent neighbours. We cannot change them. And that neighbourhood itself has thrown up an important challenge of national security and therefore last 70 years, since Independence"*

Defence Minister Arun Jaitley said in Pune on Sunday that the country since its Independence, has been facing both insurgency and wars and that the national security requires us to become hub for defence manufacturing. He also said that the public and private sectors will have to be equal partners in the process. He was speaking at the ninth convocation of the Defence Institute of Advanced Technology in Girinagar near Khadakwasla in Pune. A total of 134 graduating students including 18 PhDs, three Master of Science by Research and 113 MTech students were conferred with their respective degrees.

Jaitley said, "The first industrial revolution impacted Europe and North America. The Asian economies caught up later, particularly after the Second World War. Japan, South Korea, Taiwan, China and thereafter India. So, those who were left out initially, caught up by connecting themselves to the global markets with the help of technology. If we are to evolve as a manufacturing nation, which we are still to evolve fully, the backbone will have to be technology."

Jaitley, who by virtue of his post of defence minister, is the Chancellor of the DIAT, said, “When our former Prime Minister Mr Vajpayee visited Lahore in the famous bus journey, he said that we can alter the course of history but not geography. We are destined to have neighbours as permanent neighbours. We cannot change them. And that neighbourhood itself has thrown up an important challenge of national security and therefore last 70 years, since Independence, we have continuously battled both insurgency and wars. No country can perpetually continue to secure itself in the wars by only depending on the others for its armaments and equipment, which are extremely important.”



*Defence Minister Arun Jaitley at the 9th Convocation of Defence Institute of Advanced Technology in Pune on Sunday.*

He added, “If economy requires us to become a manufacturing hub, then security requires us to become a hub for defence manufacturing. The country will have to unleash national energy and use large resources which are there in the country. We will have to use a large number of academic institutions we have, for training human minds and cover up the critical gap that still exists. We have now entered a stage, where we have accepted that this is not just the government prerogative but also a prerogative of the private sector. And they have to be equal partners in this area.” Jaitly stressed that premier institutes like DIAT can play a major role in the process.

Before the beginning of the function, DIAT Vice Chancellor Surendra Pal, a distinguished Space Communication scientist welcomed Jaitley along with S Christopher, Chairman DIAT Governing Council and Secretary, Department of Defence Researcher and Development, G Satheesh Reddy, Scientific Advisor to Defence Minister and Baba N Kalyani of Kalyani Group, and other guests. A Radio Frequency and Electronics system laboratory was also inaugurated by the Defence Minister on Sunday.