*Deccan Herald*
*13 Apr, 2016*

# Akash test-fired for second consecutive day

Balasore (Odisha): For the second day on Tuesday, India's indigenously developed surface-to-air Akash missile was test-fired from the Integrated Test Range (ITR) at Chandipur near here.

"Two rounds of test of the Akash missile were conducted today," Defence Research and Development Organisation (DRDO) officials said.

The missiles targeted unmanned air vehicle (UAV) 'Banshee' and a para barrel target, they said.

Similar trial of the sophisticated missile had been conducted on Monday from the same test range. The missiles, with a strike range of 25 km and capability to carry warhead of 60 kg, were test-fired from the launch complex-3 of the ITR, the officials said. Akash is a medium range surface-to-air anti-aircraft defence system developed by the DRDO as part of the Integrated Guided Missile Development Programme.

*Business Wire India*
*13 Apr, 2016*

# DRDO-FICCI ATAC Program Organizes an Innovation Roundtable with the US Secretary of Defence

***US Secretary of Defense meets and interacts with Indian Startups***

The Federation of Indian Chambers of Commerce and Industry today organized an innovation roundtable under the DRDO-FICCI Accelerated Technology Assessment and Commercialization Programme with the US Secretary of Defense, Ash Carter. Ten entrepreneurs spoke about their start-up models in sectors including aerospace, defense, and cleantech.

The entrepreneurs comprised five companies to whom DRDO technologies were licensed under the DRDO-FICCI Accelerated Technology Assessment & Commercialization (ATAC) program and five start-ups that were supported under the DST-Lockheed India Innovation Growth Programme.

The technologies discussed included breakthrough innovations in the field of aerospace (DSP based Adaptive Control Algorithm to guide missiles developed by Cybermotion), defense (Short Range Surveillance Radar developed by DRDO and licensed to Bharat Electronics Limited; Explosive Detection Kit developed by DRDO and licensed to Vantage Integrated Security), and Cleantech (Geothermal cooling developed by GIBSS).

The entrepreneurs present shared details of their innovative technologies, their enterprise’s vision as well as their entrepreneurial journey before the esteemed panel. The entrepreneurs also discussed several ideas and thoughts how bilateral cooperation between Indian and US Start-ups could be enhanced particularly in the field of Defense. The panel comprised Hon’ble Ambassador of the United States, H.E. Shri Richard Verma; Chief of Staff, Office of the Secretary of Defense, Mr. Eric Rosenbach; Director General, DRDO, Dr. S Christopher; Secretary General, FICCI, Dr A. Didar Singh; Mr. Phil Shaw, Country Head, Lockheed Martin India Pvt Ltd.; Senior Director, FICCI, Mr. Nirankar Saxena; Director, DIITM, DRDO, Mr. S. Radhakrishnan.

*India Today*
*13 Apr, 2016*

# India tests most ambitious nuclear missile

***The secretive submarine-launched K-4, named after Kalam, was tested twice in March this year***

India Today can confirm that India has successfully tested its most ambitious weapon system -- a long range submarine-launched ballistic missile, codenamed K-4, capable of can strike targets upto 3,500 kilometres away. The missile test is being seen as a huge step forward for country's nuclear weapons programme and strategic deterrent.

India Today has accessed the first images of this secretive weapon system that has almost never been seen before in flight. The missile system was tested twice in March from India's home-built Arihant ballistic missile submarine, a platform that's currently undergoing sea trials before a possible entry into service next year.

The K-4, a derivative of the more well known Agni ballistic nuclear missiles already in service, will be the most potent part of India's nuclear deterrent.

The missile, which has now taken a steady step forward to prove itself, will arm India's nuclear ballistic missile submarines, invisible and undetected until they need to be used.

The missile, which has developed by the Defence Research and Development Organisation (DRDO), can carry a warhead weighing upto 2,000 kg. The DRDO plans to develop three missiles K-series missiles.

*Assam Tribune*
*13 Apr, 2016*

# India tests n-capable K-4 missile from Arihant

New Delhi: In a major step towards completing India's nuclear triad, nuclear-capable ballistic missile K-4 was test-fired from nuclear submarine Arihant, both of which have been indigenously developed, officials said on Wednesday.

Former Indian Navy chief Admiral Arun Prakash (retd) called it a "major step", but said Arihant needs to be armed with a missile of inter-continental range, which is a missile with above 5,000 km range.

The K-4 has a range of 3,500 km.

The test was conducted secretly last month and kept under wraps with the Defence Research and Development Organisation refusing to comment on it officially.

Admiral Arun Prakash called it a major step towards completing the nuclear triad.

"It is a major step towards attaining inter-continental range deterrence to make full use of Arihant," he told IANS.

"We need a missile of about 5,500 km range, then it will enable the submarine to be anywhere in the Indian Ocean and still be a threat to the targets," he said.

"This is major step but not he ultimate target," the former navy chief said.

Sources told IANS that the test was conducted on March 31 from Arihant in the Bay of Bengal, and it was successful.

The missile was fired from around 20 metres under water, and covered a distance of 700 km before hitting the target.

Prior to that, a dummy was also test-fired from a pontoon on March 7, the sources said.

Both the missile and the submarine have been developed by the DRDO.

Arihant, the lead ship of India's Arihant-class of nuclear-powered ballistic missile submarines, has been designed based on the Russian Akula-1 class submarines.

The DRDO was, however, tight-lipped over the test.

The K-4 is part of the K-family of missiles, a series of submarine-launched ballistic missiles (SLBM), named after former president and scientist A.P.J. Abdul Kalam.

The missile can carry a warhead weighing up to 2 tonnes and is powered by solid rocket propellant.

The missile was developed specifically for Arihant, as the nuclear capable Agni-III could not be compacted to fit in the submarine. Arihant has a 17 metre diameter hull.

K-4, along with the smaller K-15 Sagarika, another indigenously developed nuclear capable missile, will arm Arihant, the submarine, which will complete India's nuclear triad.

Arihant has four vertical launch tubes, which can carry 12 K-15 missiles or four larger K-4 missiles.