

## Army's lady officers test-fire missiles

By Ajit K Dubey



*Two women officers successfully launched the Akash missiles that hit their targets five times.*

AT A time when the armed forces are preparing to welcome women in more areas, for the first time in the country two women officers from the forces played a major role in the test-firing of a more potent version of the Akash surface to air missiles, which successfully hit their targets five times in the last four days. "Two lady officers played a crucial role in the successful launch of the missiles in the bestirring today that included Captain Sneha and one more lady officer from the Army Air Defence (AAD) Corps," a source said.

Women have been getting inducted in the AAD since more than a decade now. They have been operating air-defence guns, such as the L-70 and are being trained for combat roles. The five successful test firings of the Akash surface to Air Missiles, which can strike down enemy aircraft and drones at a range of 30 km in the air were conducted by the Army units.

The ground force along with the Air Force would be operating these new missiles, which would be deployed along the China and Pakistan borders. As far as the tests are concerned, five Akash missiles while simulating different situations destroyed five different targets successfully and met the parameters for which they were being tested. The missiles have been equipped with new seekers, sources added. The targets were

deployed by teams of the Air Force and the Indian Army.

**The Statesman**  
PEOPLE'S PARLIAMENT, ALWAYS IN SESSION

Fri, 01 Dec, 2017

## IAF successfully conducts 1st air-to-air re-fuelling on indigenous aircraft

IAF conducted its first air-to-air re-fuelling successfully with the indigenous Airborne Early Warning and Control System (AEW&C) aircraft. The AEW&C in IOC configuration was handed over to the Indian Air Force (IAF) in February during Aero India, 2017 at Yelahanka Airbase in Bengaluru. The Airborne Surveillance System is a game changer in air warfare.

The AEW&C is a system of systems populated with state-of-the art active electronically scanned radar, secondary surveillance radar, electronic and communication counter measures, LOS (Line of Sight) and beyond LOS data link, voice communication system and self protection suite, built on an Emb-145 platform, having an air-to-air refuelling capability to enhance surveillance time.

A complex tactical software has been developed for fusion of information from the sensors, to provide the current air situation picture along with intelligence to handle identification or classification threat assessment to authorities here. Battle management functions are in-built to work as a network-centric system of Integrated Air Command & Control System (IACCS) node.

This system was developed and evaluated through collaborative efforts between DRDO and the IAF, with co-ordination for certification clearance and quality assurance by CEMILAC and DGAQA. AWACS is capable of operating as an Airborne Command and Control Centre for conducting offensive and defensive air operations. Meanwhile, in another major step in defence sector, the manufacturing facility of the Hindustan Aeronautics Ltd (HAL) has produced Sukhoi fighter jets which can be used to build the fifth-generation fighter aircraft if the government decides to go ahead with the proposed Indo-Russian joint venture.



*Fri, 01 Dec, 2017*

## **Mid-air refuelling feat by IAF**

*This allows aircraft to be airborne for more time, boosting the force's capabilities*

For the first time, an IL-78 refueller aircraft of the Indian Air Force on Thursday carried out air-to-air refuelling of the Embraer transport aircraft that has the indigenous Airborne Early Warning and Control (AEW&C) system Netra mounted on it.

“A mere 10-minute in-flight refuelling can generate four more hours of flight. The achievement has given a tremendous boost to the IAF’s operational capability,” the IAF said in a statement.

The AEW&C — also called eye-in-the-sky — is capable of long-range surveillance and a force multiplier. Air-to-air refuelling allows the aircraft to stay airborne much beyond their limits, allowing better exploitation of capabilities.

“The ‘Probe and Drogue’ air-to-air refuelling method, practised by IAF pilots, requires exceptional flying skills as the receiving aircraft has to accurately insert the receptacle probe into the basket-shaped drogue trailing the tanker aircraft, the statement said.

During air-to-air refuelling, both aircraft must maintain accurate flying parameters. The IAF is one of the few air forces in the world to operate mid-air refuellers. It now operates six Russian IL-78 refuellers and has been trying to buy six more.

The IAF inducted the Netra, developed by the Defence Research and Development Organisation (DRDO), in February this year. Three systems are being built and will be based at Bhatinda, facing the western border. Netra gives a 240-degree coverage of airspace.



*Fri, 01 Dec, 2017*

## **Now, IAF Embraer can fly longer**

*Air-to-air refuelling on aircraft used for surveillance successfully tested*

The “eye in the sky” of the Indian Air Force (IAF) can now stay airborne for extended periods. The IAF has successfully tested air-to-air refuelling on Embraer transport aircraft specialised to conduct Airborne Early Warning and Control (AEW&C) functions.

A mere 10-minute in-flight refuelling can generate additional four hours of flying endurance for the plane. “This achievement has given a tremendous boost to IAF’s operational capability,” the IAF said in a statement. This will enable the aircraft to fly for longer durations beyond its stated endurance. It is also the first time that air-to-air refuelling has been carried out on the Embraer platform.

The technique requires exceptional flying skills from the pilot. Most fighter jets in the IAF already have the facility of mid-flight refuelling by an oil-carrying plane, the IL 78 sourced from Russia. The AEW&C has state-of-the art Active Electronically Scanned Radar, Secondary Surveillance Radar, Electronic and Communication Counter Measures, data link, voice communication system and self protection suite.

A complex software has been developed for fusion of information from the sensors to provide the air situation picture along with intelligence to handle identification of threat assessment.

It is mated with the integrated air command, control and communications system (IACCCS), which gets direct real-time feeds from existing space-based overhead reconnaissance satellites, ground-based and aerostat-mounted ballistic missile early warning radars and high-altitude-long-endurance unmanned aerial vehicles, and manned AEW&C platforms.

## पंजाब केसरी

Fri, 01 Dec, 2017

### वायुसेना को बड़ी कामयाबी उड़ते विमान में भरा ईंधन



नई दिल्ली, (एजेंसी) : भारतीय वायुसेना आए दिन नए-नए कीर्तिमान अपने नाम कर रही है। गुरुवार के दिन भी वायुसेना ने ऐसा कारनामा किया है जिसके बारे में जानकर कोई भी हैरत में पड़ जाए। दरअसल, वायुसेना के स्वदेशी एम्ब्रायर ट्रांसपोर्ट विमान ने हवा में ही उड़ते हुए दूसरे विमान में ईंधन भरने में सफलता हासिल की है। वायुसेना के विमान के जरिए ऐसा कारनामा पहली बार किया गया है। इसमें सफलता हासिल करने के बाद वायुसेना के लिए इसे बड़ी उपलब्धि माना जा रहा है। क्योंकि, अब कई मौकों पर वायुसेना के विमानों को ईंधन भराने के लिए जमीन पर लैंड कराने की जरूरत नहीं होगी। हाल ही में भारतीय वायुसेना ने सुखोई विमान के जरिए सुपर सोनिक मिसाइल ब्रह्मोस का सफल परीक्षण कर दुनिया को नई ताकत का अहसास भी कराया था। सामरिक महत्व में इसे भारत की बड़ी कामयाबी के तौर पर भी देखा जा रहा है।

## एंब्रायर विमान ने उड़ान भरते हुए भरा ईंधन



उड़ान भरते विमान में हवा में ईंधन भरता एंब्रायर ट्रांसपोर्ट विमान • प्रेट्र

नई दिल्ली, आइएनएस : एयरबोर्न अर्ली वार्निंग एंड कंट्रोल सिस्टम (अवाक्स) के एंब्रायर ट्रांसपोर्ट विमान ने सफलतापूर्वक उड़ान भरते हुए हवा में ईंधन भरने का काम किया। इस क्षमता से विमान हवा में निर्धारित समय से ज्यादा देर तक उड़ान भरने में सक्षम हो सकेगा। यह पहला मौका है, जब एंब्रायर प्लेटफार्म पर हवा में उड़ान भरने के दौरान ईंधन भरने का काम किया गया है।

वायुसेना के लिए यह एक नई उपलब्धि है। हवा में उड़ान भरते हुए ईंधन भरने की इस तकनीक को एयर-टू-एयर रीफ्यूइलिंग कहा जाता है। इस तकनीक के लिए वायुसेना के पायलटों के पास विशेष उड़ान दक्षता का होना जरूरी है। इसका कारण यह है कि ईंधन लेने वाले विमान को तेल वाहक विमान के पीछे लगे टोकरी के आकार के ड्राग से सटीक तरीके से जुड़ना होता है। ईंधन भरने की प्रक्रिया के दौरान दोनों विमानों के लिए एकदम सटीक उड़ान मानदंडों को बनाए रखना अनिवार्य है।

वायुसेना ने अपने बयान में कहा है कि दुनिया की कुछ ही वायुसेना इस क्षमता का

### सफलता

- अब विमान देर तक उड़ान भरने में सक्षम हो सकेंगे
- इसके लिए पायलटों का विशेष रूप से दक्ष होना जरूरी है

### अगली पीढ़ी के अवाक्स में होगी हवा में ईंधन भरने की क्षमता

डीआरडीओ द्वारा विकसित किए जा रहे 360 डिग्री स्कैन युक्त अगली पीढ़ी के एयरबोर्न अर्ली वार्निंग एंड कंट्रोल सिस्टम (अवाक्स) में हवा में उड़ान भरने के दौरान ईंधन भरने की क्षमता दुगनी हो जाएगी। यह कदम वायुसेना के आग्रह पर उदाया जा रहा है। यह जानकारी डीआरडीओ के एक शीर्ष अधिकारी ने दी।

प्रदर्शन कर सकती है। इस क्षमता से लैस गिनती की वायुसेना में भारतीय वायुसेना भी शामिल है।