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Nuclear-capable Dhanush successfully test-fired

By Y. Mallikarjun

Launched from a ship, the missile met mission objectives in a flawless performance

India successfully test-fired the nuclear-capable Dhanush ballistic missile for its full range of 350 km from a naval ship off the coast of Odisha on Friday.

This follows the successful flight-testing of the land-based Prithvi-II ballistic missile for a similar range on Thursday.

The surface-to-surface Dhanush, a naval variant of Prithvi-II, was fired by personnel of the Strategic Forces Command (SFC) at 11.25 a.m. as part of regular training. The missile rose from the ship and splashed down near the pre-designated target in the Bay of Bengal with an accuracy of less than 20 metres. All the mission objectives were met in a flawless performance, official sources said.

All the radars, telemetry stations and electro-optical systems tracked and evaluated the performance in real time.

The single-stage, liquid-propelled Dhanush, already inducted into the Army, is one of the five missiles developed by the Defence Research and Development Organisation under the Integrated Guided Missile Development Programme.



IAF wants fighter jet deal fast-tracked

Force wants govt to get fighter jets worth Rs.1.25L cr through G2G deal

By Ajit K Dubey

Against the backdrop of dwindling fighter squadrons, the Indian Air Force (IAF) feels that its requirement for more than 100 combat aircraft expected to be worth over Rs. 1.25 lakh crore should be procured through a government-to-government (G2G) deal to avoid further time delays due to the complex acquisition process involved in it.

The IAF wants the inter-governmental deal as the Defence ministry is of the view that it should not proceed with the single engine fighter aircraft programme, and initiate a global programme where all fighter aircraft manufacturers would be invited through a competitive tender and the winner would be chosen after

● The IAF wants the acquisition procedure for acquiring the new aircraft to be completed in the shortest possible time and that will be possible only if they are allowed to go for a government-to-government deal.

— GOVERNMENT SOURCES

● If the government decides to buy planes through a tender route, it would take a minimum of eight to nine years, as at least five years would be required to select a vendor.

extensive trials. “The IAF wants the acquisition procedure for acquiring the new aircraft to be completed in the shortest possible time and that will be possible only if they are allowed to go for a government-to-government deal with a foreign country.

Even a G2G deal would take four years for the first plane to be delivered, and this would be the only way to end the vicious circle of delays,” government sources told Mail Today.

“If the government decides to buy planes

through a tender route, it would take a minimum of eight to nine years as at least five years would be required to select a vendor, and then another three would be required for the delivery,” they said.

The 36 Rafale planes, which will start getting inducted from next year, were also acquired through an inter-governmental deal with France in 2016.

In the past, the IAF suffered major delays in fulfilling its requirements by going through the normal acquisition process as the UPA’s plan to buy 126 medium multi-role combat aircraft dragged on for 10 years due to fears of corruption, and ultimately was scrapped by the NDA government.

On the reasons for not backing the single engine aircraft programme where 114 planes were to be manufactured indigenously in partnership with either USA or Sweden, sources said there were allegations of favouritism and wrongdoings even before the deal was initiated. Now, the government is mulling to start a tender afresh, inviting all the major vendors. But the IAF, wants a quick solution to its aircraft strength in view of the phasing out of the MiG-21s and other planes.

“IAF will have 32 Fighter Squadrons and 39 Helicopter Units by 2020,” the Defence Ministry had stated in Parliament. The force is finding it difficult to arrest the falling squadron strength due to delays in the induction of the indigenously manufactured LCA Tejas planes.

“10 squadrons of IAF equipped with MiG-21 and MiG-27 aircraft are scheduled to retire by 2024 on completion of their Total Technical Life.” the government said. Due to lack of inductions in the force, the Su-30MKI has become the mainstay as 11-12 squadrons would be deployed by 2020.



Sat, 24 Feb, 2018

Army issues tender to procure small arms

The Army on Friday issued tenders for procurement of various small arms and ammunition. “The Request for Information was issued for 5.5 lakh assault rifles and 6,000 sniper rifles,” an Army officer said.



Sun, 25Feb, 2018

Forces Need At Least 400 Drones

With stress on aerial surveillance and reconnaissance to get real time picture of the battlefield, the Indian armed forces want at least 400 drones besides submarine launched remotely piloted aircraft.

Directed Energy Weapons (DEWs), including high energy lasers and high-powered microwaves with the ability to destroy enemy target and satellites, are also projected needs to boost offensive and defensive military capabilities.

These capability enhancement requirements are part of the modernisation plan up to the late 2020s and figured prominently in the recently released Defence Ministry’s document “Technology Perspective and Capability-Roadmap.” These future projects enable the Indian industry both private and public to improve their design and manufacturing capacities to cater to the needs of the armed forces.

“This roadmap may guide the industry in planning or initiating technology development, partnerships and production arrangements. While pursuing any development or collaboration, the Indian industry should accord due importance to the Government’s thrust towards ‘Make in India’,” the 82-page document said.

It also mentioned the Navy's requirement for another aircraft carrier to boost maritime prowess. At present, the Navy has only one aircraft carrier INS Vikramaditya. Another ship INS Vikrant is in the last stages of manufacturing at Cochin Shipyard and will soon embark on sea trials. The proposed aircraft carrier mentioned in the roadmap document says the ship will serve the Navy for at least 40 years.

Highlighting the urgency to equip the armed forces with next generation unmanned aerial vehicles (UAV) or drones both for surveillance and hitting enemy targets, the document said the new drones will have longer period of staying in air, fly greater distance and take out targets. The armed forces, at present, have about 200 drones which act as major force-multipliers in modern-day warfare.

As regards remotely piloted aircraft (RPA) launched from submarines, the document noted the Army and Navy need at least 30 such platforms and said "the medium-altitude, long-endurance (MALE) combat RPA should have the capability to fly up to 30,000-feet altitude, with extended satellite communication ranges and endurance of more than 24 hours." The drones should be capable of firing missiles at land and maritime targets from over 20-km away, it added.

Besides this requirement, the two Services also require 100-150 spy drones, with the Army also needing 55-70 stealth, 50 short-range and 30 hybrid RPAs. The Navy also wants 50 high-altitude, long endurance(HALE) drones that can be launched vertically from warships as well as 10 submarine-launched RPAs.

About Directed Energy Weapons (DEWS), the paper said the Army and IAF need at least 20 "tactical high-energy laser systems" with the capability to destroy small aerial targets, electronic warfare and radars systems at a range of six -eight km in Phase-I. The next phase will see the laser systems should have a range of over 20-km to take on "soft-skinned" vehicles and troops, satellites from ground and aerial platforms.



Sat, 24 Feb, 2018

Amid border volatility, firepower of ITBP units cut by one-third

By Vijay Mohan

MoD invites tenders for 5.5 lakh new rifles

- The Ministry of Defence has invited Indian defence equipment makers to send in their bids to make 5.5 lakh assault rifles for the Army
- These rifles are expected to replace existing INSAS (Indian Small Arms System) rifle, Army's standard 5.56-calibre assault weapon designed about three decades ago
- The new rifle being sought has to be of 7.62 calibre, meaning it will fire bigger ammunition and, thus, increase the 'possibility of killing'. The request for information, the first step in the tendering process, was issued on Friday — TNS in New Delhi

Amid continued volatility along the China-Indian border, the authorisation of heavy weapons in Indo-Tibetan Border Police (ITBP) Force battalions has been cut by over 30 per cent.

Every ITBP service battalion includes a support company that operates 81 mm mortars and medium machineguns (MMGs) to provide heavy fire support to forward elements in face of heavy odd during outbreak of hostilities.

The authorisation of mortars has been reduced from 12 to eight while the number of authorised MMGs has come down from 18 to 12, according to orders issued by the ITBP Directorate General last week.

The decrease in the number of heavy weapons is part of the overall force restructure and rationalisation of equipment and personnel deployment that also involves reducing the manpower in service battalions. At present, an ITBP battalion comprises nearly 1,000 personnel.

The orders, while listing out the new manpower structure of a support company and the number of authorised officers, subordinate officers and jawans in mortar and MMGs platoons and detachments, state that the force headquarters is sending the proposal to the Ministry of Home Affairs with cadre review for readjustment of the surplus strength in support company resulting from reduction of weapon holdings.

The ITBP, with force strength of 56 battalions, is responsible for the peace time management of the Himalayan border with China covering 3,488 km in Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh. The border remains volatile with frequent Chinese transgressions and force build up on either side.

There has been a significant increase in the number of Chinese transgressions into the Indian territory as well as face-offs between troops of both sides. Doklam in the Sikkim sector and Demchok in the Ladakh sector are notable recent examples.

According to some reports, there were 415 transgressions by the Chinese soldiers in 2017 as compared to 271 in 2016, while the number of confrontations went up to 216 in 2017 from 146 in 2016. Demchok, Chumar, Pangong Tso, Spanggur, Kaurik and Barahoti in the western theatre and Namkha Chu, Sumdorong Chu, Asaphila and Dibang Valley in the north-east are among prominent hotspots.



Sat, 24 Feb, 2018

In defence of Indo-US ties

By Abhishek Kumar

The US government has recently re-articulated its Asia Strategy. The term in use now is Indo-Pacific as opposed to Asia Pacific. From India's perspective, this fits well into her ambition to be a global player in strategic affairs but one that comes with added responsibility. From the US perspective, this will have to essentially mean helping India build the required capabilities to justify its pivotal role.

One area where the future of this relationship will majorly hinge is 'Defence'. A greater defence collaboration between India and the US can help accomplish several goals. Not only will it help increase India's defence capability and, thereby, add heft to its credibility in international affairs, it could also provide fillip to India's manufacturing industry and job-creation agenda. Empowering India is in US interest too as that will ensure that the US will have a stable ally in the region with proven democratic credentials.

But for this relationship to fructify, there are a number of things that India would need to put in order. First, the key will be to sort out bureaucratic hurdles that make the procurement process lengthy and inefficient. For instance, currently, India's defence procurement process follows a practice that rewards the lowest bidder. Experts have opined that as a guiding principle this may undermine procurement efficiency. A better model may be perhaps a more qualitative assessment with some flexibility in evaluation. In other words, offers that add strategic value despite acceptable deviation from RFPs should also be considered. The second key aspect is that India would need to move away from vendor procurement system to a partnership model with the industry. Typically, these partnerships will be long-term and hence they need not only be based on strategic need but also on trust.

Traditionally, Indian Defence complex has faced trust issues with the private sector and, as a consequence, has relied on public sector monopolies. Such fears in today's time may be unfounded. Here India may want to look at examples from other countries which have successfully integrated private industry into

defence manufacturing. Third, India must understand that strategic defence relationship cannot be built overnight. There will be differences and thorny issues between partners and between countries but as long as there is bipartisan political consensus on strategic aspects at the domestic level and maturity in behaviour between partnering countries at the international level, such storms can be weathered in pursuit of greater commonality of interest.

Fourth, India has to internalise that in the US recognition of India as a major defence partner is an implicit expectation that India will share some of the burden that is currently upon the US shoulders outside the American territory. While this may mean an opportunity for India to extend its soft power in other countries through aid initiatives, it implies a certain cost. Therefore, India will have to judge for itself whether such costs are in her best interests or not. The gist of President Trump's address at the World Economic Forum that every country must put its own interest first, should be among the first principles here.

Fifth, India must also see the defence collaboration as an opportunity to give a fillip to the innovation ecosystem in the country. There is enough literature that suggests that defence has significant spin-offs for economies with a relatively large defence industrial base. This means that it could have potential positive externalities even for civilian sectors in terms of scientific innovation and technological progress.

India currently procures defence equipment in the range of \$20 to \$25 billion and in addition also imports components for what it manufactures indigenously. This indicates a huge potential to capitalise on the positive spin-offs of military spending and technology transfer that it may have with the US.

While these aspects could determine the broad contours of India-US defence partnership, India must realise that its biggest asset across its borders is its soft power and this must not be traded with any temptation to lean in favour of hard power. This would be a tricky thing to do with enhanced military prowess that may come through increased defence collaboration.

Further, India must also realise that US defence budget has not seen an increase in proportion to its global footprint and hence if this is to continue for long, there will be a shelf life to Indo-US defence collaboration.

Lastly, we must remember that India's military restraint has been rewarded time and again in international diplomacy. The civilian nuclear deal is just one example of that. While India has shown restraint, it has not stopped short of taking decisive military action when the situation demanded so. Paradoxically enough, American recognition of India as a major defence partner is also in a strange way a reward for India's restraint which others might call a proven responsible behaviour that adds to India's credentials.

Perhaps an articulation of a National Security Doctrine by India would be an apt way to set in motion its defence partnership with the US, and for that matter with countries as well.

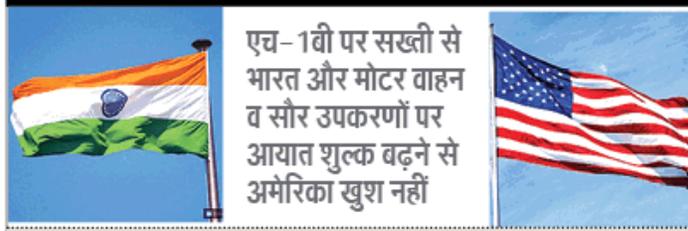
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भारत-अमेरिका के कारोबारी रिश्तों में बढ़ रही दूरी

जयप्रकाश रंजन • नई दिल्ली

डोनाल्ड ट्रंप के राष्ट्रपति बनने के बाद भारत और अमेरिका के रणनीतिक और कूटनीतिक रिश्ते भले ही बेहद ऐतिहासिक मोड़ ले चुके हों, लेकिन कारोबारी क्षेत्र में दोनों देशों के बीच नए तरह के तनाव पनप रहे हैं। भारत की तरफ से लाख आग्रह करने और पीएम नरेंद्र मोदी व विदेश मंत्री सुषमा स्वराज की तरफ से कई बार मुद्दा उठाने के बावजूद ट्रंप प्रशासन ने एच-1बी वीजा मुद्दे पर कोई रियायत नहीं दी। शुक्रवार को अमेरिकी सरकार ने एच-1बी नियमों में जो बदलाव किए, उससे भारतीय आईटी कंपनियों के लिए वहां कारोबार करना काफी महंगा हो जाएगा। दूसरी ओर, अमेरिका की तरफ से बार-बार आग्रह के बावजूद भारत ने वहां से आयातित मोटर वाहनों, सौर ऊर्जा से जुड़े उपकरणों पर लगाये जाने वाले सीमा शुल्क में कोई राहत नहीं दी है, बल्कि आम बजट 2018 में जिन कई उत्पादों पर सीमा शुल्क बढ़ाया गया, वह भी अमेरिका को नागवार गुजरा है।

ऐसा माना जा रहा है कि भारत व अमेरिका की सरकारें वैश्विक व कूटनीतिक मामलों में तो सहयोग की जरूरत महसूस कर रही हैं, लेकिन कारोबारी क्षेत्र में दोनों घरेलू राजनीति के मुताबिक कदम उठा रही हैं। राष्ट्रपति ट्रंप



एच-1बी पर सख्ती से भारत और मोटर वाहन व सौर उपकरणों पर आयात शुल्क बढ़ने से अमेरिका खुश नहीं

नई एच-1बी नीति कर्मियों की रक्षक : यूएससीआइएस

वाशिंगटन, प्रेट्र : अमेरिकी नागरिकता और आद्रजन सेवाओं (यूएससीआइएस) ने कहा है कि नई एच-1बी वीजा नीति ज्ञापन ट्रंप प्रशासन का अमेरिकी नागरिकों और गैर-आद्रजक कर्मचारियों के वेतन और कामकाज की स्थितियों की रक्षा करने के प्रयासों का हिस्सा है। यूएससीआइएस ने गुरुवार को नीति पर ज्ञापन जारी किया। एक कंपनी को यह साबित करने के लिए अतिरिक्त साधन जुटाने होंगे कि तीसरे पक्ष के कार्यस्थल पर काम करने वाला एच-1बी धारक कर्मचारी विशिष्ट व्यवसाय में एक खास असाइनमेंट पर काम कर रहा है। एच-1बी वीजा कार्यक्रम के तहत अमेरिका अस्थायी वीजा देता है। कंपनियों को शिक्षित अमेरिकी कर्मचारियों के अभाव में उच्च प्रशिक्षित विदेशी प्रोफेशनलों को नौकरी देने की छूट होती है।

को अगर 'हयर अमेरिका, बाई अमेरिका' की नीति को सही साबित करना है तो भारत को भी मेक इन इंडिया कार्यक्रम को सफल बनाना है। ट्रंप कुछ ही दिन पहले कांग्रेस में अपने भाषण में भारत की तरफ से ज्यादा शुल्क लगाने के मुद्दे की आलोचना कर चुके हैं। पिछले आम बजट में भारत ने महंगी मोटर्सआइकिलों पर आयात शुल्क को 60 फीसद व 75 फीसद से घटा कर 50 फीसद कर दिया। इसके बावजूद ट्रंप उसे नाकाफी मान

रहे हैं। वह वाहनों पर आयात शुल्क को पूरी तरह से खत्म करने की मांग कर रहे हैं। दूसरी तरफ भारत का कहना है कि इन कंपनियों को भारत में मैन्यूफैक्चरिंग प्लांट लगाना चाहिए, इसलिए इन पर ज्यादा शुल्क लगाया है। भारत की तरफ से कई तरह के लग्जरी उत्पादों (परफ्यूम, महंगी घड़ियां आदि) पर भी सीमा शुल्क बढ़ाया गया है जो अमेरिकी कंपनियों को नागवार गुजर रहा है। सिर्फ यही दो मुद्दे नहीं हैं जिनकी वजह से दोनों देशों के

कारोबारी रिश्तों में ठंडापन है। भारत की तरफ से रिटेल सेक्टर में विदेशी कंपनियों के प्रवेश को लेकर ज्यादा कुछ नहीं होने और कृषि आयात के कड़े नियम का मुद्दा भी अमेरिका की तरफ से बार-बार उठाया जाता है। मुक्त व्यापार समझौता (एफटीए) मुद्दा है जिसको लेकर दोनों देशों के बीच बिल्कुल विपरीत मत है। अमेरिका भारत के साथ एफटीए करने को ज्यादा इच्छुक है, जबकि भारत फिलहाल सिर्फ द्विपक्षीय निवेश समझौते (बीआइटी) के पक्ष में है। कारोबारी क्षेत्र में बढ़ते तनाव का ही नतीजा है कि मौजूदा 110 अरब डॉलर के द्विपक्षीय कारोबार को बढ़ाकर 500 अरब डॉलर करने के लक्ष्य को हासिल करने के लिए कोई ठोस रोडमैप नहीं बन पाया है। दोनों देशों ने विदेश मंत्रियों और रक्षा मंत्रियों की अगुआई में होने वाली टू प्लस टू वार्ता की तैयारियां तो शुरू कर दी हैं, लेकिन द्विपक्षीय कारोबार की पेंचों को किस तरह से दूर किया जाएगा, इसको लेकर अभी कोई रोडमैप नहीं बना है। शुक्रवार को ट्रंप प्रशासन ने जिस तरह से एच-1बी वीजा धारक प्रोफेशनल्स के लिए काम करने में नई अड़चनें खड़ी कर दी हैं। इसका सबसे ज्यादा असर भारत पर ही पड़ेगा क्योंकि अमेरिका जितने एच-1बी वीजा जारी करता है उसका 60-65 फीसद भारतीय कंपनियों को ही हासिल होता है।

hindustantimes.com

DU teacher devises new techniques to extract fingerprints

Forensics GS Sodhi has developed three chemical methods to get fingerprints even if they are doused with water, buried in soil, or burnt

New Delhi: GS Sodhi wanted to become a police officer as a child; a dream that was quashed when he got diagnosed with colour blindness. Now an associate professor of chemistry at Delhi University's Sri Guru Tegh Bahadur Khalsa College, he is living his dream to nab criminals in a different way — by perfecting methods of fingerprint collection.

Sodhi, after almost ten years of research, has developed three patented chemical methods to extract fingerprints even if they prints are doused with water, buried in soil, or burnt and covered in soot.

He received the Union home minister's research and development award for his work in forensic chemical sciences from Rajnath Singh on February 10.

According to Sodhi, criminals sprinkle water on their prints, burn the crime scene or bury the weapon to make it hard to extract their fingerprints, as conventional methods rely on the soluble components in one's sweat to read the impressions. Sodhi has developed methods to help in such situations, by creating chemical reagents that react with the non-soluble components in sweat and fingerprints.

"The first one is a suspension of a small particle reagent in water. It reacts with the fatty acids or oils in the sweat, and is also fluorescent in nature under a good source of light which enhances the visibility of the prints," said Sodhi.

He has also developed a phase transfer catalyst spray, which reacts with the metal ions in one's sweat, and a nano particle-sized powder, which needs minimal water to bind with it and reveal one's prints. While the preparation of the reagents can take 10-30 minutes, the collection of the fingerprint is a two-minute job.

Sumit Kumar, a scientific assistant at the Regional Forensic Science Laboratory, said water, dirt and soot, create "disturbances" in the fingerprints, making it difficult to lift and match.

Sodhi said more research in the field, and proper training of police officials is required. Delhi Police spokesperson Dependra Pathak said all officers are trained in lifting fingerprints but many times residents rummage through belongings before police the reach, contaminating the site.

Sodhi has been pushing for a BSc honours in forensic sciences at the university and his college, but to no avail. Registrar Tarun Das confirmed that the academic council approved such a programme at SGTB Khalsa College. Jaswinder Singh, principal of the college, said that the plans have been stalled because of the question of how to finance the course, as UGC has asked them to run the course in self-financed mode, and the university had disagreed.