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Press Information Bureau
Government of India

Ministry of Defence

Mon, 01 May 2023

DRDO Conducts Design Validation Trial of Vertical Shaft based Underground Ammunition Storage Structure

Centre of Fire, Explosive and Environment Safety (CFEES), a Delhi-based laboratory of Defence Research and Development Organisation (DRDO) has designed and developed a Vertical Shaft based Underground Ammunition Storage Facility. It enables upward vertical dissipation of blast effects considerably reducing the blast effect on surrounding utilities.

The Design Validation Trial of this Underground Ammunition Storage Structure was successfully conducted on April 30, 2023. The instrumented blast trial was carried out in presence of the Armed Forces by detonating 5,000 kgs of TNT in one of the chambers of the underground facility.

The CFEES team conducted the trial with precision and utmost safety in place. All the parameters recorded during the trial matched with estimated values. This facility will ensure that an explosion within will not cause damage to the adjacent chamber and also ensuring full operability of the remaining facility.

The Armed Forces find it difficult to stock ammunition as required by them due to non-availability of adequate land as large safety distances are required for ammunition storage structures.

The safety distances considerably reduce, when ammunition is stored underground. Based on the results of the instrumented trials, the safety distance has been established up to 120 Metric Ton (40 Metric Ton Net Explosive Content) ammunition storage per chamber.

The unique design developed has an additional advantage of reducing Safety Distances and Cost by 50 per cent as compared to current designs. The design also ensures higher safety of ammunition stored from any kind of aerial attack or sabotage.

Secretary, Department of Defence R&D and Chairman DRDO has congratulated the teams involved in the successful instrumented blast trial and stated that the facility can be extensively used by the Armed Forces for storage of all types of ammunition reducing the land footprint requirements in addition to providing enhanced safety of ammunition against aerial attacks or sabotage..

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1921292>

DRDO Conducts Design Validation Trial of Underground Ammunition Storage Structure

The Defence Research and Development Organisation (DRDO) has successfully conducted a trial of design validation of a state-of-the-art underground ammunition storage facility.

The Centre for Fire, Explosive and Environment Safety (CFEES), a Delhi-based laboratory of the DRDO, has designed and developed the vertical shaft-based underground storage facility.

“The design validation trial of this underground ammunition storage structure was successfully conducted on April 30,” the defence ministry said.

“The instrumented blast trial was carried out in presence of the armed forces by detonating 5,000 kg of TNT in one of the chambers of the underground facility,” it said in a statement. The ministry said the CFEES team conducted the trial with precision and utmost safety measures in place. “All the parameters recorded during the trial matched with estimated values. This facility will ensure that an explosion within will not cause damage to the adjacent chamber and also ensure full operability of the remaining facility,” it added.

The armed forces often find it difficult to stock ammunition as required by them due to the non-availability of adequate land as large safety distances are required for ammunition storage structures.

<https://theprint.in/india/drdo-conducts-design-validation-trial-of-underground-ammunition-storage-structure/1550022/>

अमर उजाला

Tue, 02 May 2023

कामयाबी: डीआरडीओ, भारतीय नौसेना ने हवा से गिराए जाने वाले कंटेनर का किया सफल परीक्षण

रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) और भारतीय नौसेना ने 150 किलोग्राम वजन ले जाने में सक्षम हवा से गिराए जाने वाले एक कंटेनर का सफल परीक्षण किया है। रक्षा मंत्रालय के अनुसार कंटेनर को आईएल 38 एसडी विमान से गिराया गया। मंत्रालय ने एक बयान में कहा कि कंटेनर का प्रारंभिक परीक्षण 27 अप्रैल को गोवा के तट पर किया गया। बयान के मुताबिक, नौसेना की रसद परिचालन क्षमताओं को बढ़ाने के लिए परीक्षण किया गया। इसका मकसद तट से 2,000 किलोमीटर से अधिक दूरी पर तैनात जहाजों को तत्काल जरूरी इंजीनियरिंग सामग्री प्रदान करना है। इससे जहाजों के लिए पुर्जे और अन्य सामान एकत्र करने के लिए कट के करीब आने की जरूरत कम हो जाएगी। डीआरडीओ की तीन प्रयोगशालाओं-नवल साइंस एंड टेक्नोलॉजी लैबोरेटरी (एनएसटीएल), विशाखापत्तनम, एरियल डिलिवरी रिसर्च एंड डेवलपमेंट इस्टैब्लिशमेंट (एडीआरडीई), आगरा और एयरोनॉटिकल डेवलपमेंट इस्टैब्लिशमेंट (एडीई), बंगलूरु ने मिलकर ये कंटेनर विकसित किया है।

<https://www.amarujala.com/india-news/drdo-indian-navy-conduct-successful-trial-of-indigenous-air-droppable-container-2023-05-02>



**Press Information Bureau
Government of India**

Ministry of Defence

Mon, 01 May 2023

DRDO & Indian Navy Conduct Successful Maiden Test Trial of Indigenous Air Droppable Container 'ADC-150' from IL-38SD Aircraft off Odisha Coast

Defence Research & Development Organisation (DRDO) and Indian Navy conducted the successful maiden test trial of 'ADC-150' from IL 38SD aircraft off the coast of Goa on April 27, 2023. 'ADC-150' is an indigenously designed and developed Air Droppable Container with 150 kg payload capacity. The trial was conducted to enhance the naval operational logistics capabilities by providing quick response to meet the requirement of critical engineering stores to ships (under distress), which are deployed more than 2,000 kms from the coast. It reduces the requirement of ships to come close to the coast to collect spares and stores.

Three DRDO laboratories - Naval Science & Technological Laboratory (NSTL), Visakhapatnam; Aerial Delivery Research & Development Establishment (ADRDE), Agra and Aeronautical Development Establishment (ADE), Bengaluru - have been involved in the development of ADC-150 container. The crucial flight clearance certification was given by Regional Center for Military Airworthiness (RCMA), Kanpur headed by Centre for Military Airworthiness & Certification (CEMILAC), Bengaluru.

Secretary, Department of Defence R&D & Chairman DRDO has congratulated the scientists and the Indian Navy for the successful trial of ADC-150.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1921291>

THE TIMES OF INDIA

Mon, 01 May 2023

DRDO, Indian Navy Conduct Successful Trial of Indigenous Air Droppable Container

The Defence Research and Development Organisation and the Indian Navy conducted a successful trial of an air droppable container with a 150 kg payload capability. The container was dropped from an IL 38SD aircraft, according to the defence ministry.

The maiden trial was conducted off the coast of Goa on April 27, it said in a statement.

"The trial was conducted to enhance the naval operational logistics capabilities by providing quick response to meet the requirement of critical engineering stores to ships which are deployed more than 2,000 kms from the coast. It reduces the requirement of ships to come close to the coast to collect spares and stores," the ministry said in a statement.

Three DRDO laboratories - Naval Science and Technological Laboratory (NSTL), Visakhapatnam; Aerial Delivery Research & Development Establishment (ADRDE), Agra and Aeronautical Development Establishment (ADE), Bengaluru have been involved in the development of the container.

"The crucial flight clearance certification was given by Regional Centre for Military Airworthiness (RCMA), Kanpur headed by Centre for Military Airworthiness & Certification (CEMILAC), Bengaluru," the ministry said.

<https://timesofindia.indiatimes.com/india/drdo-indian-navy-conduct-successful-trial-of-indigenous-air-droppable-container/articleshow/99917094.cms?from=mdr>



Mon, 01 May 2023

Indian Navy, DRDO Conduct Test Trial of Indigenous Air Droppable Container 'ADC-150' from IL-38SD Aircraft

The Indian Navy and Defence Research & Development Organisation (DRDO) conducted a successful maiden test trial of 'ADC-150' from an IL 38SD aircraft off the coast of Goa on April 27, 2023. The 'ADC-150' is an indigenously designed and developed 'Air Droppable Container' with a 150 kg payload capacity.

The trial was conducted to enhance naval operational logistics capabilities to meet the requirement of engineering stores for ships (under distress), which are deployed more than 2,000 kms from the coast.

The 'ADC-150' reduces the requirement for ships to come close to the coast to collect spares and stores.

Three DRDO laboratories - Naval Science & Technological Laboratory (NSTL), Visakhapatnam; Aerial Delivery Research & Development Establishment (ADRDE), Agra and Aeronautical Development Establishment (ADE), Bengaluru contributed to the development of the ADC-150 container.

The crucial flight clearance certification was given by the Regional Center for Military Airworthiness (RCMA), Kanpur, headed by the Centre for Military Airworthiness & Certification (CEMILAC), Bengaluru.

<https://www.indiatoday.in/india/story/indian-navy-drdo-conduct-test-trial-of-air-droppable-container-adc-150-from-il-38sd-aircraft-odisha-coast-2367274-2023-05-02>

DRDO on Twitter



Defence News

Defence Strategic: National/International



Press Information Bureau
Government of India

Ministry of Defence

Mon, 01 May 2023

ASEAN India Maritime Exercise (AIME-2023): Indian Navy Ships Arrive at Singapore

Indian Naval Ships Satpura and Delhi with RAdm Gurcharan Singh, the Flag Officer Commanding Eastern Fleet embarked onboard arrived at Singapore on 01 May 2023 to participate in the Inaugural ASEAN India Maritime Exercise (AIME-2023) scheduled from 02 to 08 May 2023.

The Harbour Phase of the exercise is scheduled to be held at Changi Naval Base from 02 to 04 May 2023 and the Sea Phase will be conducted from 07 to 08 May 2023 in the South China Sea. AIME 2023 will provide an opportunity for Indian Navy and ASEAN navies to work together closely and conduct seamless operations in the maritime domain.

INS Delhi, India's first indigenously-built guided missile destroyer and INS Satpura, an indigenously-built guided missile stealth frigate are a part of Indian Navy's Eastern Fleet based at Visakhapatnam and function under the operational command of the Flag Officer Commanding-in-Chief, Eastern Naval Command. These ships are fitted with state-of-the art weapons and sensors. The ships, during their port call at Singapore, will also participate in International Maritime Defence Exhibition (IMDEX-23) and International Maritime Security Conference (IMSC) being hosted by Singapore.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1921224>



Press Information Bureau
Government of India

Ministry of Defence

Mon, 01 May 2023

Chief of the Air Staff Visits Sri Lanka

Air Chief Marshal VR Chaudhari, Chief of the Air Staff (CAS), embarked on a four-day official visit to Sri Lanka today. During the visit, the CAS is scheduled to meet the Hon'ble President of Sri Lanka, the Hon'ble Prime Minister of Sri Lanka, the Hon'ble State Minister of Defence, the Chief of the Defence Staff, the Commanders of Sri Lanka Air Force, Army & Navy, and the Defence Secretary.

The CAS is visiting Sri Lanka on the invitation of the Commander of Sri Lanka Air Force, Air Marshal SK Pathirana. During the visit the CAS shall also interact with student officers of the National Defence College, Sri Lanka and visit the Sri Lankan Air Force Academy. The visit of the CAS will enhance the existing professional ties and bonds of mutual cooperation between both the Nations.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1921077>



Mon, 01 May 2023

India-China LAC Row Enters Fourth Year, Impasse Persists

By Rezaul H Laskar

As the military standoff with China on the Line of Actual Control (LAC) enters its fourth year, New Delhi is in no mood to acquiesce to Beijing's recent efforts to promote a narrative that the situation in Ladakh is stable and moving towards "normalised management", people familiar with the matter said. The border row in eastern Ladakh erupted into the open with a skirmish between troops of the two nations at Pangong Lake in early May 2020. A brutal clash at Galwan Valley the following month, which resulted in the death of 20 Indian soldiers and at least four Chinese troopers, took bilateral ties to their lowest point in six decades.

The resolution of outstanding problems along the LAC appears elusive, with the latest round of military talks between the two sides on April 23 yielding no outcome, and the last breakthrough coming in September 2022.

Amid the impasse, China has sought to push a narrative that the situation in Ladakh is generally stable and the two countries should move towards normalisation. The latest Chinese leader to push this narrative was defence minister General Li Shangfu, who said at a meeting with his Indian counterpart last week that the border is “generally stable” and the two countries should “place the border issue in an appropriate position” and “promote the transition of the border situation to normalised management”.

India-China relations cannot be normalised without peace and tranquillity on the LAC, the people cited above said, requesting anonymity. In this context, they pointed to friction points such as Depsang and Demchok and external affairs minister S Jaishankar’s recent remarks that the situation on the LAC remains “very fragile” as there are points where Indian and Chinese troop deployments are “quite dangerous”.

“The Chinese side has been putting out a narrative about moving towards normalisation on the border. That is not going to happen,” one of the people said.

The border talks have been deadlocked since the Indian Army and China’s People’s Liberation Army (PLA) pulled back troops from Patrolling Point-15 in September 2022. That disengagement, the fourth since the LAC row erupted in early May 2020, took place after the 16th round of talks between military commanders on July 17, 2022.

Despite four rounds of disengagement at Galwan Valley, Pangong Lake, Gogra (PP-17A) and Hot Springs (PP-15), India and China still have more than 60,000 troops each and advanced weaponry deployed in Ladakh.

Problems at Depsang in Daulet Beg Oldi sector and Charding Nullah Junction in Demchok sector are still on the negotiating table. At the 18th round of military talks on April 23, the two sides only agreed on maintaining security and stability along the LAC and continuing dialogue through military and diplomatic channels to work out a mutually acceptable resolution of remaining issues.

Defence minister Rajnath Singh raised the LAC row with Li at their meeting on April 27 and stressed that the violation of border management agreements has eroded bilateral relations, and the development of ties is based on peace and tranquillity at the borders. Singh told Li all issues at the LAC need to be resolved in line with bilateral agreements and commitments.

Former Northern Army commander Lt Gen (retired) DS Hooda described Singh’s stand as the standard Indian position – that the standoff has impacted bilateral ties, which can only improve if the PLA disengages and pulls back additional forces.

“This indicates both sides have probably reiterated their respective positions and there is no substantive move forward. However, it is good that high-level political contacts are taking place because ultimately the resolution will come at the political level,” Hooda said.

While addressing the Army Commanders’ Conference on April 19, Singh expressed confidence in the Indian Army’s ability to handle any contingency along the border with China even as he said talks will continue for peaceful resolution of the lingering row in Ladakh sector as disengagement and de-escalation are the best way forward.

<https://www.hindustantimes.com/india-news/india-rejects-china-s-narrative-of-stability-in-ladakh-standoff-says-normalisation-impossible-without-peace-and-tranquility-on-lac-101682965447670.html>

India Blocks 14 Mobile Apps Used by Terrorists to Receive Texts from Pakistan | Check List

The Central Government has blocked 14 mobile messenger applications after it found that the apps were being used by terror groups in Jammu and Kashmir. It is reported that terrorists used these mobile messenger apps to spread the message and receive messages from Pakistan. The step was taken on the recommendation of defence forces, security, intelligence and investigation agencies.

Multiple agencies found that these apps were being used by terrorists in Kashmir to communicate with their supporters and on-ground workers (OGW). Further, these apps did not have representatives in India. These apps have been blocked under Section 69A of the Information Technology Act, 2000.

List of 14 Apps Blocked

1. Crypviser
2. Enigma
3. Safeswiss
4. Wickrme
5. Mediafire
6. Briar
7. BChat
8. Nandbox
9. Conion
10. IMO
11. Element
12. Second line
13. Zangi
14. Threema

Most of these apps were designed to provide anonymity to the users, a report said, adding and their features made it tough to resolve entities associated with them. Through different agencies, the ministry of home affairs had found that these mobile apps aided terrorists and their affiliates to engage in terror activities.

"Agencies keep track of channels used by Overground workers (OGWs) and terrorists to communicate among themselves. While tracking down one of the communication, agencies found that the mobile application does not have representatives in India and it is difficult to track down activities happening on the app," ANI quoted an official.

Thereafter, with the help of other intelligence agencies operating in the valley, a list of such apps was prepared that pose a threat to national security and do not follow Indian laws. After getting the list prepared, the concerned Ministry was informed of the request to ban these mobile applications. These apps have been blocked under Section 69A of the Information Technology Act, 2000, the

official added. In official communications to higher-ups, the intelligence agencies informed that these apps are spreading terror propaganda in the Valley.

The Central government's crackdown on mobile applications is not new as the country has taken similar actions against hundreds of apps in past, citing security concerns. In the last few years, the government has imposed ban on around 250 Chinese apps citing them to be “prejudicial to the sovereignty and integrity of India, defence of India, security of the state and public order”.

These apps include popular applications like TikTok, Shareit, WeChat, Helo, Likee, UC News, Bigo Live, UC Browser, Xender, Camscanner, popular mobile games like PUBG Mobile and Garena Free Fire.

<https://www.timesnownews.com/india/breaking-news-govt-blocks-14-mobile-messenger-apps-used-by-terrorists-to-receive-texts-from-pakistan-article-99899860>

THE ECONOMIC TIMES

Mon, 01 May 2023

Govt to Move away from Concept of Cantonments

The government is looking to move away from the British-era concept of cantonment towns by demerging military stations and civil areas, and merging the latter with municipalities in their respective states. This will be a shift in administration for several cantonment towns, most of which were established pre-independence.

The defence ministry through a notification on April 27 shed the tag of cantonment for Yol in Himachal Pradesh. The military area within the cantonment has been converted into a military station while the civil area is being merged with the municipality. The next town in line for a similar exercise is Nasirabad in Ajmer. More will follow suit.

“Civilians of Cantts do not benefit from state government schemes since they are governed by Cantt Boards through the Defence Estates Department of the Ministry of Defence. Hence, there is a popular demand from civilians and also states for excision of Cantts,” sources said.

This is a first among a series of excision of cantts and is a move that has been welcomed by all. Cantts are deemed Municipalities and running Municipalities is a State subject.

<https://economictimes.indiatimes.com/news/defence/govt-to-move-away-from-concept-of-cantonments/articleshow/99917143.cms>

The Tribune

Mon, 01 May 2023

India Inks 1st Defence Pact with Caribbean Nation

India, for the first time, has included a Caribbean nation — the Dominican Republic — into the ITEC-Defence Scheme, under which the armed forces personnel of that country will get trained at various military training institutes in the country.

The pact was among the several signed during External Affairs Minister Jaishankar’s visit last week. The two sides also agreed to deepen cooperation in cutting-edge sectors such as space

exploration, satellite data management, artificial intelligence, biotechnologies, information and communication technologies and more.

A meeting between Jaishankar and his counterpart Roberto Alvarez also focused on bilateral, regional as well as international issues. The two ministers also jointly inaugurated the Indian embassy, which was opened in 2022.

<https://www.tribuneindia.com/news/nation/india-inks-1st-defence-pact-with-caribbean-nation-503857>

The Tribune

Mon, 01 May 2023

India, Maldives Discuss Defence Cooperation

Defence Minister Rajnath Singh today conducted bilateral delegation-level talks with his Maldivian counterpart Mariya Ahmed Didi. Issues of mutual defence cooperation, new initiatives to further strengthen defence and security partnership were discussed, the Ministry of Defence said.

Rajnath Singh commenced his three-day official visit to Maldives. As a special gesture, reflecting the warmth in the bilateral relations, Ahmed Didi broke protocol and personally received Rajnath Singh at the airport.

India will be handing over a fast patrol vessel along with an assault landing craft to Maldivian Coast Guard in a formal ceremony tomorrow.

<https://www.tribuneindia.com/news/nation/india-maldives-discuss-defence-cooperation-503854>

ThePrint

Mon, 01 May 2023

NSA Ajit Doval Holds Talks with Iranian Counterpart in Tehran, Focus on Key Projects & Security Cooperation

Days after Iranian Defence Minister Mohammad Reza Gharaei Ashtiani's visit to India, National Security Advisor (NSA) Ajit Doval is in Iran on a day-long visit to hold talks with his counterpart and streamline key projects and security cooperation between the two countries.

Doval, along with key officials from the National Security Council Secretariat, met with Ali Shamkhani, secretary of Iran's Supreme National Security Council (SNSC), in Tehran Monday.

The NSA will also hold talks with Iran's Minister of Foreign Affairs Hossein Amirabdollahian, who is scheduled to travel to India later this week to attend the Shanghai Cooperation Organisation (SCO) foreign ministers' meeting in Goa.

India is the current chair of the SCO and Iran is set to be made a permanent member of the grouping at its annual summit later this year. Iranian state-run news agency IRNA reported that Doval and Shamkhani discussed economic, political and security issues concerning the two countries, "as well as the most important regional and international developments".

Sources told ThePrint that the big focus of Doval's visit has been deepening security and intelligence cooperation between the two sides while also looking at ongoing projects.

As reported by ThePrint, Defence Minister Rajnath Singh and his Iranian counterpart Brigadier General Ashtiani last week reviewed the progress of the key International North-South Transport Corridor (INSTC) — a 7,200 km multi-mode transport project to facilitate movement of freight along Afghanistan, Armenia, Azerbaijan, Russia, Central Asia and Europe, besides the two countries.

The first India-bound Russian cargo — sent by train for the first time using the INSTC — reached Iran last year, having covered around 3,800 km through Kazakhstan and Turkmenistan, after which it was sent over to India by sea.

This new corridor has opened up a whole new route for trade between India and Russia in which Iran plays a key role.

India has been pushing for increased regional connectivity and the development of the Chabahar port in Iran. New Delhi has proposed to include the port in the framework of the INSTC.

Located in the Sistan-Baluchistan province on energy-rich Iran's southern coast, the Chabahar port is being increasingly seen as central to connectivity to central Asia.

<https://theprint.in/diplomacy/nsa-ajit-doval-holds-talks-with-iranian-counterpart-in-tehran-focus-on-key-projects-security-cooperation/1549385/>



Mon, 01 May 2023

Inaugural ASEAN-India Maritime Exercise in South China Sea from May 2-8

In a further step, in the expanding India-ASEAN (Association of South East Asian Nations) military cooperation, the maiden ASEAN-India Maritime Exercise (AIME) is set to begin on May 2 with war games in South China Sea. Navy Chief Adm. R. Hari Kumar is in Singapore for the exercise as well as to take part in the International Maritime Defence Exhibition (IMDEX-23) and International Maritime Security Conference (IMSC) being hosted by Singapore.

In separate developments, the Defence Minister arrived in Maldives on a three-day visit while Air Force Chief Air Chief Marshal V.R. Chaudhari embarked on a four-day visit to Sri Lanka.

Indian Naval Ships *Satpura* and *Delhi* with Rear Admiral Gurcharan Singh, the Flag Officer Commanding-Eastern Fleet "... arrived at Singapore on May 1 to participate in the inaugural AIME-2023" scheduled from May 2-8, the Navy said in a statement. "AIME-2023 will provide an opportunity for Indian Navy and ASEAN navies to work together closely and conduct seamless operations in the maritime domain," it added.

The 'Harbour Phase' of the exercise is scheduled to be held at Changi Naval Base from May 2-4 and 'Sea Phase' from May 7-8 in the South China Sea, the Navy said. The ships, during their port call at Singapore, will also participate in IMDEX-23 and IMSC, it added.

The inaugural edition of the naval and maritime defence event IMDEX was held in 1997 and has since been expanding year on year. There are about 50 delegations this year, it has been learnt.

Established in 2009, the IMSC is co-organised by Singapore Navy and S. Rajaratnam School of International Studies (RSIS). The conference brings together navy chiefs, coast guard director-

generals, policy makers, strategic thinkers and maritime stakeholders to exchange ideas and discuss ways to enhance and foster mutual security in our maritime commons, the IMSC website states.

Maldives visit

Mr. Singh reached Male on Monday afternoon on a three-day visit, the first by an Indian Defence Minister to Maldives in 11 years, according to the Indian High Commission. “Our meeting in Male today was very good. We exchanged views on multiple subjects including further boosting the defence partnership between India and Maldives,” Mr. Singh said after a meeting with his counterpart Mariya Didi.

The entire gamut of defence relations between the two countries will be reviewed during the deliberations. The Minister will also call on Maldivian President Ibrahim Mohamed Solih.

In tune with India’s commitment to capacity building of friendly countries and partners in the region, Mr. Singh will gift one Fast Patrol Vessel ship and a Landing Craft to the Maldives National Defence Forces, the Defence Ministry said. “During his stay, he will also visit the ongoing project sites in the country and interact with the Indian diaspora.”

India and the Maldives are working closely to effectively address shared challenges, including maritime security, terrorism, radicalisation, piracy, trafficking, organised crime and natural disasters, the Ministry added.

<https://www.thehindu.com/news/national/inaugural-asean-india-maritime-exercise-in-south-china-sea-from-may-2-8/article66800942.ece>

ThePrint

Mon, 01 May 2023

Exercise Ajeya Warrior 2023: Indian, UK Army Troops Carry out Tactical Drills

Indian Army and British Army troops on Monday (local time) carried out joint training on various tactical drills during the ongoing Bilateral Exercise Ajeya Warrior 2023 in the United Kingdom.

The bilateral exercise is being held at Salisbury Plains, United Kingdom till May 11.

Ajeya Warrior is a biennial training event with the United Kingdom conducted alternatively in the United Kingdom and India, the last edition was held at Chaubatia, Uttarakhand in October 2021.

Soldiers of the 2 Royal Gorkha Rifles from the United Kingdom and Indian Army soldiers from the Bihar Regiment are participating in the exercise. The Indian Army contingent arrived at Brize Norton on April 26 in an Indian Air Force C-17 aircraft with indigenous weapons and equipment.

According to the Ministry of Defence, the aim of the exercise is to build positive military relations, imbibe each other’s best practices and promote the ability to operate together while undertaking company-level sub-conventional operations in urban and semi-urban environments under UN mandate, in addition to developing inter-operability, bonhomie, camaraderie and friendship between the two armies.

The scope of this exercise involves a Command Post Exercise (CPX) at the Battalion level and Company level Field Training Exercise (FTX). During the exercise, participants will engage in various missions testing their operational acumen in various simulated situations; showcasing and refining their tactical drills, and learning from each other’s operational experience.

“Ajeya Warrior” is yet another significant milestone in defence cooperation between the Indian Army and British Army which will further foster the bilateral relations between the two countries, said the Defence Ministry statement.

The exercise is part of an initiative to develop interoperability and share expertise with friendly foreign nations.

Both nations’ military forces take part in this combined military drill. It aims to provide pieces of training to the soldiers of both nations in counter-insurgency and counter-terrorism operations. It has proved to be an excellent strategy for strengthening the ties between them.

<https://theprint.in/world/exercise-ajeya-warrior-2023-indian-uk-army-troops-carry-out-tactical-drills/1549304/>



Mon, 01 May 2023

UK's Ministry of Defence to Purchase Rockets with a Range of 100-300 Km for Ukraine

The UK Ministry of Defence has made a list of military equipment and ammunition that it has planned to purchase for Ukraine in the near future, reported Ukrinform. The List by the UK Ministry of Defence includes long-range missiles or rockets with a range of 100 to 300 km. The list of planned purchases has been released on the website of the UK Government, reported a Ukrainian local news outlet.

List of military equipment and ammunition by UK

According to the published details by the UK government, the main requirements for missiles are those which must be launched from land, sea or air. Whereas, the payload of ammunition should be from 20 to 490 kg. Other desirable requirements are:

- Low Probability of Intercept (LPI)
- Mission Planning Capability
- Assured navigation (with hardened Global Navigation Satellite System capability) in the face of advanced countermeasures and EM spectrum denial
- Air defence penetration methods to increase the probability of a successful strike
- Technical Readiness Level of at least 8

Further, to maximise the mobility of the Ukrainian Army, the UK had voiced for the purchase of engineering equipment and heavy equipment transporters:

1. Armoured minefield breaching capabilities – mine rollers and mine ploughs full width and track width for Main Battle Tanks – T-72, Leopard 1, Leopard 2. Armoured mine-clearing vehicles.
2. Armoured vehicles launched bridges and launchers in any size.
3. Medium Girder Bridges: 9m to 31m, with at least Military Load Capacity (MLC) – 70(T).
4. Logistical support bridge launchers and reusable bridges: 40m to 80m, with at least Military Load Capacity (MLC) – 70(T).

5. Heavy equipment transporters capable of transporting Main Battle Tanks.

Apart from this, the British Ministry of Defence planned to purchase equipment to strengthen Ukrainian air defence. The International Fund for Ukraine has been funded by a mechanism that uses funding from international partners to procure priority military assistance for Ukraine at pace. This would make sure that there is a continued supply of military support – lethal and non-lethal – to Ukraine through 2023 and beyond. The UK Ministry of Defence has been administering the fund on behalf of an Executive Panel, comprising the UK, Norway, Netherlands, Denmark and Sweden. These partners, along with Iceland and Lithuania, have contributed a collective total of more than £520 million to the fund to date, as per the UK government website.

<https://www.republicworld.com/world-news/russia-ukraine-crisis/uks-ministry-of-defence-to-purchase-rockets-with-a-range-of-100-300-km-for-ukraine-articleshow.html>

ThePrint

Tue, 02 May 2023

Biden Tells Marcos U.S. Commitment for Defense of Philippines ‘Ironclad’

President Joe Biden told Philippines President Ferdinand Marcos Jr. at the White House on Monday that the U.S. commitment to the defense of its ally was “ironclad,” including in the South China Sea where Manila is under pressure from China.

Marcos, on the first White House visit by a Philippines leader in 10 years, stressed the importance of the United States as his country’s sole treaty ally in a region with “arguably the most complicated geopolitical situation in the world right now.”

U.S. officials said the leaders would agree new guidelines for stronger military cooperation, as well as stepped up economic cooperation, underscoring a dramatic turnaround in U.S.-Philippine relations over the past year. “The United States remains ironclad in our commitment to the defense of the Philippines, including the South China Sea,” Biden told Marcos in the Oval Office, reaffirming a 1951 Mutual Defense Treaty that calls for the United States to act in the event of an armed attack on the Philippine military. U.S. official said the new guidelines focused on military coordination across land, sea, air, space and cyberspace, while the U.S. administration will also transfer three C-130 aircraft and look to send additional patrol vessels to the Philippines.

“It is only natural for the Philippines to look to its sole treaty partner in the world to strengthen and to redefine the relationship that we have and the roles that we play in the face of those rising tensions that we see now around the South China, Asia Pacific and Indo-Pacific region,” Marcos said. Under Rodrigo Duterte, Marcos’ predecessor, U.S. relations soured as he turned the Philippines sharply away from its former colonial ruler and built closer ties with China.

The summit is the centerpiece of a four-day U.S. visit by Marcos that started on Sunday.

Biden has invested in courting Marcos, who still faces a U.S. court judgment connected with \$2 billion of plundered wealth under his father’s rule.

Washington helped Marcos’ father flee into exile in Hawaii during a 1986 “people power” uprising and as head of state his son is immune from U.S. prosecution.

Biden noted to Marcos that “it’s been a while since you’ve been here,” before adding that Marcos Jr. had accompanied his father to the United States when he met former President Ronald Reagan.

Marcos became president last year and has sought warm relations with both the United States and China, who are vying for influence in the Asia-Pacific region.

Washington sees the Philippines as key to any effort to counter an invasion of Taiwan by China, which claims the island as its own territory. Manila recently agreed to allow the United States access to four more of its military bases under an Enhanced Defense Cooperation Agreement, but the two sides have not said what U.S. assets will be stationed at those.

Experts say Washington considers the Philippines a potential location for rockets, missiles and artillery systems to counter a Chinese amphibious assault on Taiwan.

However, Marcos told reporters on his plane China had agreed to discuss fishing rights in the South China Sea and also that he would not allow the Philippines to become a “staging post” for military action. Before departure for Washington on Sunday, Marcos said he would reaffirm Manila’s commitment “to fostering our long-standing alliance as an instrument of peace and as catalyst of development in the Asia-Pacific region.”

TOUGHER STANCE

With many Filipinos frustrated by China’s actions in the South China Sea, including the harassing of Philippine ships and fishermen in parts of the sea that both countries claim, popular support has grown for a tougher stance toward Beijing.

Wariness about China has only increased recently.

A reported comment last month by Beijing’s ambassador to Manila that the Philippines should not support Taiwan’s independence “if you care about the 150,000 overseas foreign workers” of Filipino origin who live there was viewed as a “veiled threat,” a U.S. official said.

Biden was the first official to reach out to Marcos after his election and has made strengthening economic and military ties in the Indo-Pacific region a cornerstone of his foreign policy.

Ahead of the summit, U.S. lawmakers sent a bipartisan letter to Biden calling on him to raise what they called the worsening human rights “crisis” in the Philippines.

In a statement they said there were well-documented violations under Duterte but recent reports showed “ongoing impunity.” They cited reports from the Karapatan Human Rights Alliance of 17 extrajudicial killings, 165 illegal arrests from July to December 2022, and a total of 825 political prisoners.

The new Philippines bases the U.S. gained access to last month include three facing Taiwan and one near the disputed Spratly Islands in the South China Sea. China said this was “stoking the fire” of regional tensions and Washington should take no role in a dispute far from its shores.

<https://theprint.in/world/biden-tells-marcos-u-s-commitment-for-defense-of-philippines-ironclad/1550115/>

ARMY TECHNOLOGY

Mon, 01 May 2023

Is China’s Korla Laser ASAT Site Hacking Western Satellites?

By Andrew Salerno-Garthwaite

New intra-day satellite imagery of the Korla East Test Site in Xinjiang, China, shows the operation of laser anti-satellite weapons (ASAT) to engage with Western satellites. The satellite imagery from

geospatial intelligence company BlackSky has uncovered a pattern of behaviour at the Korla East Test Site that is consistent with China's development of technology to disrupt, destroy or hijack foreign satellites, as mentioned in the recent US intelligence breach.

Army Technology has reviewed satellite images of Korla East Test Site featuring two laser gimbals with supporting infrastructure, housed within separate hangars with retractable roofs, to the north and south of the compound, confirming the view that this site holds ASAT weapons. The evidence suggests a pattern of opening the hangars to operate the ASAT lasers around solar noon, the time when foreign imaging satellites are most active.

According to satellite tracking data for a sample of days within the observation period, a large number of satellite companies orbited within line of sight of the facility during active ASAT periods, including SpaceX's Starlink communications satellites, and constellations of commercial geo-imaging satellites that include the companies Spire and Planet Labs. National military satellites may also have been active in the region during this time, but their orbits are not public knowledge.

The use of ASAT systems at the Korla East Test Site is in line with details that emerged from the leak of classified CIA documents in April 2023. The *Financial Times* reported the documents included concerns that China is developing technology "to seize control of a satellite, rendering it ineffective to support communications, weapons, or intelligence, surveillance, and reconnaissance systems".

The ASAT located at Korla East Test Site are laser directed-energy weapons that have uses that may vary from dazzling and disrupting a satellite's communications and optical sensors, to heating a target for a separate engagement with heat-seeking missiles, or even directly destroying satellite components.

Laser ASAT could also be used to harvest data from a satellite by spoofing an encrypted point-to-point laser information transfer, as described by Neil Sherwin-Peddie, head of space security BAE Systems Digital Intelligence, after the company forecasted the first major hack of a satellite in 2023. "The adversary can use satellite blinding as these satellites pass to capture critical imagery or radio frequency data."

EMP generator and aerostat blimp also at site

Other features in the imagery from the desert-based Korla East Test Site are also raising questions.

Co-located with ASATs at the facility are an electromagnetic pulse (EMP) generator used in research to protect and harden technology against nuclear EMP incidents; and a newly discovered aerostat military blimp, captured for the first time at Korla East by BlackSky. Given the size of the aircraft, roughly 31m in length, the aerostat is thought to be either a CA-30R or CA-32R.

An intelligence analyst familiar with the location and imagery said this was of interest because a military organisation would not normally house these unusual and unrelated technologies in the same remote location without a shared purpose or interconnection between them.

The electromagnetic pulse research site at Korla East Test Site is located 3km south of the main facility, and its distinctive appearance is similar to the Nuclear Electromagnetic Pulse test system in Switzerland build by Montena Technology. These systems use horizontally polarised dipoles to simulate an EMP attack and can be used to test equipment for its resistance against such electronic warfare.

An aerostat is a platform that naturally lends itself to EMP protection, according to a 1997 Whitehall Paper journal article on the subject, with blimps' capacity to remain airborne not vulnerable to this form of electronic warfare in the same manner that other aircraft would be susceptible, although many electronic subsystems would still need ruggedisation. The CA-30R and CA-32R are remotely controlled blimps capable of being adapted for aerial survey, photography,

and surveillance missions. They have small gondolas that are not equipped with controls for an onboard pilot.

Geospatial intelligence analysis of the Korla East Test Site

BlackSky operates a constellation of 16 satellites that orbit along the Earth's equator, in contrast to conventional geospatial intelligence companies that operate satellite constellations with polar orbits. Although the area covered by BlackSky's unusual pattern of orbits is smaller, it still captures 95% of the human activity related to gross domestic production worldwide.

This pattern of orbit also means that the BlackSky constellation can return to a site with a much higher frequency. Most people on earth will be under a BlackSky satellite every hour, and BlackSky can return satellite imagery within 90 minutes of any request. The industry standard elsewhere is to handle requests within a few days or a week.

Up until this point analysis of the activity pattern on the site had been hampered by latency and infrequent observation, but BlackSky's low-latency satellite constellation allowed for intra-day collections, capturing 200 images at Korla East Test Site, with observations made in a sample of all daylight hours across the period of 24 April to 9 June 2022.

An intelligence analyst familiar with the location and imagery found increased laser ASAT activity around solar noon – the time-of-day conventional satellites collect images for intelligence operations.

The most intense periods of activity were between 10am and 1pm, when a total of 46 images were collected. For example, in the 19 images collected just between 10am and 11am, the northern hangar was open to allow the laser ASAT to engage with satellites in every instance, and the southern hangar was open 89% of the time.

For other companies in the commercial geospatial intelligence industry, the period around solar noon is the optimal time for capturing and collecting images of the ground to avoid the blocking effects of shadows. Most image collection in the commercial industry occurs in this time, and the uptick in activity at the Korla East Testing Site at this point suggests the use of the ASAT to engage with this class of satellite.

This trend is underscored by the observations BlackSky made between 5am and 6am, when long shadows make commercial observation operations unlikely. Of the 10 observations made in this interval neither hangar containing an ASAT was open at any point. The data also showed a rise in the percentage of hangar openings for the northern ASAT weapon later in the day. It is possible that this corresponds to a rise in activity for satellites without publicly logged orbits, such as military and national government satellites.

In images viewed by *Army Technology*, the ASAT lasers are visible within the hangar when the roof is retracted. The laser has two large shoulders and a protruding lens, similar in outline to the China-made Silent Hunter low altitude laser air defence system, demonstrated at the 2017 International Defence Exhibition & Conference. The major difference is the size of the systems. The Silent Hunter is a car mounted tactical system, while the of the ASAT system visible at Korla East Testing Site is much larger, closer in size to a system that would be mounted on a naval vessel. The southern hangar containing a laser also featured a forward door, suggesting the laser was also tested to engage targets at ground level.

The building layout at Korla East Testing is consistent with other locations in China that have advanced laser capabilities. Both hangars are connected by pipelines to large hemispherical buildings that resemble constructions at the Chinese Academy of Engineering Physics and the Anhui Institute of Optical and Fine Mechanics. These domed structures are known to house gas required during the operation of lasers.

An intelligence analyst familiar with the location and imagery said that within and around the hangars it was possible to identify transportable modules resembling an EMP protected system that is often found in forward operating locations for mission critical functions such as command, control, and communications.

Korla East Test Site Designation

The Korla East Test Site was first built in 2003 and has seen a great deal of expansion since then, but much of the construction history prior to 2005 remains undocumented.

Research conducted by Jeffrey Lewis, a member of the State Department International Security Advisory Board, and Eli Hayes, published on Arms Control Wonk, suggested that the Korla East Test Site is managed by a previously unidentified unit, known as Unit 63655 of the Strategic Support Force (SSF). This assessment is based on an analysis of research published by the unit and geographical evidence supporting it being located at this point.

Upon examination, Lewis and Hayes found that the patents assigned to Unit 63655 can be classified into three primary categories: studies delving into lasers and optics; studies into stratospheric airships of considerable size; and studies of high-powered microwaves. In their account, Hayes and Lewis said that Korla East Test Site is the only site that has the capacity to host infrastructure for these three categories of research. Furthermore, the unit has released meteorological analyses with a primary emphasis on the regions surrounding the Bosten Lake vicinity, located immediately to the north of the Korla East Test Site.

They went on to say that the evidence suggests Unit 63655 serves as the administrative headquarters for the Korla East Test Site, with the proviso that while no single piece of evidence is conclusive, the collective information points towards this conclusion.

<https://www.army-technology.com/features/is-chinas-korla-laser-asat-site-hacking-western-satellites/>

Science & Technology News



Press Information Bureau
Government of India

Ministry of Defence

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Geomagnetic Pearl Oscillations Increase in the Recovery Phase of Geomagnetic Storms

Researchers have traced a very significant increase in special continuous oscillations with pearl-type structures called Geomagnetic Pc1 pearl oscillations on the surface of the Earth in the recovery phase of geomagnetic storms. This study is significant for investigating of precipitation particles during geomagnetic storms and can help us understand the radiation hazard to satellites and astronauts.

Earth's magnetic field forms a protective shield around us, and various plasma waves are generated in this magnetic field cavity. However, geomagnetic storms often cause a dent in this protection. Energetic particles are either accelerated or lost from the Earth's radiation belts during these

storms. This is responsible for changes in plasma environment leading to growth of low-frequency waves called Electromagnetic ion-cyclotron (EMIC) wave instability which is seen as the magnetic field oscillations (0.1-5 Hz) called as Pc1 pulsations.

The Geomagnetic Pc1 pearl oscillations are amplitude-modulated structured narrow-band signals, which are signatures of low-frequency EMIC waves generated by resonant wave-particle interactions in the Earth's magnetosphere. The observation of these oscillations is a proxy for the measurement of particle precipitation in the Earth's magnetosphere.

Evidences of these pulsations are abundant in the mid and high-latitude regions. However, at very low latitude stations, it is not frequent. These waves are an important component of space weather in the near-Earth environment.

A team of scientists at IIG, an autonomous institute of the Department of Science and Technology, along with different Indian and global organization investigated the long-term variability of these pulsations in connection to solar cycles 20-21 and descending phase of solar cycle 24 from very low latitude regions of India.

In the study published in the Journal of Atmospheric and Solar-Terrestrial Physics, the researchers used 13 years of archived records covering solar cycle 20–21 from the equatorial site Choutuppal (CPL, $L = 1.03$) and 5 years of digital induction coil magnetometer data covering descending phase of solar cycle 24 from the low latitude site Desalpar (DSP, $L = 1.07$) to investigate the structures of Pc1 waves. The morphological changes during quiet and active geomagnetic conditions were investigated, and the role of ionosphere in bringing the high-latitude EMIC wave to low latitude via ionosphere was modelled.

A clear increase in the number of Pc1 at night was observed compared to the day. This is because the attenuation of Pc1 waves upon propagation via the ionospheric waveguide towards lower latitudes is weaker during night hours. Similarly, during the solar maximum period, the transmission rate of Pc1 waves to the equator was diminished than during the solar minimum. The annual and seasonal patterns of Pc1 occurrence showed an inverse relation with sunspot numbers at both stations. An association of these pulsations with active geomagnetic conditions showed the occurrence of Pc1 increasing significantly in the recovery phase of geomagnetic storms.

The understanding of radiation hazards to satellites and astronauts offered by the study is a great necessity in an era highly dependent on satellite-based communication systems.

Publication link: <https://doi.org/10.1016/j.jastp.2022.105963>.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1921172>

