

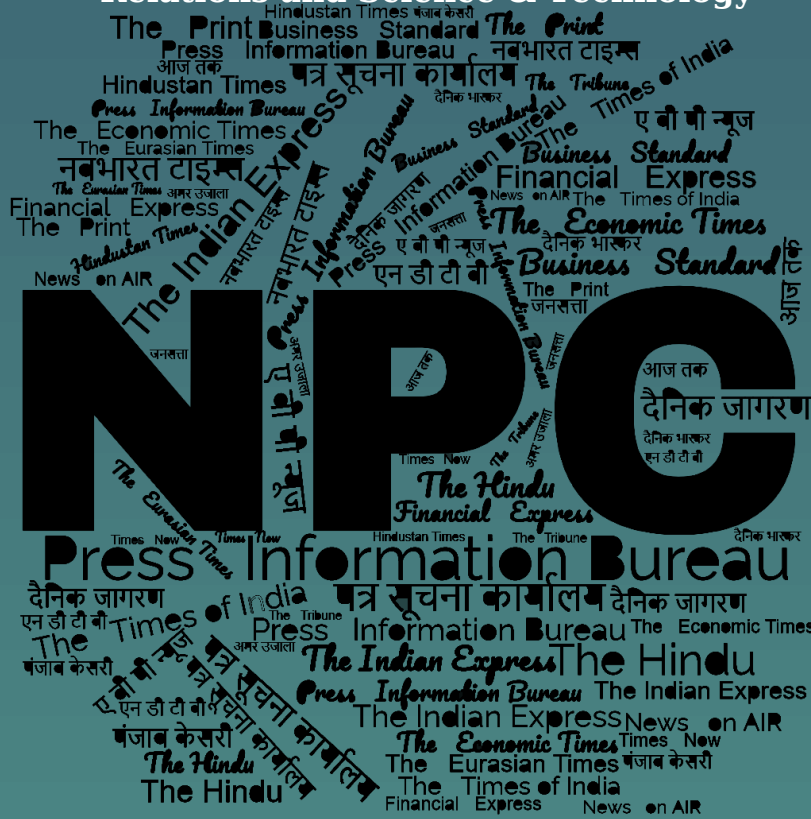
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समाचार पत्रों से चयित अंश Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

A Daily service to keep DRDO Fraternity abreast with DRDO Technologies, Defence Technologies, Defence Policies, International Relations and Science & Technology



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रक्षा अनुसंधान एवं विकास संगठन ने स्वदेशी रूप से विकसित उच्च गति वाले मानव रहित विमान फ्लाइंग-विंग, ऑटोनॉमस फ्लाइंग विंग टेक्नोलॉजी डिमॉन्स्ट्रेटर का सफल उड़ान परीक्षण किया

इस सफलता के साथ ही भारत टेललेस कॉन्फिगरेशन में फ्लाइंग विंग तकनीक के नियंत्रण में महारत हासिल करने वाले देशों के विशिष्ट क्लब में शामिल हो गया है

रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) ने कर्नाटक में चित्रदुर्ग एयरोनॉटिकल टेस्ट रेंज से स्वदेशी रूप से विकसित उच्च गति वाले मानव रहित विमान फ्लाइंग-विंग, ऑटोनॉमस फ्लाइंग विंग टेक्नोलॉजी डिमॉन्स्ट्रेटर का सफल उड़ान परीक्षण किया है। इस ऑटोनॉमस रडार से बचने में सक्षम गोपनीय मानव रहित विमान का सफल उड़ान परीक्षण भारत में प्रौद्योगिकी तत्परता के स्तर में परिपक्वता का प्रमाण है। इस सफलता के साथ ही भारत टेललेस कॉन्फिगरेशन में फ्लाइंग विंग तकनीक के नियंत्रण में महारत हासिल करने वाले देशों के विशिष्ट क्लब में शामिल हो गया है।

इस मानव रहित विमान को रक्षा अनुसंधान एवं विकास संगठन के वैमानिकी विकास प्रतिष्ठान द्वारा तैयार और विकसित किया गया है। इस विमान की पहली सफल उड़ान जुलाई 2022 में की गई थी और इसके बाद दो आंतरिक रूप से निर्मित प्रोटोटाइप का उपयोग करके विभिन्न विकासात्मक विन्यासों में छह उड़ान परीक्षण किए गए। इन उड़ान-परीक्षणों से सशक्त वायुगतिकीय एवं नियंत्रण प्रणाली के विकास; एकीकृत वास्तविक समय और हार्डवेयर-इन-लूप सिमुलेशन तथा अत्याधुनिक ग्राउंड कंट्रोल स्टेशन स्थापित करने में सफलता प्राप्त हुई है। टीम ने अंतिम कॉन्फिगरेशन में सफल सातवीं उड़ान के लिए वैमानिकी प्रणाली, एकीकरण व उड़ान संचालन को अनुकूलित किया था।

एयरक्राफ्ट प्रोटोटाइप को एक जटिल एरोहेड विंग प्लेटफॉर्म के साथ स्वदेशी रूप से विकसित कम भार वाले कार्बन प्रीप्रेग मिश्रित सामग्री के साथ तैयार और विकसित किया गया है। इसके अलावा, कामकाजी निगरानी के लिए फाइबर इंटेरोगेटर्स से युक्त समग्र संरचना, एयरोस्पेस प्रौद्योगिकी में 'आत्मनिर्भरता' का एक उदाहरण है। ग्राउंड राडार/बुनियादी ढांचे/पायलट की आवश्यकता के बिना इस उच्च गति वाले मानव रहित विमान की ऑटोनॉमस लैंडिंग ने एक अद्वितीय क्षमता का प्रदर्शन किया, जो संचालन में पाए गए निर्देशांक के साथ किसी भी रनवे से टेक-ऑफ तथा लैंडिंग की अनुमति देता है। इसमें जीपीएस नेविगेशन की सटीकता और समग्रता में सुधार के लिए जीपीएस एडेड जीईओ ऑगमेंटेड नेविगेशन (जीएजीएन) रिसीवर का उपयोग करके स्वदेशी उपग्रह-आधारित संवर्द्धन के साथ ऑनबोर्ड सेंसर डेटा फ्यूजन का उपयोग करना संभव है।

रक्षा मंत्री श्री राजनाथ सिंह ने इस प्रणाली के सफल उड़ान परीक्षण के लिए रक्षा अनुसंधान एवं विकास संगठन, सशस्त्र बलों तथा रक्षा उद्योग जगत को बधाई दी है। उन्होंने कहा कि स्वदेशी रूप से ऐसी महत्वपूर्ण प्रौद्योगिकियों के सफल विकास से सशस्त्र बल और भी सशक्त होंगे।

रक्षा अनुसंधान और विकास विभाग के सचिव तथा रक्षा अनुसंधान एवं विकास संगठन के अध्यक्ष डॉ. समीर वी कामत ने भी रक्षा अनुसंधान एवं विकास संगठन और इस सफल उड़ान परीक्षण से जुड़ी टीमों को बधाई दी।

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DRDO Carries out Successful Flight Trial of Autonomous Flying Wing Technology Demonstrator, an Indigenous High-Speed Flying-wing UAV

India joins elite club of countries to have mastered the controls for flying wing technology in tailless configuration

Defence Research and Development Organisation (DRDO) has successfully carried out a flight trial of Autonomous Flying Wing Technology Demonstrator, an indigenous high-speed flying-wing Unmanned Aerial Vehicle (UAV) from the Aeronautical Test Range, Chitradurga in Karnataka. The successful flying demonstration of this autonomous stealth UAV is a testimony to maturity in the technology readiness levels in the country. With this flight in the tailless configuration, India has joined the elite club of countries to have mastered the controls for the flying wing technology.

This UAV is designed and developed by DRDO's Aeronautical Development Establishment. The maiden flight of this aircraft was demonstrated in July 2022, followed by six flight trials in various developmental configurations using two in-house manufactured prototypes. These flight-tests led to achievements in development of robust aerodynamic and control system; integrated real-time and hardware-in-loop simulation, and state-of-the-art Ground Control Station. The team had optimised the avionic systems, integration and flight operations towards the successful seventh flight in final configuration.

The aircraft prototype, with a complex arrowhead wing platform, is designed and manufactured with light-weight carbon prepreg composite material developed indigenously. Also, the composite structure, impregnated with fibre interrogators for health monitoring, is a showcase of 'Aatmanirbharta' in the aerospace technology. The autonomous landing of this high-speed UAV, without the need for ground radars/infrastructure/pilot, showcased a unique capability demonstration, allowing take-off and landing from any runway with surveyed coordinates. This was possible using onboard sensor data fusion with indigenous satellite-based augmentation using GPS Aided GEO Augmented Navigation (GAGAN) receivers to improve the accuracy and integrity of GPS navigation.

Raksha Mantri Shri Rajnath Singh has complimented DRDO, Armed Forces and the Industry for the successful flight trial of the system. He stated that the successful development of such critical technologies indigenously will further strengthen the Armed Forces.

Secretary Department of Defence R&D and Chairman DRDO Dr Samir V Kamat also congratulated the DRDO and the teams associated with this successful flight trial.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986788>



Fri, 15 Dec 2023

चुपके से दुश्मन पर वार करता है ये देसी स्टेल्थ ड्रोन, जानिए भारत के इस नए हथियार की ताकत

रक्षा अनुसंधान और विकास संगठन (DRDO) ने देसी स्टेल्थ ड्रोन की दूसरी सफल उड़ान पूरी की. इसका नाम है- ऑटोनॉमस फ्लाईंग विंग टेक्नोलॉजी डिमॉन्स्ट्रेटर (Autonomous Flying Wing Technology Demonstrator-AFWTD). टेस्ट फ्लाइट कर्नाटक के चित्रदुर्ग स्थित एयरोनॉटिकल टेस्ट रेंज में की गई.

अमेरिका के बी-2 बमवर्षक की तरह दिखने वाला ये विमान पूरी तरह से ऑटोमैटिक है. यह ही टेकऑफ करता है. मिशन पूरा करने के बाद खुद ही लैंडिंग करता. यह उड़ान भविष्य के मानव रहित विमानों के विकास की दिशा में महत्वपूर्ण प्रौद्योगिकियों को साबित करने के मामले में एक प्रमुख उपलब्धि है. यह देश की रक्षा को लेकर भी बड़ा कदम है.

इसे बंगलुरु स्थित एयरोनॉटिकल डेवलपमेंट इस्टैबलिशमेंट (ADE) ने बनाया है. यह एक छोटे टर्बोफैन इंजन से उड़ता है. विमान के लिए उपयोग किए जाने वाले एयरफ्रेम, अंडर कैरिज और संपूर्ण उड़ान नियंत्रण और एवियोनिक्स सिस्टम स्वदेशी हैं. इससे महत्वपूर्ण सैन्य प्रणालियों के रूप में 'आत्मनिर्भर भारत' का मार्ग भी प्रशस्त होगा.

भारत के हमलावर ड्रोन का भविष्य है ये

21 वीं सदी के युद्धों का मानव रहित हवाई वाहन यानी यूएवी एक अभिन्न हिस्सा हैं. इस दशक में हुए सभी युद्ध-संघर्षों में यूएवी के इस्तेमाल का चलन देखा गया है. युद्ध के एक निर्णायक हथियार के तौर पर यूएवी को बीते साल के आर्मीनिया और अजरबैजान के बीच हुए नागोर्नो-कराबाख संघर्ष के दौरान पहचान मिल गई है, जिसमें युद्ध के मैदान पर ड्रोन पूरी तरह से हावी हो गए थे. यूएवी यानी ड्रोन तकनीक तक अब आतंकियों की भी पहुंच बनती जा रही है.

पिछले साल भारतीय सेना प्रमुख ने हाल ही में बताया था कि ड्रोन हमले का खतरा कितना गंभीर है. साथ ही भारत के यूएवी ड्रोन बेड़े को मजबूत करने की जरूरत पर बल दिया था. भारतीय सशस्त्र बलों ने इस अहम मुद्दे को समझते हुए इस पर आगे बढ़ना शुरू कर दिया है, जबकि देश में प्रभावी लड़ाकू ड्रोन (Combat Drone) बनाने के स्वदेशी प्रयास अब भी प्रारंभिक चरण में हैं. इसका मतलब है कि भारतीय सेना इस दशक के अंत तक आयातित ड्रोन पर ही निर्भर रहेगी.

पड़ोसी देश ड्रोन में भारत से आगे

भारत ड्रोन और यूएवी के मामले में पाकिस्तान से एक दशक और चीन से और भी ज्यादा पीछे है. पाकिस्तान और चीन लड़ाकू ड्रोन समेत कई सैन्य प्लेटफार्मों और हथियारों को विकसित और पाने के लिए एकदूसरे के करीबी सहयोगी की भूमिका निभा रहे हैं. इसलिए भारत ने बनाया है रहस्यमयी स्टेल्थ ड्रोन घातक (Stealth Drone Ghatak). पिछले साल ही इसकी तस्वीर सामने आई थी. परीक्षण भी हुए थे. स्टेल्थ विंग फ्लाईंग टेस्टेड (SWiFT) बुलाया जा रहा था. इसकी जानकारियों को पूरी तरह से गुप्त रखा गया था.

भारतीय नौसेना में शामिल करने के लिए इसके एक डेक-आधारित लड़ाकू यूएवी वेरिएंट की संभावनाएं भी तलाशी जा रही हैं. साल 2025 से 2026 के बीच में स्टेल्थ ड्रोन घातक का प्रोटोटाइप लोगों के सामने आ सकता है. पिछली साल ही भारतीय सेना ने 75 लड़ाकू ड्रोन के साथ स्वार्म ड्रोन तकनीक का सफलतापूर्वक प्रदर्शन किया था. यानी भारत ड्रोन के जरिए हमला करने में काबिल है.

कैसा होगा घातक UCAV?

डीआरडीओ के वैज्ञानिकों ने इसके आकार, वजन, रेंज आदि के बारे में कोई जानकारी नहीं दी है. लेकिन ये माना जा रहा है कि यह 30 हजार फीट की ऊंचाई तक जा सकता है. इसका वजन 15 टन से कम है. इस ड्रोन से मिसाइल, बम और प्रेशियन गाइडेड हथियार दागे जा सकते हैं. इसमें स्वदेशी कावेरी इंजन लगा है. यह 52 किलोन्यूटन की ताकत विमान को मिलती है. अभी जो प्रोटोटाइप है उसकी लंबाई 4 मीटर है. विंगस्पैन 5 मीटर है. यह 200 किलोमीटर की रेंज तक जमीन से कमांड हासिल कर सकता है. अभी एक घंटे तक उड़ान भर सकता है.

<https://www.aajtak.in/defence-news/story/indias-indigenous-stealth-drone-test-flight-done-successfully-cds-1839568-2023-12-15>



Fri, 15 Dec 2023

भारत ने बनाया अपना घातक UAV ड्रोन, दुश्मन को नहीं लगेगी हमले की भनक, दूसरा ट्रायल भी सफल

भारत ने स्वदेशी लड़ाकू ड्रोन बनाने की दिशा में अहम कदम बढ़ाया है. DRDO द्वारा विकसित स्टील्थ ड्रोन ने दूसरी उड़ान को सफलतापूर्वक पूरा कर लिया है. कर्नाटक के चित्रदुर्ग के एयरोनॉटिकल टेस्ट रेंज में स्वदेशी स्टील्थ ड्रोन ऑटोनॉमस फ्लाईंग टेक्नोलॉजी डिमॉन्स्ट्रेटर (AFWTD) की टेस्ट फ्लाइट सफल रही है. इसी के साथ भारत ड्रोन बनाने के क्षेत्र में अमेरिका, चीन जैसा देशों की कतार में खड़ा हो गया है. इस ड्रोन को अमेरिका के B2 बॉम्बर जेट की तर्ज पर डिजाइन किया गया है.

ड्रोन की सबसे बड़ी खासियत फिक्स्ड विंग, लगा है छोटा टोर्बोफैन इंजन

भारत टेललेस कॉन्फिगरेशन में इस उड़ान के साथ, उन देशों के क्लब में शामिल हो गया है, जिन्होंने फ्लाईंग विंग कन्फिगरेशन के कंट्रोल में महारत हासिल कर ली है. इस ड्रोन की सबसे बड़ी खासियत फिक्स्ड विंग है. ड्रोन में एक छोटा टोर्बोफैन इंजन लगा है. गौरतलब है कि इस इंजन का इस्तेमाल HJT-36 जेट में भी किया गया है. ये इंजन इस एयरक्राफ्ट प्रोटोटाइप को स्वदेशी रूप से एक जटिल एरोहेड विंग प्लेटफॉर्म के साथ स्वदेशी रूप से विकसित हल्के वजन वाले कार्बन प्रीप्रेग मिश्रित सामग्री के साथ डिजाइन किया गया है.

जुलाई 2022 में की गई थी सफल उड़ान, इस टेक्नोलॉजी का किया है इस्तेमाल

मानव रहित ड्रोन ने ग्राउंड राडार/बुनियादी ढांचे/पायलट की आवश्यकता के बिना ऑटोनॉमस लैंडिंग की एक बेहतरीन क्षमता का प्रदर्शन किया है. गौरतलब है कि इस विमान की पहली सफल उड़ान जुलाई 2022 में की गई थी. इसके बाद दो आंतरिक रूप से निर्मित प्रोटोटाइप का इस्तेमाल करके छह फ्लाइट टेस्ट किए गए हैं. ड्रोन में जीपीएस नेविगेशन की सटीकता और समग्रता में सुधार के लिए जीपीएस एडेड जीईओ ऑगमेंटेड नेविगेशन (जीएजीएएन) रिसीवर का इस्तेमाल किया गया है.

<https://www.zeebiz.com/hindi/trending/drdo-carries-out-successful-flight-trial-of-autonomous-flying-wing-technology-demonstrator-153194>

Fri, 15 Dec 2023

India Achieves Milestone in Autonomous Flying Wing Technology

India joins the elite club of countries to have mastered the controls for flying wing technology in tailless configuration following the successful flight trial of the Autonomous Flying Wing Technology Demonstrator, the Aeronautical Test Range, Chitradurga in Karnataka.

The successful trial of the indigenous high-speed flying-wing Unmanned Aerial Vehicle (UAV) designed by Defence Research and Development Organisation (DRDO) has demonstrated maturity in the technology readiness levels in the country. With this flight in the tailless configuration. The maiden flight of this aircraft was demonstrated in July 2022, followed by six flight trials in various developmental configurations using two in-house manufactured prototypes.

These flight-tests led to achievements in development of robust aerodynamic and control systems; integrated real-time and hardware-in-loop simulation, and state-of-the-art Ground Control Station. The team had optimised the avionic systems, integration and flight operations towards the successful seventh flight in final configuration.

The aircraft prototype, with a complex arrowhead wing platform, is designed and manufactured with light-weight carbon prepreg composite material developed indigenously. Also, the composite structure, which has fibre interrogators for health monitoring, is a showcase of 'Aatmanirbharta' in aerospace technology. The autonomous landing of this high-speed UAV, without the need for ground radars/infrastructure/pilot, showcased a unique capability demonstration, allowing take-off and landing from any runway with surveyed coordinates. This was possible using onboard sensor data fusion with indigenous satellite-based augmentation using GPS Aided GEO Augmented Navigation (GAGAN) receivers to improve the accuracy and integrity of GPS navigation.

Defence Minister Rajnath Singh complimenting DRDO, Armed Forces and the Industry for the successful flight trial of the system stated that the successful development of such critical technologies indigenously will further strengthen the Armed Forces.

Secretary Department of Defence R&D and Chairman DRDO Dr Samir V Kamat also congratulated the DRDO and the teams associated with this successful flight trial.

<https://www.financialexpress.com/business/defence-india-achieves-milestone-in-autonomous-flying-wing-technology-3339968/>

नवभारत टाइम्स

Sun, 17 Dec 2023

एक साथ चार टारगेट ढेर... जब आसमान में गरजा एयर फोर्स का 'आकाश', देश के नाम बड़ी कामयाबी

भारतीय वायु सेना ने आज एक और बड़ी कामयाबी हासिल की है। वायु सेना ने अपनी आकाश वायु रक्षा मिसाइल प्रणाली (Akash Air Defence Missile System) का सफलतापूर्वक परीक्षण किया है। इस मिसाइल ने एक साथ

चार टारगेट को ढेर कर दिया। रक्षा अधिकारियों ने बताया कि भारत ऐसा पहला देश बन गया है, जिसने ऐसी क्षमता हासिल की है, जिससे सिंगल फायरिंग यूनिट के जरिए उस रेंज पर कमांड गाइडेंस के जरिए 4 लक्ष्यों को ढेर कर दिया।

रक्षा अधिकारियों ने बताया कि हाल के अभ्यास अस्त्रशक्ति 2023 के दौरान भारत ने स्वदेशी आकाश मिसाइल प्रणाली की मारक क्षमता का प्रदर्शन किया, जहां एक ही आकाश फायरिंग यूनिट द्वारा एक साथ चार लक्ष्यों (मानव रहित हवाई लक्ष्यों) को निशाना बनाया गया। यह प्रदर्शन 12 दिसंबर को सूर्यलंका वायु सेना स्टेशन में अस्त्रशक्ति 2023 के दौरान भारतीय वायुसेना द्वारा आयोजित किया गया था। स्वदेशी आकाश वेपन सिस्टम को डीआरडीओ ने बनाया है। आकाश वेपन सिस्टम एक स्वदेशी डिफेंस सिस्टम है, जिसे खरीदने के लिए कई अंतरराष्ट्रीय ग्राहकों ने ऑर्डर दिए हैं, इसको लगातार DRDO के वैज्ञानिक अपग्रेड कर रहे हैं।

कितना ताकतवर है आकाश मिसाइल सिस्टम

आकाश भारत डायनेमिक्स लिमिटेड (बीडीएल) की एक छोटी दूरी की सरफेस टू एयर (एसएएम) एयर डिफेंस सिस्टम है। यह सिस्टम दुश्मन के हवाई हमलों से एक बड़े इलाके की रक्षा कर सकता है। बीडीएल वेबसाइट के मुताबिक, आकाश वेपन सिस्टम (एडब्ल्यूएस) ग्रुप मोड या ऑटोनॉमस मोड में एक साथ कई लक्ष्यों को निशाना बना सकता है। इसमें बिल्ट-इन इलेक्ट्रॉनिक काउंटर-काउंटर मेजर्स (ईसीसीएम) विशेषताएं हैं। संपूर्ण हथियार प्रणाली को मोबाइल प्लेटफॉर्म के ऊपर तैनात किया गया है।

आकाश मिसाइल सिस्टम 4-25 किलोमीटर की रेंज में उड़ान भरने वाले हेलीकॉप्टर, लड़ाकू जेट और यूएवी को प्रभावी ढंग से मार गिरा सकता है। यह लक्ष्य का पता लगाने से लेकर मार गिराने तक की पूरी प्रक्रिया रो त्वरित गति से पूरा करता है। इसके साथ ही इसका पूरा सिस्टम ऑटोमेटिक है। यह एक्टिव और पैसिव जैमिंग के को प्रभावी तरीके से रोक सकता है। इसे रेल या सड़क मार्ग से तेजी से कहीं भी ले जाया जा सकता है और जल्दी से तैनात किया जा सकता है।

<https://navbharattimes.indiatimes.com/india/exercise-astrashakti-indian-akash-air-defence-missile-system-destroys-4-targets-simultaneously/articleshow/106064299.cms>



Sun, 17 Dec 2023

Exercise Astrashakti: Indian Akash Air Defence Missile System Destroys 4 Targets simultaneously

Looking to export its indigenous weapon systems, India has strongly demonstrated the firepower of its Akash surface-to-air (SAM) weapon system, where a single firing unit simultaneously engaged and destroyed four unmanned targets during the recent Exercise Astrashakti 2023.

With this demonstration during the Air Force Exercise Astrashakti-2023, India has become the first to demonstrate the capability of engaging four targets simultaneously at such ranges by command guidance using a single firing unit, defence officials told ANI.

"India demonstrated the firepower of the indigenous Akash missile system, where four targets (unmanned aerial targets) were engaged simultaneously by a single Akash firing unit. The demonstration was conducted by the IAF during Astrashakti 2023 at Suryalanka Air Force Station on December 12," they said.

India became first country to demonstrate the capability of engagement of 04 aerial targets simultaneously at 25Km ranges by command guidance using single firing unit. The test was conducted by @IAF_MCC using Akash Weapon System @DefenceMinIndia@SpokespersonMoDpic.twitter.com/ut2FDzVd64

— DRDO (@DRDO_India) December 17, 2023

Explaining the trials, the officials said that during the exercise, four targets were coming from same direction in a close formation and were split to attack their own defence assets from multiple directions simultaneously.

"The Akash firing unit was deployed with Firing Level Radar (FLR), Firing Control Centre (FCC), and two Akash Air Force Launcher (AAFL) launchers having five armed missiles," they said.

The FLR was detected and tracked and the air scenario with four targets was updated to a higher echelon.

The targets were assigned to the Akash Firing Unit to neutralise the threat and the commander issued the firing commands when the system prompted the engagement as per system capability.

"Two Akash missiles were launched from two launchers and the same launcher was assigned for next two targets. A total of four missiles were launched within a short span and all four targets were successfully engaged at maximum range (around 30 km) simultaneously," they said.

The Akash Weapon System is indigenously designed and developed by the Defence Research and Development Organisation (DRDO) and produced by defence public sector units along with other industries.

Akash has been deployed by the Indian Air Force and the Indian Army for the last decade. The current firing was done from the system, which was ordered in September 2019 as a repeat order from the IAF.

The Akash weapon system is also one of the indigenous defence systems that have bagged orders from international customers. It is also being constantly upgraded by the DRDO scientists involved in it and they may get more orders from Southeast Asia and the Middle East.

Recently, DRDO chief Dr Samir V Kamat inaugurated a replica of the missile at the Indian Institute of Technology (IIT) in Mumbai to attract talented youth towards defence research and development.

<https://www.thehindu.com/news/national/exercise-astrashakti-indian-akash-air-defence-missile-system-destroys-4-targets-simultaneously/article67647579.ece>



Press Information Bureau
Government of India

Ministry of Defence

Fri, 15 Dec 2023

Dare to Dream Scheme

The details of the applications received under the Dare to Dream (D2D) contests during the last three years are enumerated below:

S No	Dare to Dream (D2D) Contest	Year of Contest	No. of Application received
1.	Dare to Dream-1	2019	3080
2.	Dare to Dream-2	2020	1750
3.	Dare to Dream-3	2021	819
4.	Dare to Dream-4	2023	792

Dare to Dream (D2D) 1.0 (2019), D2D 2.0 (2020) and D2D 3.0 (2021) have been successfully conducted, wherein, more than 5,600 applications were received and out of which 86 technologies/ideas have been recognized and Rs. 3.97 Crore worth of prize Money has been awarded to the individual innovators and start-ups. DRDO also supports best awarded ideas to realize them into prototype through Technology Development Fund (TDF) scheme. A total of eight projects at a cost of Rs 6.93 crore have been awarded under TDF scheme to Dare to Dream winners of Start-up category.

The individual innovators (Indian Citizen above 18 years age) and Start-ups (Registered with Department for Promotion of Industry & Internal Trade and with Indian founder) are eligible to participate in the D2D contest. The entries/applications received under the D2D contest are evaluated by a two-stage process:

Screened by Domain Expert Committee headed by Director General (Concerned Technical Cluster).

Shortlisted and Ranked by Independent Expert Committee. The selection criteria includes, Novelty, Applicability, Implementability, Technical Merit and Maturity.

D2D winners are awarded with cash prize money in the Individual and start-up categories. The winners are also encouraged and further considered for funding for the realisation of Prototypes under TDF scheme of Defence Research & Development Organisation (DRDO), Ministry of Defence on merit and feasibility basis.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Shri GM Siddeshwar and Shrimati Poonam Mahajan in the Lok Sabha today.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986638>



Press Information Bureau
Government of India

Ministry of Defence

Fri, 15 Dec 2023

MoU between Indian Navy and IIT Kanpur

Indian Navy & IIT Kanpur join forces to drive innovation through research partnership

Indian Navy and Indian Institute of Technology Kanpur, signed a Memorandum of Understanding (MoU) today at Naval Headquarters, New Delhi, symbolising their commitment to promote technology development, innovative solutions and joint R&D. Rear Admiral K Srinivas, Asst Chief of Materiel (Dockyard & Refits) and Professor Subramaniam Ganesh, Officiating Director IIT Kanpur concluded this MoU.

IN and IIT Kanpur share common interest in academic exchange of scientific research activities in the field of Engineering related to defence technologies. The MoU would serve as a broader framework and enable both sides to enhance capacity building, provide solutions to field level issues and enhance training effectiveness through exchange of faculty/ guest lectures. The structured collaboration focuses on joint Research and Development initiatives involving teams from Centre of Excellence (Marine Engg) at INS Shivaji, Lonavla and IIT Kanpur.

This Strategic alignment signifies a move towards a symbolic relationship between the academia and the armed forces, fostering a conducive environment for innovation and knowledge exchange.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986799>



Press Information Bureau
Government of India

Ministry of Defence

Fri, 15 Dec 2023

Aatmanirbharta in Ammunition Manufacturing: MoD Inks Rs 5,336.25 Crore Contract with BEL for Procurement of Electronic Fuzes for Indian Army for 10 Years

The Ministry of Defence, on December 15, 2023, signed a landmark contract with Bharat Electronics Limited (BEL), Pune for procurement of Electronic Fuzes for the Indian Army for a

period of 10 years, at a total cost of Rs 5,336.25 crore. As part of the 'Aatmanirbhar Bharat' vision, this contract has been signed for ammunition procurement under 'Manufacture of Ammunition for Indian Army by Indian Industry', a Government initiative for long term requirement of 10 years. The aim of the project is to build up ammunition stocks to minimise imports, achieve self-sufficiency in ammunition manufacturing, obtain critical technologies and secure stock affected by supply chain disruption.

Electronic Fuzes are an integral component of medium to heavy calibre Artillery guns which provides sustained artillery firepower for military operations. The Fuzes will be procured for usage in artillery guns which are capable of lethal engagements in various kinds of terrain including high altitude areas along the Northern Borders.

Electronic Fuzes will be manufactured by the BEL at its Pune and upcoming Nagpur Plant. The project will generate employment for one and half lakh man days and encourage active participation of Indian Industries including MSMEs in ammunition manufacturing and broaden ammunition manufacturing ecosystem in the country.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986590>



**Press Information Bureau
Government of India**

Ministry of Defence

Sat, 16 Dec 2023

Indian Navy's Mission Deployed Platforms Respond to Hijacking Incident in the Arabian Sea

Indian Navy's Mission Deployed platforms responded swiftly to a maritime incident in Arabian Sea involving hijacking of Malta Flagged Vessel MV Ruen. The vessel, with 18 crew onboard, had sent a Mayday message on UKMTO portal, PM 14 Dec 23, indicating boarding by approx six unknown personnel.

Responding swiftly to the developing situation, Indian Navy diverted its Naval Maritime Patrol aircraft undertaking surveillance in the area and its warship on Anti Piracy patrol in the Gulf Aden to locate & assist MV Ruen. The aircraft overflew the hijacked vessel on early morning of 15 Dec 23 and IN aircraft have been continuously monitoring movement of the vessel, which is now heading towards the coast of Somalia.

Indian Navy's warship, mission deployed in Gulf of Aden for anti-piracy patrol, has also intercepted MV Ruen at early hours of 16 Dec 23.

The overall situation is being closely monitored, in coordination with other agencies/ MNF in the area.

The Indian Navy remains committed to being a first responder in the region and ensuring safety of merchant shipping, along with international partners and friendly foreign countries.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1987060>

Traditions, Innovations should be Balanced in Armed Forces, Says Defence Minister Rajnath Singh

Defence Minister Rajnath Singh on Sunday stressed the need for maintaining the traditions of the armed forces while adopting innovation and said there has to be a balance between both of them.

Addressing the Combined Graduation Parade (CGP) at the Air Force Academy at Dundigul near here, Singh urged the newly commissioned officers to never lose their openness towards new ideas, innovative thinking and idealism.

He exhorted the officers to give due importance to tradition in the Armed Forces, terming it as time-tested, but pointed out that if tradition is followed for a long time without thinking, then a state of “inertia or ossification” occurs in the system. To avoid this situation and keep pace with the constantly-evolving times, there is a need to innovate.

The Defence Minister called for striking a balance between tradition and innovation, describing it as extremely crucial.

“Strike a balance between tradition and innovation to keep pace with constantly-evolving times. If we follow only tradition, we will be like a dead lake. We need to be like a flowing river. For that, we will have to bring in innovation along with tradition. Keep flying and touch greater heights, but maintain your connection with the ground,” he said.

Earlier, the Defence Minister was received by Chief of the Air Staff, Air Chief Marshal VR Chaudhari.

A total of 213 Flight Cadets, including 25 women, were commissioned into various branches of the Indian Air Force upon completion of their training. Eight officers from the Indian Navy, nine from the Indian Coast Guard and two from friendly countries were also awarded ‘Wings’ following the completion of their flying training.

The highlight of the parade was the ‘Commissioning Ceremony’ in which graduating Flight Cadets were awarded their ‘Stripes’ by the Defence Minister.

Flying Officer Atul Prakash from the flying branch was awarded the President’s Plaque and Chief of the Air Staff Sword of Honour for standing first in the overall order of merit in the pilots’ course.

Flying Officer Amrinder Jeet Singh was awarded the President’s Plaque for standing first in the overall order of merit amongst the ground duty branches.

An enthralling aerobatic show by Su-30MKI, synchronous aerobatics by the helicopter display team ‘Sarang’, and ‘Surya Kiran’ Aerobatic Team marked the grand finale of the CGP.

<https://indianexpress.com/article/india/armed-forces-traditions-innovations-should-be-balanced-defence-minister-rajnath-singh-9071763/>

Sat, 16 Dec 2023

India Calls for Zero Tolerance for Terror Actors, Sponsors at UN

India's Permanent Representative to the United Nations, Ruchira Kamboj, called on the UN on Friday to exercise zero tolerance against the terror groups and their sponsors, adding that the illicit traffic of small arms and light is a key enabler for sustaining conflicts by armed and terrorist groups.

"The illicit traffic of small arms and light weapons and related ammunition is a key enabler for sustaining conflicts by armed and terrorist groups. This necessitates the need for coordinated efforts by states to limit the acquisition of small arms and light weapons by such actors. It is therefore important that this council exercise a zero tolerance for terror actors and their sponsors, their possession and misuse of small arms and light weapons," Kamboj said.

While speaking at the UNSC Open Debate on Small Arms, she highlighted that India has suffered from cross-border terrorism and violence carried by terrorist groups using illicit weapons.

She said, "Having fought the scourge of terrorism for several decades. India is aware of the perils of the diversion and illicit transfer of small arms and ammunition to armed non state actors and terrorists. We have suffered immensely due to cross-border terrorism and violence carried out by terrorist groups using these illicit weapons smuggled across our borders, including now through the use of drones." Kamboj added, "The increase in volume and the quality of the arsenal acquired by these terrorist organizations reminds us time and again that they cannot exist without the sponsorship or support of states." Asserting the need of International cooperation to identify diversion points and trafficking routes, India supported the implementation of UN program of Action and the international tracing instrument for controlling the illicit trafficking.

Kamboj stated, "International cooperation is essential in strengthening existing mechanisms for information exchange to identify diversion points, trafficking routes, customs control, cross border cooperation, etcetera, to prevent diversion and the illicit transfers of small arms and life weapons and their ammunition." She said further, "India accordingly supports the redoubling of efforts at the national and global levels to strengthen the implementation of the UN program of Action and the international tracing instrument, including through national legislative measures and enforcement, exporter controls information sharing and capacity building. " Kamboj highlighted India's efforts for controlling export of all munitions and related items and shared India's participation in the " Wassenaar Arrangement".

She said, "India maintains strict, export controls over all munitions and related items, including small arms and light weapons. Our commitment is also reflected in India's participation in the Wassenaar Arrangement. As plenary chair for the year 20 23, India remains committed to work towards a further strengthening of the global non proliferation architecture, including in the area of small arms and light weapons. Thank you very much."

<https://www.financialexpress.com/business/defence-india-calls-for-zero-tolerance-for-terror-actors-sponsors-at-un-3340138/>



Fri, 15 Dec 2023

Ukraine Signs 'Dozens' of Joint Production Deals with Western Defence Firms

Ukraine has agreed dozens of contracts for joint production or technology exchanges with Western partners, Kyiv said on Friday, as it strives to reduce its dependence on military supplies from the West and to boost domestic output. The effort to ramp up production at home has become critically important as the future of large-scale military aid from the United States and European Union appears more uncertain and Western stockpiles have become more depleted.

"We have dozens of new contracts between companies on joint production or technology exchange," Ukraine's Defence Minister Rustem Umerov said in a Facebook post.

He pointed to an international defence industry forum hosted by Kyiv in September with more than 250 Western weapons producers, followed by a joint Ukraine-U.S. defence conference in Washington in December. "We signed a memorandum with the United States on joint production and technical data sharing," Umerov said.

This week, Kyiv hosted another conference with the largest British defence manufacturers including Babcock International Group (BAB.L) and BAE Systems (BAES.L) participating, state-owned arms maker Ukroboronprom said on Telegram messenger.

"I called on British defence companies to use Ukrainian factors — the possibility of testing weaponry in combat and getting quick feedback from the military — for transparent and effective cooperation with Ukrainian manufacturers," Umerov said.

President Volodymyr Zelenskiy has said Ukraine does not want to rely solely on military aid from allies and aims to become a donor of security for its neighbours in the future.

Ukraine is seeking more agreements similar to its venture with German arms producer Rheinmetall AG (RHMG.DE) to service and repair Western weapons, and an agreement with two American firms to jointly manufacture vital 155 mm artillery shells.

Domestic defence output has tripled in 2023, according to the strategic industries ministry, and is expected to increase six times more in 2024.

<https://www.reuters.com/business/aerospace-defense/ukraine-signs-dozens-joint-production-deals-with-western-defence-firms-2023-12-15/>



Sat, 16 Dec 2023

US, South Korea to Draw up Joint Nuclear Defence Guideline against North Korean Threat -Yonhap

The United States and South Korea plan to draw up joint guidelines on nuclear defence strategy by the middle of next year and establish an integrated system to deter North Korea's nuclear weapons, Yonhap news agency said on Saturday.

Washington and Seoul have decided to complete a comprehensive guideline by next year on how to contain and respond to Pyongyang's nuclear threat together, Yonhap reported, citing Kim Tae-hyo, South Korea's deputy national security adviser speaking to reporters in the U.S.

The guideline is expected to include methods of sharing sensitive information related to North Korea's nuclear weapons, the consultation process in the event of a nuclear crisis, and real-time communication channels between the two countries' leaders, it said.

The U.S. and South Korea are also expected to include nuclear operation exercises in next year's joint military drills, Yonhap said.

North Korea may test-launch an intercontinental ballistic missile (ICBM) this month, which is a nuclear threat regardless of its range because it can carry a nuclear warhead, Kim had said on Friday.

North Korea has developed and tested a range of ballistic missiles that can reach targets in South Korea, Japan, and the U.S. mainland.

<https://www.reuters.com/world/us-south-korea-draw-up-joint-nuclear-defence-guideline-against-north-korean-2023-12-15/>

Science & Technology News



Press Information Bureau
Government of India

Ministry of Science & Technology

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India is Fast Emerging as Protective Healthcare Leader, particularly after the World Started Citing India Model of Covid Management and the Vaccine Success Story under the Leadership of PM Shri Narendra Modi, Says Dr Jitendra Singh

“The age of working in silos is over and conscious efforts have to be made to integrate different organs of the Government including Ministries and Departments with various associations, institutes of higher and specialized learning and the Industry, particularly in the Healthcare sector”

It is here that the role of Hospital Administrators will be critical as coordinators between different specialities and different streams of medical management, he said

The Minister handed over the national level Hospital Academy Excellence Awards to some of the country's distinguished doctors specialising in hospital administration

Union Minister Dr Jitendra Singh, who is also a Professor of Medicine and a renowned Daibetologist, has said that India is fast emerging as protective healthcare leader, particularly after

the world started citing India model of Covid management and the Vaccine success story under the leadership of Prime Minister Shri Narendra Modi.

India has moved from sectoral and segmented approach of health service delivery to a comprehensive need-based healthcare service, said Dr Jitendra Singh while handing over the national level Hospital Academy Excellence Awards at a ceremony in New Delhi to some of the country's distinguished doctors specialising in hospital administration.

India is now seen as a role model in Crisis Management and Preventive Healthcare after the successful handling of the pandemic, he said.

The Minister said, “The age of working in silos is over and conscious efforts have to be made to integrate different organs of the Government including Ministries and Departments with various associations, institutes of higher and specialized learning and the Industry, particularly in the Healthcare sector”.

It is here that the role of Hospital Administrators will be critical as coordinators between different specialities and different streams of medical management, he said.

Dr Jitendra Singh said that New India will become Atmanirbhar in healthcare only by integrating various sciences and domains of medicine, going beyond Allopathy and synergising oriental alternatives like AYUSH, Yoga etc as well.

During the COVID even the West started looking up to India in search of immunity building techniques drawn from Ayurveda, Homoeopathy, Unani, Yoga, Naturopathy and other oriental alternatives and that is what calls for administrative skills to bring all together, he said.

Dr Jitendra Singh said, “India is today recognised as the vaccination hub of the world having produced DNA Covid Vaccine, world’s first intra-nasal Covid Vaccine, India’s first indigenously developed vaccine, ‘CERVAVAC’ for the prevention of cervical cancer and many other vaccines for different diseases,” he said.

The S&T Minister said, India is working on the world’s first vaccines against four Zoonotic diseases.

Besides Covid, we have four more vaccines in trial stage, which is being excitedly watched by the world, one is related to Anthrax, another on Brucellosis, one on Swine Fever and one on Leptospirosis, he said.

“Under PM Modi, India has also emerged as the world’s most cost-effective healthcare destination, with the latest technology tools deployed, across healthcare delivery. More than 10 lakh medical visas were issued to foreigners between 2019 and 2022 and the country is fast emerging as the Medical Tourism Hub of the world, despite the pandemic,” he said.

Dwelling on the Vision@2047, Dr Jitendra Singh said, it is expected that India becomes one of the top markets in medical devices grabbing 14-15% of the trade. India has almost 600 globally and nationally accredited hospitals that provide world-class treatment in cost-effective manner.

Dr Jitendra Singh pointed out that at present there are over 4,000 Healthtech Startups in India. Telemedicine is expected to reach \$5.5 billion by 2025. eSanjeevani, a Ministry of Health & Family Welfare conceived technical intervention, has enabled virtual doctor consultations and connected thousands of people living in remote parts of the country with doctors in major cities while sitting in the comfort of their own homes, the Minister added.

Dr Jitendra Singh said, India is among the top five countries in the world manufacturing life-saving high risk medical devices but the cost of our devices is about one-third of those manufactured by the other four countries. He underlined that this reflects the Atmanirbhar vision of PM Modi to become self-reliant in medical devices as well as medical management.

Asserting for promotion of PPP (Public-Private Partnership) model for healthcare services, Dr Jitendra Singh said, this is the need of the hour especially to put an end to the urban-rural dichotomy in healthcare services for which many unimaginable initiatives have been taken by this government.

He said, PM Modi's 9 years tenure has given India its vision for 2047 and laid the roadmap for the next 25 years of Amrit Kal which would witness the ascent of India as a front-ranking nation in the world in terms of best healthcare system," he said.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986744>



Press Information Bureau
Government of India

Ministry of Science & Technology

Sun, 17 Dec 2023

India has Witnessed Investment of over Rs.1,000 Crore in Space Startups in Last Nine Months of the Current Financial Year from April to December 2023, Says Union Minister Dr Jitendra Singh

**From just one Startup in the Space sector four years back, we have almost 190 private Startups after opening up of the sector and the earlier ones have now turned entrepreneurs:
Dr Jitendra Singh**

“PM Modi has provided an enabling milieu for entrepreneurship”: Dr Jitendra Singh

India has witnessed investment of over Rs.1,000 crore in Space Startups in last nine months of the current financial year from April to December 2023, Union Minister Dr Jitendra Singh has said.

During an exclusive interview at the Zee TV National Conclave in New Delhi, Union Minister of State (Independent Charge) Science & Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh said, this has been possible because after a bold decision taken by Prime Minister Shri Narendra Modi, India's Space sector has been opened up for private players, as a result of which there is an overwhelming response from Industry as well as investors from private sector.

From just one Startup in the Space sector four years back, we have almost 190 private Space Startups after opening up of the sector and the earlier ones of them have now turned entrepreneurs, he said.

Dr Jitendra Singh said, overall from just about 350 Startups in the year 2014, today we have about 1,30,000 Startups, besides Unicorns.

Stating that Prime Minister Shri Narendra Modi has provided an enabling milieu with his vision and policy initiatives, Dr Jitendra Singh said, this has created the opportunity for entrepreneurship. In the Space sector, an interphase called "InSPACE" has been established and a public sector unit called "NSIL" also set up to facilitate PPP mode projects, he said.

Dr Jitendra Singh said, PM Modi has scrapped obsolete rules and focused on citizen-centric Governance through optimum use of technology. In the same vein, the gates of Sriharikota have been thrown open to all stakeholders, he said.

“Not only this, Government has been very inclined to use technology to the maximum extent and seeks to do away with all those hindrances or obstructionist rules that were not very enabling,” he said.

Citing the application of satellites and drones in mapping land ownership under the SVAMITVA scheme and Face Recognition Technology for DLC, Dr Jitendra Singh said, our Chandrayaan Mission was the first to discover evidence of water on the Moon.

Dr Jitendra Singh said, the world will witness integrated technology driven growth in the future. India is now taking the lead in frontier areas of technology, including Artificial Intelligence and Quantum Technology, he said.

Citing the success of Aroma Mission, the Union Minister said India has a huge wealth of untapped bioresources, an unsaturated resource waiting to be harnessed, ranging from the Himalayas to the 7,500 kms long coastline.

Stating that the Anusandhan National Research Foundation (NRF) will be an important supplement to this entire ecosystem, Dr Jitendra Singh said it will be majorly funded from non-government sources.

Complementing the NRF, Dr Jitendra Singh said, NRF enriches the ecosystem along with the National Education Policy NEP-2020 which liberates students from being “prisoners of their aspiration”, by allowing switch over or combinations from different streams of studies such as Humanities and Commerce to Sciences and Engineering.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1987449>

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