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समाचार पत्रों से चयित अंश
Newspapers Clippings

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

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DRDO News

DRDO Technology News

THE TIMES OF INDIA

Sun, 25 April 2021

Jaipur: Advanced version of Arjun tank hits target at Pokhran firing range

Jaisalmer: Firepower demonstration of advanced version of main battle tank Arjun Mark-1 ALFA took place at Pokhran field firing range in Jaisalmer district on Friday.

Konark Corps GOC Lt Gen P S Minhas, Battle Axe Division GOC Major Gen Ajit Singh Gehlot and other senior officers were present to witness the firing capability of the tank.

An official source said, "Seeing the current scenario and challenges, the firepower demonstration of main battle tank Arjun Mark-1 ALFA, which is an advanced version of Arjun, took place to check its capabilities in various parameters in the desert area, thus, fulfilling Army's future requirements."

Advanced version of Arjun tank in action at Pokhran field firing range

The tank has been developed indigenously by DRDO and combined vehicles research and development establishment Chennai. In the new advanced version, the firing system has been upgraded with automatic fire control system guided missiles.

It also had many other features which will increase and strengthen the firing capacity of the Army. According to information from Army sources, as per the requirements of the Indian Army, DRDO has upgraded 14 features in the tank.

"The Mark 1-A includes an improved gunner's main sight, integrated with automatic target tracking. This would enable the tank crew to track moving targets automatically, and engage them even when Arjun Tank is on the move," added the source.

https://timesofindia.indiatimes.com/city/jaipur/jaipur-advanced-version-of-arjun-tank-hits-target-at-pokhran-firing-range/articleshow/82238326.cms

दैनिक भास्कर

Mon, 26 April 2021

दुश्मनों की खैर नहीं: अग्नि परीक्षा में अर्जुन सफल, टैंक में एंटी एयरक्राफ्ट में आग लगाने की क्षमता

- *पोकरण फील्ड फायरिंग रेंज में टैंक अर्जुन का परीक्षण, लेफ्टिनेंट जनरल पीएस मिन्हास की मौजूदगी में टैंक ने दुश्मनों के ठिकानों पर लगाए अचूक निशाने*
- *टैंक अर्जुन मार्क रणक्षेत्र में बिछाई गई माइंस को साफ करते हुए आसानी से आगे बढ़ सकता है,नई तकनीक का ट्रांसमिशन सिस्टम भी लगा है*

जैसलमेर: **भारतीय सेना के मुख्य युद्धक टैंक अर्जुन मार्क का अग्नि शक्ति प्रदर्शन शुक्रवार को पोकरण फील्ड फायरिंग रेंज में हुआ। अर्जुन टैंक के एल्फा एडवांस संस्करण ने कई सफल गोले दागकर दुश्मन के छद्म ठिकानों को नेस्तनाबूत कर दिया। अर्जुन टैंक से आर्मी फायर पॉवर को बढ़ावा मिल गया है।**

जैसलमेर. पोकरण फील्ड फांयरिंग रेंज में अर्जुन टैंक ने दागे गोले।

इस टैंक का इंडक्शन पहले ही हो चुका है। इस दौरान कोणार्क कोर के जीओसी लेफ्टिनेंट जनरल पीएस मिन्हास, बैटल एक्स डिवीजन के जीओसी मेजर जनरल अजीतसिंह गहलोत सहित अन्य वरिष्ठ अधिकारी इस उन्नत टैंक की फायरिंग क्षमता को देखने के लिए उपस्थित रहे। वर्तमान परिदृश्य और चुनौतियों को देखते हुए मुख्य युद्धक टैंक अर्जुन मार्क 1 एल्फा का अग्नि शक्ति प्रदर्शन किया गया। यह अर्जुन टैंक का एक उन्नत संस्करण है। जिसमें अर्जुन टैंक की क्षमताओं को विभिन्न मापदंडों और रेगिस्तान में उन्नत संस्करण में जांचा गया है।

यह टैंक सेना की भविष्य की सभी आवश्यकताओं को पूरा कर रहा है। यह स्वदेशी रूप से डीआरडीओ और संयुक्त वाहन अनुसंधान और विकास प्रतिष्ठान चेन्नई द्वारा देश में निर्मित किया गया है। इस नए अग्रिम संस्करण में फायरिंग प्रणाली को स्वचालित आग नियंत्रण प्रणाली निर्देशित मिसाइलों के साथ उन्नत किया गया है। इसमें कई अन्य विशेषताएं भी है जो सेना की फायरिंग क्षमता को बढ़ाएंगी और मजबूत करेंगी। लेफ्टिनेंट जनरल पीएस मिन्हास जैसलमेर पहुंचे और शुक्रवार को पोकरण फायरिंग रेंज में गोलाबारी की क्षमता और इस अग्रिम संस्करण में किए गए बदलावों को देखा। यह टैंक खुद कोपोला के अंदर से एंटी एयरक्राफ्ट में आग लगा सकता है जिसकी वजह से भारतीय सेना की फायरिंग क्षमता भी बढ़ गई है।

इसमें एकदम नई तकनीक का ट्रांसमिशन सिस्टम लगाया गया है। हंटर किलर अपने लक्ष्य को स्वयं तलाश करने में सक्षम है। यह स्वयं तेजी से आगे बढ़ते हुए दुश्मन के लगातार हिलने वाले लक्ष्यों पर भी सटीक प्रहार कर सकता है। इस टैंक में कमांडर, गनर, लोडर व चालक का क्रू होगा। इन चारों को यह टैंक युद्ध के दौरान भी पर्याप्त सुरक्षा प्रदान करेगा।

टैंक की सबसे बड़ी खासियत यह है कि रणक्षेत्र में बिछाई गई माइंस को साफ करते हुए आसानी से आगे बढ़ सकता है। कंधे से छोड़े जाने वाले एंटी टैंक ग्रेनेड और मिसाइल का इस पर कोई प्रभाव नहीं पड़ता है। केमिकल अटैक से बचाने के लिए इसमें विशेष तरह का सेंसर लगाया गया है। केमिकल या परमाणु बम के विस्फोट की स्थिति में इसमें लगा अलार्म बज उठेगा। साथ ही टैंक के अंदर हवा का दबाव बढ़ जाएगा ताकि बाहर की हवा अंदर प्रवेश न कर सके। क्रू मेंबर के लिए ऑक्सीजन के लिए बेहतरीन फिल्टर लगाए गए हैं। इसमें कई नए फीचर्स शामिल किए गए हैं।

https://www.bhaskar.com/local/rajasthan/barmer/jaisalmer/news/arjun-successful-in-fire-test-ability-to-fire-anti-aircraft-in-tank-128444801.html

IDN INDIAN DEFENCE NEWS
Global Defence, Aerospace & Security

Sun, 25 April 2021

India developing Light Combat Aircraft teamed with unmanned systems: Israeli Media

Manned-unmanned teaming concept forms the base for a new Indian aircraft. Hindustan Aeronautics (HAL) has unveiled a developmental air-teaming system that will incorporate the Tejas Light Combat Aircraft with various unmanned assets.

The Indian air force and navy are believed to have backed the effort, designated Combat Air Teaming System (CATS).

Work on CATS started in 2018, says HAL test pilot Group Captain H.V. Thakur (Retd). Preliminary design work has been completed and the Tejas twin-seat trainer is being optimized as part of a manned-unmanned teaming concept, as this variant still has some growth potential, he said.

As part of CATS, future variants of the TEJAS MK-1A will act as a 'Mothership for Air teaming eXploitation' (MAX) and will be modified with additional command and control interfaces for this purpose.

Several other elements are included. The CATS Warrior is a low-observable unmanned wingman, which is controlled from CATS MAX. A full-size CATS Warrior mock-up displayed at the Aero India show in Bengaluru also featured MBDA's ASRAAM short-range air-to-air missile, designated NGCCM (New Generation Close Combat Missile) in Indian air force service.

Another element involves swarming UAVs called CATS ALFA (Air Launched Flexible Assets), which can be launched from CATS-MAX and work as a swarm of weaponized drones, as well as the CATS Hunter multi-purpose weapons carriage system.

A high-altitude, long-endurance UAV is also being considered as part of CATS.

Scale models are expected to begin testing in the near future. Since the Tejas lacks an operational datalink, HAL is looking to integrate an indigenous datalink that is being tested on the Hawk-i – a locally modified version of the BAE Systems Hawk-132, according to flightglobal.com.

http://www.indiandefensenews.in/2021/04/india-developing-light-combat-aircraft.html

COVID 19: DRDO's Contribution

REPUBLICWORLD.COM

Sun, 25 April 2021

Rajnath Singh briefs on COVID hospitals set up by DRDO in Delhi, Reviews Preparedness

Defence Minister informed that DRDO is set to add 250 beds, the same day, later in the evening at the Sardar Vallabhbhai Patel COVID-19 hospital in New Delhi

By Srishti Jha

In the wake of ever-ascending COVID-19 cases, Defence Minister Rajnath Singh informed that the Defence Research and Development Organisation (DRDO) Agency is adding 250 beds, by later in the evening today at the Sardar Vallabhbhai Patel COVID-19 hospital in New Delhi.

This addition has taken the total number of beds to 500 in the said hospital. The Defence Minister took to Twitter to inform that apart from adding another 250 beds at Sardar Vallabhbhai Patel COVID hospital, a 1000-bed hospital has also become operational in the state of Gujarat.

Earlier today, Rajnath Singh reviewed efforts of the Ministry of Defence (MoD) and the Army, Navy and Air-force to fight against the current wave of COVID. He said, "the Armed Forces and MoD will leave no stone unturned in providing all possible assistance to the civilian administration."

He further enumerated that work is carried out in full swing to establish a COVID-19 facility in Lucknow that would be operational in the upcoming 5 to 6 days. This hospital will run in coordination with the Uttar Pradesh Government.

Rajnath Singh approaches DRDO to combat COVID-19

Amid emergency-like situation in the country, earlier last week, the Defense Minister Rajnath Singh has buckled up to make sure citizens of the country are provided with necessary resources. Rajnath Singh reached out to Army Chief MM Narvane, Defence Secretary and Chief of the Defence Research and Development Organization (DRDO), and had asked them to provide expertise and necessary requirements to the citizens to fight the COVID-19 crisis. Singh also directed Army chief MM Naravane to contact Chief Ministers through local commanders and provide them with every possible help. As per the instructions from Defence Minister, Defence Secretary Ajay Kumar issued instructions of providing 67 Cantt Board Hospitals across India to let the Medical Service know that service should be given to both Cantt residents and non-residents.

COVID-19 tally in India

India on Saturday crossed a grim landmark as it clocked its highest single-day rise adding 3.46 lakh new cases and 2,624 fatalities, taking the total of COVID-19 infections to 1.66 crores. After crossing more than 3.32 lakh cases earlier, India also became the country with the highest single-day rise in COVID-19 cases globally. The active cases have increased to 25.52 lakh in the country now.

https://www.republicworld.com/india-news/general-news/rajnath-singh-briefs-on-covid-hospitals-set-up-by-drdo-in-delhi-reviews-preparedness.html

Sat, 24 April 2021

कोरोना संकटः DRDO सरदार वल्लभभाई पटेल अस्पताल में आज शाम तक तैयार करेगा और 250 बेड, बोले रक्षा मंत्री राजनाथ सिंह

कोविड-19 (Covid-19) के तेजी से बढ़ते मामलों से निपटने के लिए सेना के तीनों अंगों के साथ-साथ रक्षा मंत्रालय की अन्य इकाइयां भी विभिन्न राज्यों और केन्द्रशासित प्रदेशों को सहयोग प्रदान कर रही हैं।

Edited By: रामदीप मिश्रा

कोरोनावायरस को लेकर देश में हाहाकार मचा हुआ है। अस्पतालों में ऑक्सीजन और बेड्स के लिए संकट गहराया हुआ है। इस बीच रक्षा मंत्री राजनाथ सिंह ने शनिवार को रक्षा मंत्रालय के अधिकारियों के साथ समीक्षा बैठक की, जिसमें देश में कोविड-19 की स्थिति से निपटने के लिए चल रही कोशिशों पर चर्चा की है। इस दौरान उन्होंने कहा है कि सशस्त्र बल और रक्षा मंत्रालय नागरिकों को हर संभव सहायता प्रदान करने में कोई कसर नहीं छोड़ेंगे।

रक्षा मंत्री राजनाथ सिंह (File photo)

रक्षा मंत्री राजनाथ सिंह ने कहा कि डीआरडीओ (DRDO) नई दिल्ली के सरदार वल्लभभाई पटेल कोविड अस्पताल में आज शाम के बाद 250 और बेड तैयार करने जा रहा है, जिसके बाद कुल बेड की संख्या 500 तक हो जाएगी। गुजरात में 1,000-बेड वाला अस्पताल चालू हो गया है। लखनऊ में कोविड फैसिलिटी स्थापित करने के लिए काम जोरों पर है जो अगले 5-6 दिनों में चालू हो जाएगा। यह अस्पताल उत्तर प्रदेश सरकार के समन्वय में AFMS द्वारा चलाया जाएगा।

'रक्षा मंत्रालय के अधिकारी बनाए हुए हैं नजर'

उन्होंने कहा कि डिफेंस PSUs एंड ऑर्डनेंस फैक्ट्री बोर्ड की सभी स्वास्थ्य सुविधाओं को स्थानीय COVID-19 प्रभावित नागरिक आबादी को स्वास्थ्य सेवाएं प्रदान करने की अनुमति दी गई है। मंत्रालय की ओर से की गई तमाम पहलों की मंत्रालय के अधिकारी और तीनों सर्विसेज बारीकी से निगरानी कर रही हैं।

सिंह ने वीडियो कॉन्फ्रेंस के जरिए समीक्षा बैठक की, जिसमें प्रमुख रक्षा अध्यक्ष जनरल बिपिन रावत, सेना प्रमुख जनरल एम एम नरवणे, नौसेना प्रमुख एडमिरल करमबीर सिंह और रक्षा एवं अनुसंधान विकास संगठन के अध्यक्ष जी सतीश रेड्डी तथा अन्य अधिकारी शामिल हुए। कोविड-19 के तेजी से बढ़ते मामलों से निपटने के लिए सेना के तीनों अंगों के साथ-साथ रक्षा मंत्रालय की अन्य इकाइयां भी विभिन्न राज्यों और केन्द्रशासित प्रदेशों को सहयोग प्रदान कर रही हैं।

रक्षामंत्री ने कहा था, अधिकारी 'युद्ध स्तर' पर करें काम

इससे पहले रक्षा मंत्री ने कोविड-19 के बढ़ते मामलों से निपटने में मदद के लिए रक्षा क्षेत्र के सार्वजनिक उपक्रमों (डीपीएसयू), रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) एवं आयुध कारखाना बोर्ड

से राज्य सरकारों को अतिरिक्त बिस्तर और ऑक्सीजन सिलेंडर मुहैया कराने के लिए 'युद्ध स्तर' पर काम करने को कहा था।

अधिकारियों ने बताया था कि सिंह ने शीर्ष रक्षा अधिकारियों के साथ डिजिटल माध्यम से हुई बैठक में महामारी के मद्देनजर चिकित्सा उपकरणों की खरीद एवं अतिरिक्त क्षमता के सृजन के लिए तीनों बलों एवं अन्य रक्षा एजेंसियों को आकस्मिक वित्तीय अधिकार प्रदान किए। रक्षा मंत्री ने सशस्त्र बलों से कहा था कि वे राज्य सरकारों के करीबी संपर्क में रहें और कोविड से निपटने के लिए जरूरी मदद उपलब्ध कराएं। अधिकारियों ने बताया था कि डीआरडीओ ने पहले ही निजी उद्योग के साथ अपनी ऑक्सीजन उत्पादन प्रौद्योगिकी साझा की है, जिसका विकास हल्के लड़ाकू विमान तेजस के उपयोग के लिए किया गया था।

https://www.tv9hindi.com/india/drdo-is-adding-another-250-beds-later-in-evening-today-at-the-sardar-vallabhbhai-patel-covid-hospital-says-rajnath-singh-629659.html

Hindustan Times

Sat, 24 April 2021

Centre installs DRDO-Tata Sons oxygen generation plants at state-run hospitals

The government has been leading the fight against Covid-19 through a 'whole of government' and 'whole of society' approach

New Delhi**:** The Centre has decided to immediately install DRDO-Tata Sons oxygen generation plants at various state-run hospitals like AIIMS, NIC Jhajjar, Safdarjung, Ram Manohar Lohia Hospital among others, which shall have a capacity to generate 1,000 litres of oxygen per minute.

The decision was taken at a high level meeting chaired by Union health minister Harsh Vardhan as he reviewed the status of oxygen availability at the All India Institute of Medical Sciences (AIIMS) here and various other central government hospitals, and the steps being taken for timely augmenting the supply.

He also reviewed the preparedness of the central government hospitals in the national capital--Safdarjung Hospital, Dr Ram Manohar Lohia (RML) Hospital, Lady Hardinge Medical College (LHMC) and AIIMS--for clinical management of severe COVID-19 patients, a health ministry statement said.

A health worker fixes an oxygen cylinder for a Covid-19 patient at a banquet hall converted into a quarantine center in New Delhi on Friday.(AP File Photo)

The minister directed the officials concerned to expedite installation of five Pressure Swing Adsorption (PSA) plants at all locations in Delhi hospitals, it said.

He also directed the state-run hospitals to be prepared with expansion plans for providing timely treatment to coronavirus patients in the days to come.

"A decision was taken to install DRDO-Tata Sons oxygen generation plants at AIIMS, NIC Jhajjar, Safdarjung, LHMC and Dr RML Hospital immediately. These plants shall have a capacity to generate 1,000 litres of oxygen per minute," the statement stated.

Vardhan noted that the country is passing through the second Covid-19 wave. Most of the states and Union territories (UTs) are reporting a very high number of daily cases and the daily mortality has also increased, he said.

The Union government has been leading the fight against Covid-19 through a 'whole of government' and 'whole of society' approach. The hospital infrastructure has been substantially ramped up through various proactive decisions taken by the government in collaboration with the states/UTs.

In view of the unprecedented surge in the number of daily cases, the requirement of oxygen-supported and ICU beds in addition to adequate oxygen supply along with medicines and trained manpower has increased manifold, the statement quoted Vardhan as saying.

The health minister also reviewed in detail beds availability, including oxygen supported and ICU-ventilator beds.

Meanwhile, the central government hospitals talked about the immediate steps taken for augmenting the beds availability to cater to the immediate needs of Covid-19 patients.

"The Union minister directed all the hospitals to urgently start work on the augmentation plans through fabricated hospitals, repurposing non-COVID beds (such that the healthcare services are not unduly and adversely impacted), conversion of buildings/blocks and wards in the existing premises into dedicated COVID facilities," the statement said.

It was also informed that Safdarjung Hospital was augmenting the bed availability with 172 more COVID beds (total being 391). With this, the Super Specialty Block at the hospital will be fully converted to a specialty block for only coronavirus patients. Also, 46 beds (including 32 ICU beds) are being added with the help of the Council of Scientific & Industrial Research (CSIR).

Dr RML Hospital stated that it is converting non-Covid buildings for dedicated Covid treatment facilities. This step shall provide 200 additional beds for the Covid affected.

In LHMC, 240 more beds are being created by CSIR which shall become operationalised soon, the statement said.

Shekhar Mande, secretary, DSIR & Director General, CSIR assured that all support is being provided to strengthen and expedite the ongoing efforts, it said.

AIIMS director Randeep Guleria outlined the expansion plans for adding more beds in other wards/blocks such as the Burns and Plastic Surgery Centre, NCI Jhajjar, Dr R P Centre for Ophthalmic Sciences and the geriatric wards. The total capacity shall be enhanced to more than 1,000 beds for only Covid-19 patients, according to the statement.

Union Health Secretary Rajesh Bhushan underlined the measures taken by the government to resolve and streamline logistic issues related to transport of oxygen supply from manufacturing sources to hospitals.

He also talked about the 24X7 Control Room of the Department for Promotion of Industry and Internal Trade (DPIIT) that is working to resolve all transportation-related issues of Delhi for smooth supply of oxygen.

https://www.hindustantimes.com/india-news/centre-installs-drdo-tata-sons-oxygen-generation-plants-at-state-run-hospitals-101619190147838.html

जागरण

Sat, 24 April 2021

दिल्ली में आक्सीजन को लेकर मचे हाहाकार के बीच DRDO ने दी राहत भरी खबर, अब नहीं टूटेगी सांसों की डोर

सफदरजंग अस्पताल डा आरएमएल अस्पताल लेडी हार्डिंग मेडकिल कालेज और एम्स में चार आक्सीजन प्लांट लगाए जाएंगे। जबकि एक अन्य आक्सीजन प्लांट एम्स के झज्जर स्थित नेशनल कैंसर इंस्टीट्यूट में लगाया जाएगा। केन्द्रीय स्वास्थ्य मंत्री ने कहा कि यह कोरोना की दूसरी लहर चल रही है।

By Prateek Kumar & Sanjeev Kumar Mishra

नई दिल्ली: राजधानी दिल्ली में आक्सीजन को लेकर मचे हाहाकार के बीच एक राहत भरी खबर आयी है। सफदरजंग अस्पताल, डा आरएमएल अस्पताल, लेडी हार्डिंग मेडकिल कालेज और एम्स में चार आक्सीजन प्लांट लगाए जाएंगे। जबकि एक अन्य आक्सीजन प्लांट एम्स के झज्जर स्थित नेशनल कैंसर इंस्टीट्यूट में लगाया जाएगा। इसकी घोषणा केंद्रीय स्वास्थ्य एवं परिवार कल्याण मंत्री डा हर्षवर्धन ने की। हर्षवर्धन ने शुक्रवार को कोरोना संक्रमित मरीजों के इलाज के प्रबंधन की उच्च स्तरीय समीक्षा बैठक आयोजित की। इसमें स्वास्थ्य और परिवार कल्याण राज्य मंत्री अश्विनी कुमार चौबे भी वर्चुअल माध्यम से उपस्थित रहे।

केन्द्रीय स्वास्थ्य मंत्री ने कहा कि देश में इस समय कोरोना की दूसरी लहर चल रही है। अधिकांश राज्यों और केन्द्र शासित प्रदेशों में मामलों एवं मृत्यु की संख्या बढ़ी है। इसकी वजह से आक्सीजन युक्त और आइसीयू बिस्तरों की आवश्यकता, पर्याप्त आक्सीजन आपूर्ति के साथ दवाओं और प्रशिक्षित कर्मचारियों की आवश्यकता कई गुना बढ़ गई है। उन्होंने सभी अस्पतालों को तुरंत विस्तार योजना पर कार्य शुरू करने के निर्देश दिए और कहा कि इसके लिए फैब्रिकेटेड अस्पतालों, गैर-कोविड बिस्तरों को कोविड बिस्तरों में बदलने,वर्तमान इमारत में भवन/ब्लॉक और वार्डों को विशेष कोविड सुविधा में बदला जा सकता है।

बेड की बढ़ेगी संख्या

बैठक में बताया गया कि सफदरजंग अस्पताल में 172 और बिस्तरों की उपलब्धता पर काम किया जा रहा है। इस प्रकार कोविड मरीजों के इलाज के लिए बेड की संख्या बढ़कर 391 हो जाएगी। साथ ही सफदरजंग अस्पताल के सुपरस्पेशलिटी ब्लाक में केवल कोरोना संक्रमितों का इलाज किया जाएगा। इसके अलावा सीएसआइआर की सहायता से 46 अन्य बिस्तर जोड़े जा रहे हैं, इस तरह अस्पताल में 32 आइसीयू बिस्तर हो जाएंगे। आरएमएल अस्पताल भी परिसर स्थित कई भवनों को कोरोना मरीजों के इलाज के लिए प्रयोग में लाएगा। लेडी हार्डिंग मेडिकल कालेज में 240 से अधिक बिस्तर तैयार किए गए हैं। जो शीघ्र मरीजों के लिए उपलब्ध होंगे।

एम्स में बर्न एंड प्लास्टिक सर्जरी सेंटर, एनसीआइ झज्जर, डॉ. आर.पी. नेत्र विज्ञान केन्द्र और वृद्धों के लिए वार्ड जैसे अन्य वार्डों और ब्लॉकों में कोरोना संक्रमितों के इलाज के लिए बेड बनाए जाएंगे। इस प्रकार केवल कोविड रोगियों के लिए कुल क्षमता बढ़कर एक हजार बिस्तर से अधिक हो जाएगी।

बैठक की प्रमुख बातें

- **उद्योग संवर्धन एवं आतंरिक व्यापार विभाग (डीपीआइआइटी) का 24x7 नियंत्रण कक्ष दिल्ली के लिए आक्सीजन की सुचारू आपूर्ति से संबंधित परिवहन से जुड़े मुद्दों के समाधान के लिए कार्य कर रहा है।**
- **पांच प्रेशर स्विंग ऐडसार्प्शन संयंत्र तेजी से लगाने के निर्देश दिए।**
- **कोरोना मरीजों काे दवा दिए बगैर लौटाने पर जताई नाराजगी। कहा-उपलब्ध कराई जाए दवा।**

https://www.jagran.com/delhi/new-delhi-city-ncr-oxygen-emergency-drdo-gave-relief-news-amidst-the-oxygen-emergency-in-delhi-now-the-breath-will-not-be-broken-21585314.html

Business Standard

Sun, 25 April 2021

DRDO to assist Madhya Pradesh in construction of 1000-bed Covid-19 hospital

DRDO will fully assist the Madhya Pradesh government in the construction of a 1,000-bed temporary hospital at Bina amid surging Covid-19 cases, said Chief Minister Shivraj Singh Chouhan on Saturday

The Defence Research and Development Organisation (DRDO) will fully assist the Madhya Pradesh government in the construction of a 1,000-bed temporary hospital at Bina amid surging COVID-19 cases, said Chief Minister Shivraj Singh Chouhan on Saturday.

"Today had a discussion with Union Minister of Defence Rajnath Singh over a phone. DRDO will fully assist the Madhya Pradesh government in the construction of a 1,000-bed temporary hospital at Bina. The supply of oxygen for this hospital has been ensured by the Bina Refinery," Madhya Pradesh CM tweeted in Hindi.

He further said that now oxygen will be supplied to Madhya Pradesh from Gwalior-Ranchi and Bhopal-Ranchi air routes.

"With this, after the Indore-Jamnagar Oxygen air route, oxygen now will be supplied to Madhya Pradesh from Gwalior-Ranchi and Bhopal-Ranchi air routes. Empty oxygen cylinders will be transported in @IAF_MCC plane to Ranchi from Bhopal Gwalior and the filled tankers will return by road," he said.

He also informed that during his discussion with Union Home Minister Amit Shah, it has been decided that oxygen tankers will be transported to Madhya Pradesh by airways, railways and roads, in which the Ministry of Home Affairs has assured full cooperation and coordination.

The Chief Minister further said that he also had a discussion with Leader of Opposition Kamal Nath over the phone and he apprised him about the efforts being made to control and prevent COVID-19 in the state.

"Instructions have been given to bring former Minister Brajendra Singh Rathore from Jhansi to Bhopal by air ambulance," he added.

He also spoke to Union Minister Prakash Javdekar and urged him to supply more oxygen to hospitals in Bhopal from the BHEL plant.

"The ED of BHEL will meet later today to discuss the subject in detail," he further added.

(Only the headline and picture of this report may have been reworked by the Business Standard staff; the rest of the content is auto-generated from a syndicated feed.)

https://www.business-standard.com/article/current-affairs/drdo-to-assist-madhya-pradesh-in-construction-of-1000-bed-covid-19-hospital-121042400602_1.html

INDIA TV

Sat, 24 April 2021

1200-bed special Covid-19 hospital to come up in Gandhinagar: Amit Shah

Union Home Minister Amit Shah announced that a 1200-bed hospital will be set up by DRDO in Gandhinagar at helipad ground in collaboration with Tata Trust

Ghandinagar: Union Home Minister Amit Shah announced that a 1200-bed hospital will be set up by DRDO here at helipad ground in collaboration with Tata Trust.

Shah said, "Ahmedabad will also have isolation centers for which private clubs like Karnavati club, ADC, GSC, Rajpath Club, Umiya Pariwar have given their consent. The infrastructural facilities like beds and other expenses will be borne by these organizations. While, services like primary treatment, medicines, meals, etc expenses will be borne by the Gujarat government. This initiative will be replicated across Gujarat."

Union Home Minister Amit Shah announced that a 1200-bed hospital will be set up by DRDO in Gandhinagar at helipad ground in collaboration with Tata Trust.

The Union Minister also informed about the setting up of a helpline for Covid-19. Shah said, "A toll-free number will be started for Covid-19 related queries. Over 50 medical experts, doctors will attend the calls. For this, seasoned medical professionals will be roped in to cater to such calls. Telephonic guidance will be offered to the patients in home isolation. This service will start within two days."

Shah was on a visit to Ahmedabad to dedicate a 900-bed Dhanvantari Covid hospital set up at Gujarat University Convention and Exhibition Centre. The hospital has been set up by the Gujarat government, DRDO, and Central paramilitary force doctors and will be opened for the citizens from Saturday. It will also have 250 ICU beds and all the beds will have an oxygen facility.

After his visit, Shah held a meeting with Chief Minister Vijay Rupani, Deputy Chief Minister Nitin Patel, and senior officials.

https://www.indiatvnews.com/news/india/1200-bed-special-covid-19-hospital-to-come-up-in-gandhinagar-amit-shah-700048

The Indian EXPRESS

Mon, 26 April 2021

DRDO's Dhanvantari Covid hospital starts operation, admits 40 patients on Day 1

Several patients and their relatives who had queued outside the hospital for critical care beds were turned away Saturday

Ahmedabad: On the first day of its operations, the Dhanvantari Covid Care Hospital, set up jointly by Defence Research and Development Organisation (DRDO), Gujarat University and the state government at Gujarat University Convention and Exhibition Centre in Ahmedabad, admitted 40 Covid-19 patients Sunday.

Ambulances wait outside the Dhanvantari Covid Care Hospital in Ahmedabad on Sunday. (Express Photo by Nirmal Harindran)

The operations at the 900-bed facility, which was reviewed by Union Home Minister Amit Shah along with Chief Minister Vijay Rupani on April 23, was set to commence from Saturday.

However, the facility deferred the process of admitting patients by a day due to glitches in the oxygen supply line, principal secretary of education and in-charge of the administration of the hospital Anju Sharma had told The Indian Express Saturday.

Several patients and their relatives who had queued outside the hospital for critical care beds were turned away Saturday.

The hospital, authorities said, started admitting patients through 108 emergency services around 10.30 am Sunday. More beds will be made available to Covid-19 patients in a phased manner over the coming days.

"As operations are being smoothened out, we will try to add another 60 functioning beds by tonight (Sunday) reaching a total of 100 beds by tomorrow," Sharma said. "Such unavoidable issues are expected when we are trying to set up operations on such a large scale. But we wanted to ensure and verify all operations are functioning well before admitting anyone. It is always better to get delayed by a day than risking patients' lives," the senior bureaucrat added.

Since the hospital is a referral hospital, Sharma said, admissions are done only through 108 emergency services as referred by Ahmedabad Municipal Corpor-ation (AMC) and thus, admitting only patients from Ahmedabad. "We are admitting patients only referred by AMC through 108 (ambulance service). We are not taking direct admissions or from outside," Sharma said.

The hospital has deployed over 200 medical and paramedical staff, including over 50 doctors and medical officers.

https://indianexpress.com/article/cities/ahmedabad/drdos-dhanvantari-covid-hospital-starts-operation-admits-40-patients-gujarat-7289028/

Sat, 24 April 2021

Work in full swing to establish DRDO's 350-bed COVID facility at Lucknow's Awadh Shilpgram!

According to the DRDO official, this COVID hospital with start admitting patients in about 15 days

By Muskaan Tekwani and Pawan Kaushal

The principal construction work of DRDO's provisional COVID facility at Awadh Shilpgram in Lucknow, has started in full swing. This special centre will be housing 350 beds, to meet the rising demands of hospital beds amid the volatile uptick of coronavirus infection in the state capital. The centre is expected to be complete in about 15 days, post which it will shoulder the district's healthcare infrastructure, which is crippling each day due to the overwhelming pressure.

New facilities in Lucknow to keep up with the pandemic sneers

The Defence Research and Development Organisation has planned to set up 2 facilities in Lucknow, providing a total of 600 beds for the dedicated treatment of COVID infected patients. This was confirmed by the Union Defence Minister to aid the people in Lucknow.

Earlier, the DRDO had also targeted the Haj House and Golden Blossom Resort to set up temporary covid care centres, however, the resort has been ruled out for the time being, read reports. Meanwhile, the preparations to convert Awadh Shilpgram into a makeshift COVID hospital has been speeded up, to cope with the pandemic emergency.

This temporary COVID hospital will make its own oxygen

One of the most striking features of the Awadh Shilpgram facility will be the fact that it won't be dependent on the supply of external oxygen. Instead, the DRDO is making provisions to ensure that the temporary COVID centre manufactures its own oxygen with the help of an oxygen plant. This will ensure sufficient oxygen supply, directly from the plant to their beds. After the completion of this facility, the authorities will commence work at the Haj House and the Defense Expo venue.

Lucknow COVID update

Lucknow's fresh infection tallies surged to 5,689 in the last 24 hours, reportedly the highest across Uttar Pradesh. On the brighter note, recoveries have exceeded the count of new cases for the second consecutive day. Around 7,165 recoveries were noted in the city on Friday, bringing marginal respite from the surging active tallies. The aggregate recovery count stands at 1,18,091 while the toll has clocked in 1,598 deaths since the outbreak of the virus last year.

https://www.knocksense.com/lucknow/work-begins-to-materialise-drdos-350-bed-covid-facility-at-lucknows-awadh-shilpgram

अमर उजाला

Sat, 24 April 2021

बीएचयू में अस्थायी अस्पताल बनना शुरू, महीने के अंत तक होगा तैयार

सार

डीआरडीओ की मदद से मई के पहले सप्ताह से शुरू हो सकता है 1000 बेड का संचालन

विस्तार

वाराणसी में कोरोना संक्रमण पर नियंत्रण के लिए बीएचयू एंफीथिएटर मैदान में 1000 बेड का अस्थायी अस्पताल बनना शुरू हो गया है। डीआरडीओ की मदद से बनने वाले इस अस्पताल के शुरू होने से मरीजों के लिए बेड का संकट दूर होगा।

सांकेतिक तस्वीर - फोटो : अमर उजाला

डीआरडीओ की मदद से बीएचयू खेल मैदान पर 1000 बेड के अस्थायी अस्पताल बनाए जाने के लिए शुक्रवार को दिन में यहां कर्मचारियों ने काम शुरू कर दिया। यहां एक अस्थायी कार्यालय भी बना दिया गया है, जहां से काम की मानिटरिंग होगी। इसी महीने में अस्पताल बनकर तैयार हो जाएगा। वर्तमान समय में करीब 45 कोविड हास्पिटल हैं और 2000 बेड हैं। बावजूद इसके ऑक्सीजन वाले बेड को लेकर मरीजों को परेशानी हो रही है। बीएचयू में बन रहा अस्पताल लखनऊ के बाद यूपी में डीआरडीओ की मदद से बनने वाला दूसरा अस्थायी अस्पताल होगा, जहां कोरोना के मरीजों का इलाज होगा।

स्वास्थ्य कर्मियों की तैनाती की प्रक्रिया शुरू

डीआरडीओ के द्वारा फार्मेसी, आक्सीजन सप्लाई, मोर्चरी आदि की भी व्यवस्था की जाएगी। इधर काम शुरू होने के बाद डाक्टर्स, मेडिकल स्टाफ व अन्य टेक्नीशियन की व्यवस्था में प्रशासन अभी से युद्ध स्तर पर जुट गया है। बीएचयू के डाक्टर्स और मेडिकल स्टाफ का डाटा भी इस अस्पताल के संचालन के लिए जिला प्रशासन ने मांगा है।

https://www.amarujala.com/uttar-pradesh/varanasi/bhu-starts-temporary-hospital-will-be-ready-by-the-end-of-the-month?pageId=1

Hindustan Times

Mon, 26 April 2021

DRDO's Covid hospital in Panipat will have direct pipeline for oxygen supply

Three days after the Union government announced the Defence Research and Development Organisation (DRDO) will set up a temporary 500-bedded hospital for Covid-19 patients in Panipat and Hisar, a join team of officials of the district administration and DRDO inspected sites in Panipat

Karnal: Three days after the Union government announced the Defence Research and Development Organisation (DRDO) will set up a temporary 500-bedded hospital for Covid-19 patients in Panipat and Hisar, a join team of officials of the district administration and DRDO inspected sites in Panipat.

The hospital will be set up near the Indian Oil Corporation's Panipat refinery due to availability of oxygen within the plant. The officials inspected two sites but final decision has not been taken yet.

However, officials of the Panipat district administration said that there is a strong possibility that the hospital will be set up in the panchayati land of Bal Jattan village.

There is possibility that patients will come from Delhi and the medical staff will be arranged by the Union government from Delhi and nearby hospitals.

As per information, the hospital will be set up by the central government and funds will be allocated by the Centre.

In a press statement issued by Panipat deputy commissioner Dharmendra Singh, around 1.5km pipeline for round-the-clock oxygen supply will be connected to the hospital from the refinery and the blueprint has already been finalised.

He said that the work on setting up of the hospital will start soon.

In a tweet, Haryana health minister Anil Vij said that two hospitals of 500 beds each are in the process of being set up. The Chandimandir-based Western Command has been asked to provide doctors and medical staff and work will start immediately.

https://www.hindustantimes.com/cities/others/drdos-covid-hospital-in-panipat-will-have-direct-pipeline-for-oxygen-supply-101619374147681.html

DECCAN Chronicle

Mon, 26 April 2021

ESIC mobile virology lab completes one lakh RT-PCR tests

Minister Kishan Reddy visited the hospital to mark the occasion and take stock of Coronavirus services at the hospital

Hyderabad: DRDO-developed Mobile Virology Research and Development Laboratory (MVRDL) at ESIC Medical College Hospital has completed one year and conducted more than one lakh RT-PCR tests for diagnosing Covid-19 cases. Sunday marked MVRDL completing 1,00,300 tests.

Union minister of state for home Kishan Reddy visited the ESIC Medical College Hospital to mark the occasion and take stock of Coronavirus services at the hospital. He lauded that ESIC is the only hospital with more than 1,000 beds (470 general + 88 ICU + 300 Covid + 150 super speciality + 34 special ICU); providing both Covid and non-Coronavirus services exclusively to 70 lakh ESI beneficiaries in Telangana every since the pandemic started in 2020.

Minister of State for Home G Kishan Reddy speaks at the ESI Medical College in Hyderabad on Sunday. - By Arrangement

The minister congratulated the hospital dean and professor Srinivas M., apart from his team, for receiving three awards from the ESI Corporation.

ESCI Medical College and Hospital also accounts for the highest clinical workload delivered by any medical college hospital in the country during the pandemic period from April 2020 to March 2021.

Dr. Srinivas thanked DRDO Chairman Sateesh Reddy and DRDO DG M. S. R. Prasad, in addition to all senior scientists for their contribution in building the mobile lab within a record time of 15 days.

https://www.deccanchronicle.com/nation/in-other-news/260421/esic-mobile-virology-lab-completes-one-lakh-rt-pcr-tests.html

DRDO on Twitter

Rajnath Singh @rajnathsingh · 5h

Work is in full swing to establish a COVID facility in Lucknow that would become operational in the next 5-6 days. This hospitals would be run by AFMS in coordination with the Uttar Pradesh Government.

Rajnath Singh @rajnathsingh · 5h

The @DRDO_India is adding another 250 beds later in the evening today at the Sardar Vallabhbhai Patel COVID hospital in New Delhi, taking the total number of beds to 500. In Gujarat, a 1,000-bed hospital has become operational.

Defence News

Defence Strategic: National/International

Press Information Bureau
Government of India

Ministry of Defence

Fri, 23 April 2021 7:34PM

Raksha Mantri Shri Rajnath Singh approves delegation of emergency financial powers to AFMS to fight recent surge in COVID-19 cases

Raksha Mantri Shri Rajnath Singh has sanctioned delegation of emergency financial powers to Armed Forces Medical Services (AFMS) to fight the recent surge in COVID-19 cases across the country. As per the order issued on April 23, 2021, emergency financial powers have been delegated to Director General Medical Services (Army/Navy/Air Force), head of Medical Branches at Formation/Command Headquarters of Army/Navy/Air Force/Andaman & Nicobar Command and Joint Staff including Command Medical Officers of Navy and Principal Medical Officers of Air Force (Major General and equivalent/Brigadiers and equivalent). The emergency financial powers have been delegated under Sl No 8.1 of Schedule 8 of Medical Schedule of Powers (MSP) to Delegation of Financial Powers to Defence Services (DFPDS) 2016. The delegated financial powers are as given below:-

- DGsMS (Army/Navy/Air Force) – Rs 500 lakh
- Major General & equivalent – Rs 300 lakh
- Brigadier & equivalent – Rs 200 lakh

Emergency powers to these Lower CFAs have been delegated upto September 30, 2021 with a provision for revision/extension to expedite procurement of medical items/materials/stores and provisioning of various services for treatment/management/tackling of COVID-19 cases.

This is a pro-active measure taken by Ministry of Defence to enable AFMS to provide medical services to the personnel of the Armed Forces as well as aid the civil administration.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1713620

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Fri, 23 April 2021 7:34PM

कोविड-19 के मामलों में तेजी को देखते हुए रक्षा मंत्री श्री राजनाथ सिंह ने सशस्त्र सेना चिकित्सा सेवा (एएफएमएस) को आपातकालीन वित्तीय शक्तियां सौंपने हेतु स्वीकृति दी

रक्षा मंत्री श्री राजनाथ सिंह ने सशस्त्र सेना चिकित्सा सेवा (एएफएमएस) को देश भर में इस कोविड-19 महामारी के बढ़ते मामलों से निपटने के लिए आपातकालीन वित्तीय शक्तियां सौंपने हेतु स्वीकृति दे दी है। 23 अप्रैल 2021 को जारी आदेश के अनुसार, तीनों सेनाओं (थल सेना, वायु सेना और नौसेना) के महानिदेशक चिकित्सा सेवा, तीनों सेनाओं और अंडमान निकोबार कमान के फॉर्मेशन/ कंमान मुख्यालयों की चिकित्सा शाखाओं के प्रमुखों और जॉइन्ट स्टाफ, जिनमें नौसेना के कमान मेडिकल ऑफिसर्स, वायुसेना के प्रिसिंपल मेडिकल ऑफिसर्स (मेजर जनरल और समकक्ष/ ब्रिगेडियर्स और समकक्ष) शामिल हैं, इन्हें आपातकालीन वित्तीय फैसले लेने के लिए शक्तियां प्रदान की गई हैं।

यह आपातकालीन शक्तियां 'मेडिकल शेड्यूल ऑफ पावर्स (एमएसपी) टू डेलिगेशन ऑफ फाइनेंशियल पावर्स टू डिफेंस सर्विसेज 2016 (डीएफपीडीएस)' की अनुसूची 8 के एस1 क्रमांक 8.1 के तहत दी गई हैं।

रक्षा बलों को प्रदान की गई वित्तीय शक्तियां इस प्रकार हैं-

- चिकित्सा सेवा के महानिदेशक (थल सेना, नौसेना और वायुसेना)- 5 करोड़ रुपए
- मेजर जनरल और समकक्ष- 3 करोड़ रुपए
- ब्रिगेडियर और समकक्ष- 2 करोड़ रूपए

सेना के इन अधिकारियों को यह आपातकालीन शक्तियां 30 सितंबर 2021 तक सौंपी गई हैं जिसके तहत चिकित्सा वस्तुओं/ सामग्रियों/ भंडारों की खरीद में तेजी लाने और उपचार/ प्रबंधन/ कोविड-19 मामलों से निपटने के लिए विभिन्न सेवाओं के प्रावधान के लिए संशोधन/ विस्तार का प्रावधान है।

यह रक्षा मंत्रालय द्वारा सशस्त्र बलों के कर्मियों को चिकित्सा सेवाएं प्रदान करने के साथ-साथ नागरिक प्रशासन को सहायता प्रदान करने का एक सक्रिय कदम है।

https://pib.gov.in/PressReleasePage.aspx?PRID=1713729

Press Information Bureau
Government of India

Ministry of Defence

Sat, 24 April 2021 4:01PM

Raksha Mantri Shri Rajnath Singh holds second meeting to review efforts of MoD & Armed Forces to fight current COVID-19 crisis;

Directs them to extend all possible assistance to civil administration

Raksha Mantri Shri Rajnath Singh reviewed the efforts of Ministry of Defence and the three Services to fight the current COVID-19 crisis through video conferencing on April 24, 2021. The meeting was attended by Chief of Defence Staff General Bipin Rawat, Chief of Naval Staff Admiral Karambir Singh, Chief of Army Staff General M M Naravane, Defence Secretary Dr Ajay Kumar, Secretary (Defence Production) Shri Raj Kumar, Secretary Department of Defence R&D and Chairman Defence Research and Development Organisation (DRDO) Dr G Sathish Reddy, Deputy Chief of Air Staff Air Marshal Sandeep Singh and Director General Armed Forces Medical Services (AFMS) Surg Vice Admiral Rajat Datta.

Shri Rajnath Singh directed the Armed Forces and various other establishments of Ministry of Defence to extend all possible assistance to the civilian administration to tide over the present situation. He said, people look up to the Armed Forces in times of crisis as they have great hope and trust in them.

Raksha Mantri reviewed and expressed satisfaction on the assistance being provided by Indian Air Force (IAF) in moving oxygen tankers and plants from abroad as well as within the country. He was briefed that one C-17 IAF transport plane left for Singapore in the morning of April 24, 2021 and will return in the evening with four containers of cryogenic oxygen tanks. He was also informed that one C-17 transported two empty container trucks for liquid oxygen from Pune to Jamnagar and another transported two empty oxygen containers from Jodhpur to Jamnagar. One Chinook airlifted medical equipment for testing COVID from Jammu to Leh. Indian Navy ships have been put on standby for any assistance in moving oxygen tankers, Raksha Mantri was informed.

DRDO Chairman briefed that another 250 beds would become functional at the Sardar Vallabhbhai Patel COVID hospital in New Delhi by the evening of April 24, 2021, taking the total number of beds to 500. In Gujarat, DRDO has completed setting up of a 1,000-bed hospital. He informed the Raksha Mantri that work is in full swing to establish a COVID facility in Lucknow that would become operational in the next 5-6 days. These hospitals would be run by AFMS in coordination and with assistance of local state governments.

Senior officials of MoD are in constant touch with the officials of state governments for necessary coordination in this regard. As AFMS has its resources stretched to the limit, services of local doctors and health professionals might be enlisted for the 750-bed hospital that is coming up at Varanasi. To augment the work force of health professionals, Raksha Mantri approved a suggestion to deploy those who have recently retired from AFMS.

Shri Rajnath Singh was also briefed that all health facilities of Defence PSUs and Ordnance Factory Board have been allowed to provide health services to local COVID-19 affected civilian population. He directed the officials of MoD and the three Services to closely monitor the progress of various initiatives. This was the second meeting chaired by Raksha Mantri to review the preparedness of MoD and the Armed Forces to deal with the current surge in COVID-19 cases. The first meeting was held through video conferencing on April 20, 2021.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1713768

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Sat, 24 April 2021 4:01PM

रक्षा मंत्री श्री राजनाथ सिंह ने वर्तमान कोविड 19 संकट से लड़ने के लिए रक्षा मंत्रालय एवं सशस्त्र बलों के प्रयासों की समीक्षा के लिए दूसरी बैठक ली;

उन्हें नागरिक प्रशासन को हर संभव सहायता देने का निर्देश दिया

रक्षा मंत्री श्री राजनाथ सिंह ने दिनांक 24 अप्रैल, 2021 को वीडियो कांफ्रेंसिंग के माध्यम से वर्तमान कोविड-19 संकट से लड़ने के लिये किए जा रहे रक्षा मंत्रालय और सेना के तीनों अंगों के प्रयासों की समीक्षा की। इस बैठक में चीफ ऑफ डिफेंस स्टाफ जनरल बिपिन रावत, नौसेना प्रमुख एडमिरल करमबीर सिंह, सेनाध्यक्ष जनरल एम एम नरवणे, रक्षा सचिव डॉ. अजय कुमार, रक्षा उत्पादन सचिव श्री राज कुमार, रक्षा अनुसंधान एवं विकास विभाग के सचिव और रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) के अध्यक्ष डॉ. जी सतीश रेड्डी, डिप्टी चीफ ऑफ एयर स्टाफ एयर मार्शल संदीप सिंह और महानिदेशक सशस्त्र बल चिकित्सा सेवा (एएफएमएस) वाइस एडमिरल रजत दत्ता शामिल हुए ।

श्री राजनाथ सिंह ने सशस्त्र बलों और रक्षा मंत्रालय के अलग अलग अन्य प्रतिष्ठानों को निर्देश दिया कि वे वर्तमान स्थिति से उबरने के लिए नागरिक प्रशासन को हर संभव सहायता प्रदान करें । उन्होंने कहा कि लोग संकट के समय सशस्त्र बलों की ओर देखते हैं क्योंकि उन्हें उन पर बहुत आशा और भरोसा है ।

रक्षा मंत्री ने विदेशों के साथ-साथ देश के भीतर ऑक्सीजन टैंकरों और संयंत्रों को ले जाने में भारतीय वायु सेना (आईएएफ) द्वारा दी जा रही सहायता की समीक्षा की और इस पर संतोष व्यक्त किया। उन्हें जानकारी मिली कि भारतीय वायुसेना का एक सी-17 परिवहन विमान दिनांक 24 अप्रैल, 2021 की सुबह सिंगापुर के लिए रवाना हुआ और शाम को क्रायोजेनिक ऑक्सीजन टैंक के चार कंटेनरों के साथ वापस आ जाएगा । उन्हें यह भी बताया गया कि एक सी-17 परिवहन विमान ने पुणे से जामनगर के लिए लिक्विड ऑक्सीजन के लिए दो खाली कंटेनर ट्रकों को पहुंचाया और एक अन्य ने जोधपुर से जामनगर के लिए दो खाली ऑक्सीजन कंटेनर पहुंचाए । एक चिनूक ने जम्मू से लेह के लिए कोविड परीक्षण के लिए चिकित्सा उपकरण पहुंचाए। रक्षा मंत्री को सूचित किया गया कि ऑक्सीजन टैंकरों को ले जाने में किसी भी सहायता के लिए भारतीय नौसेना के जहाजों को स्टैंडबाई पर रखा गया है।

रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) के अध्यक्ष ने जानकारी दी कि दिनांक 24 अप्रैल, 2021 की शाम तक नई दिल्ली के सरदार वल्लभ भाई पटेल कोविड अस्पताल में 250 बेड का कार्य हो जाएगा, जिससे कुल बिस्तरों की संख्या 500 हो जाएगी। गुजरात में डीआरडीओ ने 1,000 बेड के अस्पताल की स्थापना पूरी कर ली है। उन्होंने रक्षा मंत्री को बताया कि लखनऊ में कोविड सुविधा स्थापित करने के लिए काम जोरों पर है जो अगले 5-6 दिनों में चालू हो जाएगी । इन अस्पतालों को एएफएमएस द्वारा समन्वय और स्थानीय राज्य सरकारों की सहायता से चलाया जाएगा।

रक्षा मंत्रालय के वरिष्ठ अधिकारी इस संबंध में आवश्यक समन्वय के लिए राज्य सरकारों के अधिकारियों से लगातार संपर्क में हैं । चूंकि एएफएमएस ने अपने संसाधनों को जितना संभव हो बढ़ाया है,

इसलिए वाराणसी में आने वाले 750 बिस्तर वाले अस्पताल के लिए स्थानीय डॉक्टरों और स्वास्थ्य पेशेवरों की सेवाओं को सूचीबद्ध किया जा सकता है। स्वास्थ्य पेशेवरों के कार्यबल को बढ़ाने के लिए रक्षा मंत्री ने एएफएमएस से हाल ही में सेवानिवृत्त हुए लोगों को तैनात करने के सुझाव को मंजूरी दी।

श्री राजनाथ सिंह को यह भी जानकारी दी गई कि रक्षा क्षेत्र के सार्वजनिक उपक्रमों एवं आयुध निर्माणी बोर्ड की सभी स्वास्थ्य सुविधाओं को स्थानीय कोविड-19 प्रभावित नागरिक आबादी को स्वास्थ्य सेवाएं प्रदान करने की अनुमति दी गई है। उन्होंने रक्षा मंत्रालय और तीनों सेनाओं के अधिकारियों को उठाए गर विभिन्न कदमों की प्रगति पर बारीकी से नजर रखने का निर्देश दिया ।

रक्षा मंत्री की अध्यक्षता में यह दूसरी बैठक थी जिसमें कोविड-19 मामलों में मौजूदा वृद्धि से निपटने के लिए रक्षा मंत्रालय और सशस्त्र बलों की तैयारियों की समीक्षा की गई। पहली बैठक दिनांक 20 अप्रैल, 2021 को वीडियो कांफ्रेंसिंग के माध्यम से हुई थी।

https://pib.gov.in/PressReleasePage.aspx?PRID=1713829

Press Information Bureau
Government of India

Ministry of Defence

Fri, 23 April 2021 7:43PM

Air Vice Marshal PS Karkare took over as Senior Officer in-charge of Administration of Headquarters Western Air Command

Air Vice Marshal PS Karkare took over as Senior Officer in-charge of Administration of Headquarters Western Air Command from Air Vice Marshal K Anantharaman Vishisht Seva Medal on 01 Feb 2021.

Air Vice Marshal PS Karkare was commissioned in the Administration Branch on 19 December 1987. The Air Officer has served in a wide variety of Units, at Command Head Quarters & Air Head Quarters. He is a graduate of the Defence Services Staff College and the College of Defence Management (CDM) and has been a Directing Staff at CDM Hyderabad.

AVM PS Karkare was the 'Air Commodore Air Force Works' at Air Headquarters (Vayu Bhavan) prior to the current appointment at Head Quarters Western Air Command.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1713611

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Fri, 23 April 2021 7:43PM

एयर वाइस मार्शल पी एस करकरे ने पश्चिमी वायु कमांड मुख्यालय में वरिष्ठ अधिकारी (प्रशासन) का पदभार संभाला

एयर वाइस मार्शल पी.एस. करकरे ने 1 फरवरी, 2021 को पश्चिमी वायु कमांड मुख्यालय प्रशासन के वरिष्ठ अधिकारी का पदभार संभाला। उन्होंने यह पदभार विशिष्ट सेवा मेडल एयर वाइस मार्शल के. अनंतरमण से ग्रहण किया।

एयर वाइस मार्शल पी.एस. करकरे को 19 दिसंबर, 1987 को प्रशासन शाखा में नियुक्त किया गया था। इस वायु सेना अधिकारी ने कमांड मुख्यालयों और वायु मुख्यालयों की कई तरह की इकाइयों में सेवाएं दी हैं। वे डिफेंस सर्विसेज स्टाफ कॉलेज और कॉलेज ऑफ डिफेंस मैनेजमेंट (सीडीएम) से स्नातक हैं एवं सीडीएम हैदराबाद में एक डायरेक्टिंग स्टाफ रह चुके हैं।

एवीएम पी.एस. करकरे पश्चिमी वायु कमांड मुख्यालय में वर्तमान नियुक्ति से पहले वायु मुख्यालय (वायु भवन) में 'एयर कमोडोर एयर फोर्स वर्क्स' थे।

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1713649

Press Information Bureau
Government of India

Ministry of Defence

Fri, 23 April 2021 5:26PM

IAF airlifting oxygen containers, essential medicines & other medical equipment in fight against fresh surge in COVID-19 cases

Indian Air Force (IAF) has swung into action by carrying out sorties from various parts of the country to airlift oxygen containers, cylinders, essential medicines, equipment required for setting up and sustaining COVID hospitals and facilities in the fight against fresh surge in COVID-19 cases. The IAF Transport aircraft and helicopters have been pressed into service for carrying out these tasks. These include transport aircraft C-17, C-130J, IL-76, An-32 and Avro. Chinook and Mi-17 helicopters are on standby. Tasks undertaken include airlift of doctors and nursing staff from Kochi, Mumbai, Vizag and Bangalore for various hospitals at Delhi.

The C-17 and IL-76 aircraft of IAF have started airlifting big empty oxygen tankers from their place of use to the filling stations across the country to speed up the distribution of much needed oxygen. In addition to this, the C-17 and IL-76 have transported large quantity of load comprising bio safety cabinets and autoclave machines for setting up of an additional COVID test facility at Leh. The IAF transport and helicopter assets are on standby to be deployed at short notice.

It may be recalled that in the initial days of COVID-19 outbreak in 2020, the IAF ran several sorties to deliver medicines, medical and other essential supplies required to combat the coronavirus pandemic as well as brought back stranded Indian nationals from abroad.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1713580

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Fri, 23 April 2021 5:26PM

कोविड-19 के खिलाफ लड़ाई में भारतीय वायुसेना ने ऑक्सीजन कंटेनर, आवश्यक दवाओं एवं अन्य चिकित्सा उपकरणों को एयरलिफ्ट किया

भारतीय वायु सेना ने कोविड-19 के मामलों में ताजा वृद्धि के खिलाफ लड़ाई में देश के विभिन्न भागों से ऑक्सीजन कंटेनरों, सिलेंडरों, आवश्यक दवाओं, कोविड अस्पतालों एवं सुविधाओं की स्थापना और उन्हें बनाए रखने के लिए आवश्यक उपकरणों को एयरलिफ्ट करने की कार्यवाही की है। इन कार्यों को अंजाम देने के लिए भारतीय वायुसेना के परिवहन विमानों और हेलीकॉप्टरों को लगाया गया है। इनमें परिवहन विमान सी-17, सी-130जे, आईएल-76, एएन-32 और एवरो शामिल हैं। चिनूक और एमआई-17 हेलिकॉप्टर को स्टैंडबाय पर रखा गया है। दिल्ली के विभिन्न अस्पतालों के लिए कोच्चि, मुंबई, विशाखापट्टनम और बैंगलोर के डॉक्टरों और नर्सिंग स्टाफ को एयरलिफ्ट किया गया है।

भारतीय वायुसेना के सी-17 और आईएल-76 विमानों ने अत्यावश्यक ऑक्सीजन के वितरण में तेजी लाने के लिए टैंकरों के उपयोग वाली जगह से देश भर के फिलिंग स्टेशनों तक इन बड़े खाली ऑक्सीजन टैंकरों को एयरलिफ्ट करना शुरू कर दिया है। इसके अलावा सी-17 और आईएल-76 ने लेह में अतिरिक्त कोविड टेस्ट सुविधा स्थापित करने के लिए बायो सेफ्टी अलमारियां और ऑटोक्लेव मशीनों को मिलाकर बड़ी मात्रा में सामग्री पहुंचाई है । भारतीय वायुसेना के परिवहन विमान और हेलीकॉप्टर अल्प सूचना पर तैनात किए जाने के लिए एकदम तैयार हैं।

गौरतलब है कि 2020 में कोविड-19 प्रकोप के शुरुआती दिनों में भारतीय वायुसेना ने कोरोना वायरस महामारी से निपटने के लिए आवश्यक दवाएं, चिकित्सा और अन्य आवश्यक आपूर्ति पहुंचाने के साथ-साथ विदेशों से फंसे भारतीय नागरिकों को वापस लाने के लिए कई उड़ानें संचालित की थीं।

https://pib.gov.in/PressReleasePage.aspx?PRID=1713633

Press Information Bureau
Government of India

Ministry of Defence

Fri, 23 April 2021 5:00PM

AFMS to import oxygen generation plants from Germany to tide over current surge in COVID-19 cases

MoD giving extension to SSC Doctors in AFMS till December 31, 2021

Armed Forces Medical Services (AFMS) has decided to import oxygen generation plants and containers from Germany, amid shortage of oxygen in the hospitals during the second wave of Covid-19 across the country. Twenty-three mobile oxygen generation plants are being airlifted from Germany that will be deployed in AFMS hospitals catering to the COVID patients.

Each plant has a capacity to produce 40 litres of oxygen per minute and 2,400 litres an hour. At this rate, it can cater to 20-25 patients round the clock. The advantage of these plants is that they are easily portable.These oxygen generating plants are expected to arrive in India within a week.

In another important decision, Ministry of Defence is giving extension to Short Service Commissioned Doctors in AFMS till December 31, 2021 to tide over the current surge in medical services. This will augment the strength of AFMS by 238 more doctors.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1713573

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Fri, 23 April 2021 5:00PM

कोविड-19 मरीजों की बढ़ती संख्या को देखते हुए सशस्त्र सेना चिकित्सा सेवा जर्मनी से ऑक्सीजन उत्पादन संयंत्रों का आयात करेगी

रक्षा मंत्रालय ने एएफएमएस में एसएससी डॉक्टरों की सेवाओं को 31 दिसंबर 2021 तक बढ़ाया

सशस्त्र सेना चिकित्सा सेवा (एएफएमएस) ने देश भर में कोविड-19 की दूसरी लहर के दौरान अस्पतालों में ऑक्सीजन की कमी के बीच, जर्मनी से ऑक्सीजन उत्पादन संयंत्रों और कंटेनरों को आयात करने का फैसला किया है। जर्मनी से 23 मोबाइल ऑक्सीजन उत्पादन सयंत्र एयरलिफ्ट किए जा रहे हैं, जिन्हें उन एएफएमएस अस्पतालों में लगाया जाएगा जो कोविड रोगियों की देखभाल कर रहे हैं।

प्रत्येक संयंत्र में प्रति मिनट 40 लीटर ऑक्सीजन और 2,400 लीटर प्रति घंटे की उत्पादन करने की क्षमता है। इस दर पर यह सयंत्र 24 घंटे में 20 से 25 मरीजों को ऑक्सीजन प्रदान कर सकता है। इन सयंत्रों का लाभ यह है कि वे आसानी से रखे जा सकते हैं। भारत में एक सप्ताह के भीतर इनके आने की उम्मीद है।

एक अन्य महत्वपूर्ण निर्णय में, रक्षा मंत्रालय ने चिकित्सा सेवाओं में अचानक आई डॉक्टरों की जरूरत को देखते हुए मंत्रालय ने फैसला लिया है कि एएफएमएस शॉर्ट सर्विस कमीशन (एसएससी) के तहत अपने सभी डॉक्टरों की सेवाएं 31 दिसंबर 2021 तक बढ़ा दी हैं। इससे एएफएमएस के डॉक्टरों की संख्या में 238 की बढ़ोतरी होगी और स्वास्थ्य सेवाओं को मजबूती मिलेगी।

https://pib.gov.in/PressReleasePage.aspx?PRID=1713612

Hindustan Times

Sun, 25 April 2021

Rajnath Singh reviews defence ministry's efforts to deal with Covid-19 crisis

Rajnath Singh carried out the review at a virtual meeting attended by Chief of Defence Staff Gen Bipin Rawat, Army Chief Gen MM Naravane, Navy Chief Admiral Karambir Singh and DRDO chairman G Satheesh Reddy among others

New Delhi**:** Defence Minister Rajnath Singh on Saturday reviewed efforts by various wings of the ministry in contributing to India's battle against a fast-spreading second wave of coronavirus.

Singh carried out the review at a virtual meeting attended by Chief of Defence Staff Gen Bipin Rawat, Army Chief Gen MM Naravane, Navy Chief Admiral Karambir Singh and DRDO Chairman G Satheesh Reddy among others.

The three services as well as other wings of the Ministry of Defence (MoD) ministry have been extending support to various state governments and union territories in dealing with the massive surge in Covid-19 cases.

"Raksha Mantri Shri Rajnath Singh is reviewing the MoD's efforts to deal with the prevailing Covid-19 situation in the country," the defence minister's office tweeted.

Defence minister Rajnath Singh.(PTI)

Since Friday, the Indian Air Force airlifted empty oxygen tankers and containers to various filling stations across the country to speed up the distribution of the much-needed medical oxygen in treating Covid-19 patients.

The IAF has also been transporting essential medicines as well as equipment required by the designated Covid hospitals in various parts of the country.

On Saturday, one C-17 transport aircraft of the IAF reached Changi airport in Singapore to bring high-capacity oxygen containers to boost the oxygen supply in the country.

"The Indian Air Force is taking sorties to reduce the transportation time of Oxygen and other critical supplies. One C-17 has reached Changi airport in Singapore today. These containers of cryogenic oxygen tanks will help boosting the oxygen supply in the country," Singh's office said.

India is struggling with a second wave of the coronavirus infection and hospitals in several states are reeling under acute shortage of medical oxygen and beds in view of a rising number of Covid-19 cases.

https://www.hindustantimes.com/india-news/rajnath-singh-reviews-defence-ministry-s-efforts-to-deal-with-covid-19-crisis-101619253403102.html

THE TIMES OF INDIA

Sat, 24 April 2021

India has resources and assets to map, monitor and enforce good order at sea: Navy Chief

New Delhi**:** Against the backdrop of increasing Chinese presence in the Indian Ocean Region, Chief of Naval Staff Admiral Karambir Singh on Friday said India has the resources, assets and domain expertise for mapping, monitoring and enforcing "good order" at sea.

In an address at a seminar, Admiral Singh also asserted that the Indian Navy remained focused on contributing its "might" to support the government's efforts on realising the potential of the blue economy.

"We have the resources, assets and domain expertise for mapping, characterising, monitoring as well as enforcing good order at sea. The Navy's aim is to create an enabling ecosystem that supports the blue economy," he said.

Chief of Naval Staff Admiral Karambir Singh (File Photo)

Admiral Singh also said that his force is supporting organisations like Indian Ocean Rim Association (IORA) in their efforts towards developing a common vision in developing the blue economy.

"The 23-member grouping has emphasised development of the blue economy through a common vision for balanced economic development in the Indian Ocean Rim," he said at the seminar on the role of maritime forces in promoting a blue economy.

The Navy Chief said that the blue economy holds out promise and hope as a new frontier and engine of global growth in the wake of the coronavirus pandemic wrecking economies around the world.

"The prime minister has laid emphasis on India emerging as one of the leading blue economies of the world, with all maritime stakeholders joining hands to achieve this task," he said. "The Indian Navy is a key stakeholder in realising this vision and its strength lies in ensuring safety, security and good order at sea. This is critical to enable commerce and trade to thrive in a stable and sustainable manner," the Navy Chief said.

Referring to the Indian Navy's maritime domain awareness efforts, he said it is focused on preventing "inimical activities" at sea which can deprive nations of their rightful blue economic dividend.

There have been mounting concerns in the Indian Ocean Region about growing Chinese assertiveness including Beijing's exploitation of marine resources.

"I wish to assure you all that the Navy remains focussed on contributing its might to support blue economy efforts of the government of India, and indeed, the region," he said.

The Indian Ocean, considered the backyard of the Indian Navy, is critical for India's strategic interests.

China has been making concerted efforts to increase its presence in the region. The Indian Navy has been ramping up presence in the Indian Ocean to keep a hawk-eyed vigil over Chinese activities.

https://timesofindia.indiatimes.com/india/india-has-resources-and-assets-to-map-monitor-and-enforce-good-order-at-sea-navy-chief/articleshow/82220035.cms

Sat, 24 April 2021

Harnessing India's Blue Economy: Role of Indian Navy

By Ravi Shankar

The Blue Economy holds out a promise and hope as a new frontier and engine of global growth amidst the gloom of the COVID-19 pandemic that has damaged the global economy, said Chief of Naval Staff Admiral Karambir Singh. With India aiming to emerge as a $5 trillion economy, the only way to achieve this is to move outwards as the oceans provide a vast resource pool that can be tapped to spur India's economic growth. "The Blue Economy contributes about 4 per cent of India's GDP, there is tremendous potential to expand its contribution," the Navy Chief opined.

In his address during a webinar on 'Securing the Blue Economy' held on 23 April, the Navy Chief highlighted how India is progressing towards harnessing the blue economy and the role that the Indian Navy is playing to ensure a safe, secure and stable maritime environment.

Speaking about the role of the Indian Navy in harnessing the blue economy, Admiral Singh emphasized that the Indian Navy would remain focussed on contributing its might to support the Blue Economy efforts of the Government of India. In this endeavour, the Navy aims to be, both, an enabler and an element of national and regional Blue Economy efforts. "We have the resources, assets and domain expertise for mapping, characterising, monitoring as well as enforcing good order at sea. The Navy aims to create an enabling ecosystem that supports the Blue Economy," he added.

"The Indian Navy is a key stakeholder in realising this vision and its strength lies in ensuring safety, security and good order at sea. This is critical to enable commerce and for trade to thrive in a stable and sustainable manner. The Navy's efforts aim to contribute to the core objectives of the UN Sustainable Development Goal 14 to preserve, protect and conserve ocean spaces and resources," observed the Navy Chief.

He further said that the oceans have an annual gross value of $ 2.5 trillion that makes it the 8th largest global economy and ocean-based trade is likely to quadruple by 2050. "Two-thirds of the food production will be farmed from the seas, and clean offshore wind energy will be the leading power generation technology in the next few years," he added.

The Navy is also supporting organizations such as Indian Ocean Rim Association (IORA) in their regional efforts towards developing a common vision in developing the blue economy. The 23-member grouping has emphasised the development of the Blue Economy through a common vision for balanced economic development in the Indian Ocean Rim. We support this initiative through participation in various working groups, preparation of HADR SOPs, as also information-sharing on critical issues through an MoU between the Navy and IORA Member States, informed the Naval Chief.

Akhilesh Mishra, OSD (DPA), Ministry of External Affairs informed that India is in the process of developing its own comprehensive Blue Economy policy framework, which will cover coastal economy, tourism, marine fishery, technology, skill development, shipping, deep-sea mining, and

capacity building in a holistic manner. He also stated that harnessing the significant potential of the ocean is vital to the economic wellbeing of any nation. This is particularly important for a country like India, where land-based resources are stressed. "Blue economy is emerging as a vital area of cooperation with nations like Australia and Indonesia," he added.

Addressing the valedictory session, organized by FICCI, Vice Chief of the Naval Staff, Admiral G Ashok Kumar said a Blue Economy needs a stable and secure environment to sustain and grow. "This is enabled through effective maritime security. With growing maritime interests, the growth of our Navy is inevitable. The blue economy and maritime security are deeply intertwined and mutually dependent on each other. We will be successful in moving ahead in a cohesive and coordinated manner with a clear-eyed focus on the greater good at the national regional and global level," he added.

Blue Economy opportunities for India spans the entire spectrum from energy to ecology, fishing to tourism. For instance, of a potential fish resource of 5.3 million metric tons in India's Maritime Zone, only about 70 per cent is fished. 90 per cent of this catch comes from fishing up to 50m contour, highlighting opportunities for deep-sea fishing. India's offshore wind energy generation potential is more than 300 GW, 1/10th of which is currently planned to be tapped. Large Marine Ecosystems in the Bay of Bengal comprise 8 per cent of the world's Coral Reefs and 12 per cent of Mangroves, opening opportunities for Coral Reef tourism, apart from ecological conservation.

With 80 per cent of the world's population residing within 200 km of the coast and the global population requiring 30 per cent more water, 40 per cent more energy and 50 per cent more food by 2030, a turn to the seas is inevitable, the Chief of Naval Staff emphasised.

https://bharatshakti.in/harnessing-indias-blue-economy-role-of-indian-navy/

ThePrint

Sat, 24 April 2021

Army wants around 350 light tanks to sharpen its mountain warfare edge amid Ladakh stalemate

The Army's technical specifications for the tanks indicate the combat weight should not exceed 25 tonnes. The RFI has been floated to seek vendors

By Amrita Nayak Dutta

New Delhi**:** The Army is planning to procure around 350 light tanks in a phased manner under the Make in India initiative. On Friday, it floated a Request for Information (RFI) to seek prospective vendors.

These 25-tonne tanks, if and when procured, would form nearly six regiments in the Army.

The preliminary document comes amid an ongoing stalemate in the disengagement process between Indian and Chinese troops in eastern Ladakh.

File image of Indian soldiers in Ladakh | Representational image | By special arrangement

Procuring light tanks — considered a versatile platform — is part of the Army's efforts to sharpen its edge in mountain warfare as they will be able to exploit the limited space available in mountainous terrains by way of enhanced mobility, thus providing additional firepower.

During the Ladakh stand-off, the Army had deployed its existing heavier T-90, T-72 tanks and infantry combat vehicles in eastern Ladakh. The Army's Armoured Corps' Russian-origin tanks weigh anywhere between 40-50 tonnes. The latest version of the Arjun tank weighs 68.5 tonnes.

The People's Liberation Army had deployed their lighter tanks, which offer greater manoeuverability but less armour protection.

Requirements for the tanks

According to the RFI, the new generation combat vehicle platforms will come along with "performance-based logistics, niche technologies, engineering support packages" as well as other maintenance and training requirements.

The technical specifications for the tanks decided by the Army indicate the combat weight of the tanks should not exceed 25 tonnes. It states that the physical dimensions of the tanks should not come in the way of them being transported by water, air, road or water.

The tanks should be able to operate in different conditions and terrains, including cold high altitude areas and deserts as well and they should be able to attack tanks, armoured vehicles, UAVs, precision guided munitions, among others.

They should also have several weapons for anti-aircraft and ground role, advanced multipurpose smart munitions and gun tube launched anti tank guided missiles.

Other suggested specifications include the tanks having a high detection recognition, identification ranges and thermal night fighting capability and sleuth features such as the ability to suppress visual, audio/acoustic, thermal and electromagnetic signatures.

The RFI also seeks to know if the vendors would be able to offer other features such as anti-drone capability and UAV jammers and some AI technologies.

It also calls upon the vendors to indicate the approximate cost for the platform, transfer of technologies to be offered and the tentative delivery schedule. The deadline for filing the response is 18 June.

Russia already offered its 18 tonne Sprut light weight tanks to the Army last year amid the standoff with China.

The Army is also in talks with the Defence Research and Development Organisation (DRDO), which is working with private firm L&T to convert the K9 Vajra into a light tank that could come handy in high altitude areas.

Need for light tanks

Speaking about the need for light tanks, Major General Birender Dhanoa (Retd) told ThePrint these tanks would be purely for the mountains, primarily against China, but would be effective north or south of the Pir Panjal as well.

The former armoured corps officer explained that a light tank cannot carry troops inside so they will have to be grouped with Infantry Combat Vehicles and other combat support, especially air defence.

"Actually, based on the need, even a common platform that can become a tank or an ICV (infantry combat vehicle) and even a light self propelled howitzer could be a better bet for the mechanised forces," he said.

"Last but not the least, we do need to consider whether light tanks are going to be relevant on a future battlefield that may or may not resemble what planners have in mind when they firm in the light tank requirement," said the Maj Gen.

"A hard look at the cost benefit analysis vis-a-vis newer technologies that right now may appear sci-fi and unattainable such as unmanned platforms and drone swarms mounted with precision ordnance or kamikaze drones may well do a better job. It's never an easy choice for planners who have to fit square pegs in round holes, here and now," he added.

The retired officer also said that some measures for cold proofing the tanks as well as for ruggedness and ability to traverse mountainous terrain would be ideal.

"Airportability and palletisation of ammunition would be necessary and finally some measure of compatibility of maintenance with the existing ecosystem of repair and recovery," he added.

https://theprint.in/defence/army-wants-around-350-light-tanks-to-sharpen-its-mountain-warfare-edge-amid-ladakh-stalemate/644727/

THE TIMES OF INDIA

Sat, 24 April 2021

Indian Navy starts process to take 24 naval utility helicopters on lease

New Delhi**:** The Indian Navy on Friday started the process of taking 24 naval utility helicopters on lease by issuing a request for information (RFI) to foreign vendors.

According to the RFI, the Navy plans to keep the helicopters with ground-support equipment for five years.

"This lease will also include all maintenance support ashore, including performance-based logistics (PBL) and training of air crew and maintenance crew during the term of the lease," the Navy said in the RFI.

The original equipment manufacturers (OEMs) or authorised leasing firms or government-sponsored export agencies are eligible for participation in the bidding process, in accordance with the norms of defence acquisition procedure, the Navy said.

It said the helicopters will have to be in the weight category of five tonnes and below and should be able to perform a range of activities while operating from the ships of the Indian Navy and ashore in day and night.

The activities mentioned include search and rescue from ships at sea, medical evacuation, communication duties to and from ships and low-intensity maritime operations.

The RFI said the helicopters should be twin-engine and piloted by two pilots with wheeled landing gear and blade fold capability.

It said the lessor will also have to indicate the possibility of delivering all 24 helicopters within two years from the date of signing of the contact and that the training schedule is to be in line with the delivery schedule.

The last date for replying to the RFI is June 18.

https://timesofindia.indiatimes.com/india/indian-navy-starts-process-to-take-24-naval-utility-helicopters-on-lease/articleshow/82220268.cms

The Statesman

Sat, 24 April 2021

The future is unmanned

From a Balanced to an Unmanned Force. At present, many Air Forces across the world are striving to achieve a balance between manned and unmanned systems, based on threat perceptions, budgets and desired capabilities

The manned fighter aircraft is dead!

The Air Warfare Symposium, conducted by the US Air Force Association on 27 and 28 February, 2020, may go down in history as an event where history was foretold. It was here, on the morning of 28 February, 2020, that Elon Musk, the quintessential disruptor, set the cat among the pigeons. In a room overflowing with Air Force personnel, many fighter pilots among them, Musk famously predicted the end of the manned fighter aircraft. Much consternation followed, and copious amounts of newsprint was invested in the counter-narrative that flowed, mainly from the US Air Force and its veterans. Notably, much of the criticism of Musk's proclamation was aimed at targeting him personally as a 'head-line grabber', rather than to disprove his assertion through solid logic and evidence. This is probably indicative of the fact that Musk's prediction may hold more than a modicum of truth.

(Representational image: iStock)

History Tells a Story. History is replete with examples of path-breaking inventions being viewed with disdain at inception, and thought either impractical or even impossible. For instance, Marshal Ferdinand Foch, the Supreme Commander of Allied Forces in 1918 was quite dismissive of aviation, and had famously said that "airplanes are interesting toys, but of no military value." The past Century, and the significant role that air power has played in conflicts therein, from WWI and WWII to the Gulf Wars as well as the 1971 Indo-Pak wars, bear testimony to the inaccuracy of Marshal Foch's proclamation. However, in a similar vein, it may be imprudent to wish away the monumental technological advancements of recent years and the potential for change that they portend, merely because such changes may be undesirable, sound improbable or, in some cases, seem outlandish.

The age of unmanned systems

While air power inarguably retains great value in present day warfare, it is rapidly imbuing an unmanned character. The US Department of Defence (DoD), in its Unmanned Aircraft Systems Roadmap 2005-2030, defines UAVs as "A powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or non-lethal payload." The extensive use of drones by the US across the world, the clear advantages drawn by Azerbaijan over Armenia in their recent conflict, and numerous other examples, point to the manner in which unmanned aircraft technology can serve as a force multiplier. As far back as 2013, analyst Dan Parsons had estimated that "future autonomous air refueling of unmanned systems would accord them the capability to remain 'on station' for months, and allow all roles from combat to cargo handling." The question that bears consideration, therefor, is can unmanned aircraft (drones) become the mainstay of air power in the near future (2030)?

Advanced Air Defence Systems

Concomitant with the advent of unmanned aerial systems, modern Air Defence has also witnessed significant advances in capability. Integrated Air Defence Systems (IADS) have become the order of the day, characterized by highly mobile sensors and weapons, organised in a multi-

layered manner. Within these systems, weapons like the Russian S-400 and Chinese HQ-9 cover a significantly large area. Analysts estimate that Russian IADS deployed on NATO's Eastern Flank threaten to keep NATO Air Power at arm's length.

AD Systems Vs Drones

While AD systems have evolved, increasing number of actors are opting to use drones as a mitigating measure. For instance, in mid-2020, Turkish supplied drones assisted the Libyan Govt of National Accord in destroying Russian Pantsir SHORADS being used by rebel forces. Similarly, the drone attacks on Aramco in Saudi Arabia also underscored the relative advantages that these unmanned aerial systems possess. In this instance, Saudi Arabian Air Defence Systems proved helpless when two oil facilities were attacked by alleged Houthi rebels, who launched 18 drones and seven cruise missiles against two facilities on 14 September 2019. Evidently, unmanned aerial systems in conjunction with long-range missiles, offer an option that is more viable against expensive, highly capable AD systems, as compared to equally expensive, and resource-intensive manned aircraft.

Modern long-range missiles

As the US plans for an increasingly challenging 'great power competition' scenario with China, the Pentagon appears to have realised that air support may not be readily available to ground troops caught in a high intensity conflict over heavily contested air spaces. Accordingly, the US Army has rated 'Long Range Precision Fire' as its highest priority. In consonance with this outlook, Lockheed Martin's website advertises development of a next-generation, modular Precision Strike Missile, in conjunction with the Army. Long-range ballistic/ quasi-ballistic trajectory missiles offer the government a relatively cheaper option to undertake precision attack, as compared to the large number of prohibitively expensive manned aircraft squadrons, currently maintained for such a role.

The future air force

From a Balanced to an Unmanned Force. At present, many Air Forces across the world are striving to achieve a balance between manned and unmanned systems, based on threat perceptions, budgets and desired capabilities. However, as alluded to by Elon Musk, the day of the manned aircraft may soon be over. This flows from the following aspects:-

The cost of unmanned aircraft will be significantly lower than manned aircraft. Financial savings will accrue, not only from the relatively lower cost of Unmanned Aircraft (UA), but also from the fact that expenditure on training will evolve. This would, initially cover ground based controllers and, eventually, to no controllers at all, as UAs gradually become completely autonomous. This will lead to further savings resulting from reduced requirement of flying to maintain pilot currency, decreased pay and allowances expenditure, etc.

The potential losses suffered in battle would not include precious human lives.

Countries will increasingly realise that sending in unmanned aircraft to penetrate defended air space may be more cost effective. Justin Bronk, the Editor of RUSI Defence Systems, had predicted a "significant move towards unmanned systems for vanguard penetrating roles".

Manned aircraft carry missiles, as can unmanned aircraft. The features mandated onboard an aircraft designed for manned flight are significantly more than on an unmanned one, e.g. ejection seats, Head-Up Displays, etc.

At present, an air strike into hostile or contested areas mandates a comprehensive air package comprising a wide array of aircraft, from AWACS to EW escorts, AD escorts, et al. In effect, the number of actual strike aircraft in a package is only a small proportion of the overall number of aircraft deployed. In an unmanned scenario, this requirement will reduce drastically, leading to further cost saving.

Artificial Intelligence (AI) driven unmanned aircraft

AI is slowly becoming ubiquitous in nature, and organisations across the world are scrambling to harness the immense potential of this niche technology. Militaries are no different, and numerous air forces have also invested heavily in research and development in this field. DARPA

recently undertook a simulated flight combat competition pitting a top US fighter pilot against AI in five rounds of combat. The AI program won all five rounds in under two minutes.

While this may not lead to a definitive conclusion that the fighter pilot is no longer required, it does point to the possibilities that the future portends.

Land and sea-based long-range vectors

Apart from the effect that UAs will have on the size, role and capabilities of a future Air Force, the advent of long-range, precision vectors ï¿½ sea-based and land-based ï¿½ will also play a key role. The following aspects assume salience:-

Land-based vectors

Existing land-based capabilities, already extend to thousands of kilometres, which comfortably covers most areas in India's immediate vicinity. Added to this is the strategic location of India's island territories, where mobile, long-range missile batteries (Brahmos) could be positioned. This would be able to exert influence over large swaths of sea areas, including choke points. Such deployment of missiles, in lieu of aircraft, would accrue financial savings as well. This derives from the fact that expensive airfields would no longer need to be maintained for manned flights on these islands.

Sea-based vectors

With regard to sea-based vectors, it is common knowledge that 70 per cent of the earth is covered with water which, as a corollary, also implies accessibility for sea-based forces to almost every part of the globe. For instance, in the Indian context, the long range Nirbhay missile (also a product of 'Made in India') is reported to have advanced features, including sea-skimming/ terrain-hugging and loiter capabilities. It is also estimated to be capable of an extended range of over 1000 Km. Coupled with this, development of modern, sea-based, long-range vectors provide naval forces the capability to address targets deep in the hinterland. Therefore, the need for air forces to traverse long distances, using multiple support aircraft (AWACS/ FRA), escorts, etc, to strike distant targets is steadily diminishing.

The issues highlighted above are indicative of the role of future air forces being limited primarily to supporting friendly forces in the Tactical Battle Area. Collectively, these aspects along with developments in the field of unmanned systems, buttress the case for a re-evaluation of the future structure of air forces.

The smart way ahead

USA has drawn out a clear roadmap for UA induction, including fighter aircraft. It may be prudent to adopt a similarly aspirational outlook and plan for a calibrated move from manned to completely unmanned and autonomous air power. In the case of India, with adversarial nations to the West and North, the savings accrued from charting the unmanned course would free up budgets for much required capabilities such as additional Mountain Strike Corps, Submarines and Aircraft Carriers ï¿½ also carrying unmanned aircraft.

Strategic guidance

Prime Minster Narendra Modi has clearly laid down the guidance and vision for the Country in terms of adoption of innovations, AI, niche technologies and the need to 'leapfrog' capability gaps. His expectations and intent were made amply clear through his articulation that "India is placed to leverage power of technology and leapfrog into the future." In the military sense, the low hanging fruit is air power, which can easily evolve to becoming a completely unmanned force in the medium term.

Conclusion

China is investing heavily in AI and niche technologies, many of which will enable and drive a move to unmanned aerial assets. It would be short-sighted at best, and disastrous at worst, for India to be left behind in this race for transformation into unmanned air power. Hence, while it may be tempting to dismiss claims such as those made by Elon Musk as outlandish, and easy to provide convenient self-serving logic for retaining manned air forces, it may result in India sliding

backwards, rather than surging forward in the race for technology and military capabilities. Hence, embracing unmanned solutions in lieu of the current philosophy of manned aircraft will be operationally relevant, financially prudent, and conceptually futuristic. We need to open our eyes and mind to see that the future is truly unmanned.

https://www.thestatesman.com/features/the-future-is-unmanned-1502964276.html

BW BUSINESSWORLD

Sun, 25 April 2021

India and France to conduct high tempo submarine naval exercise in the Indian Ocean

India and France are set for high tempo bilateral exercise 'VARUNA-2021' in the Arabian Sea from 25th to 27th April 2021. How strategic is the three day exercise in the Indian Ocean is evident with flagship Aircraft carrier Charles-de-Gaulle with Rafale-M fighter in action with Indian navy at sea, including advanced air defence and anti-submarine exercises, intense flying operations, tactical manoeuvres, surface and anti-air weapon firings, underway replenishment and other maritime security operations

By Manish Kumar Jha

The 19th edition of the Indian and French Navy bilateral exercise 'VARUNA-2021' is scheduled to be conducted in the Arabian Sea from 25th to 27th April 2021.

An area of vital strategic influence within Indian Ocean Region (IOR), Arabian Sea lies in northwestern part of the IOR, and forming part of the principal sea route between Europe and India. Further to the west, it is surrounded by by the Horn of Africa and the Arabian Peninsula, to the north by Iran and Pakistan, to the east by India, and to the south by the remainder of the Indian Ocean. It is the connecting point at sea with the Persian Gulf via the Strait of Hormuz and to further to the west the Gulf of Aden connects it with the Red Sea via the Bab el-Mandeb (Bāb al-Mandab) Strait.

Aircraft Carrier Charles-de-Gaulle with Rafale-M fighter during Varuna 21

France has brought its flagship aircraft carrier Aircraft Carrier Charles-de-Gaulle closer to the Indian Ocean in glaring show of military comradeship with India.

From the Indian Navy's side too, top the naval assets are being deployed, including guided missile stealth destroyer INS Kolkata, guided missile frigates INS Tarkash and INS Talwar, Fleet Support Ship INS Deepak, with Seaking 42B and Chetak integral helicopters, a Kalvari class submarine and P8I Long Range Maritime Patrol Aircraft.

The French Navy, along with Aircraft Carrier Charles-de-Gaulle will be represented by with Rafale-M fighter, E2C Hawkeye aircrafts and helicopters Caïman M and Dauphin embarked, Horizon-class Air defense destroyer Chevalier Paul, Aquitaine-class multi-missions frigate FNS Provence with a Caïman M helicopter embkared and Command and supply ship Var.

The Indian side will be led by Rear Admiral Ajay Kochhar, Flag Officer Commanding Western Fleet, while the French side will be led by Rear Admiral Marc Aussedat, Commander Task Force 473.

The three day exercise will see high tempo-naval operations at sea, including advanced air defence and anti-submarine exercises, intense fixed and rotary wing flying operations, tactical manoeuvres, surface and anti-air weapon firings, underway replenishment and other maritime security operations. Units of both navies will enhance and hone their war-fighting skills to demonstrate their ability as an integrated force to promote peace, security and stability in the maritime domain.

According to the spokesperson from Indian Navy, on completion of exercise VARUNA-21, Indian Navy's guided missile frigate INS Tarkash will continue to exercise with the French Navy's Carrier Strike Group (CSG) from 28th April to 1st May 2021. During this period, the ship will take part in advanced surface, anti-submarine and air-defence operations with the French CSG.

Indian and France have demonstrated the strategic alignment mostly on the joint naval exercise and recent Coordinated Petrol (CORPAT) between in Reunion Island which is French naval base in the Indian Ocean. In 2018, India and France have already signed the crucial Agreement for the Provision of Reciprocal Logistics Support between the Armed Forces that would give reciprocal access to each other's military facilities. For example, based on the Agreement, Indian warships and military aircraft can embark on the French base of Djibouti in the Horn of Africa or the French territory of Reunion Islands in the Indian Ocean.

The Agreement is similar to the four other logistics agreements India has signed with partner countries, viz., Logistics Exchange Memorandum of Agreement (LEMOA) with the United States (US) in 2016, Implementing Arrangement Concerning Mutual Coordination, Logistics and Services Support with Singapore in 2018, and, most recently, Agreement to Extend Logistical Support to each other's navies with the Republic of Korea (ROK) in 2019.

Though the such agreements are similar in nature but it was with France that India has agreed to conduct CORPAT which hitherto was only with its maritime neighbors-- Maldives, Seychelles and Mauritius besides the navies of Bangladesh, Myanmar, Thailand and Indonesia.

This was evident as how quickly the Agreement worked it way when Indian Navy P-8I Maritime Patrol Aircraft visited Reunion Island to train with the French Air Force and Navy based on the island, known as "FAZSOI".

Such agreements provide for added operational flexibility of the Indian Navy's P8I long-range maritime patrol (LRMP) aircraft. With an operational range of 1200 nm (with four hours on station) and speed of 789 kmph, the agreement with France broadens the range of maritime surveillance as it allows the landing and refuelling of these aircraft at reciprocal bases.

Recently during the 'La Perouse' Navy exercise which was led by France, Rear Admiral Jacques Fayard has said that French Navy see Indian Navy as global security provider of Indo-Pacific region. Rear Admiral Fayard who is in charge of the operational control of all French ships deployed from the Suez Canal towards the Malacca strait said: "We see Indian Navy as a global security provider of this strategic region." That marks a clear strategic role that Indian navy is bound to play in the IOR. Stressing that the Indo-Pacific is now a reality, the Rear Admiral further stated that his forces deployed in the Indian Ocean are part of the will of the French government to be part of solutions of all the tensions in this strategic region. "We are balanced, eager to make sure that the international rules are overseen and freedom of navigation is enhanced everywhere on international waters," he said.

Indo- French bilateral naval exercise VARUNA-21 will highlight the increased levels of synergy, coordination and inter-operability between the two friendly navies. As per Indian navy, these interactions further underscore the shared values as partner navies, in ensuring freedom of seas and commitment to an open, inclusive Indo-Pacific and a rules-based international order.

http://www.businessworld.in/article/India-And-France-To-Conduct-High-Tempo-Submarine-Naval-Exercise-In-The-Indian-Ocean-/25-04-2021-387596/

The EurAsian Times

Mon, 26 April 2021

China on-course to make 'Trillion Dollar' F-35 Jets useless with its stealth detecting radars

By Ayush Jain

China is all set to get advanced radars capable of detecting stealth fighter jets such as US F-35 as well as drones and even low-flying cruise missiles, according to reports.

In November last year, The EurAsian Times reported that China has developed an anti-stealth radar that can detect advanced stealth. Moreover, the radar could guide missiles towards stealthy fighter jets.

In the three-day World Radar Expo held in Nanjing, in East China's Jiangsu province, China showcased its various advanced surveillance systems including "anti-stealth" technology, as a countermeasure to fifth-generation aircraft that have become a challenge to air defense systems worldwide. The event concluded on Saturday.

Developed by the No.14 Research Institute of the state-owned China Electronics Technology Group Corporation or CETC, the SLC-7 L-band 3D surveillance radar system can take down targets including stealth aircraft, helicopters, drones, cruise missiles, tactical ballistic missiles, near-space targets, and artillery shells and rockets, making it much more versatile than many competing products, according to a statement by the research institute quoted by Global Times.

With its gigantic antenna, the flagship radar YLC-8E can detect "even the most advanced stealth aircraft", and that its high-definition feature is superior to foreign competitors.

In contrast to this big antenna, the research institute also showcased an advanced man-portable radar system capable of detecting low-altitude, low observable, low-speed flying targets like drones, aircraft, and subsonic cruise missiles. This is designated as YLC-48, dubbed "terminator of drones".

This small radar could be effectively used for all kinds of lightweight ground-based weapons platforms for all-weather operations with rapid deployment and withdrawal, according to its developer.

Further developing this “drone terminator”, the institute has also developed the AUDS high-mobile anti-drone system based on the YLC-48 which can greatly enhance China’s public safety and low-altitude security defense capabilities in sensitive areas, Global Times reported.

However, while the advancements in radar technology are important, it is certainly not impossible to counter stealth aircraft using the current technology. In an interesting writeup while explaining problems encountered by Israeli F-35I against Russian radars in Syria, defense analyst David Cenciotti, explains:

“In fact, tactical fighter-sized stealth aircraft are built to defeat radar operating at specific frequencies; usually high-frequency bands as C, X, Ku and S band where the radar accuracy is higher (in fact, the higher the frequency, the better is the accuracy of the radar system).

“However, once the frequency wavelength exceeds a certain threshold and causes a resonant effect, LO aircraft become increasingly detectable… Radars that operate at bands below 300 MHz (lower UHF, VHF and HF radars), such as the so-called Over The Horizon (OTH) radars, are believed to be particularly dangerous for stealth planes: although they are not much accurate (because lower frequency implies very large antenna and lower angle accuracy and angle resolution) they can spot stealth planes and be used to guide fighters equipped with IRST towards the direction the LO planes might be.”

https://eurasiantimes.com/is-chinese-pla-finally-getting-anti-stealth-radars-with-an-eye-on-us-f-35/

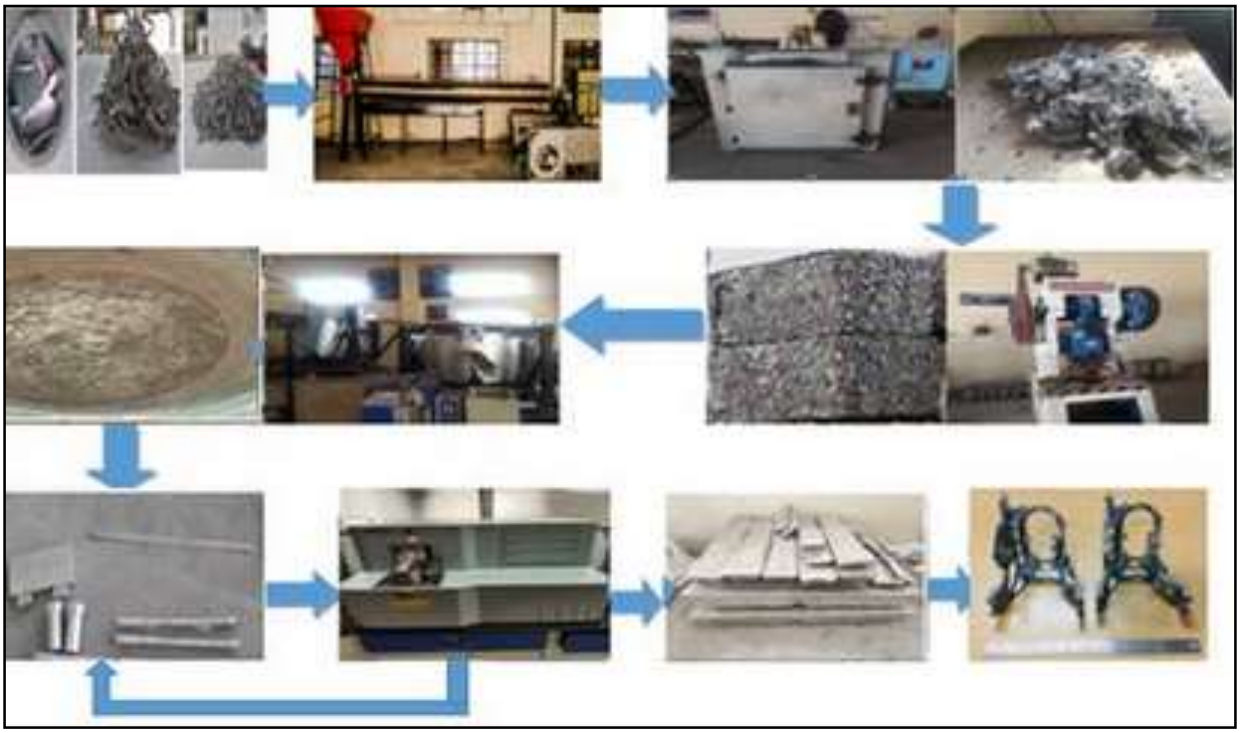
Press Information Bureau
Government of India

Ministry of Science & Technology

Sat, 24 April 2021 12:28PM

Cost-Effective & efficient technology for recycling Aluminium scraps developed

A team of Scientists has developed a cost-effective technology to recycle aluminum scraps efficiently minimizing material losses in the process, which can be used by small and medium scale industries.



Technology Work flow

Melting and refining of aluminum scraps

Dr. C. Bhagyanathan, Associate Professor from Sri Ramakrishna Engineering College, Coimbatore along with Dr. P. Karuppuswamy, Professor Sri Ramakrishna Engineering College and Dr. M. Ravi, Sr. Principal Scientist, CSIR-NIIST Trivandrum developed a technology system that could combine value added / non-value added and hazardous / non-hazardous wastes, aluminium alloys and assorted scraps for industrial applications and recycle them efficiently. The technology was developed with support from the Advanced Manufacturing Technologies programme of the

Department of Science & Technology (DST), Government of India aligned with the 'Make in India' initiative. The developed technology can be used in tiny & cottage Industries, Small Scale Industries and MSME Aluminium foundries and recycling industries.

Conventional aluminium recycling techniques require high investment in processing and generate dangerous residues in form of ferrous (Fe), tin (Sn), lead (Pb) and burning of Mg in the crucible red hot. The process also involves manual separation and sorting of magnesium alloys, ferrous alloys and high silicon alloys etc. Moreover the separated magnesium is hazardous to the environment. Melting of these alloys are in the form of graded aluminium scraps. These industries sell the ingots based on chemical composition of the melt.

The new technology increases the purity and quality of recycled aluminium melt. The technology involves washing the basic inputs -- assorted aluminium scraps (mixed), drying and preheating, removal of basic impurities in melting furnace, degassing in nitrogen atmosphere and addition of alloying elements in holding furnace, filtering (refining) and pouring the metal into the mold. Three problems are addressed during the process. Separation of iron and silicon materials, preventing the loss of magnesium and adding of other elements like chromium, strontium, zirconium and so on to improve the mechanical properties under the prescribed limits. The conversion rate in the existing technology is 54% and with the new technology developed, the conversion rate has been increased by 70% to 80% depending on various cases of scraps dealt with.

The technology is in 7th stage of Technology Readiness Level (TRL) and Dr. C. Bhagyanathan's team has collaborated with several industrial partners in Coimbatore like Roots Cast, Lakshmi Balaji DieCast, Enkey Engineering Works, Adhrash Line Accessories, Super Cast, Star Flow Tech, to cast various components like electrical housing bracket, automobile casings and valve components, motor housing bracket, motor impeller components etc., for further expansion. The team is also in processes of filing a patent for the technology and has also transferred it to Swayam Industries, Coimbatore, Servo Scientific Equipments, Coimbatore.

The technology is also equipped with advanced Aluminium Melting and Holding furnaces, a degassing unit, filtering setup, an industrial washing machine and Oven.

Dr. C. Bhagyanathan's team is further working on recycling of aluminium to suit medium and large scale industries. They are in the process of mapping the results obtained with the small scale furnaces to the large scale furnace and conducting studies on purity post aluminium refining. This technology will be further upgraded with an advanced aluminium induction furnace capable of heat recovery could be successfully implemented in the small-scale industries.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1713724

पत्र सूचना कार्यालय
भारत सरकार

विज्ञान एवं प्रौद्योगिकी मंत्रालय

Sat, 24 April 2021 12:28PM

एल्युमिनियम स्क्रैप को रीसाइक्लिंग करने के लिए म लागत वाली कुशल तकनीक विकसित की गई

वैज्ञानिकों की एक टीम ने एल्युमिनियम स्क्रैप को रीसाइक्लिंग करने के लिए कम लागत वाली एक कुशल तकनीक विकसित की है। इस तकनीक से रीसाइक्लिंग करने पर मेटेरियल का भी कम नुकसान होता है। इस नई तकनीक का उपयोग लघु और मध्यम उद्योगों द्वारा किया जा सकता है।

Technology Work flow

Melting and refining of aluminum scraps

डॉ. सी. भाग्यनाथन, एसोसिएट, प्रोफेसर श्री रामकृष्ण इंजीनियरिंग कॉलेज, कोयम्बटूर, डॉ. पी. करुप्पुस्वामी, प्रोफेसर श्री रामकृष्ण इंजीनियरिंग कॉलेज और डॉ. एम. रवि, सीनियर प्रिंसिपल साइंटिस्ट, सीएसआईआर-एनआईआईएसटी त्रिवेंद्रम ने मिलकर नई प्रौद्योगिकी प्रणाली विकसित की है जो औद्योगिक अनुप्रयोगों के लिए मूल्य वर्धित/गैर-मूल्य वर्धित और खतरनाक/गैर-खतरनाक कचरे, एल्यूमीनियम मिश्र धातुओं और मिश्रित स्क्रैप्स को कंबाइन कर उन्हें कुशलतापूर्वक रीसायकल कर सकती है। यह नई तकनीक विज्ञान और प्रौद्योगिकी विभाग (डीएसटी) के सपोर्ट से चलाए जा रहे उन्नत विनिर्माण प्रौद्योगिकी

कार्यक्रम के तहत विकसित की गई जिसे भारत सरकार के 'मेक इन इंडिया' कार्यक्रम का भी साथ मिला है। विकसित तकनीक का उपयोग छोटे और कुटीर उद्योग, लघु उद्योग और एमएसएमई एल्यूमीनियम ढलाई और रीसाइक्लिंग उद्योगों में किया जा सकता है।

परम्परागत एल्युमीनियम रीसाइक्लिंग तकनीक से लौह (एफई), टिन (एसएन), लेड (पीबी) और क्रूसिबल रेट हॉट से एमजी को जलाकर प्रसंस्करण करने में बड़े निवेश की जरूरत होती है। इस प्रक्रिया में मैग्नीशियम मिश्र धातुओं, फेरस मिश्र और उच्च सिलिकॉन मिश्र धातुओं आदि को मैन्युअल छंटाई भी करनी होती है। इसके बावजूद इससे निकाला गया मैग्नीशियम पर्यावरण के लिए खतरनाक होता है। इन मिश्र धातुओं का गलन ग्रेडेड एल्यूमीनियम स्क्रैप के रूप में होता है। उद्योग रासायनिक संरचना के आधार पर सिल्लियां बेचते हैं।

नई तकनीक से रीसाइक्लड एल्यूमीनियम की शुद्धता और गुणवत्ता बढ़ जाएगी। नई तकनीक में मिश्रित एल्यूमीनियम स्क्रैप (मिश्रित), सुखाना और चुल्हा को गर्म करना, पिघलने वाली भट्टी में बुनियादी अशुद्धियों को दूर करना, वायुमंडल में नाइट्रोजन के स्तर को नीचे रखना और भट्ठी में मिश्र धातु तत्वों को मिलाना और पिघली धातु डालना शामिल है। प्रक्रिया के दौरान तीन समस्याओं का समाधान किया जाता है। लोहे और सिलिकॉन सामग्री को अलग करना, मैग्नीशियम के नुकसान को रोकना और निर्धारित सीमा के तहत मैकेनिकल प्रॉपर्टी को सुधार करने के लिए क्रोमियम, स्ट्रोंटियम, जिरकोनियम और अन्य तत्वों को मिलाना मौजूदा तकनीक में रूपांतरण दर 54 प्रतिशत है और नई तकनीक विकसित होने के साथ स्क्रैप के विभिन्न मामलों के आधार पर रूपांतरण दर 70 प्रतिशत से 80 प्रतिशत तक बढ़कर हो गई है।

यह नई तकनीक टेक्नोलॉजी रेडीनेस लेवल (टीआरएल) में 7वें चरण पर है और डॉ. सी. भाग्यनाथन की टीम ने कोयम्बटूर में कई औद्योगिक भागीदारों के साथ साझेदारी की है जैसे रूट्स कास्ट, लक्ष्मी बालाजी डाइकास्ट, एनकी इंजीनियरिंग वर्क्स, आदर्श लाइन एसेसरीज, सुपर कास्ट, स्टार फ्लो टेक। आगे के विस्तार के लिए विभिन्न घटकों को जोड़ने के लिए इलेक्ट्रिकल हाउसिंग ब्रैकेट, ऑटोमोबाइल केसिंग और वाल्व कम्पोनेंट, मोटर हाउसिंग ब्रैकेट, मोटर इम्पेलर घटकों आदि से साझेदारी की है। यह टीम प्रौद्योगिकी के लिए एक पेटेंट दाखिल करने की प्रक्रिया में है और इसे स्वयम इंडस्ट्रीज, कोयम्बटूर, सर्वो साइंटिफिक इक्विपमेंट, कोयम्बटूर में स्थानांतरित कर दिया है।

यह नई तकनीक उन्नतम एल्युमिनियम मेल्टिंग और होल्डिंग फरनेस, एक डीगैसिंग यूनिट, फिल्टरिंग सेटअप, एक औद्योगिक वाशिंग मशीन और ओवन से भी लैस है।

डॉ. सी. भाग्यनाथन की टीम आगे मध्यम और बड़े उद्योगों के लिए एल्यूमीनियम रीसाइक्लिंग भट्टी विकसित करने पर काम कर रही है। वे छोटे पैमाने पर भट्टियों के साथ बड़े पैमाने पर भट्ठी के लिए प्राप्त परिणामों की मैपिंग करने और एल्यूमीनियम शोधन के बाद शुद्धता पर अध्ययन करने की प्रक्रिया में हैं। इस तकनीक को और उन्नत किया जाएगा, जिससे उन्नत एल्यूमीनियम इंडक्शन भट्टी बनाया जा सके, जो लघु उद्योगों में सफलतापूर्वक लगाया जा सके।

https://pib.gov.in/PressReleasePage.aspx?PRID=1713816

INDIA TODAY

Mon, 26 April 2021

ISRO to launch data relay satellite to track Gaganyaan

The Indian Space Research Organisation will launch a data relay satellite before the final leg of the Gaganyaan mission in order to help maintain contact with the Gaganyaan mission after the launch

Bengaluru: The Indian Space Research Organisation will launch a data relay satellite that will help maintain contact with the Gagangyaan mission throughout after the launch, sources said.

The satellite will be launched before the final leg of the Gaganyaan mission, which will send astronauts to the Lower Earth Orbit (LEO). The first leg -- the unmanned mission -- is to be launched in December.

"We're planning to launch our own satellite, which will act as a data relay satellite before going for the first human space flight," the sources said.

The Rs 800-crore project has been approved and work has been going on, they added.

Satellites in orbit cannot pass along their information to the ground stations on Earth if the satellite does not have a clear view of the ground station. A data relay satellite serves as a way to pass along the satellite's information.

A data relay satellite serves as a way to pass along the satellite's information. (Image credit: India Today magazine)

The NASA, with a robust human space mission programme, also has its own data relay satellite.

Its Tracking and Data Relay Satellite allows it to have global coverage of all the satellites round the clock without having to build extra ground stations on Earth.

The ISRO uses several ground stations spread across the globe -- Mauritius, Brunei and Biak, Indonesia.

Last month, ISRO Chairperson K Sivan had said the space agency was also in talks with the Australian counterpart to have a ground station at the Coco islands for the Gaganyaan mission.

However, there are blind spots, due to which there is a possibility of not receiving signals, sources added. The data relay satellite will help address the issues.

Earlier this month, the ISRO signed an agreement with French space agency CNES for cooperation for the Gaganyaan, a move that will enable training of Indian flight physicians in French space agency's facilities.

Under this agreement, CNES-developed French equipment, tested and still operating aboard the International Space Station, will be made available to Indian crews.

The CNES will also be supplying fireproof carry bags made in France to shield equipment from shocks and radiation, it said.

Last month, four prospective astronauts also returned to India after spending nearly a year in Russia.

https://www.indiatoday.in/science/story/isro-to-launch-data-relay-satellite-to-track-gaganyaan-1794804-2021-04-25

INDIA TODAY

Mon, 26 April 2021

गगनयान मिशन के पहले इसरो लांच करेगा एक खास उपग्रह, अंतरिक्ष यात्रियों के लिए करेगा ये बड़ा काम

गगनयान अभियान के अंतिम चरण में पहुंचने से पहले यह उपग्रह लांच किया जाएगा जो अंतरिक्ष यात्रियों को लोअर अर्थ ऑॅबट (एलईओ) में भेजेगा। इस अभियान का मानव रहित पहला चरण दिसंबर में शुरू होगा। 800 करोड़ रुपये की इस परियोजना को मंजूरी दे दी गई है

By Ramesh Mishra

नई दिल्ली: भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) गगनयान मिशन शुरू होने के बाद उससे संपर्क बरकरार रखने में मदद के लिए एक संचार उपग्रह (डाटा रिले सेटेलाइट) लांच करेगा। गगनयान अभियान के अंतिम चरण में पहुंचने से पहले यह उपग्रह लांच किया जाएगा जो अंतरिक्ष यात्रियों को लोअर अर्थ ऑॅबट (एलईओ) में भेजेगा। इस अभियान का मानव रहित पहला चरण दिसंबर में शुरू होगा। सूत्रों ने कहा कि हम अपना उपग्रह भेजने की योजना बना रहे हैं, जो एक संचार उपग्रह के तौर पर काम करेगा।'

उपग्रहों की जानकारियों को ग्राउंड स्टेशनों तक पहुंचाने में होगा मददगार

उन्होंने कहा कि 800 करोड़ रुपये की इस परियोजना को मंजूरी दे दी गई है और इस पर काम जारी है। दरअसल, कक्षा में स्थित उपग्रह पृथ्वी पर स्थित ग्राउंड स्टेशनों पर तब तक सूचनाएं नहीं पहुंचा सकता जब तक कि ग्राउंड स्टेशन उसकी स्पष्ट पहुंच में न हों। डाटा रिले सेटेलाइट उपग्रहों की जानकारियों को ग्राउंड स्टेशनों तक पहुंचाने में मदद करता है। बेहद क्षमतावान मानव अंतरिक्ष मिशन कार्यक्रम वाली अमेरिकी अंतरिक्ष एजेंसी नासा के पास भी अपना डाटा रिले सेटेलाइट है। उसका यह सेटेलाइट पृथ्वी पर अतिरिक्त ग्राउंड स्टेशनों का निर्माण किए बिना 24 घंटे सभी सेटेलाइटों की वैश्विक कवरेज उपलब्ध कराता है।

https://www.jagran.com/news/national-isro-will-launch-a-special-satellite-before-gaganyaan-mission-it-will-do-big-work-for-astronauts-21590301.html

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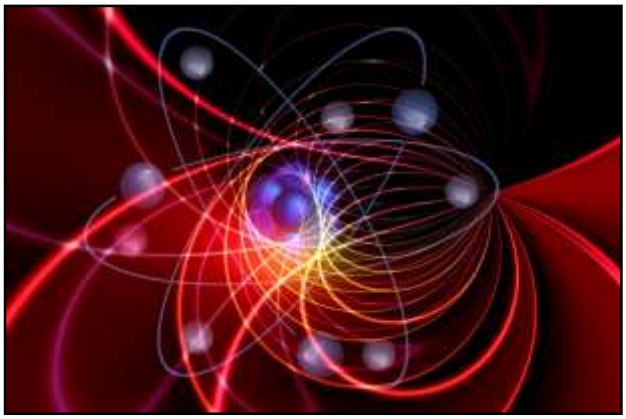
Sat, 24 April 2021

Using a new kind of electron microscopy to measure weak van der Waals interactions

By Bob Yirka

A team of researchers from China, the Netherland and Saudi Arabia has used a new kind of electron microscopy to measure weak van der Waals interactions. In their paper published in the journal *Nature*, the group describes creating what they describe as a molecular compass to measure weak van der Waals interactions using a new type of electron microscopy developed in the Netherlands.



Credit: Pixabay/CC0 Public Domain

Van der Waals forces are electrostatic forces between uncharged molecules—they arise due to the interaction between electric dipole moments—measuring them typically requires the use of highly sophisticated equipment. In this new effort, the researchers have developed a new way to measure their interactions using less sophisticated equipment.

The work was made possible by the development of a new kind of electron microscope created recently by a team in the Netherlands. Officially called integrated differential phase contrast scanning transmission electron microscopy, the new technology produces images at the atomic level using image data, which gives results with higher signal-to-noise ratios. This means that smaller doses of electrons can be used than with other electron microscopes.

To measure van der Waals interactions, the researchers used ZSM-5, a type of zeolite that has rings of oxygen atoms and silicon that link around holes in lattice sheets. They stacked several of the sheets, aligning them in a way that created small channels. The team then placed para-xylene molecules into the channels using a centrifuge. Next, they used the para-xylene molecules as a pointer in a type of compass. They noted that shifting of the molecules relative to the oxygen and silicon atoms indicated changes in weak van der Waals interactions. They measured these shifts using the imaging capabilities of the new electron microscope.

The researchers tested their technique by comparing orientation changes in the para-xylene pointers with changes in the shape of the rings. They suggest their technique could be used to optimize applications such as those involved in converting alcohol to petrol.

More information: Boyuan Shen et al. A single-molecule van der Waals compass, *Nature* (2021). DOI: 10.1038/s41586-021-03429-y

Journal information: *Nature*

https://phys.org/news/2021-04-kind-electron-microscopy-weak-van.html

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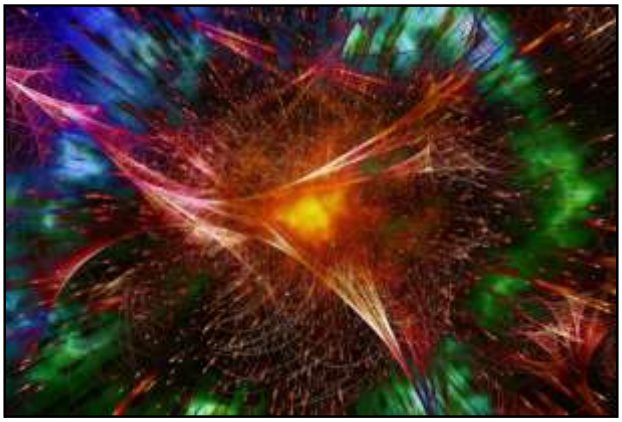
Sat, 24 April 2021

Quantum steering for more precise measurements

Quantum systems consisting of several particles can be used to measure magnetic or electric fields more precisely. A young physicist at the University of Basel has now proposed a new scheme for such measurements that uses a particular kind of correlation between quantum particles.



Credit: Pixabay/CC0 Public Domain

In quantum information, the fictitious agents Alice and Bob are often used to illustrate complex communication tasks. In one such process, Alice can use entangled quantum particles such as photons to transmit or "teleport" a quantum state—unknown even to herself—to Bob, something that is not feasible using traditional communications.

However, it has been unclear whether the team Alice-Bob can use similar quantum states for other things besides communication. A young physicist at the University of Basel has now shown how particular types of quantum states can be used to perform measurements with higher precision than quantum physics would ordinarily allow. The results have been published in the scientific journal *Nature Communications*.

Quantum steering at a distance

Together with researchers in Great Britain and France, Dr. Matteo Fadel, who works at the Physics Department of the University of Basel, has thought about how high-precision measurement tasks can be tackled with the help of so-called quantum steering.

Quantum steering describes the fact that in certain quantum states of systems consisting of two particles, a measurement on the first particle allows one to make more precise predictions about possible measurement results on the second particle than quantum mechanics would allow if only the measurement on the second particle had been made. It is just as if the measurement on the first particle had "steered" the state of the second one.

This phenomenon is also known as the EPR paradox, named after Albert Einstein, Boris Podolsky and Nathan Rosen, who first described it in 1935. What is remarkable about it is that it works even if the particles are far apart because they are quantum-mechanically entangled and can feel each other at a distance. This is also what allows Alice to transmit her quantum state to Bob in quantum teleportation.

"For quantum steering, the particles have to be entangled with each other in a very particular fashion," Fadel explains. "We were interested in understanding whether this could be used for making better measurements." The measurement procedure he proposes consists of Alice's performing a measurement on her particle and transmitting the result to Bob.

Thanks to quantum steering, Bob can then adjust his measurement apparatus such that the measurement error on his particle is smaller than it would have been without Alice's information. In this way, Bob can measure, for instance, magnetic or electric fields acting on his particles with high precision.

Systematic study of steering-enhanced measurements

The study of Fadel and his colleagues now makes it possible to systematically study and demonstrate the usefulness of quantum steering for metrological applications. "The idea for this

arose from an experiment we already did in 2018 in the laboratory of Professor Philipp Treutlein at the University of Basel," says Fadel.

"In that experiment, we were able to measure quantum steering for the first time between two clouds containing hundreds of cold atoms each. After that, we asked ourselves whether it might be possible to do something useful with that." In his work, Fadel has now created a solid mathematical basis for realizing real-life measurement applications that use quantum steering as a resource.

"In a few simple cases, we already knew that there was a connection between the EPR paradox and precision measurements," Treutlein says. "But now we have a general theoretical framework, based on which we can also develop new strategies for quantum metrology." Researchers are already working on demonstrating Fadel's ideas experimentally. In the future, this could result in new quantum-enhanced measurement devices.

More information: Benjamin Yadin et al. Metrological complementarity reveals the Einstein-Podolsky-Rosen paradox, *Nature Communications* (2021). DOI: 10.1038/s41467-021-22353-3

Journal information: *Nature Communications*

https://phys.org/news/2021-04-quantum-precise.html

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Sat, 24 April 2021

With new optical device, engineers can fine tune the color of light

Among the first lessons any grade school science student learns is that white light is not white at all, but rather a composite of many photons, those little droplets of energy that make up light, from every color of the rainbow—red, orange, yellow, green, blue, indigo, violet.

Now, researchers at Stanford University have developed an optical device that allows engineers to change and fine-tune the frequencies of each individual photon in a stream of light to virtually any mixture of colors they want. The result, published April 23 in *Nature Communication*, is a new photonic architecture that could transform fields ranging from digital communications and artificial intelligence to cutting-edge quantum computing.

Credit: Pixabay/CC0 Public Domain

"This powerful new tool puts a degree of control in the engineer's hands not previously possible," said Shanhui Fan, a professor of electrical engineering at Stanford and senior author of the paper.

The clover-leaf effect

The structure consists of a low-loss wire for light carrying a stream of photons that pass by like so many cars on a busy throughway. The photons then enter a series of rings, like the off-ramps in a highway cloverleaf. Each ring has a modulator that transforms the frequency of the passing photons—frequencies which our eyes see as color. There can be as many rings as necessary, and engineers can finely control the modulators to dial in the desired frequency transformation.

Among the applications that the researchers envision include optical neural networks for artificial intelligence that perform neural computations using light instead of electrons. Existing methods that accomplish optical neural networks do not actually change the frequencies of the

photons, but simply reroute photons of a single frequency. Performing such neural computations through frequency manipulation could lead to much more compact devices, say the researchers.

"Our device is a significant departure from existing methods with a small footprint and yet offering tremendous new engineering flexibility," said Avik Dutt, a post-doctoral scholar in Fan's lab and second author of the paper.

Seeing the light

The color of a photon is determined by the frequency at which the photon resonates, which, in turn, is a factor of its wavelength. A red photon has a relatively slow frequency and a wavelength of about 650 nanometers. At the other end of the spectrum, blue light has a much faster frequency with a wavelength of about 450 nanometers.

A simple transformation might involve shifting a photon from a frequency of 500 nanometers to, say, 510 nanometers—or, as the human eye would register it, a change from cyan to green. The power of the Stanford team's architecture is that it can perform these simple transformations, but also much more sophisticated ones with fine control.

To further explain, Fan offers an example of an incoming light stream comprised of 20 percent photons in the 500-nanometer range and 80 percent at 510 nanometers. Using this new device, an engineer could fine-tune that ratio to 73 percent at 500 nanometers and 27 percent at 510 nanometers, if so desired, all while preserving the total number of photons. Or the ratio could 37 and 63 percent, for that matter. This ability to set the ratio is what makes this device new and promising. Moreover, in the quantum world, a single photon can have multiple colors. In that circumstance, the new device actually allows changing of the ratio of different colors for a single photon.

"We say this device allows for 'arbitrary' transformation but that does not mean 'random,'" said Siddharth Buddhiraju, who was a graduate student in Fan's lab during the research and is first author of the paper and who now works at Facebook Reality Labs. "Instead, we mean that we can achieve any linear transformation that the engineer requires. There is a great amount of engineering control here."

"It's very versatile. The engineer can control the frequencies and proportions very accurately and a wide variety of transformations are possible," Fan added. "It puts new power in the engineer's hands. How they will use it is up to them."

Provided by Stanford University

https://phys.org/news/2021-04-optical-device-fine-tune.html

BUSINESS INSIDER INDIA

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Smokers and vegetarians may be less vulnerable to COVID-19 infection, says a government research organisation

A recent survey conducted by CSIR (Council of Scientific Industrial Research), Government of India, has revealed that smokers and vegetarians are less likely to contract Covid-19 infection. The survey suggested smoking may be protective, despite Covid-19 being a respiratory disease, due to its role in increasing the mucous production that may be acting as the first line of defence among the smoking population. It indicated that vegetarian food rich in fibre may have a role to play in providing immunity against COVID-19 due to its anti-inflammatory properties by modification of gut microbiota.

The pan India survey was conducted by an eminent team of 140 doctors and research scientists to study the presence of antibodies against SARS-CoV-2, the virus that causes Covid-19, and their neutralization capability to infer possible risk factors for infection. The study assessed 10,427 adult individuals working in more than 40 CSIR laboratories and centers in urban and semi-urban settings spread across and their family members. These people voluntarily participated in the study.

Earlier, two studies from France and similar reports from Italy, New York, and China reported lower Covid infection rates among smokers. A study by America's Centers for Disease Control and Prevention (CDC), which examined over 7,000 people who tested positive for COVID-19, also vindicated the above findings. Interestingly, the study found that only 1.3 per cent of survey participants were smokers, compared to the CDC report that 14 per cent of all Americans smoke.

Similarly, UCL (University College London) academics that looked at 28 papers across the UK, China, US, and France found the proportions of smokers among hospital patients were 'lower than expected. One of its studies showed that in the UK the proportion of smokers among COVID-19 patients was just five per cent, a third of the national rate of 14.4 per cent. Another found in France the rate being four times lower (7.1 per cent vs 32 per cent among all population). In China, a study noted that only 3.8 per cent of patients were smokers - despite more than half of the population regularly smoking cigarettes.

In a separate study by Jin-jin Zhang to understand the influence of smoking behaviour on the susceptibility to Coronavirus observed that only 9 (6.4 per cent) patients had a history of smoking, and 7 of them were past smokers. The study found that smoking populations were less likely to be infected with SARS-CoV-2. These findings were also confirmed by a French study of public health data that showed people who smoke, were 80 per cent less likely to fall prey to COVID-19 than non-smokers of the same age and sex.

The Council of Scientific & Industrial Research (CSIR), known for its cutting-edge R&D knowledge base in diverse S&T areas, is a contemporary R&D organization. Having a pan-India presence, CSIR has a dynamic network of 40 national laboratories, 39 outreach centers, 3 Innovation Complexes, and 5 units. CSIR's R&D expertise and experience are embodied in about 4,600 active scientists supported by about 8,000 scientific and technical personnel.

CSIR covers a wide spectrum of science and technology - from radio and space physics, oceanography, geophysics, chemicals, drugs, genomics, biotechnology, and nanotechnology to mining, aeronautics, instrumentation, environmental engineering, and information technology. It provides significant technological intervention in many areas with regard to societal efforts which include environment, health, drinking water, food, housing, energy, farm and non-farm sectors. Further, CSIR's role in S&T human resource development is noteworthy.

CSIR is ranked at 84th among 4851 institutions worldwide and is the only Indian organization among the top 100 global institutions, according to the Scimago Institutions Ranking World Report 2014. CSIR holds the 17th rank in Asia and leads the country at the first position.

https://www.businessinsider.in/science/health/news/smokers-and-vegetarians-may-be-less-vulnerable-to-covid-19-infection-says-a-government-research-organisation/articleshow/82240989.cms