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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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Sun, 01 Aug 2021

Inside the world of India's most advanced and lethal missiles

Since independence, India has added various strategic and tactical missiles in its missile arsenal that serves a number of purposes in New Delhi's defense strategy. With rigorous decades-long projects, India has developed all types of missile systems including anti-ship, air-defense, ballistic, cruise, air to air, and anti-missile systems. Notably, India is one of seven nations in the world with Intercontinental Ballistic Missile (ICBM), which has a minimum range of 5,500 kilometers, and one of four countries around the globe with an Anti-Ballistic Missile (ABM) system.

With the Indian AirForce (IAF) version of the BrahMos, Intercontinental ballistic missile Agni- 5, and other major missiles, India has been adding lethal and potent weapons in its arsenal. Apart from BrahMos and Agni series missiles, India already has Dhanush, Prithvi, and Nirbhay series of missiles in its arsenal.

Here is a look at India's most lethal missiles:

BrahMos Supersonic Cruise Missile

An amalgamation of the names of Brahmaputra river and Moskva rivers, BrahMos missiles are designed, developed, and produced by BrahMos Aerospace, a joint venture company set up by Defence Research and Development Organisation (DRDO) and Mashinostroyeniya of Russia.

Multiple versions of the supersonic cruise missile, including those which can be fired from land, warships, submarines, and Sukhoi-30 fighter jets have already been developed and successfully tested earlier. The ship-launched version of BrahMos and the land-based system is in service of the Indian Navy and the Indian Army since 2005 and 2007 respectively.

Later, the air-launched version BrahMos was successfully flight-tested for the first time from the IAF frontline fighter aircraft Sukhoi-30MKI against a sea-based target in the Bay of Bengal on November 22, 2017.

The BrahMos is a medium-range supersonic missile that can be launched from submarines, ships, aircraft or land-based platforms. It is considered to be the fastest supersonic missile in the world that can achieve a speed 2.8 times the speed of sound.

Considered as the fastest supersonic missile in the world, the land-attack version of BrahMos has the capability of cruising at 2.8 Mach speed and with the upgraded capability, the missile can hit targets at a range of up to 400 kilometers with precision. Advanced versions of the range above 1,000 kilometers and speed up to 5 Mach are said to be under development.



Agni 5

India's only Intercontinental Ballistic Missile (ICBM), Agni-V has a 5,000 km plus range, with the view that its range can be easily extended to at least 8,000 km. The lethal missile is a three-stage solid-fueled missile and is configured to carry up to 10 Multiple Independently-targetable Reentry Vehicles (MIRVs). The missile is 17.5-20 m long, 2-2.2 m wide with a launch weight of 49,000-55,000 kg.

The missile is carried by a road-mobile truck, allowing the mobilization of missile across the country easily. The missile has claimed to be tested more than 7 times before moving to user trials with the Army.

Agni P Ballistic Missile

In the latest addition, Defence Research and Development Organisation (DRDO) successfully flight tested a New Generation Nuclear-Capable Ballistic Missile Agni P on June 28 this year.

Agni P is a new generation advanced variant of the Agni class of missiles. It is a canisterised missile with range capability between 1,000 and 2,000 kms.

Agni-IV

Inducted in service since 2013, Agni-IV is an Intermediate-Range Ballistic Missile (IRBM) with a range of between 3,500-4,000 km and a warhead capacity of 800 kg which will be a nuclear fission bomb of 20 or 45 KT. The missile is 20 m long, along with a two-stage solid propellant missile with a launch weight of 17,000 kg.

Shaurya

Shaurya is a submarine-launched medium-range ballistic missile that is 12 m long, 0.8 m wide, comprises a two-stage solid propellant, and has a range of 3,000-3,500 km.

Agni-III

Another intermediate-range ballistic missile (IRBM) of India, Agni-III comprises a two-stage solid propellant engine, and has a strike range of 3,000 km. The missile is 16.7 m long, 1.85 m wide, launch weight 48,000 kg and carries a single 2,000 kg warhead. Agni-III has multiple independently targetable reentry vehicles (MIRV), which can annihilate several targets simultaneously.

Agni-II

Serving the nation since 2004, the medium-range Agni-II ballistic missile is 20 m long, 2.3 m wide and has a launch weight of 16,000 kg. Agni-II is a road/rail-mobile launch missile that can has an operational range between 2,000–3,500 km.

Nirbhay

Nirbhay is India's first indigenously produced cruise missile that can be fired from land and submarine. The missile is 6.0 m long, 0.5 m wide with a launch weight of 1,500-1,600 kg. It can be used to carry both conventional and nuclear warheads and can strike a target upto 1,000 km.

Prahaar

The indigenous developed Prahaar is another short-range, solid propellant, road-mobile ballistic missile. The missile can strike enemy's armored formations, bunkers, command and control centers. The road-mobile missile has a 150 km range and has a launch weight of 1,280 kg.

<https://newsonair.com/2021/07/31/inside-the-world-of-indias-most-advanced-and-lethal-missiles/>

Lockdown delayed installation of bio-digester toilets, House told

Panjim: The prolonged monsoon for the two consecutive years from 2019, coupled with COVID-19 imposed lockdown delayed the work of installing individual household bio-digester toilets to around 18,990 beneficiaries in the State.

This information was provided by Minister for Waste Management Michael Lobo to the State Legislative Assembly on Thursday.

Lobo said the Goa Waste Management Corporation (GWMC) had set one-year deadline to complete the project; however the same could not be achieved.

“The individual household construction works were affected due to heavy prolonged monsoon experienced in 2019 and 2020. The works had to be suspended during the lockdown imposed in the State to restrict spread of COVID-19 pandemic,” Lobo said responding to a question tabled by MLA Rohan Khaunte.

“Works of installation of toilets in Tiswadi taluka commenced in January 2021. However, the same got further delayed due to the second wave of the COVID-19 pandemic and the Tauktae Cyclone and subsequent rains,” the minister added announcing a deadline of two years to complete the project.

Lobo informed the House that the Directorate of Panchayats, the nodal agency, initially forwarded list of 17,150 beneficiaries and in second list forwarded 1,840 beneficiaries, taking the list of beneficiaries to total 18,990.

The Defence Research and Development Organisation (DRDO) developed bio-digester toilets will be installed across State. The total cost of the project is almost Rs 110.49 crore and the price of each toilet is Rs 58,184.

Lobo said the Bio-Digester based toilets were considered, as during monsoon, at some location the ground water table rises and there is possibility of incursion into open tanks and in case of other technology-based toilets, which could affect groundwater quality.

The superstructure of the toilets installed is of RCC, the bio-digester tank is of FRP and the treated effluent from bio-digester tanks is released in soak pits.

<https://www.heraldgoa.in/Goa/Lockdown-delayed-installation-of-biodigester-toilets-House-told-/178187>

Book Review | Achievements in India's defence research despite many odds

The Defence Science Organisation was formed in 1956 for initiating studies and development of futuristic weapon systems

By Anil Bhat

The process of evolution of India's Defence Research and Development Organisation (DRDO) is unusual, to say the least. This book may not be the first on DRDO, but it is certainly the first to be written by one of its seasoned scientists, who also headed its public interface. Either way, it is welcome as it recounts events and personalities involved in the decades long process of DRDO's evolution, providing interesting insights into India's officialdom related to the Armed Forces and external security.

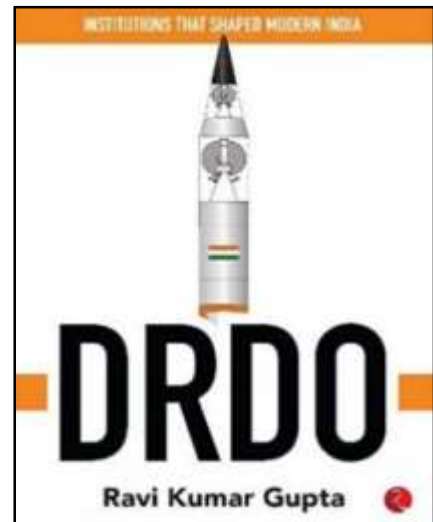
The author begins with a glimpse of historic Indian temples which are architectural wonders to prove what the capabilities of Indians were in those times including the applications of advanced technologies in warfare known to Indians since time immemorial but which were systematically rejected by most scholars of Western origin and many Indians influenced by the West as merely mythological. Centuries before British rule, India was subjected to large-scale destruction of its material wealth, cities, seats of learning, traditional knowledge, culture and traditions. Yet, there is much material evidence of high levels of understanding of science and technology and its applications in India's archaeological finds like Dwarka, Sanauli, Mehrgarh and Hampi; the advanced architecture of Khajuraho, Helebedu, Modhera, Virupaksha and Meenakshi temples; the caves of Ajanta, Ellora, Elephanta and the grand 32-metre-high Kailash temple at Ellora carved and chiselled out of a single rock; the metallurgy of the Ashokan pillar and other structures and weapons/cannons and detailed descriptions of plastic surgery and related medical procedures, all of which indicate that the Indian society has been technologically far more advanced than generally viewed through the prism of Western/leftist historians.

And yet, India's first Prime Minister Jawaharlal Nehru invited Prof. P.M.S. Blackett of Manchester University to get advice about setting up defence research and development in India. It was Blackett, who, whatever his recommendations, became the cause of a decade-long delay in formation of the DRDO.

In May 1948, Professor Daulat Singh Kothari, University of Delhi, very reluctantly accepted the post of the scientific advisor to the Ministry of Defence at persistent insistence from Nehru.

The Defence Science Organisation, formed in 1956 for initiating studies and development of futuristic weapon systems, was headed by Dr B.N. Singh who formed the special weapon development team (SWDT) for study and development of guided missiles at Metcalfe House, Delhi. He worked on the first generation of anti-tank missiles for gaining developmental experience. SWDT later became the Defence Research and Development Laboratory (DRDL) at old Ahmed Manzil, Hyderabad in June 1962 under Gp Capt V. Ganesan as its director. The DRDL of DRDO is now part of what has been named as Dr APJ Abdul Kalam Missile Complex.

Following the tenure of India's first Defence Minister, Baldev Singh, from September 1946 till May 1952, there was no full-time cabinet rank defence minister till April 1957 when V.K. Krishna



Following the tenure of India's first Defence Minister, Baldev Singh, from September 1946 till May 1952, there was no full-time cabinet rank defence minister till April 1957. (Image: Amazon)

Menon was appointed for this important post. The author avers that notwithstanding the many controversies, including meddling with the Army's leadership and making a mess jointly with Nehru of dealing with China that had led to his being expelled by Nehru immediately after the Chinese Aggression, Mr Menon deserves to be remembered for his major contributions in promoting defence R&D and production.

DRDO was formed in 1958 from the amalgamation of the then already functioning Technical Development Establishment of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).

The book reveals how DRDO's growth/progress was hampered by bureaucratic apathy and politico-bureaucratic aims which often resulted in DRDO's innovative projects being dumped so that the required weapon/system could be imported with large kickbacks.

Considering the problems India faced for decades in modernizing/replenishing its conventional weapons arsenal, thanks to politico-bureaucratic apathy and the sanctions/obstacles faced in reaching the Missile Technology Control Regime (MTCR) status, its achievements in the field of missile and satellite technology are commendable.

Astra (missile) and Dhanush (launcher) have been written about in the Mahabharata. Rockets and missiles were used by in India in the 18th century, during the period of Hyder Ali and Tipu Sultan. Rocket artillery brigades were used against infantry formations for mass attacks. With such a huge force, Tipu Sultan defended the Mysore kingdom against the British until his death in Srirangapatnam in 1799. Two of the rockets, captured by the British at Srirangapatnam, are displayed in London's Royal Artillery Museum. Even Marathas used rockets in the 1761 Battle of Panipat. Indian rocketry, which ended after Tipu Sultan's death, was revived in the 1970s by Dr Vikram Sarabhai and Dr A.P.J. Abdul Kalam, among others.

After many decades of problems and failures outweighing achievements, since the past few years the trend changed and there has been a steady rate of needful requirements/improvements in weapons and equipment as well as some praiseworthy projects covering medicines, food processing and improvement in living conditions in extremely challenging terrain and temperature. For the Western world, till World World War II, Alps at 8000 feet were considered the highest and coldest and Alpine became the term for categories of weapons, equipment and clothing. Since 1947, Indian Army redefined mountain warfare by fighting at and even transporting battle tanks to 14,000 feet in the Himalayas.

Today, Himalayan heights for Indian armed forces deployment and battle are up to 22,000 feet. DRDO has made some commendable contributions to ameliorate conditions for our troops deployed at almost thrice the Alpine height.

While the book is a useful reference piece and should be read by all related to national security, defence industry and the military technology, students, historians and other readers may find it engaging.

Institutions that Shaped Modern India: DRDO

Ravi Kumar Gupta

Rupa, pp. 275, Rs.375/-

<https://www.asianage.com/books/310721/book-review-achievements-in-indias-defence-research-despite-many-odds.html>

MLA Rana inaugurates PSA based oxygen plant in Kapurthala

By Ashok Kaura

Kapurthala: MLA kapurthala Rana Gurjit singh today dedicated the newly established PSA based oxygen plant in isolation ward near civil hospital kapurthala which have the capacity of 1000 LPM.

The plant is based on Pressure swing adsorption (PSA) technology and designed by the DRDO. It will directly supply the oxygen to 105 beds at isolation centre, where 20 beds reserved for kids to tackle covid. For the maintenance of the plant 4 employees have been deputed under the state disaster Management relief fund.



Terming it a historic day in kapurthala while inaugurating the oxygen plant, MLA Rana Gurjit singh said that "this newly inaugurated plant will surely provide a Big push to the efforts to tackle the covid in future as now there will be no shortage of oxygen in future for medical purposes.

Cautioning the people against any lack luster approach towards covid, the MLA said that " we all citizens must follow the health protocol as the third wave may be more dangerous.

He also assured the full support to district administration and health department like first and second covid wave under which sanitation was made in kapurthala to contain the spread of covid.

He said that the Punjab Government under the leadership of Chief Minister Captain Amarinder singh has done tremendous work which provides leadership to all Punjabis in the hour of crisis, which saves thousands of lives.

Hailing the efforts of government machinery like doctors, para medical staff etc , the MLA said that the state machinery has played the great role to tackle the covid in first two waves.

Will set up land bank for MC

The MLA also announced to constitute a land bank with the Municipal corporation kapurthala to fulfill the land related demands for development and welfare related projects in future.

Besides that he also said that the Municipal corporation will recruit 100 safai karamcharis to ensure clean city.

Renowed industrialist Bhavdeep sardana from sukhjit starch was honored for providing assistance to set up oxygen plant.

Prominent amongst present on the occasion included ADC G aditya Uppal, Mayor Kulwant kaur, Senior deputy mayor, Deputy mayor master vinod sood Rahul kumar, Civil surgeon Dr Parminder kaur DHO kuljit singh, Chairman improvement Trust Manoj bhasin, Dr sandeep bhola Nodal officer covid care centre, SMO Dr Sandeep dhawan.

<https://www.punjabnewsexpress.com/punjab/news/mla-rana-inaugurates-psa-based-oxygen-plant-in-kapurthala--144228>

सदर व एसएनएमएमसीएच खुद बनाएंगे आक्सीजन, प्लांट तैयार

धनबाद : कोरोना की संभावित तीसरी लहर को लेकर जिला प्रशासन व स्वास्थ्य विभाग की तैयारी तेज हो रही है। अब एसएनएमएमसीएच में तीन आक्सीजन प्लांट लगाए जा रहे हैं। प्रधानमंत्री केयर फंड के तहत डीआरडीओ ने एसएनएमएमसीएच का चयन किया है। डीआरडीओ की ओर से यहां पर 1000 लीटर प्रति मिनट आक्सीजन उत्पादन करने की क्षमता वाली मशीन स्थापित किए जा रहे हैं। वहीं, केंद्र सरकार की एक और योजना के तहत पीएसए आक्सीजन प्लांट स्थापित किए जा रहे हैं। दोनों मिलाकर 1600 लीटर प्रति मिनट आक्सीजन की आपूर्ति होगी। इसके साथ जिला प्रशासन की ओर से भी एक आक्सीजन प्लांट जल्द स्थापित करने की प्रक्रिया शुरू होगी। कुल मिलाकर तीन आक्सीजन प्लांट हो जाएंगे। फिलहाल पीएसए आक्सीजन प्लांट का काम पूरा हो गया है।

सदर अस्पताल में प्लांट का काम पूरा

सदर अस्पताल में दो अलग-अलग आक्सीजन प्लांट लगाए जा रहे हैं। दोनों जगहों पर 85-85 लीटर प्रति मिनट आक्सीजन का उत्पादन शुरू होगा। इसके लिए पाइप लाइन का काम पूरा हो गया है। अस्पताल के प्रभारी डा. राजकुमार सिंह ने बताया कि प्लांट अब उदघाटन को तैयार है। प्रधानमंत्री सभी पीएसए प्लांट का आन लाइन उदघाटन जल्द करने वाले हैं। इसमें धनबाद के प्लांट भी शामिल है।---

ग्रामीण क्षेत्रों को भी विशेष फोकस, टुंडी में आक्सीजन बेड

विभाग अब ग्रामीण क्षेत्रों में मजबूती से तैयारी में जुट गया है। टुंडी में मरीजों को आइसीयू की सुविधा मिल पाएगी। टुंडी के सामुदायिक स्वास्थ्य केंद्र को माडल केंद्र बनाने के लिए चयनित किया गया है। यहां पीएसए आक्सीजन प्लांट लगाया जाएगा। केंद्र परिसर में इसके लिए जगह भी चिह्नित कर ली गई है। यहां पर 20 आक्सीजन बेड बनाए गए हैं।

दूसरी लहर में आक्सीजन की हुई थी भारी किल्लत

जिले में दूसरी लहर में आक्सीजन की काफी किल्लत हुई थी। एसएनएमएमसीएच व सदर को निजी एजेंसी पर निर्भर होना पड़ा। दोनों जगहों पर दूसरी लहर में प्रतिदिन 160 जंबो सिलेंडर आक्सीजन की मांग थी। कई मरीजों को समय से आक्सीजन नहीं मिल पा रही थी। हालांकि जिला प्रशासन और स्वास्थ्य विभाग के पहल पर जिले में ही कई निजी एजेंसी में आक्सीजन उत्पादन शुरू किया था। जिसके वजह से स्थानीय मांगों के अनुसार आपूर्ति की गई। अब एसएनएमएमसीएच और सदर अस्पताल में अपना आक्सीजन प्लांट तैयार हो गया है।

तीसरी लहर के लिए डॉक्टर और कर्मचारियों के हो रहे रोस्टर तैयार

जिला महामारी रोग नियंत्रण विभाग के प्रभारी डा. राजकुमार सिंह ने बताया कि तीसरी लहर को देखते हुए मुख्यालय ने अलर्ट रहने का निर्देश दिया है। यही वजह है कि जिले में बाहर से आने वाले लोगों की कोरोना जांच लगातार हो रही है। इसके साथ ही विभिन्न माध्यमों से प्रचार प्रसार कर के लोगों को जागरूक किया जा रहा है।

<https://www.jagran.com/jharkhand/dhanbad-sadar-and-snmch-will-make-oxygen-themselves-plant-ready-21887068.html>

आक्सीजन प्लांट तैयार, आइसीयू में बढ़ेंगे बिस्तर और वेंटिलेटर

कोरोना की संभावित तीसरी लहर अगस्त के अंत तक आ सकती है। राष्ट्रीय नीति आयोग के सदस्य डॉ. वीके पाल द्वारा व्यक्त इस अंदेश के मद्देनजर जिले की स्वास्थ्य सेवाओं को बेहतर बनाने के लिए जिला प्रशासन की तैयारियां जोरों पर हैं। जिला अस्पताल में आइसीयू (गहन चिकित्सा इकाई) में बिस्तरों के साथ-साथ वेंटिलेटरों की संख्या

नरसिंहपुर: कोरोना की संभावित तीसरी लहर अगस्त के अंत तक आ सकती है। राष्ट्रीय नीति आयोग के सदस्य डॉ. वीके पाल द्वारा व्यक्त इस अंदेश के मद्देनजर जिले की स्वास्थ्य सेवाओं को बेहतर बनाने के लिए जिला प्रशासन की तैयारियां जोरों पर हैं। जिला अस्पताल में आइसीयू (गहन चिकित्सा इकाई) में बिस्तरों के साथ-साथ वेंटिलेटरों की संख्या बढ़ाई जा रही है। युद्ध स्तर पर जारी सभी निर्माण की कलेक्टर खुद मॉनिटरिंग कर रहे हैं। अच्छी खबर ये है कि शनिवार को डीआरडीओ का आक्सीजन प्लांट भी पूरी तरह से तैयार घोषित कर दिया गया।



कोरोना की दूसरी लहर ने जिले में जमकर कहर बरपाया था। अप्रैल-मई में तो हालात ये हो गए थे कि कोरोना के सामान्य रोगियों की बात छोड़ें अत्यंत गंभीर प्रवृत्ति के मरीजों को भर्ती करने के लिए सरकारी-निजी अस्पतालों में आक्सीजनयुक्त बिस्तर नहीं मिल रहे थे। नतीजा ये रहा कि इन मरीजों को जबलपुर, भोपाल, नागपुर, इंदौर आदि महानगरों के अस्पतालों की ओर रुख करना पड़ा। समय पर इलाज न मिल पाने के कारण दर्जनों लोगों की असमय मौत भी हो गई। इसे देखते हुए कलेक्टर वेदप्रकाश के निर्देशन में जिले के सरकारी अस्पतालों में स्वास्थ्य सुविधाओं को बेहतर बनाने के लिए पुरजोर कोशिश की जा रही है। इसके तहत जिला अस्पताल में मौजूदा आक्सीजनयुक्त बिस्तरों के साथ-साथ आइसीयू की क्षमता बढ़ाने पर फोकस किया जा रहा है। स्थापित की जाने वाली हर सुविधा, निर्माण का कलेक्टर स्वयं मौके पर पहुंचकर निरीक्षण कर रहे हैं।

32 बिस्तरों वाला होगा आइसीयू:

जिला अस्पताल में अभी आइसीयू के अंतर्गत 12 बिस्तरों वाले बेड हैं। वहीं वर्तमान में अस्पताल की पुरानी बिल्डिंग में नया अल्ट्रा माडर्न आइसीयू निर्मित किया जा रहा है। इसके लिए साजो सामान भी आ चुके हैं। यहां पर 20 बिस्तरों की व्यवस्था होगी। इस तरह जिला अस्पताल में 32 बिस्तरों की क्षमता वाला आइसीयू वाई स्थापित हो जाएगा। वर्तमान में इतने आइसीयू बिस्तर जिले के किसी भी निजी अस्पताल में भी नहीं हैं। इस आइसीयू में 24 घंटे मरीजों की निगरानी के लिए विशेषज्ञ नर्सिंग स्टाफ की तैनाती भी की जा रही है।

बच्चों के लिए आइसीयू बिस्तर बढ़ेंगे:

कोरोना की संभावित तीसरी लहर बच्चों को प्रभावित कर सकती है। इस आशंका के मद्देनजर जिला अस्पताल में बच्चों के बेहतर इलाज और गंभीर हालत में उन्हें इलाज की सुविधा मुहैया कराने पर विशेष जोर दिया जा रहा है। इसके अंतर्गत यहां पर ऊपरी मंजिल में बच्चों के लिए अलग से आइसीयू वाई तैयार हो रहा है। इसमें बिस्तरों की क्षमता 16 होगी। अभी तक बच्चों के लिए आइसीयू के बिस्तरों की संख्या महज 8 ही है। वहीं सामान्य बीमारी वाले बच्चों के लिए भी अलग से वाई भी निर्मित किया जा रहा है।

इसमें भी बिस्तरों की संख्या 20 के आसपास रहेगी। इन वार्डों में आक्सीजन की 24 घंटे आपूर्ति सुनिश्चित करने की योजना पर काम चल रहा है।

वेंटिलेटरों की बढ़ रही संख्या:

कोरोना की दूसरी लहर में अत्यंत कोविड के साथ-साथ हृदय, दमा आदि रोगों से जूझ रहे गंभीर प्रकृति के मरीजों को भर्ती करने लिए वेंटिलेटरों की कमी उभरकर सामने आई थी। यद्यपि दूसरी लहर में जिला अस्पताल में 7 वेंटिलेटर उपलब्ध थे लेकिन इनमें से दो ही चालू हो सके थे। इसे देखते हुए स्वास्थ्य विभाग ने जिला अस्पताल में 5 नए वेंटिलेटर मंगाए हैं। इस तरह यहां पर अब 14 वेंटिलेटर हो गए हैं। इन्हें चलाने के लिए प्रशिक्षित स्टाफ की नियुक्ति भी प्रक्रिया में है। चिकित्सकों की संख्या बढ़ाने के लिए शासनस्तर पर प्रस्ताव भेजा गया है।

अन्य सरकारी अस्पतालों में भी तैयारियां जारी: जिला चिकित्सा एवं स्वास्थ्य अधिकारी डॉ. मुकेश जैन ने बताया कि जिला अस्पताल को छोड़ शेष गाडरवारा, गोटेगांव, तेंदूखेड़ा व करेली के सिविल अस्पताल, सामुदायिक और प्राथमिक स्वास्थ्य केंद्रों में अब तक 188 आक्सीजनयुक्त बिस्तर बिछाए जा चुके हैं। इससे आसपास के सैकड़ों गांवों के मरीजों को जरूरत के मुताबिक आक्सीजन उपलब्ध हो सकेगी। गाडरवारा के सिविल अस्पताल में अत्याधुनिक पैथोलॉजी लैब स्थापित की जा चुकी है। यहां पर 500 लीटर प्रति मिनट आपूर्ति वाले आक्सीजन प्लांट की स्थापना एनटीपीसी द्वारा कराई जा रही है। इसी तरह यहां पर आक्सीजनयुक्त बिस्तरों की संख्या भी बढ़ाने पर काम हो रहा है। गोटेगांव के अस्पताल में 300 लीटर प्रति मिनट आक्सीजन उत्पादित करने वाला प्लांट शासन स्तर से मंजूर हो चुका है। इसका काम भी शुरू हो गया है। रोंसरा-तेंदूखेड़ा में भी नए आक्सीजन प्लांट का प्रस्ताव विचाराधीन है।

जिला अस्पताल में डीआरडीओ का आक्सीजन प्लांट आपूर्ति के लिए तैयार

जिला अस्पताल में कोरोना की दूसरी लहर के दौरान आक्सीजन की कमी ने मरीजों-चिकित्सकों सभी को रुलाकर रख दिया था। इसे देखते हुए यहां पर पीएम केयर फंड से डीआरडीओ ने एक हजार लीटर प्रति मिनट की क्षमता से आक्सीजन उत्पादित करने वाला प्लांट स्थापित किया गया है। शनिवार को कलेक्टर वेदप्रकाश, सीएमएचओ डॉ. मुकेश जैन की मौजूदगी में भोपाल के अधिकारियों ने इसका कमीशंड किया। इसका दूसरी बार ट्रायल लिया गया, जो कि सफल रहा। प्लांट में शनिवार को हुए ट्रायल में आक्सीजन की शुद्धता का प्रतिशत 89 से 93 के लेवल के बीच घटता-बढ़ता रहा। हालांकि विशेषज्ञों के अनुसार ट्रायल के दौरान प्लांट के सिलिंडर खाली होने के कारण इस लेवल में उतार-चढ़ाव आ रहा है। जब प्लांट पूरी क्षमता से चलेगा तो इसका लेवल आदर्श स्थिति में रहेगा। वहीं प्लांट से अस्पताल के वार्डों में बिछाई गई सप्लाइ लाइन की भी टेस्टिंग की गई। इस दौरान वार्डों में रखे गए आक्सीजन सिलिंडरों को डिस्कनेक्ट किया गया। अधिकारियों के अनुसार छोटे-मोटे काम भी एक-दो दिन में पूरे हो जाएंगे। हालांकि प्लांट आक्सीजन की आपूर्ति के लिए अब पूरी तरह से तैयार है। इस प्लांट के शुरू होने के बाद जिला अस्पताल में आक्सीजन की कोई कमी नहीं रहेगी। एक हजार लीटर प्रति मिनट आक्सीजन आपूर्ति के अलावा जिला अस्पताल में रिफिल किए गए आक्सीजन सिलिंडर भी उपलब्ध रहेंगे। स्वास्थ्य अधिकारियों के अनुसार जिला अस्पताल में आने वाले दिनों में एक साथ 500 मरीजों को 24 घंटे आक्सीजन दी जा सकेगी। ये क्षमता दूसरी लहर के मुकाबले करीब ढाई गुना अधिक है। अभी तक जिला अस्पताल में आक्सीजन सपोर्टेड बिस्तरों की संख्या 145 है।

“जिले में कोरोना की तीसरी लहर के अंदेश को देखते हुए युद्धस्तर पर तैयारियां की जा रही हैं। स्वास्थ्य सेवाओं से संबंधित हर जरूरी उपकरण स्थापित किए जा रहे हैं। जिला अस्पताल में डीआरडीओ के आक्सीजन प्लांट का कमीशंड हो गया है। ये प्लांट अब आक्सीजन आपूर्ति के लिए तैयार है। अस्पताल में

नए वार्डों की स्थापना की जा रही है। आइसीयू को अत्याधुनिक बनाने के साथ-साथ इसकी क्षमता भी बढ़ा रहे हैं। जिले के अन्य सरकारी अस्पतालों में भी स्वास्थ्य सेवाओं को उन्नत बनाया जा रहा है। चिकित्सकों-पैरामेडिकल स्टाफ की जरूरत के मुताबिक तैनाती की जाएगी।“

वेदप्रकाश, कलेक्टर, नरसिंहपुर।

<https://www.naidunia.com/madhya-pradesh/narsimhapur-narsinghpur-news-6994496>



Sun, 01 Aug 2021

बुरहानपुर अस्पताल के ऑक्सीजन प्लांट में मशीन लगाने दिल्ली से आएगी टीम

शेड हुआ तैयार

By Amiruddin Ahmad

बुरहानपुर. जिला अस्पताल में लगने वाले एक हजार एलपीएम ऑक्सीजन प्लांट के लिए शेड बढ़ाने का काम शुरू हो गया। दिल्ली से टीम मशीनें लगाने से पहले शेड का निरीक्षण करने पहुंचेगी। अगर टीम के निरीक्षण के दौरान अगर कोई खामियां मिलेगी तो शेड में बदलाव होगा। प्लांट तैयार होने से जिले के मरीजों को राहत मिलेगी।

कोविड संक्रमण की दूसरी लहर में ऑक्सीजन की किल्लत होने के बाद तीसरी लहर से निपटने के लिए स्वास्थ्य विभाग तैयारी कर रहा है। शासन से पहले जिला अस्पताल में 200 एलपीएम का ऑक्सीजन प्लांट स्वीकृत हुआ था, लेकिन अब बढ़ाकर एक हजार एलपीएम (लीटर पर मिनट) क्षमता का ऑक्सीजन प्लांट लगाया जा रहा है। इंजीनियर गणेश तवर ने बताया कि अस्पताल में 200 एलपीएम की क्षमता के अनुसार शेड तैयार हुआ था, लेकिन बदलाव होने के बाद एक हजार एलपीएम ऑक्सीजन प्लांट वाली मशीनों के अनुसार शेड को बढ़ाने का कार्य शुरू हो गया। शेड का निर्माण कार्य भी अंतिम चरण में है।

दिल्ली से निरीक्षण करने आएंगी टीम

ऑक्सीजन प्लांट में मशीनें लगाने के लिए डीआरडीओ की टीम दिल्ली से बुरहानपुर आएंगी। पहले अस्पताल का निरीक्षण कर प्लांट की जगह, शेड सहित आसपास के स्थानों का निरीक्षण करेंगी। अगर शेड में कुछ बदलाव करना होगा तो टीम तय करेंगी। डीआरडीओ टीम द्वारा ही ऑक्सीजन प्लांट में मशीनों को लगाकर शुरू किया जाएगा। संभावना है कि दिल्ली से टीम शनिवार या सोमवार को शेड देखने के लिए जिला अस्पताल पहुंच सकती है।

<https://www.patrika.com/burhanpur-news/team-will-come-from-delhi-to-install-machine-in-oxygen-plant-of-burhan-6983408/>

ICICI Foundation launches plantation drive at DRDO Hospital Jammu

Jammu: ICICI Foundation today started plantation drive in collaboration with DRDO Hospital Jammu in and around the newly established Hospital.

More than 200 employees of DRDO hospital planted 240 plants in the premises of the Hospital to spread the message for safeguarding the green cover of the planet.



The plantation drive was undertaken under the supervision of Dr. Narender, Medical Superintendent, DRDO Hospital. He emphasised the need of planting more trees, rainwater harvesting and motivated hospital staff to encourage their families, especially children to participate in the drive to contribute towards national greenery.

ICICI Foundation, subsidiary of ICICI Bank supports many such initiatives under its Environmental Policy to contribute towards the reduction of pollution levels in the air and improve air quality in the areas nearby.

Deputy Medical Superintendents Dr. Manoj, Dr. Sanjay, Dr. Deepak, Shakha Dogra & Parvinder Singh from ICICI Foundation, consultants and staff from hospitals were also present on the occasion.

The motive of the drive was to promote awareness regarding saving the environment. The whole initiative was taken on the directions of Principal Government Medical College Jammu, Dr. Shashi Sudhan Sharma with the message that “For a healthy environment, Air Pollution needs to be checked and controlled.

<https://indiaeducationdiary.in/icici-foundation-launches-plantation-drive-at-drdo-hospital-jammu/>

Defence Strategic: National/International



Press Information Bureau
Government of India
Ministry of Defence

Sat, 31 July 2021 1:06PM

Vice Admiral SN Ghormade, AVSM, NM assumes charge as Vice Chief of the Naval Staff

Vice Admiral SN Ghormade, AVSM, NM has assumed charge as the Vice Chief of Naval Staff from Vice Admiral G Ashok Kumar, PVSM, AVSM, VSM, ADC at a formal ceremony held this morning at South Block, New Delhi. Vice Admiral G Ashok Kumar is retiring today after glorious service of 39 years.

Vice Admiral SN Ghormade is an alumni of the National Defence Academy (NDA), Khadakwasla, Naval Staff College at the United States Naval War College, Newport, Rhode Island, and the Naval War College, Mumbai. The Flag Officer was commissioned in the Indian Navy on 01 Jan 1984 and is a Navigation and Direction specialist. The Flag Officer has had extensive operational tenures onboard frontline warships of the Indian Navy. During his career spanning over 37 years, he has been through a myriad of operational and staff appointments. His important operational appointments include Commands of Guided Missile Frigate INS Brahmaputra, Submarine Rescue Vessel INS Nireekshak, and Minesweeper INS Alleppey, and Second-in-Command of Guided Missile Frigate INS Ganga. INS Nireekshak was awarded the Unit Citation for the first time during his command.



His important staff appointments ashore include Assistant Chief of Personnel (Human Resources Development), Principal Director of Personnel, Director Naval Plans and Joint Director Naval Plans at Naval Headquarters as separate assignments, Director (Military Affairs) at the Ministry of External Affairs (Disarmament & International Security Affairs), Local Workup Team (West), and Instructor at the Navigation Direction School and the National Defence Academy. The officer also held the coveted appointments of Flag Officer Commanding Karnataka Naval Area and Flag Officer Commanding Maharashtra Naval Area.

In the rank of Vice Admiral he has held the challenging and coveted appointments of Director General Naval Operations, Chief of Staff Eastern Naval Command and Controller Personnel Services. The Flag Officer was holding the tri-service appointment of Deputy Chief (Operations & Training) at Headquarters Integrated Defence Staff prior taking over the present appointment as Vice Chief of the Naval Staff at IHQ MoD(N).

The Flag officer was awarded the Ati Vishisht Seva Medal on 26 Jan 17 and Nausena Medal in 2007 by the President of India, and Commendation by the Chief of the Naval Staff in 2000.

He has succeeded Vice Admiral G Ashok Kumar who retires after more than 39 years of illustrious service on 31 Jul 21. During his tenure as VCNS, the Navy saw an increase in budget allocation with 100% utilisation of allocated budget with impetus on capital acquisition. He proactively pushed for adopting 'AtmaNirbhar Bharat' Mission with Navy allocating more than

2/3rd of capital procurement from indigenous sources, 39 out of 41 ships and submarines for Indian Navy are being constructed in Indian Shipyards. The first ever procurement case under the Strategic Partnership Model for Project 75(I) was successfully progressed for issuance of RFP during his tenure. Many other instances of technological advancements, capability enhancements and research and development projects with DRDO and DPSU were progressed during his illustrious tenure.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1741001>



पत्र सूचना कार्यालय
भारत सरकार

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Sat, 31 July 2021 1:06PM

वाइस एडमिरल एसएन घोरमडे, एवीएसएम, एनएम ने नौसेना स्टाफ के उप-प्रमुख के रूप में पदभार ग्रहण किया

वाइस एडमिरल एसएन घोरमडे, एवीएसएम, एनएम ने आज सुबह नई दिल्ली के साउथ ब्लॉक में आयोजित एक औपचारिक समारोह में नौसेना स्टाफ के उप-प्रमुख के रूप में पदभार ग्रहण किया। वाइस एडमिरल एसएन घोरमडे ने यह पदभार वाइस एडमिरल जी अशोक कुमार, पीवीएसएम, एवीएसएम, वीएसएम, एडीसी से ग्रहण किया। वाइस एडमिरल जी अशोक कुमार 39 वर्ष की शानदार सेवा के बाद आज सेवानिवृत्त हो रहे हैं।

वाइस एडमिरल एसएन घोरमडे नेशनल डिफेंस एकेडमी (एनडीए), खडकवासला, न्यूपोर्ट, रोड आइलैंड स्थितयूनाइटेड स्टेट्स नेवल वॉर कॉलेज और मुंबई के नेवल स्टाफ कॉलेज के पूर्व छात्र हैं। फ्लैग ऑफिसर को भारतीय नौसेना में 01 जनवरी 1984 को कमीशन किया गया था और वह नौवहन और निर्देशन विशेषज्ञ हैं। फ्लैग ऑफिसर का भारतीय नौसेना के फ्रंटलाइन युद्धपोतों पर व्यापक परिचालन कार्यकाल रहा है। 37 वर्षों से अधिक के अपने करियर के दौरान, उन्होंने असंख्य परिचालन और स्टॉफ नियुक्तियों के माध्यम से अपनी सेवा प्रदान की है। उनकी महत्वपूर्ण परिचालन नियुक्तियों में गाइडेड मिसाइल फ्रिगेट आईएनएस ब्रह्मपुत्र, सबमरीन रेस्क्यू वेसल आईएनएस निरीक्षक और माइनस्वीपर आईएनएस एलेप्पी के साथ-साथ गाइडेड मिसाइल फ्रिगेट आईएनएस गंगा में सेकेंड-इन-कमांड शामिल हैं। आईएनएस निरीक्षक को उनकी कमान के दौरान पहली बार यूनिट प्रशस्ति पत्र से सम्मानित किया गया था।



तट पर उनकी महत्वपूर्ण स्टाफ नियुक्तियों में सहायक प्रमुख कार्मिक (मानव संसाधन विकास), प्रधान निदेशक कार्मिक, निदेशक नौसेना प्लान्स और नौसेना मुख्यालय में संयुक्त निदेशक नौसेना प्लान्स जैसे अलग-अलग कार्य के रूप में, विदेश मंत्रालय (निरस्त्रीकरण और अंतर्राष्ट्रीय सुरक्षा मामले) में निदेशक (सैन्य मामले) लोकल वर्कअप टीम (वेस्ट), नेविगेशन डायरेक्शन स्कूल एवं नेशनल डिफेंस एकेडमी में इंस्ट्रक्टर की नियुक्ति भी शामिल रही है। अधिकारी को कर्नाटक नौसेना क्षेत्र के फ्लैग ऑफिसर कमांडिंग और महाराष्ट्र नौसेना क्षेत्र के फ्लैग ऑफिसर कमांडिंग जैसी प्रतिष्ठित पदों पर भी नियुक्त किया गया है।

वाइस एडमिरल के पद पर उन्होंने महानिदेशक नौसेना संचालन, चीफ ऑफ स्टाफ पूर्वी नौसेना कमान और नियंत्रक कार्मिक सेवाओं की चुनौतीपूर्ण और प्रतिष्ठित नियुक्तियों के रूप में कार्यभार संभाला है। रक्षा मंत्रालय (एन) में मुख्यालय में नौसेना स्टाफ के उप-प्रमुख के रूप में वर्तमान नियुक्ति को संभालने से पहले फ्लैग ऑफिसर मुख्यालय एकीकृत रक्षा स्टाफ में ट्राई-सर्विस नियुक्ति के उप प्रमुख (संचालन और प्रशिक्षण) के तौर पर कार्यरत थे।

फ्लैग ऑफिसर को 26 जनवरी 2017 को अति विशिष्ट सेवा मेडल और 2007 में भारत के राष्ट्रपति द्वारा नौसेना मेडल और 2000 में नौसेना प्रमुख द्वारा प्रशस्ति से सम्मानित किया गया है।

उन्हें वाइस एडमिरल जी अशोक कुमार के स्थान पर नियुक्त किया है, जो 31 जुलाई 2021 को 39 वर्षों से अधिक की शानदार सेवा के बाद सेवानिवृत्त हुए हैं। वीसीएनएस के रूप में उनके कार्यकाल के दौरान, नौसेना पूंजी अधिग्रहण को प्रोत्साहन देते हुए आवंटित बजट के 100 प्रतिशत उपयोग के साथ बजट आवंटन में वृद्धि की साक्षी रही है। उन्होंने नौसेना के लिए आबंटित पूंजी में से 2/3 से अधिक का उपयोग स्वदेशी स्रोतों से खरीद के लिए करने के साथ 'आत्मनिर्भर भारत' मिशन को अपनाने के लिए सक्रिय रूप से जोर दिया, भारतीय नौसेना के लिए 41 जहाजों और पनडुब्बियों में से 39 का निर्माण भारतीय शिपयार्ड में किया जा रहा है। परियोजना 75(I) के लिए सामरिक भागीदारी मॉडल के तहत अब तक का प्रथम खरीद मामला उनके कार्यकाल के दौरान आरएफपी जारी करने के लिए सफलतापूर्वक आगे बढ़ाया गया था। उनके शानदार कार्यकाल के दौरान, डीआरडीओ और डीपीएसयू के साथ तकनीकी प्रगति, क्षमता वृद्धि और अनुसंधान एवं विकास परियोजनाओं के कई अन्य उदाहरणों को भी गति दी गई।

<https://pib.gov.in/PressReleasePage.aspx?PRID=1741040>



Press Information Bureau
Government of India
Ministry of Defence

Sat, 31 July 2021 2:22PM

Lt Gen Tarun Kumar Chawla takes over as Director General of Artillery

Lt Gen Tarun Kumar Chawla, AVSM will assume the appointment of the Director General of Artillery on 01 August 2021. He takes over the appointment from Lt Gen K Ravi Prasad, PVSM, VSM who superannuated on 31 July 2021 after completing thirty nine years of distinguished service in the Army.

The General officer is an alumnus of St Thomas High School, Dehradun and National Defence Academy, Khadakwasla. He was commissioned into a Field Regiment of Artillery in June 1984 and has served across a wide spectrum of terrain profiles and tenanted a host of command, staff and instructional appointments. He commanded an Artillery Regiment both in the Western and Eastern sectors. He has commanded an Artillery Brigade on the Line of Control and later an Artillery Division in the Western Theatre.

An alumnus of the Defence Services Staff College Wellington, College of Defence Management Secunderabad and National Defence College New Delhi, he has held prestigious staff appointments at the Military Secretary branch, erstwhile Perspective (now Strategic) Planning directorate, Infantry Division



in the Northern sector and finally at the Financial Planning branch, where he was the Director General. He has been an instructor in the School of Artillery Deolali and College of Defence Management Secunderabad, apart from tenantry a staff appointment at the Defence Services Staff College Wellington.

The General officer served as a Military Observer at the United Nations Mission in Liberia (UNOMIL). His civil qualifications include dual Master degree in Defence & Strategic Studies and Weapon Systems and a Master of Philosophy degree in Defence and Strategic Studies.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1741010>



पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Sat, 31 July 2021 2:22PM

लेफ्टिनेंट जनरल तरुण कुमार चावला ने आर्टिलियरी के महानिदेशक का पदभार संभाला

लेफ्टिनेंट जनरल तरुण कुमार चावला, एवीएसएम दिनांक 1 अगस्त 2021 को आर्टिलियरी के महानिदेशक का पदभार ग्रहण करेंगे। उन्होंने लेफ्टिनेंट जनरल के रवि प्रसाद, पीवीएसएम, वीएसएम से यह कार्य संभाला है, जो दिनांक 31 जुलाई 2021 को सेना में सेवा के उनतीस साल पूरे करने के बाद सेवानिवृत्त हो गए हैं।

जनरल ऑफिसर सेंट थॉमस हाई स्कूल, देहरादून और राष्ट्रीय रक्षा अकादमी, खडकवासला के पूर्व छात्र हैं। उन्हें जून 1984 में आर्टिलियरी फील्ड रेजिमेंट में कमीशन प्रदान किया गया था और उन्होंने इस क्षेत्र के व्यापक स्पेक्ट्रम में काम किया है और कई कमांड, स्टाफ और निर्देशात्मक नियुक्तियों में अपनी सेवा प्रदान की है। उन्होंने वेस्टर्न और ईस्टर्न दोनों सेक्टरों में एक आर्टिलियरी रेजिमेंट की कमान संभाली। उन्होंने नियंत्रण रेखा पर एक आर्टिलियरी ब्रिगेड और बाद में वेस्टर्न थिएटर में एक आर्टिलियरी डिवीजन की कमान संभाली है।

वह डिफेंस सर्विसेज स्टाफ कॉलेज वेलिंगटन, कॉलेज ऑफ डिफेंस मैनेजमेंट सिकंदराबाद और नेशनल डिफेंस कॉलेज नई दिल्ली के पूर्व छात्र हैं, उन्होंने मिलिट्री सेक्रेट्री ब्रांच, तत्कालीन परस्पेक्टिव और अब स्ट्रैटेजिक कहलाने वाले प्लानिंग डायरेक्टरेट, नॉर्दर्न सेक्टर में इन्फैंट्री डिवीजन तथा अंततः फाइनेंशियल प्लानिंग ब्रांच में डीजी का पदभार संभाला है। वह डिफेंस सर्विसेज स्टाफ कॉलेज वेलिंगटन में नियुक्ति के अलावा स्कूल ऑफ आर्टिलियरी देवलाली और कॉलेज ऑफ डिफेंस मैनेजमेंट सिकंदराबाद में प्रशिक्षक रहे हैं।

जनरल ऑफिसर ने लाइबेरिया में संयुक्त राष्ट्र मिशन (यूएनओएमआईएल) में एक मिलिट्री ऑब्ज़र्वर के रूप में कार्य किया। उनकी शिक्षा की बात करें तो रक्षा और रणनीतिक अध्ययन तथा हथियार प्रणाली में मास्टर डिग्री और रक्षा एवं रणनीतिक अध्ययन में एमफिल की डिग्री शामिल है।

<https://pib.gov.in/PressReleasePage.aspx?PRID=1741028>





Sun, 01 Aug 2021 12:34PM

INS Tabar at Port Stockholm, Sweden

INS Tabar, as part of the ongoing Overseas Deployment, entered Port Stockholm on 30 Jul 21. This is the first visit of an Indian Navy Ship to Stockholm in nearly two decades. The ship was received by Brig Gen Peder Ohlsson, Deputy Chief of Royal Swedish Navy and Group Captain Pankaj Mittal, Indian Defence Attache (DA) at Sweden. Subsequently, Deputy Chief of Royal Swedish Navy visited the ship and was presented a Guard of Honour onboard. During the walk around, he was explained about the key functionalities of the ship. While extending a warm welcome, he conveyed that Tabar visit to Stockholm would only consolidate the long standing ties between the Indian Navy and the Royal Swedish Navy. Captain Mahesh Mangipudi, the Commanding Officer (CO) presented him with the ship's crest on completion of the visit.

The Commanding Officer, INS Tabar accompanied by DA, called on Mr Tanmaya Lal, the Ambassador of India to Sweden and Latvia at the Indian Embassy in Stockholm. The CO briefed the Ambassador on the ship's current deployment and presented him the ship's crest. The Indian Ambassador during his visit to the ship on 31 Jul 21, conveyed his appreciation for the role played by the Indian Navy in safeguarding the maritime interests of the country, diplomacy through Port Visits and in undertaking HADR tasks as and when needed.

The CO also called on the Commandant of Stockholm, Col Thomas Karlsson at the Royal Palace. He was accorded a ceremonial welcome with a Guard of Honour by the Royal Guard. The Commandant and the CO held discussions regarding the current deployment and other issues of mutual interest.

A reception for limited guests, adhering to all COVID protocols; was hosted by INS Tabar on 30 Jul 21. Maj Gen Jonas Wikman, Deputy Chief of Joint Operations of the Swedish Armed Forces was the Chief Guest. He was appreciative about the Indian Navy Ship visit to Stockholm and added that the two Navies have considerable potential to partner in combating common maritime concerns.



<https://pib.gov.in/PressReleasePage.aspx?PRID=1741232>



पत्र सूचना कार्यालय भारत सरकार

रक्षा मंत्रालय

Sun, 01 Aug 2021 12:34PM

आईएनएस तबर स्वीडन के पोर्ट स्टॉकहोम पहुंचा

आईएनएस तबर वर्तमान में जारी विदेशी तैनाती के हिस्से के रूप में 30 जुलाई 2021 को पोर्ट स्टॉकहोम पहुंचा। लगभग दो दशकों में स्टॉकहोम में भारतीय नौसेना के जहाज की यह पहली यात्रा है। इस पोत का स्वागत स्वीडन में रॉयल स्वीडिश नेवी के उप प्रमुख ब्रिगेडियर जनरल पेडर ओहल्सन और भारतीय डिफेन्स ऐटशे (डीए) ग्रुप कैप्टन पंकज मित्तल ने किया। इसके बाद, रॉयल स्वीडिश नौसेना के उप प्रमुख ने जहाज का दौरा किया और फिर पोत पर गार्ड ऑफ ऑनर प्रस्तुत किया गया। भारतीय नौसैनिक पोत पर भ्रमण के दौरान उन्हें जहाज की प्रमुख विशेषताओं और कार्यविधियों के बारे में बताया गया। गर्मजोशी भरे स्वागत के दौरान उन्होंने कहा कि, तबर की स्टॉकहोम यात्रा भारतीय नौसेना और रॉयल स्वीडिश नौसेना के बीच लंबे समय से चले आ रहे संबंधों को और मजबूत करेगी। कमांडिंग ऑफिसर (सीओ) कैप्टन महेश मंगीपुडी ने यात्रा पूरी होने पर उन्हें जहाज का राजचिन्ह भेंट किया।

डिफेन्स ऐटशे के साथ आईएनएस तबर के कमांडिंग ऑफिसर ने स्टॉकहोम के भारतीय दूतावास में स्वीडन और लातविया में भारत के राजदूत श्री तन्मय लाल से मुलाकात की। कमांडिंग ऑफिसर ने राजदूत को जहाज की वर्तमान तैनाती के बारे में जानकारी दी और उन्हें जहाज का राजचिन्ह भेंट में दिया। भारतीय राजदूत ने 31 जुलाई 2021 को जहाज की अपनी यात्रा के दौरान देश के समुद्री हितों की रक्षा, पोर्ट यात्राओं के माध्यम से कूटनीति और जरूरत पड़ने पर एचएडीआर कार्यों को करने में भारतीय नौसेना द्वारा निभाई गई भूमिका के लिए प्रसन्नता व्यक्त की।

सीओ ने रॉयल पैलेस में स्टॉकहोम के कमांडेंट कर्नल थॉमस कार्लसन से भी मुलाकात की। रॉयल गार्ड द्वारा गार्ड ऑफ ऑनर के साथ ही उनका औपचारिक स्वागत किया गया। कमांडेंट और सीओ ने मौजूदा तैनाती और आपसी हित के अन्य मुद्दों पर चर्चा की।

आईएनएस तबर द्वारा 30 जुलाई 2021 को सभी कोविड प्रोटोकॉल का पालन करते हुए सीमित मेहमानों के लिए स्वागत समारोह आयोजित किया गया था। स्वीडिश सशस्त्र बलों के संयुक्त अभियान के उप प्रमुख मेजर जनरल जोनास विकमैन इस समारोह के मुख्य अतिथि थे। उन्होंने स्टॉकहोम में भारतीय नौसैनिक जहाज की यात्रा के बारे में सराहना की और कहा कि, दोनों नौसेनाओं में आम समुद्री चिंताओं का मुकाबला करने में भागीदार होने की काफी संभावनाएं हैं।



<https://pib.gov.in/PressReleasePage.aspx?PRID=1741250>



Press Information Bureau
Government of India

Ministry of Defence

Sun, 01 Aug 2021 7:16PM

Establishment of hotline between Indian Army and People's Liberation Army (PLA) in North Sikkim

A hotline was established between Indian Army in Kongra La, North Sikkim and PLA at Khamba Dzong in Tibetan Autonomous Region to further the spirit of trust and cordial relations along the borders. The event coincided with the PLA Day on 01 Aug 2021.

The Armed forces of the two countries have well established mechanisms for communication at ground commanders level. These hotlines in various sectors go a long way in enhancing the same and maintaining peace and tranquility at the borders.

The inauguration was attended by ground commanders of the respective Armies and a message of friendship and harmony was exchanged through the Hotline.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1741293>



पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Sun, 01 Aug 2021 7:16PM

उत्तरी सिक्किम में भारतीय सेना और पीपुल्स लिबरेशन आर्मी (पीएलए) के बीच हॉटलाइन की स्थापना

सीमा पर विश्वास और सौहार्दपूर्ण संबंधों की भावना को आगे बढ़ाने के लिए उत्तरी सिक्किम के कॉंगरा ला में भारतीय सेना और तिब्बत स्वायत्त क्षेत्र के खंबा ज़ोंग में पीएलए के बीच एक हॉटलाइन स्थापित की गई। यह आयोजन दिनांक 1 अगस्त 2021 को पीएलए दिवस के साथ सम्पन्न हुआ।

दोनों देशों के सशस्त्र बलों के बीच जमीनी स्तर पर तैनात कमांडरों के बीच संचार हेतु अच्छी तरह स्थापित तंत्र है। विभिन्न क्षेत्रों में यह हॉटलाइन इस संवाद को बढ़ाने और सीमा पर शांति बनाए रखने में एक महती भूमिका निभाएगी।

इस अवसर पर उद्घाटन में संबंधित सेनाओं के ग्राउंड कमांडरों ने भाग लिया और हॉटलाइन के माध्यम से मित्रता और सद्भाव के संदेश का आदान-प्रदान किया गया।

<https://pib.gov.in/PressReleasePage.aspx?PRID=1741323>

Air Chief Marshal Bhadauria embarks on UAE visit

Air Chief Marshal RKS Bhadauria on Saturday embarked on a visit to the United Arab Emirates. His visit comes roughly eight months after Chief of Army Staff Gen MM Naravane visited the Gulf country

New Delhi: Air Chief Marshal RKS Bhadauria on Saturday embarked on a visit to the United Arab Emirates in reflection of India's growing strategic ties with the influential Gulf country.

His visit comes nearly eight months after Chief of Army Staff Gen MM Naravane travelled to the Gulf country.

In December last year, Gen Naravane paid a six-day visit to the UAE and Saudi Arabia in a first-ever trip by a head of the Indian Army to the two important Gulf countries.

An official release said the “goodwill visit” by the IAF Chief to the UAE will further strengthen bilateral defence cooperation.

It said Air Chief Marshal Bhadauria is visiting the UAE on an invitation from Major General Ibrahim Nasser M Al Alawi, Commander of the UAE Air Force and Air Defence (UAE AF and AD).

“The IAF and UAE AF and AD have had significant professional interactions in the past few years and this visit will further strengthen the defence cooperation and Air Force level exchanges, as part of the comprehensive strategic partnership between the two sides,” it said, without mentioning the duration of the visit.

In the last few years, India's ties with the UAE have witnessed a major upswing.

The UAE Air Force had provided mid-air refuelling to a number of Rafale fighter jets on their journey from France to India. India is procuring 36 Rafale jets from France out of which 24 have already been delivered.

<https://www.indiatoday.in/india/story/air-chief-marshal-bhadauria-embarks-on-uae-visit-1835253-2021-08-01>



Air Chief Marshal RKS Bhadauria visited the UAE at the request of Major General Ibrahim Nasser M Al Alawi (Photo: File)

Hyderabad: New Commandant of Air Force Academy takes charge

An alumnus of National Defence Academy, Defence Services Staff College, Flying Instructors' School, College of Defence Management and National Defence College, he is one of the pioneers of aerial refuelling operations in the IAF

Hyderabad: Air Marshal Sanjeev Kapoor on Sunday took over as Commandant of Air Force Academy (AFA), Dundigal, upon superannuation of Air Marshal IP Vipin.

Commissioned in the Indian Air Force (IAF) in 1985, Air Marshal Kapoor has more than 7700 flying hours on various aircrafts. An alumnus of National Defence Academy, Defence Services Staff College, Flying Instructors' School, College of Defence Management and National Defence College, he is one of the pioneers of aerial refuelling operations in the IAF. He also commanded the only air-to-air refuelling squadron in the IAF.



AIR MARSHAL SANJEEV KAPOOR TAKES OVER AS COMMANDANT OF AIR FORCE ACADEMY

In his three-decade-plus career, Kapoor held important appointments as Director (air-to-air refuelling) and Principal Director (operations) at Air Headquarters. He also worked as Head of Faculty and Senior Air Force Instructor at the prestigious College of Defence Management, Secunderabad and was the Assistant Chief of Air Staff, Operations (Transport & Helicopters) at Air Headquarters.

His last appointment before being appointed as Commandant AFA was Assistant Chief of Air Staff. Air Marshal Sanjeev Kapoor received Ati Vishist Seva Medal and Vayu Sena Medal for his services.

<https://telanganatoday.com/hyderabad-new-commandant-of-air-force-academy-takes-charge>

Eastern Fleet on visit to Port Blair to enhance synergy with Andaman & Nicobar Command

Port Blair: The Indian Navy's Eastern Fleet is on a visit to Port Blair to enhance synergy with the Andaman and Nicobar Command, an official release said.

The Andaman and Nicobar Command (ANC) is the first integrated theatre command in India with headquarters at Port Blair.

The Eastern Fleet of the Indian Navy is on a visit to Port Blair from July 31 to August 2.

The visiting Eastern Fleet is deployed for undertaking combat manoeuvres in Bay of Bengal and Andaman Sea and comprises of one frigate, two destroyers, one tanker, two anti-submarine warfare corvettes and two corvettes, the release said.

After visiting Port Blair the Eastern fleet would undertake combat manoeuvres in Andaman Sea. The operational deployment is to further enhance synergy amongst Eastern Naval Command and Andaman and Nicobar Command. The exercise would symbolise the commitment towards the safety and security of the Islands situated 700 nautical miles (NM) from the mainland. The operational manoeuvres in the Bay of Bengal and Andaman Sea would further strengthen the critical capability to monitor sea areas and important Sea Lines of Communications (SLOCs) through the Indian Ocean Region, it added.

(Disclaimer: This story has not been edited by Outlook staff and is auto-generated from news agency feeds. Source: PTI)

<https://www.outlookindia.com/newscroll/eastern-fleet-on-visit-to-port-blair-to-enhance-synergy-with-andaman--nicobar-command/2132510>

Gulf War to Vietnam to Balakot—role of air force offers lessons for theatre command planners

It is a dichotomy that the Army, while realising the utility of en mass firepower of an artillery division, does not apply the same rationale to air power

By Anchit Gupta, Edited by Anurag Chaubey

In all the debate on theatre commands, the key aspect of unity of aerospace command has been compromised. Aerospace power is unique and requires an innate understanding for its effective application.

While its initial grandiose promises didn't quite ring true in their entirety, air power emerged to establish itself as a force that could gravely alter the course of conflicts, if not win them by itself. Paradoxically, the detractors who thought nothing of the tank as a fighting weapon oversaw its birth and initial use. The rhetoric claiming that air power was the panacea to the horrors of trench warfare proved to be its bane with its proponents brushed aside as being given to hyperbole. Thus, it was



File photo | Indian Air Force | Facebook

restricted to minimal roles like reconnaissance and observation, firmly in the grips of commanders unfamiliar with its application. Its more imaginative use was to follow after the emergence of visionaries like Liddell-Hart and Douhet, and later, Trenchard and Billy Mitchell, who persisted with the idea of an independent air force under the command of an airman.

From sceptics who argued that aircraft would only serve to startle cavalry horses, to those who today question its independent role, aerospace power has weathered the storm with great aplomb.

As before, the aerospace power's keystone remains its reach and cover. Its inherent freedom to manoeuvre and ubiquity imply that an aggressor can attack from any direction, forcing a defender to spread out his forces. Speed is an attribute that is almost synonymous with aerospace power. Collectively, these traits bestow upon an air force the ability to carry out distinct operations, as was demonstrated during Operation Instant Thunder during the first Gulf War. The 1981 Israeli attack on Osirak and the American F-111 strike on Libya in 1986, and the Balakot strikes are also cases in point. The latter examples also highlight the political signals that can be produced by a squadron-worth of aircraft.

Characteristics and limitations

Aerospace power's potency has resulted in an increasing demand from all arms. However, this demand is fast degenerating into a call for individual command over its assets.

The proponents of such splitting of aerospace power assets are, however, ill-informed of its basic tenets, characteristics and limitations. This is largely because the goal of an air commander is to fight at a strategic level, while forcing the enemy to do so at a tactical level. Contrast this to a ground Commander's view of what is arguably a linear battle. As he matures in service, his Area of Responsibility (AOR) too keeps growing. This AOR, however, is bounded on either side by a friendly commander's, thus limiting the commander concerned to a 'Bowling Alley Effect' — a myopic view of the enemy. Consequently, they are faced only with the immediate problem, losing the larger picture in the bargain. The Indian Army's insistence on the use of armed helicopters in the initial stages of the Kargil incursions too reeked of the Bowling Alley Effect leading to much heartburn amongst the Service chiefs.

The airman, on the other hand, grows up thinking little of geographical barriers, knowing that aerospace power is never to be used in penny packets and that the results of his effort may not be immediate. Most importantly, his AOR spreads across an entire theatre, maybe more than a Corps Commander's.

Soviet aerospace luminary Alexander P. Seversky listed 'unity of command' as one of the three principles of application of aerospace power. Unity of aerospace command implies directing and coordinating the action of all aerospace forces towards a common objective. This principle ensures that for every objective or aim, there should be a unity of effort under one air commander. In this regard, it must be understood that command need not necessarily imply ownership. Instead, it implies 'unity of effort' and that of 'purpose'.

History is replete with misdirected adventures at splitting aerospace power and/or placing it under the command of a 'non-airman'. Vietnam and Korea are obvious examples in this regard, where the basic tenet of mass was given the go-by in favour of a gradual incremental approach. Lack of unity in effort and command on part of the US forces also effected the conduct of these campaigns, with the US navy and air force sometimes working at variance with each other.

A slight variation, though involving wilful splitting of aerospace power resources, is found in the Royal Air Force's (RAF) campaign in North Africa where, initially, the RAF split its assets into penny packets called 'Mobile Wings' under direct control of the army. This attempt proved disastrous, forcing reversion of command to the RAF and the subsequent air interdiction effort, which starved Erwin Rommel, the German, of his POL (Petroleum, Oil, and Lubricants) supplies. The Egyptian misadventure with air defence in 1973 is another contemporary example of wilfully splitting air power or one of its components, ostensibly for better operational response. A separate Egyptian Air Defence Command hived off the Egyptian Air Force (EAF) and placed subordinate to the army saw the EAF lose 58 aircraft to friendly fire, compared to a total Israeli loss of 102 aircraft.

Such examples, where the unity of aerospace power was tinkered with, abound in military history. Clearly, decentralised application of an air force has always led to an incoherent strategy, which lacks unity of effort. Penny-packet use of aerospace power, as in the past, is never going to yield any results. In a developing country like India, there is a great need to have a unified command over the aerospace power assets because they are limited. The proliferation of aerial vehicles across Services has resulted in duplication of effort, wastefulness and problems in airspace management. It is a dichotomy that the Army, while realising the utility of en masse firepower of an artillery division, does not bestow the same rationale on the use of aerospace power.

Focus on strategic aim, not means

The air defence of a fleet air arm differs from that of the ground forces in that it is far removed from the TBA (Tactical Battle Area), which is also being used by friendly air assets. Thus, the chances of fratricide are remote, though not entirely absent. However, navies having big aircraft carriers also possess the ability to deliver weapon loads offensively on the mainland. When this effort is in concert with one already underway from a shore-based airfield, the naval air assets should come under the command of one commander, who would then be able to orchestrate the entire campaign, with the forces at his disposal. Such coordination is only possible when all the naval aerospace assets are placed under a unified command. Arguably, the Karachi attack of 1971 is an example in this regard.

As any Clausewitzian student (of military theorist Carl von Clausewitz) would agree, a nation's military might is a mere means to a larger end. It matters little who contributes how much. What is of importance is the achievement of the strategic aim, maybe at the cost of a few battles. The strategic aim, in turn, can only be achieved by optimum (not maximum) use of military force. Such use is possible only when force is wielded cohesively and by those who are trained to wield it. This glimpse into the past brings forth the fact that aerospace power assets under a commander not versed with its application resulted in stunted growth or misapplication of air assets. It should suffice to say that aerospace assets are best left unified under the command (not necessarily ownership) of an airman. Consequently, the Indian Air Force's resistance of theatre commands is

being trivialised by comparing the air force component of theatre commands to the current operational commands of the IAF, disregarding the overall unity of command, under an airman, that exists in the current setup.

(Anchit Gupta @AnchitGupta9 is a finance professional from a military family. He has a deep interest in aviation history, is currently co-authoring a book on the role of IAF in the Kargil war and has been a regular contributor to the IAF section on www.bharat-rakshak.com . Views are personal.)

<https://theprint.in/opinion/gulf-war-to-vietnam-to-balakot-role-of-air-force-offers-lessons-for-theatre-command-planners/707027/>

modern diplomacy

Sun, 01 Aug 2021

The future of the Quadrilateral Security Dialogue (the QUAD) grouping explained

By Prof. Dr. Amarendra Bhushan Dhiraj

The Quadrilateral Security Dialogue (the Quad) comprises four countries, Australia, India, Japan, and the United States. It was founded in the year 2007 by Shinzo Abe, the prime minister of Japan. The initiation of the dialogue was supported by Dick Cheney and John Howard, the then USA vice president and the Prime Minister of Australia, respectively. Manmohan Singh, the then Prime Minister of India, also took part in the quad grouping initiation process (Gale & Shearer, 2018). The informal strategic dialogue was formed with a common objective of ensuring and supporting an open, free, and prosperous Indo-Pacific region through the minimization of China's influence. The paper's primary purpose is to discuss why the quadrilateral security dialogue is currently common on the news by describing the group's new activities that have attracted media attention.



Quad Nations and China

United States of America

Given the increasing influence of China in East Asia, United States sees the Quad Nations coalition as a chance to gain back its declining power in the Indo-Pacific. The nation describes Russia and China as tactical rivals in the strategy to promote National security.

Australia

The country is highly disturbed by China's growing interests in its politics, land, infrastructure, and influence on its learning institutions. Despite Australia being part of the quad grouping, the country has maintained its commitment to the partnership with China because of its high dependence on China for economic prosperity.

Japan

Japan has shown concerns about the territorial transgression of China in the region. However, the country cannot break its ties with China because the trade volume between the two nations is the key contributor to the growth of the Japanese economy. Therefore, the country is trying out ways to balance its territorial concerns and economic needs by preserving its relationship with China while at the same time joining the quad grouping.

India

The violation of international norms by China, especially by constructing military facilities in the South China Sea, affects India negatively. Considering China's critical role in India's economic

development, the country has preserved its commitment to strategic autonomy to China despite being a member of the quad grouping.

Reasons behind Quad's High Media Attention

Quad grouping started attracting high media attention when it came back to life on November 12, 2017, by forming a quadrilateral coalition to counter the aggressive behavior of China in the Indo-Pacific region. The group held its first meeting after the rebirth one day before the ASEAN Summit, which was attended by officials from the Ministries of External Affairs of all member countries. Australia, Japan, and India issued alternate statements citing the Indo-Pacific as the central debate area. The group agreed to expand cooperation to maintain respect for international law and rule-based order in tactically vital regions (O'Neil & West, 2020). The countries agreed that an open, free, inclusive, and prosperous Indo-Pacific would positively impact the nations' interests in the area and those of the entire world. The officials also shared ideas on tackling common propagation linkages and terrorism affecting the region, among other discussions. They also shared views on the best ways to use present-day technology to enhance connectivity. The meeting attracted significant media attention and has activated close follow-up by different media stations of all the group's activities.

Director generals from the four countries of the Quad group met officially for the second time in 2018 after the dialogue was reinitiated. The officials discussed ways to meet their shared objectives in development and connectivity, humanitarian assistance, regional security, maritime corporation, and disaster relief. Another complementary meeting was again held between the Quad countries, where joint secretaries heading American and East Asia were the attendees. The participants reassured their support for an open, accessible, inclusive, and prosperous Indo-Pacific Region. Members again confirmed their joint commitment, built on shared principles and values to ensure order in the Indo-Pacific.

News about the Quad grouping was at its peak from March 12, 2021, after the US, Australia, India, and Japan conducted a virtual meeting because of the current Coronavirus pandemic. The leaders agreed to work as a unit to stop China's rising influence in the Indo-Pacific and tackle the Covid pandemic. Quad members spoke about their plans to function alongside the World Health Organization to make Covid-19 vaccines available to more than one billion people in the Indo-Pacific region. With the Australian logistics competence, the United States' technology, Indian manufacturing, and the Japanese financing, Quad members are confident with their plan of creating as many Covid-19 vaccines as possible to supply among their target population (Satake, 2020). Besides China's aggressiveness and Covid-19, the members also agreed to work together to address climate change. The group also reiterated its assurance to denuclearize North Korea and encouraged the restoration of the democratic election of public members to the government in Myanmar.

Conclusion

The member states started the quad grouping, majorly to protect their territories and limit China's dominance. The group has grown to attract significant attention, not only in the media but also worldwide. Besides the limitation of China's reign, the quadrilateral security dialogue has and is still making substantial contributions in tackling the current Coronavirus pandemic, which has had devastating impacts worldwide. The group has turned out to advocate for a more peaceful, free, prosperous, and inclusive world.

<https://moderndiplomacy.eu/2021/08/01/the-future-of-the-quadrilateral-security-dialogue-the-quad-grouping-explained/>

Taliban seek air missiles from China

Delegation requests Beijing to help it with electronic warfare against US bombers

New Delhi: The Taliban are desperate to get supplies of medium range surface-to-air missiles (SAMs) from China before the complete withdrawal of the US troops from Afghanistan in September. Afghan Taliban co-founder Mullah Abdul Ghani Baradar, alias Mullah Baradar, placed his desire to get SAMs before the Chinese Foreign Minister Wang Yi at a delegation-level meeting at Tianjin on Wednesday.

“The Taliban delegation requested SAMs from China during the inter-delegation meeting headed by Baradar from the Taliban and Yi from the Chinese side,” they said.

Backed by technical inputs from the Pakistan Army-ISI complex, the Taliban have sought missiles capable of crippling the electronic warfare capabilities and jamming the radar of the American B-52 bombers as the configuration is estimated to be closely matching those of Rafale fighter jets being procured by India from France, the sources said.

The Talibani bid to acquire the SAMs comes in view of the outfit’s estimated 50,000 to 60,000 fighters, as compared to the 2.5 lakh-strong Army of the Abdul Ghani-led dispensation and Pakistan’s inability to aid the militia with military logistics.

With a change in tactics and military strategy, the Afghan Army can challenge and dominate the Taliban and the SAMs will provide some kind of deterrent against weakness and bombings by the American B-52 bombers, they said.

To overcome the limited number of fighters as compared Afghan Army regulars, the Taliban has taken a leaf out of the 1971 war won by India against Pakistan to liberate Bangladesh wherein the Indian Army forced the Pakistanis to surrender after pounding their bases and posts and further marching ahead. In a similar fashion, the Taliban is cordoning the city limits of the districts it is capturing and preventing others from estimating their actual strength.

Experts said the Indian Army’s tactics in the 1971 war could have been shared by Pakistan which estimates the strategy to be the best suited for the Taliban’s onslaught with limited numbers and resources.

The Chinese SAMs could ultimately land in the Pakistan Army which could be exploited against India, especially the Rafales in the Indian Air Force in the event of any conflict.

When the US was backing the Taliban during the Russian occupation of Afghanistan, Adamkhel in the erstwhile North West Frontier Province, became a hub of illegal weapons market.

Now, these areas around the China-Pakistan Economic Corridor could potentially turn into an illegal weapons market with readily available components from the Chinese factories in the Belt and Road Initiative projects in Balochistan, experts added.

<https://www.dailypioneer.com/2021/page1/taliban-seek-air-missiles-from-china.html>



ISRO to take cooperation with European, Israeli space agencies to higher orbit

An ISRO-ESA Arrangement concerning network and operations Cross-support which will enable use of ground station to support each others spacecraft missions, was signed recently

Bengaluru: The Indian Space Research Organisation is in discussions with European and Israeli space agencies to enhance cooperation and identify potential opportunities to work together.

The Secretary in the Department of Space and ISRO Chairman K Sivan held virtual meetings with Director General of Israel Space Agency (ISA) Avi Blasberger and Director General of European Space Agency (ESA) Josef Aschbacher last week.

Sivan and Blasberger reviewed the progress of the ongoing activities including cooperation in electric propulsion system for small satellites and GEO-LEO (Geosynchronous Earth Orbit-Low Earth Orbit) optical link.

They also discussed potential opportunities of working together in future including launch of Israeli satellites in Indian launcher and commemorating 75th anniversary of Indian independence and 30 years of India-Israel diplomatic relations through an appropriate event in 2022, an ISRO statement said.

Sivan and Aschbacher reviewed the status of ongoing cooperation activities in earth observation, space science, satellite navigation, space situational awareness and human space flight.

An ISRO-ESA Arrangement concerning network and operations Cross-support which will enable use of ground station to support each others spacecraft missions, was signed recently.

"They agreed to form thematic working groups which will discuss to identify potential opportunities for working together to further enhance ISRO-ESA cooperation", the Bengaluru-headquartered space agency added.

<https://www.newindianexpress.com/nation/2021/aug/01/isro-to-take-cooperation-with-european-israeli-space-agencies-to-higher-orbit-2338560.html>



For representational purposes (Photo | ISRO)

यूरोपीय, इजराइली अंतरिक्ष एजेंसियों के साथ मिलकर उच्च स्तर पर सहयोग करेगा इसरो

बेंगलुरु: भारतीय अंतरिक्ष अनुसंधान संगठन (ISRO) यूरोपीय एवं इजराइली अंतरिक्ष एजेंसियों के साथ मिलकर काम करने के लिए उनके साथ वार्ता कर रहा है, ताकि एजेंसियों के बीच सहयोग बढ़ाया जा सके और संभावित अवसरों की पहचान की जा सके।

अंतरिक्ष विभाग के सचिव और इसरो के अध्यक्ष के सिवन ने पिछले हफ्ते इजराइल अंतरिक्ष एजेंसी (ISA) के महानिदेशक एवी ब्लैसबेर्गर और यूरोपीय अंतरिक्ष एजेंसी (ESA) के महानिदेशक जोसेफ असचबैकर के साथ ऑनलाइन बैठकें कीं। सिवन और ब्लैसबेर्गर ने छोटे उपग्रहों के लिए विद्युत प्रणोदन प्रणाली और जीईओ-एलईओ (भूतुल्यकाली पृथ्वी कक्षा- पृथ्वी की निचली कक्षा) ऑप्टिकल लिंक में सहयोग सहित जारी गतिविधियों की प्रगति की समीक्षा की।

इसरो ने एक बयान में बताया कि उन्होंने भारतीय प्रक्षेपक से इजराइली उपग्रहों का प्रक्षेपण और भारतीय स्वतंत्रता की 75वीं वर्षगांठ एवं भारत-इजराइल के राजनयिक संबंधों के 30 साल पूरे होने के अवसर पर 2022 में एक उपयुक्त कार्यक्रम आयोजित करने समेत भविष्य में एक साथ काम करने के संभावित अवसरों पर भी चर्चा की।

सिवन और असचबैकर ने पृथ्वी के पर्यवेक्षण, अंतरिक्ष विज्ञान, उपग्रह नेविगेशन, अंतरिक्ष स्थितिजन्य जागरूकता और मानव अंतरिक्ष उड़ान में चल रही सहयोगात्मक गतिविधियों की स्थिति की समीक्षा की। नेटवर्क और मिशनों में आपस में सहयोग से संबंधित इसरो-ईएसए व्यवस्था पर हाल में हस्ताक्षर किए गए। यह समझौता एक दूसरे के अंतरिक्ष यान मिशन का समर्थन करने के लिए जमीनी स्टेशन के उपयोग को सक्षम करेगा।

इसरो ने कहा, 'उन्होंने विषयगत कार्य समूह बनाने पर सहमति जताई, जो इसरो एवं ईएसए के बीच सहयोग बढ़ाने के लिए मिलकर काम करने के संभावित अवसरों की पहचान करने पर चर्चा करेंगे।' असचबैकर ने ट्वीट किया, 'मैं इसरो के साथ ईएसए के सहयोग को ईएसए के अंतरराष्ट्रीय एजेंडे में उच्च प्राथमिकता पर रखता हूं। भारत के अंतरिक्ष पोर्टफोलियो में विस्तार हो रहा है, इसलिए हमारी एजेंसियों के बीच सहयोग बढ़ाने के बहुत अवसर हैं।'

<https://navbharattimes.indiatimes.com/state/other-states/bangalore/chennai/isro-to-collaborate-at-high-level-with-european-and-israeli-space-agencies/articleshow/84941323.cms>

New solid electrolyte promises cheaper, better all-solid-state li batteries

Researchers from the University of Science and Technology of China (USTC) have designed a novel material to make all-solid-state Li batteries less costly but more effective, according to an article published in the science journal Nature Communications on July 20.

Solid electrolytes are important to realizing safe, energy-dense all-solid-state Li batteries. Among different types of solid electrolytes, the chloride solid electrolytes were recently found to exhibit the desirable characteristics of both sulfide and oxide systems, including high ionic conductivity, deformability and oxidative stability. The rare combination of these advantages has rapidly attracted wide interest. Nevertheless, two issues are making the mass production of these attractive solid electrolytes extremely challenging: the expensive raw materials, and the low humidity tolerance.



The team designed and synthesized the material, Li_2ZrCl_6 (LZC). With all the advantages of chloride solid electrolytes well preserved, it simultaneously exhibits low materials cost and excellent humidity tolerance.

The raw material cost of LZC at 50 μm thickness is only \$1.38/ m^2 , which is much lower than that of even the cheapest chloride system in the literature (\$23.05/ m^2), and way below the \$10/ m^2 threshold for ensuring the cost competitiveness of all-solid-state batteries. Furthermore, LZC is stable in an atmosphere with 5% relative humidity, so the strict requirements for atmosphere during synthesis and storage, like those for sulfide solid electrolytes, are no longer needed.

More importantly, the above advantages in mass production have been “achieved without sacrificing any of the attractive characteristics of chloride solid electrolytes,” according to Prof. MA.

LZC still possesses high ionic conductivity (0.81 mS cm^{-1}), outstanding deformability, and remarkable compatibility with 4V-class cathodes. A cell with a $\text{LiNi}_{0.8}\text{Mn}_{0.1}\text{Co}_{0.1}\text{O}_2$ cathode and a LZC solid electrolyte delivered a stable specific capacity of about 150 mAh g^{-1} after 200 cycles at 200 mA g^{-1} without considerable fade, which rivals even the best among similar all-solid-state cells.

“All-solid-state Li batteries play an important role in achieving the goal of ‘peak carbon dioxide emissions’ and ‘carbon neutrality’,” Prof. MA said. “The achievement of both cost-effectiveness and high performance of Li_2ZrCl_6 removes a major obstacle to the commercialization of such batteries.”

<https://indiaeducationdiary.in/university-of-science-and-technology-of-china-new-solid-electrolyte-promises-cheaper-better-all-solid-state-li-batteries/>

Researchers realize coherent manipulation of single-spin qubits in silicon carbide at room temperature

Prof. LI Chuanfeng, Prof. XU Jinshi and their colleagues from Prof. GUO Guangcan's group at University of Science and Technology of China, collaborating with Prof. Adam Gali from the Wigner Research Centre for Physics, Hungary, realized the high-contrast readout and coherent manipulation of a single silicon carbide divacancy color center electron spin at room temperature for the first time. The study was published in National Science Review on July 5.

Solid-state spin color centers are of great importance to the application of quantum technologies, especially the nitrogen-vacancy (NV) centers in diamond. Since the detection of individual NV defect centers in diamond with room temperature was reported in 1997, the NV centers in diamond have been applied to versatile fields including quantum computing, quantum networking and quantum sensing.

The researchers have been seeking similar color centers in other semiconductor materials using more mature material processing and device integration technologies. Among them, the spin color centers in silicon carbide, including silicon vacancies (missing a silicon atom) and divacancies (missing a silicon atom and an adjacent carbon atom), have attracted interest due to excellent optical and spin properties.

However, the typical readout contrast via coherent manipulation of the single silicon vacancy color centers at room temperature is only 2%, and the photon count rate is as low as 10 kilo counts per second. These shortages restrict the application of the coherent manipulation of the single silicon vacancy color centers at room temperature.

The researchers implanted defect color centers in SiC with their ion implantation technique (ACS Photonics and Phys. Rev. Lett.) to manufacture a divacancy color center array. They achieved spin-coherent manipulation of the single divacancy color center at room temperature with the optically detected magnetic resonance (ODMR), and found that one type of divacancy color centers whose single-photon emission rate is up to 150 kilo counts per second has a 30% spin readout contrast.

These two important parameters showed an order of magnitude higher than those of the silicon vacancy color center in SiC. For the first time, the spin color centers of SiC showed excellent properties comparable to the diamond NV color center at room temperature. Especially, the coherence time of the electron spin at room temperature was extended to 23 microseconds, and the coupling and detection of a single electron spin and a nearby nuclear spin in SiC color centers were realized.

This study lays the foundations for building room temperature solid-state quantum storage and scalable solid-state quantum networks which are based on the SiC spin color center system. It is essential for the next generation of hybrid quantum devices to integrate spin defects with a high readout contrast and a high photon count rate into high-performance SiC electron devices.

<https://indiaeducationdiary.in/university-of-science-and-technology-of-china-researchers-realize-coherent-manipulation-of-single-spin-qubits-in-silicon-carbide-at-room-temperature-2/>

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Next Covid-19 wave definite but when, how not known: CSIR Chief

By U Sudhakar Reddy

Hyderabad: Council of Scientific and Industrial Research (CSIR) director general Dr Shekhar C Mande said the next wave of Covid-19 is definitely happening, but refused to make a guess as to how and when it will strike.

Speaking to reporters here on Saturday, the CSIR chief said vaccination and wearing a mask will certainly help in reducing the intensity of the third wave. Dr Mande said that they were analysing the data of surge in positive cases in Kerala. He also said the Delta plus variant of the virus was not of great concern.

“The Delta variant is bad, but there is no need to worry about Delta plus. The UK, Europe and the US have witnessed the next wave. We have to take a guarded approach. The next wave is likely, but how and when is not known yet. It can be due to the new mutant of the virus or laxity of the general public in following the Covid-19 protocols,” Dr Mande said.

The CSIR chief appealed to the public to follow Covid-appropriate behaviour. “There is enough scientific evidence to show that vaccination is working,” he said and added that the genomic surveillance of coronavirus will be continued for another three years.

“Fifteen days before the World Health Organisation declared the pandemic, we started deliberations on Covid-19 and tried to understand the situation. Experts of 37 CSIR labs were roped in. We had done genomic, sero and sewage surveillance. We have innovated and developed diagnostic kits and testing methods, including the dry swab method,” he said.

He said the CSIR labs had contributed to developing Covid-19 drugs, vaccines, hospital devices and supply chains. Dr Mande said umifenovir, an anti-viral medication to treat influenza, had got the approval for clinical trials from the Drug Controller General of India. “The results are promising,” he added.

<https://timesofindia.indiatimes.com/city/hyderabad/next-wave-definite-but-when-how-not-known-csir-chief/articleshow/84934000.cms>



