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कोरोना वायरस से जंग: DRDO की मदद से तैयार हुआ डिसइंफेक्टेंट चैंबर, पूरा शरीर हो जाएगा सैनेटाइज

डीआरडीओ की मदद से गाजियाबाद की एक कंपनी बना रही है। टनल-नुमा इस चैंबर में दाखिल होते ही शरीर सैनेटाइज हो जाता है। ये चैंबर्स अस्पताल, सरकारी ऑफिस और छावनियों के लिए हैं। जो कंपनी इन चैंबर्स का निर्माण कर रही है वो बायोलॉजिकल हमले से बचने के लिए सेना के लिए खास चैंबर भी बना चुकी है।

नीरज राजपूत

नई दिल्ली: कोरोना वायरस देशभर में महामारी बनकर ना फैल जाए उससे पहले ही रक्षा मंत्रालय के अंतर्गत डीआरडीओ ने युद्धस्तर पर तैयारी शुरू कर दी है। इसके लिए डीआरडीओ ने खास 'फुलबॉडी डिसइंफेक्टेंट चैंबर' तैयार किया है जो शरीर के ऊपरी हिस्से पर वायरस को खत्म कर देता है। गाजियाबाद स्थित एक प्राइवेट कंपनी जो पहले देश को बायोलॉजिकल हमले से बचाने में देश की सेनाओं को मदद कर रही थी उसे इन खास चैंबर बनाने की जिम्मेदारी सौंपी गई है। एबीपी न्यूज की टीम ने खुद इस प्लांट में जाकर देखा कि आखिर ये 'वाँकथू चैंबर' कैसे कोविड-19 को खत्म करने में सहायक है।

करीब छह फीट लंबा और दस फीट ऊंचे इस डिसइंफेक्टेंट चैंबर में पाइप लगे हैं। छोटी टनल-नुमा इस चैंबर में आप जब प्रवेश करते हैं तो पाइप से पानी और हाईपो-सोडियम क्लोराइड की फुहार आपके पूरी शरीर पर चारों तरफ से छिड़काव करने लगती हैं। बॉडी को 25 सेंकेड तक इसी चैंबर में 360 डिग्री में घूमना होती है ताकि सिर से लेकर पांव तक आपका पूरा शरीर कीटाणु-रहित हो जाए यानि ये चैंबर कोरोना वायरस को पूरी तरह से धो डालता है।



डिफेंस रिसर्च एंड डेवलपमेंट ऑर्गेनाइजेशन यानि डीआरडीओ की अहमदनगर (महाराष्ट्र) स्थित व्हीकल रिसर्च लैब यानि वीआरडीई (VRDE) ने इस चैंबर को कोरोना वायरस से लड़ने के लिए डिजाइन किया है। डीआरडीओ ने इस चैंबर के बल्क-प्रोडक्शन के लिए राजधानी दिल्ली के करीब गाजियाबाद की डीएच लिमिटेड नाम की कंपनी को चुना है। ताकि उन जगह जहां पर लोगों की भीड़ इत्यादि होने की संभावना ज्यादा होती है वहां इन्हें लगाया जा सके।

जानकारी के मुताबिक, शुरूआत में इन चैंबर्स को अस्पताल, सरकारी ऑफिस, सेना के कैंप इत्यादि में लगाने की तैयारी है, ताकि कोई भी आदमी या सैनिक यहां आए तो वो पूरी तरह से डिसइंफेक्टेंट होकर ही अंदर दाखिल हो। यानि कोरोना वायरस को पूरी तरह से धोकर ही अंदर आए और कोरोना वायरस अंदर दाखिल ना हो सके।

करीब 96 घंटे यानि चार दिनों के अंदर डीआरडीओ ने डीएच कंपनी के साथ मिलकर इस चैंबर के दो वर्चन तैयार किए हैं। अपग्रेडेड वर्जन में चैंबर के साथ एक सेंसर लगा वॉशबेसिन है जिसमें लिक्विड सोप ऐर सैनेटाइजर भी है। हाथ साफ करने के बाद पैर से इस चैंबर को स्टार्ट किया जा सकता है। यानि आपको अंदर जाने के लिए चैंबर के बाहर लगे जैक को पैर से दबाना है और अंदर जाते ही पाइप से हल्की हल्की फुहार शुरू हो जाती है।

डीएच लिमिटेड कंपनी के सीईओ, प्रदीप दास के मुताबिक, इस चैंबर में करीब साढ़े सात सौ लीटर डिसइंफेक्टेंट कैमिकल और पानी आ सकता है। एक बार भरने से इससे 700-800 लोगों को डिसइंफेक्टेंट किया जा सकता है। इस चैंबर में दो छोटे छोटे इंजन लगे हैं जिससे पाइप से बौछार की जाती है। इस चैंबर की कीमत 4-5 लाख रुपये है। लेकिन

इसके दूसरे वर्जन की कीमत करीब एक से दो लाख रुपये हैं। इस दूसरे वर्जन को डीएच कंपनी आम लोगों के लिए तैयार कर रही है ताकि मॉल या फिर अपार्टमेंट और हाउसिंग सोसायटी में लगाया जा सके।

दरअसल, डीची कंपनी एक लंबे अरसे से डीआरडीओ और सेना के लिए एनबीसी चैंबर्स यानि न्युक्लियर, बायोलॉजिकल और कैमिकल युद्ध के दौरान सैनिकों को सुरक्षित रखने वाले एनक्लोजर तैयार करती आई है। इसके अलावा मॉडर्न-वॉरफेयर के लिए जैमर-रहित चैंबर भी बनाती है ताकि सेनाओं के कम्युनिकेशन सिस्टम को दुश्मन जाम ना कर सके।

लेकिन प्रदीप दास ने एबीपी न्यूज से खास बातचीत में बताया कि लॉकडाउन के दौरान काम करना एक बड़ी चुनौती साबित हुई। क्योंकि ना केवल सीमित इंजीनियर्स और वर्कर्स के साथ उन्होंने काम किया बल्कि पंप और चैंबर बनाने के लिए मैटेरियल मिलने में भी उन्हें खासी दिक्कत आई। क्योंकि दुकान, बाजार और सिविल प्लांट सभी बंद हैं। लेकिन कोविड-19 के खिलाफ जंग में लड़ने के लिए उनकी कंपनी पूरी तरह से डीआरडीओ और सरकार के साथ खड़ी है। इसीलिए दिन-रात एककर वे इन खास डिसइंफेक्टेंट चैंबर्स को बना रहे हैं। क्योंकि प्लांट में सीमित साधन होने के चलते अब इस डिजाइन और तकनीक को वे दो और कंपनियों से संपर्क में हैं ताकि दक्षिण भारत के लिए भी इन चैंबर्स को सप्लाई किया जा सके।

<https://www.abplive.com/news/india/corona-virus-war-disinfectant-chamber-prepared-with-the-help-of-drdo-full-body-will-be-sanitized-ann-1345551>



Wed, 08 April 2020

DRDO और विप्रो 3डी ने मिलकर किया बड़ा कारनामा, बनाई देसी फुल फेस शील्ड

डीआरडीओ के अधिकारियों ने यह भी कहा कि यह शील्ड कोरोना वायरस के मरीजों का इलाज कर रहे डॉक्टरों और स्वास्थ्य कर्मियों को सीधे होने वाले संक्रमण से बचाने में मदद करेगी।

नई दिल्ली: DRDO और विप्रो 3D ने साथ मिलकर पूरे चेहरे को ढकने वाली एक शील्ड (full face shield) बनाई है। इस शील्ड को उन डॉक्टरों और स्वास्थ्य कर्मियों (Doctors and medical staff) को उपलब्ध कराए जाने की योजना है, जो कोरोना वायरस (Coronavirus) के मरीजों का इलाज कर रहे हैं। डीआरडीओ के अधिकारियों ने इस बात की सूचना दी। डीआरडीओ (DRDO) के अधिकारियों ने यह भी कहा कि यह शील्ड कोरोना वायरस (Coronavirus) के मरीजों का इलाज कर रहे डॉक्टरों और स्वास्थ्य कर्मियों (Doctors and medical staff) को सीधे होने वाले संक्रमण से बचाने में मदद करेगी।



पहले से ही मास्क, फुल बॉडी सूट और PPE की सप्लाई करता आ रहा है डीआरडीओ

बता दें कि पूरे चेहरे को ढकने वाली शील्ड (full face shield) बनाने से पहले ही डीआरडीओ (DRDO) मास्क, फुल बॉडी सूट और कई सारे PPE की सप्लाई मेडिकल स्टाफ (Medical Staff) को कर चुका है।

<https://hindi.news18.com/news/nation/drdo-and-wipro-3d-team-came-together-to-fight-coronavirus-created-full-face-shield-2995033.html>

DRDO & Wipro 3D develop 'full face shield' to protect covid warriors from direct infection

Defence Research and Development Organisation (DRDO) and Wipro 3D, on Tuesday, have come up with a 'full face shield' to protect doctors from direct infection

By Suchitra Karthikeyan

Mumbai: Aiding doctors and other health officials who are involved in the treatment and care of Coronavirus (COVID-19) patients, Defence Research and Development Organisation (DRDO) and Wipro 3D, on Tuesday, have come up with a 'full face shield' to protect them from direct infection. India's premier defence research facility has already provided several testing kits, PPEs and masks to the health ministry for the same. India's current COVID-19 case tally stands at 4789, with the 124 deaths.

DRDO Designs Disinfection Chamber

On Sunday, DRDO unveiled a full-body disinfection chamber and a special face protection mask for healthcare professionals. The special chamber called 'PSE' has been designed by Vehicle Research Development Establishment (VRDE), Ahmednagar, a DRDO Laboratory as a walkthrough enclosure for personnel decontamination, one person at a time, equipped with sanitiser and soap dispenser. On entering the chamber, the electrically-operated pump creates a disinfectant mist of hypo sodium chloride for disinfecting, which automatically stops after 25 seconds.



DRDO's Bio Suit

The defence research organisation had also developed a bio-suit to keep safe medical, paramedical and other personnel engaged in containing the pandemic. The bio-suit has been subjected to rigorous testing and exceeds the standards set for body suits by the Ministry of Health and Family Welfare. DRDO is aiming to start mass production of the suits and has a current production capacity of 7,000 suits per day. It has already identified companies to assist with production.

<https://www.republicworld.com/india-news/general-news/drdo-and-wipro-3d-develop-full-face-shield-to-protect-covid-warriors.html>



COVID-19: DRDO developed disinfectant chamber deployed at AIIMS, Delhi

New Delhi: The Defence Research and Development Organisation (DRDO) deployed a disinfectant chamber at the All India Institute of Medical Sciences (AIIMS) in the national capital to prevent the spread of Coronavirus.

"The chamber uses a solution that is known to kill COVID-19 and will help in controlling the spread of coronavirus," said DRDO officials.

The DRDO has been working on providing a large number of medical and personal protection equipment for healthcare personnel in the country.

On Tuesday, DRDO said that it has developed a 3D full-face shield for doctors and medical staff treating COVID-19 patients along with private firm Wipro.

The shield will protect healthcare personnel from direct infection. DRDO had already supplied masks, full-body suits and many personal protection equipment (PPE) for the medical staff.

A total of 2.94 lakh Personal Protective Equipment (PPE) coveralls have been arranged and supplied by the Government of India so far.

To ensure that front line health workers are protected against the contagious virus, DRDO has also developed a bio-suit to keep them safe.

DRDO laboratories are using their technical expertise in textile, coating and nanotechnology to develop the Personal Protective Equipment (PPE) having a specific type of fabric with coating.

DRDO is also working on a multi patient ventilator to help meet the shortage of critical equipment for patients. (ANI)

<https://www.aninews.in/news/national/general-news/covid-19-drdo-developed-disinfectant-chamber-deployed-at-aiims-delhi20200407233050/>



Wed, 08 April 2020

DRDO installs disinfection chamber at AIIMS on trial basis

DRDO installs disinfection chamber at AIIMS on trial basis

New Delhi: In the ongoing fight against COVID-19 pandemic, the Defence Research and Development Organisation (DRDO) has installed its newly developed full body disinfection chamber at All India Institute of Medical Sciences (AIIMS).

The chamber will help in controlling the spread of coronavirus.

A senior DRDO officer told IANS, "It has been installed on trial basis. We are looking how it is working." The officer explained that once successful, it will also install as per demands from the respective organisations.

Last week, DRDO developed the full body disinfection chamber called as Personnel Sanitization Enclosure and face protection mask.

The Vehicle Research and Development Establishment in Ahmednagar, a DRDO Laboratory, had designed the full body disinfection chamber called as personnel sanitization enclosure.

"The walk through enclosure is designed for personnel decontamination, one person at a time. This is a portable system equipped with sanitizer and soap dispenser," the DRDO had stated.

The decontamination is started using a foot pedal at the entry. On entering the chamber, electrically operated pump creates a disinfectant mist of hypochlorite.

The mist spray is calibrated for an operation of 25 seconds and stops automatically indicating completion of operation.

As per procedure, personnel undergoing disinfection will need to keep their eyes closed while inside the chamber.

The system consists of roof mounted and bottom tanks with a total of 700 litres capacity. Approximately 650 personnel can pass through the chamber for disinfection until the refill is required.

"The system has see through glass panels on side walls for monitoring purpose and is fitted with lights for illumination during night time operations. A separate operator cabin is provided to monitor overall operations," it said.

"The system has been manufactured with the help of Dass Hitachi Ltd, Ghaziabad, within a time span of four days. This system can be used for disinfection of personnel at the areas of controlled ingress and egress such as entry and exit to hospitals, malls, office buildings and critical installations," DRDO said.

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

<https://www.outlookindia.com/newscroll/drdo-installs-disinfection-chamber-at-aiims-on-trial-basis/1795233>



Wed, 08 April 2020

DRDO disinfection chamber put up at AIIMS for Covid control

DRDO disinfection chamber put up at AIIMS for Covid control

New Delhi: A disinfectant chamber developed by the Defence Research & Development Organisation (DRDO) was on Tuesday put up at the All India Institute of Medical Sciences (AIIMS) in New Delhi.

The chamber uses a solution that is known to kill the Covid-19 virus and help control the spread of the infection.

The system has been manufactured with the help of M/s DH Ltd, Ghaziabad, within a time span of four days. This system can be used for disinfection of personnel at the areas of controlled ingress and egress such as entry and exit to hospitals, malls, office buildings and critical installations.

Vehicle Research Development Establishment (VRDE), Ahmednagar, a DRDO laboratory, has designed the full body disinfection chamber called PSE.

This walk through enclosure is designed for personnel decontamination, one person at a time. This is a portable system equipped with sanitiser and soap dispenser.

The decontamination is by started using a foot pedal at the entry. On entering the chamber, electrically operated pump creates a disinfectant mist of hypo sodium chloride for disinfecting.

The mist spray is calibrated for an operation of 25 seconds and stops automatically, indicating completion of operation. As per the procedure, personnel undergoing disinfection will need to keep their eyes closed while inside the chamber.

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<https://www.outlookindia.com/newscroll/drdo-disinfection-chamber-put-up-at-aiims-for-covid-control/1795121>

Business Standard

Wed, 08 April 2020

COVID-19: DRDO developed disinfectant chamber deployed at AIIMS, Delhi

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"The chamber uses a solution that is known to kill COVID-19 and will help in controlling the spread of coronavirus," said DRDO officials.

The DRDO has been working on providing a large number of medical and personal protection equipment for healthcare personnel in the country.

On Tuesday, DRDO said that it has developed a 3D full-face shield for doctors and medical staff treating COVID-19 patients along with private firm Wipro.

The shield will protect healthcare personnel from direct infection. DRDO had already supplied masks, full-body suits and many personal protection equipment (PPE) for the medical staff.

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To ensure that front line health workers are protected against the contagious virus, DRDO has also developed a bio-suit to keep them safe.

DRDO laboratories are using their technical expertise in textile, coating and nanotechnology to develop the Personal Protective Equipment (PPE) having a specific type of fabric with coating.

DRDO is also working on a multi patient ventilator to help meet the shortage of critical equipment for patients.

(This story has not been edited by Business Standard staff and is auto-generated from a syndicated feed.)

https://www.business-standard.com/article/news-ani/covid-19-drdo-developed-disinfectant-chamber-deployed-at-aiims-delhi-120040701901_1.html



Wed, 08 April 2020

DRDO develops sanitising gadgets to fight corona

Baleswar: In the continuing quest for developing indigenous solutions to combat the coronavirus pandemic, the Defence Research and Development Organisation (DRDO) is ready with technologies for sanitising areas of different sizes.

The Centre for Fire Explosive and Environment Safety (CFEES), Delhi has developed two configurations of sanitising equipment. These are spinoffs from technologies developed for fire suppression applications, said a Press release issued by the DRDO.

The equipment developed are Portable Backpack Area Sanitisation Equipment and Trolley Mounted Large Area Sanitisation Equipment.

The CFEES, Delhi with the help of its industry partner has developed portable sanitisation equipment for spraying decontamination solution consisting of one per cent hypochlorite (HYPO) solution for sanitisation of suspected area. The portable system can be mounted as a backpack and can be carried by the operations personnel. This system incorporates low pressure twin fluid (air and disinfectant liquid) technology to generate very fine mist. The system is capable of disinfecting up to 300 square metre area. The application areas can include hospital reception, doctor chambers, office spaces dealing with general public, corridors, pathways, metro and railway stations, bus stations, etc.

The Centre with the help of its industry partner has also developed a higher capacity which is carried on a trolley. The system incorporates low pressure single fluid (disinfectant liquid) technology generating very fine mist. It is capable of disinfecting up to 3,000 square metre area.

It has a tank capacity of 50 litres and has a lancing (throw) distance of 12-15 metres. This is useful for disinfecting hospitals, malls, airports, metro stations, isolation areas, quarantine centres and high risk residential areas.

Two of these systems are being provided to Delhi Police for immediate use. These can be made available to other agencies with the help of industry partners, the release mentioned.

<https://www.dailypioneer.com/2020/state-editions/drdo-develops-sanitising-gadgets-to-fight-corona.html>

hindustantimes

Wed, 08 April 2020

Railways plans to make 1000 low cost PPE per day after DRDO nod

The Railways will deploy around 17 of its workshops to begin production of 1,000 such protective overalls per day. Plans are also afoot to supply 50% of these PPEs to other medical professionals across the country, the ministry said

By Anisha Dutta

New Delhi: The Indian Railways plans to manufacture 1,000 low cost personal protective equipment (PPE) such as overalls for doctors and paramedics per day after its samples made by Northern Railways were tested and approved by the Defence Research and Development Organisation (DRDO) authorities.

The national carrier will deploy around 17 of its workshops to begin production of 1,000 such protective overalls per day. Plans are also afoot to supply 50% of these PPEs to other medical professionals across the country, the ministry said.

“Indian Railways has taken up the in-house production of PPE type overall on a mission mode. A DRDO laboratory recently cleared overalls produced by its Jagadhari workshop. Approved design and material will be used for making this protective overall by other workshops under different zones,” the ministry said on Tuesday.

The material for the overall will be procured from Punjab, as it is located near the Jagadhari workshop in Haryana.

The Indian Railways is aiming to produce three sets of overalls per sewing machine per hour for as many days as required in its production units and workshops, the ministry said.

“It may be noted this internal effort of Indian Railways is over and above a centralised request projected to the government and also indicated to HLL Lifecare Limited (HLL) through indent,” the ministry added.



HLL, the government's nodal agency for medical procurement, had pointed out an acute shortfall of supply of equipment due to high demand and logistical constraints since the ongoing 21-day nationwide lockdown was enforced on March 25 to contain the spread of coronavirus disease (Covid-19) outbreak. The state-run company had also written to the Indian Railways citing the supply crunch.

The country is facing a massive shortage of PPE for doctors treating Covid-19 patients. The Delhi government had last week also accused the Centre of not responding to the shortage of the PPE in the national capital.

<https://www.hindustantimes.com/india-news/railways-plans-to-make-low-cost-ppe-after-drdo-nod/story-sW4ZCPHN9kgf6OVx2IIj6J.html>



Wed, 08 April 2020

रेलवे हर रोज तैयार करेगा एक हजार पीपीई किट, DRDO से मिली मंजूरी

- रेलवे को डीआरडीओ से पर्सनल प्रोटेक्शन इक्विपमेंट (पीपीई) को बनाने की मंजूरी मिली है।
- अन्य सरकारी एजेंसियों द्वारा भारतीय रेलवे के इस कदम का स्वागत किया जा रहा है।

नई दिल्ली: रेलवे ने हर रोज अपनी 17 कार्यशालाओं में अब लगभग एक हजार पर्सनल प्रोटेक्शन इक्विपमेंट (पीपीई) बनाने का लक्ष्य तय किया है। रेलवे को रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) से पीपीई को बनाने की मंजूरी मिली है। पीपीई रेलवे के अस्पतालों में कोरोना वायरस के इलाज में लगे रेलवे चिकित्सकों और पैरामेडिक्स को आवश्यक सुरक्षा उपलब्ध करायेगा।

रेलवे ने एक बयान में कहा, "रेलवे के चिकित्सकों और पैरामेडिक्स के लिए हर रोज इस तरह के एक हजार सुरक्षा उपकरण बनाने के लिए रेलवे में आवश्यक प्रबंध किये जा रहे हैं।" रेलवे देश के अन्य चिकित्सकों को भी 50 प्रतिशत पीपीई कपड़ों की आपूर्ति करने पर विचार कर रहा है।

इन सभी के लिए जगाधरी से सामग्री खरीदी जा रही है जो पंजाब में कई बड़े कपड़ा उद्योगों के निकट स्थित है। यमुनानगर स्थित विक्रेता से कच्चे माल का स्रोत तय करने का निर्णय लिया गया है और इसे कपड़ा मंत्रालय ने मंजूरी दे दी है।



बयान में कहा गया है, "आने वाले दिनों में, उत्पादन सुविधाओं में और तेजी आ सकती है। कोरोना वायरस से निपटने में लगी अन्य सरकारी एजेंसियों द्वारा भारतीय रेलवे के इस कदम का स्वागत किया जा रहा है।"

<https://www.abplive.com/news/india/indian-railways-will-prepare-one-thousand-ppe-kits-everyday-approval-from-drdo-1345263>

Covid-19: Railways to make 1,000 PPEs for railway doctors and paramedics

By Shreya Nandi

- *The national transporter said it has got a nod from Defence Research and Development Organization (DRDO) to manufacture PPEs*
- *PPE kits are used by medical personnel working in isolation areas and intensive care units (ICU) to protect them from infections*

Indian railways on Tuesday said it is gearing up to make 1,000 personal protective equipments (PPEs) for doctors and paramedics, treating and taking care of patients suffering from covid-19 at railway hospitals.

Towards this, the national transporter said it has got a nod from Defence Research and Development Organization (DRDO) to manufacture PPEs.

"A coverall produced by Jagadhari workshop was recently cleared by a DRDO lab, authorised for the purpose. Approved design and material will now be used for making this protective overall by other workshops under different zones," an official statement said, adding that 17 workshops will strive to contribute to the exercise of making PPEs.

"Railways is considering to supply 50% of the innovated PPE garment to other medical professionals of the country," it said.

PPE kits are used by medical personnel working in isolation areas and intensive care units (ICU) to protect them from infections. The government has urged domestic firms to manufacture and ramp up supplies to meet the increasing demand for PPEs. Last week, the union health ministry had said that the government has already place order for more than 1.5 crore PPEs, for which supply has already begun. On Monday, a batch of 170,000 PPEs coveralls arrived from China.

Material for all the coveralls is being procured centrally at Jagadhari, which is near several big textile industries in Punjab.

"Technical specifications of these PPEs are now ready, and material suppliers are in place. Now the production can start...This development is a big boost to equip our doctors and paramedics on the front line of this battle against covid -19," the ministry said.

"In the days to come, the production facilities can be further ramped up. The development of this overall and innovation by Indian railways is being welcomed by other government agencies engaged in the war against covid-19," it said.

<https://www.livemint.com/news/india/covid-19-railways-to-make-1-000-ppes-for-railway-doctors-and-paramedics-11586270729348.html>



DEFENCE AVIATION POST
Your Connect To The World Of Defence And Aviation

Wed, 08 April 2020

Covid-19 outbreak: DRDO nod to made in Punjab N99 and N95 masks

In a major breakthrough by Punjab's industry, two firms, Oxiclear Private Limited of Ludhiana and Surgeine Safety Products, Hoshiarpur have got approval from India's elite Defence Research and Development Establishment (DRDE) Gwalior for manufacturing N99 and N95 masks which

currently are the most sought after masks around the world, particularly in the wake of outbreak of Covid-19.

Both these manufacturers are now eligible for supply of these masks to any government or private concern. In another big development, owners of these firms claim that they will be able to supply these

masks at almost 40 per cent cheaper rates than the existing masks available in the market. According to Gagandeep Singh, owner of Oxiclear said, “We are happy that N99 masks being made by our company has been approved by DRDE which is a big achievement for us, it could not have been possible without the support from Punjab government.

With this development now it has been certified that our masks meet all the requirements to combat the Covid-19. Since we are now eligible to supply these masks to government departments and hospitals we are going to scale up production and bring the costs down to such a level that without any compromise on the quality, our products will be priced at almost 40 percent less than the presently available products of big brands. We are hopeful that together with the support of all stakeholders we will be able to contribute extensively in the battle against Covid-19”

Notably ever since the lockdown began, a team comprising of additional chief secretary Vini Mahajan , director of industries and commerce Sabin C and all the general managers (GM) of district industries centres, particularly Mahesh Khanna GM of Ludhiana is working round the clock to ensure development of various medical kinds of medical equipment including Personal Protective Equipment (PPE), Hazmat Suits, special fabrics, low cost ventilators and masks etc within Punjab in order to meet the high demand of these crucial items within India to battle Covid-19.

<https://www.defenceaviationpost.com/2020/04/covid-19-outbreak-drdo-nod-to-made-in-punjab-n99-and-n95-masks/>



Wed, 08 April 2020

New weapons to combat coronavirus

Two critical defence ministry stakeholders, DRDO and OFB, have joined the war against Covid-19

By Sandeep Unnithan

With the coronavirus pandemic slowly increasing its footprint in India, the government is scrambling to meet the massive shortfalls in health infrastructure. Two critical defence ministry stakeholders —the Defence Research and Development Organisation (DRDO) and the Ordnance Factory Board (OFB) —have joined the war against Covid-19.

These organisations have been tasked with meeting shortfalls -- from ventilators to emergency care facilities and basic personal protection equipment like masks, clothing and gloves. The DRDO has a network of 46 laboratories while the OFB has 40 weapons and ammunition making factories. The DRDO — the nodal agency to protect soldiers from a biological weapons attack— has reoriented itself to fighting a pandemic. Chairman DRDO Dr V Satheesh Reddy says eight laboratories have been earmarked to producing personal protective equipment, masks and ventilator parts. “We have given the government a list of our technologies and our scientists are continuously rolling out new applications over the next few days,” he says.

One of its labs in Delhi has developed portable backpack area sanitisation equipment.

The DRDO is working with industry to ramp up production capacity to 15,000 bio suits per day.

The Bhopal-based Defence Research and Development Establishment (DRDE), the nodal agency for protection from biological weapons, has been asked to test for Covid-19 cases.

The Kolkatabased Ordnance Factory Board has temporarily halted the production of arms, ammunition and equipment in nearly 40 factories across the country in keeping with the government rules during the 21-day lockdown. It is now producing PPE masks coveralls and hand sanitisers.

Three factories Aruvankadu, Bhandara and Itarsi — which usually produce explosives have produced 50,000 litres of hand sanitisers — equivalent to 5 lakh bottles — in less than a week.

The board has given emergency powers to 10 of its factories to procure raw materials to manufacture protective equipment. OFB Chairman Hari Mohan puts his organisation's role in perspective.

“OFB is meant to support the country in war – and today the country is at war with coronavirus, our medical fraternity are our soldiers now – it is our duty to support our soldiers, our health workers and our police forces.”

(Courtesy of *Mail Today*).

<https://www.dailyo.in/variety/drdo-ofb-coronavirus-covid-19-ordnance-factory-board/story/1/32671.html>

hindustantimes

Wed, 08 April 2020

Covid-19 outbreak: Textile Ministry announces new PPE rules

The ministry has laid down new norms, which require a Unique Certification Code called UCC-Covid19 and a tamper-proof sticker in indelible ink specifying details of the manufacturer

By Amrita Madhukalya

New Delhi: The Union Ministry of Textiles has announced a new regulatory framework for the production of personal protective equipment (PPE) units after reports emerged that Indian manufacturers, who failed laboratory tests, have sold their rejected products to a section of private hospitals.

The ministry has laid down new norms, which require a Unique Certification Code called UCC-Covid19 and a tamper-proof sticker in indelible ink specifying details of the manufacturer.

The ministry issued a notification to this effect on April 6, saying that the code would apply to both PPE garments and fabric that pass the laboratory tests, as stipulated by the South India Textile Research Association (SITRA) and the Defence Research & Development Establishment (DRDE). The code will record the type of garment, its test procedure and also the date of the test. The certification will be valid for a fixed time frame and both SITRA and DRDE will preserve the sample sent by the manufacturer, said the notification, accessed by HT.

The move, ministry officials said, was to tighten the production of PPE units by Indian manufacturers in line with the specifications of the World Health Organisation (WHO) and the Union Ministry of Health and Family Welfare (MoHFW). Approvals have been given by the Coimbatore-based SITRA, an autonomous body under the ministry, and Gwalior-based DRDE.

The notification stated that in case of coveralls a manufacturer needs to print in indelible ink or in tamper-proof sticker detail such as the name of the maker, code, test standard, batch number and order details.

A ministry official, on condition of anonymity, told HT that the move was prompted by media reports that some manufacturers, whose products were rejected by SITRA and DRDE, were found to be supplying their units to a section of private hospitals. The ministry's directive has been sent to states as well.

Nihar Ranjan Dash, a joint secretary in the ministry, said that the certification primarily concerns coveralls and fabric provided by certain manufacturers of PPEs. “The directive doesn't

concern masks, as they're certified by the Bureau of Indian Standards. We relied on imports of masks for all this while, and their specifications were of international standards," said Dash.

The tightening of norms would help Indian manufacturers prepare for the global market, he added. The current capacity of the Indian industry is to manufacture 10,000 PPE units per day, but Dash said that in about three months, the country is likely to produce three lakh units.

An official of one of the testing agencies told HT on condition of anonymity that the two specific tests that are applied are the synthetic blood penetration for overalls and bacterial efficiency as far as masks are concerned. "A severe shortage of N-95 masks has been a cause for concern, as there are just a handful of manufacturers in the country," said the official.

Since India began domestic production of PPE in March owing to the spread of the coronavirus disease (Covid-19), these two testing agencies have approved 18 manufacturers to produce PPE units with non-woven textiles such as masks and coveralls. Later, the agencies approved 20 more manufacturers of the fabric. Only 50% of the manufacturers passed the test at the outset, the official said. "However, the success rate has come up to 80% now," he added.

M Rajaa of Coimbatore-based Saastha Textiles, one of the approved manufacturers of waterproof, laminated thermoplastic polyurethane and thermoplastic elastomers fabric in knitted, woven and non-woven fabric used in PPE units, told HT that the fabric needs to have a certain type of lamination to ensure that blood and virus do not contaminate a health care worker. "We also need to use only polypropylene virgin material to ensure that the material is protective and some manufacturers are also using reprocessed materials," said Rajaa.

Parag of Sai Synergy, another manufacturer of PPE units, said that the Indian Navy has ordered their products earlier and they always carry a sticker. "The sticker has to be put during the manufacturing process and cannot be put thereafter," he added.

<https://www.hindustantimes.com/india-news/covid-19-textile-ministry-announces-new-ppe-rules/story-wAeOmca9W1BrLr8JaAvQ2J.html>

hindustantimes

Wed, 08 April 2020

Approved PPE kits to have unique code and stickers

By Amrita Madhukalya

Manufacturers of personal protective equipment (PPE) will now need to mark their products with a unique code and tamper-proof stickers, the textile ministry has said. This comes after reports emerged that unapproved products were being sold in the market.

Healthcare workers are at most risk of infection as they come in close contact with Covid-19 patients. With a global shortage of PPE that is supposed to protect them, the demand for such equipment has grown exponentially in hospitals and among sanitation workers who are called on to disinfect high risk areas.

The move, ministry officials said, was to tighten the production of PPE among Indian manufacturers and producers in line with the specifications of the World Health Organisation and the union ministry of health and welfare.

The ministry, in a notification issued on April 6, said the Unique Certification Code (UCC-COVID19) will apply to PPE garments and fabric which pass the laboratory tests laid down by the South India Textile Research Association (SITRA) as well as the the Defence Research & Development Establishment (DRDE). The Code will record the type of garment, its test procedure, date of test. The certification will be valid for a certain time period and both SITRA and DRDE will preserve the sample sent by the producer, said the notification, accessed by HT.

Approvals for the manufacturing of PPEs and the fabrics used in making them are given by the Coimbatore-based SITRA, an autonomous body under the textiles ministry and the Gwalior-based DRDE.

Another directive was that in the case of coveralls, the manufacturer will print in indelible ink or in a tamper-proof sticker details such as name of producer, code, test standard, batch number, order details.

A ministry official, on the condition of anonymity, told HT that the move was prompted by news reports of some of those rejected by SITRA and DRDE supplying their units to private hospitals. The directives have now been sent to states, too.

Nihar Ranjan Dash, joint secretary at the textiles ministry said that the certification mainly concerns coveralls and fabric provided by certain manufacturers to producers of PPEs. “The directive does not concern masks, as they are certified by the Bureau of Indian Standards. All this while, as we relied on imports, the specifications were of international standards,” said Dash.

He added that the tightening of norms will also help Indian manufacturers prepare for the global market. The current capacity of the Indian industry is 12,000 units per day, but Dash said that in about three months, India has the production capacity of 300,000 PPEs per day.

An official of one of the testing agencies told HT, on the condition of anonymity, that the two specific tests that are applied are the synthetic blood penetration test in the case of coveralls and the bacterial efficiency test in the case of masks. “A severe shortage of N95 masks has been a concern as there are just a handful of producers,” said the officials.

Since India began domestic production of PPE in March, these two testing agencies have approved 28 manufacturers with non-woven textiles such as masks and coveralls, and additionally approved 22 manufacturers of the fabric that is supplied to some of these producers.

The official of the testing agency said that in the beginning, only 50% of manufacturers passed the test. “The success rate now is over 80 percent,” the official said.

M Rajaa of Coimbatore-based Saastha Textiles, one of the approved manufacturers of waterproof, laminated thermoplastic polyurethane and thermoplastic elastomers fabric in knitted, woven and non-woven fabric used in PPE units, told HT that the fabric needs to have a certain type of lamination to ensure that blood and virus do not contaminate a healthcare worker. “We also need to use only polypropylene virgin material to ensure that the material is protective and some manufacturers are also using reprocessed materials,” said Rajaa.

Parag of Sai Synergy, a producer of PPEs, said that their products have been ordered by the Indian Navy before and hence their products carry a sticker. “The sticker has to be put during the manufacturing process and cannot be put there after,” he said.

<https://www.hindustantimes.com/india-news/approved-ppe-kits-to-have-unique-code-and-stickers/story-ERWavSWnIFdvrwIxNyW03J.html>

Indian Army to take over Covid-19 facility

At present, the camp has five doctors and eight paramedics, besides armed security personnel

By Imran Ahmed Siddiqui

New Delhi: The Indian Army is preparing to take control of a quarantine facility in Delhi where some of participants of the Tablighi Jamaat congregation are being lodged, government sources said on Tuesday.

The army is acting on requests to handle medical screening at the Narela quarantine facility in the capital, the sources said. This will be the first civilian set-up for Covid-19 to be under military control.

At present, the camp has five doctors and eight paramedics, besides armed security personnel. Over 200 people, including members of the Tablighi Jamat, have been kept in the quarantine centre at Narela.



“Following the request to take over the medical screening set-up at Narela Camp, additional army medical staff are currently working along with civil medical professionals on the takeover process,” said an official of the army headquarters.

Once the army takes over, the official said, the strength of doctors, nursing staff and security teams will be increased.

Last week, Chief of Defence Staff General Bipin Rawat had visited the Covid camp at Narela and interacted with the doctors, volunteers and the military medical team. He expressed satisfaction about the excellent synergy between the civil and military team and assured all assistance to them.

So far, the army’s doctors and specialists have been operating only out of the quarantine centres set up by the force. Six quarantine facilities being run by the army in Mumbai, Jaisalmer, Jodhpur, Hindon, Manesar and Chennai.

Sources said the army has been asked to take control of the Narela medical camp at the request of the health ministry after a Delhi government appeal in the wake of pressure on the civil medical teams.

The defence ministry has deployed additional military medical and logistics resources to aid the government’s health authorities.

Dedicated Covid-19 facilities, including high-dependency units and intensive care unit beds, are being prepared in 51 hospitals of the armed forces across the country. Some of these facilities are located in Calcutta, Visakhapatnam, Kochi, Dundigal, Bangalore, Kanpur, Jaisalmer, Jorhat and Gorakhpur.

In addition, 15 facilities are being kept ready as standby for use. Together, these have beds for about 15,000 Covid-19 patients, sources in the army said.

As the coronavirus testing picks up momentum, five viral testing labs at armed forces hospitals which can carry out Covid-19 tests have been made part of national grid. These include Army Hospital (Research & Referral), Delhi Cantonment; Air Force Command Hospital, Bangalore, and Armed Forces Medical College, Pune; Command Hospital (Central Command), Lucknow, and Command Hospital (Northern Command), Udhampur.

Six more hospitals are being equipped with the resources to begin Covid-19 testing, said an official of the defence ministry.

The Indian Army has offered more than 8,500 doctors and support staff to assist in the anti-Covid-19 effort.

<https://www.telegraphindia.com/india/indian-army-to-take-over-a-covid-19-facility/cid/1762993>

Wed, 08 April 2020

Indian Air Force continuing its support in fight against COVID-19

Indian Air Force is continuing its support in fight against COVID-19 wherein medical supplies are being transported to equip the State Governments and supporting agencies to combat the contagion effectively and efficiently. During the last few days, IAF airlifted essential medical supplies and commodities from nodal points to Manipur, Nagaland and Gangtok in North Eastern region and also in the Union Territories of Jammu and Kashmir and Ladakh.

In addition, AN-32 aircraft yesterday, airlifted personnel and 3,500 kilograms of medical equipment of ICMR from Chennai to Bhubaneshwar for setting up of testing labs and facilities in Odisha. IAF has earmarked aircraft at nodal points to airlift medical supplies and equipment at short notice to proactively support operations against COVID-19. In addition, IAF airlifted critical medical supplies to Maldives Capital Male as Operation Sanjeevani on 2nd of this month. Maldives has faced shortage of essential medical supplies as its connectivity with India- its main source of medical supplies was broken after COVID-19 lockdown.

IAF has created nine quarantine facilities of 200-300 personnel capacity each, at nodal IAF bases across the country. Air Force Command Hospital in Bangalore has been designated as the first laboratory in the IAF to undertake COVID-19 testing. To monitor the prevailing situation and provide immediate response and assistance as required, a 24x7 crisis management cell has been set up at Air Headquarters and various Command Headquarters.

<http://www.newsonair.com/News?title=Indian-Air-Force-continuing-its-support-in-fight-against-COVID-19&id=385003>



Wed, 08 April 2020

Diplomacy is the key

Surgical Strikes after Uri and at Balakot have not ended terrorism and infiltration has increased despite lockdown. The post-COVID-19 environment may provide a window to restart process

By Ashok K Mehta

For Prime Minister Narendra Modi, the use of surgical strikes has become the new-normal in resolving intractable problems like cross-border terrorism, black money and Jammu & Kashmir. After Balakot, the airstrikes appear to have turned the page in terrorism but in real terms, little has changed. Black money has altered the “colour” and “terrorism” is just on “pause.” The new invisible enemy is COVID-19. Not even a nuclear strike will conquer this pandemic, which only time, more human lives and a vaccine can cure. Preliminary studies are showing how Coronavirus will change the way we live and cohabit. One can only hope that our existential difficulties with Pakistan will ease and end.

The Government and the Indian Air Force (IAF) celebrated February 26 as the first anniversary of Balakot. Exaggerated claims were made to perpetuate the ones made last year without new evidence and factoring the Pakistani perspective. It is too early to begin rewriting the doctrine and call the airstrikes as “game-changer.” Claims on behalf of the IAF have been made mainly by former Chief of Air Staff, Air Chief Marshal BS Dhanoa, through interviews and parts of an internal IAF report that were leaked to the media. His successor, Air Chief Marshal RKS

Bhadauria, simply reinforced Dhanoa's claims through the same medium at a public event titled, 'Air Power in No War No Peace Scenario,' organised by the Centre for Air Power Studies, which was presided by Defence Minister Rajnath Singh.

The Pakistan Air Force (PAF)'s perspective came from a conference held at the University of Lahore, which was jointly organised by the Centre for Security Strategy and Policy Research and the Centre for Aerospace and Security Studies (CASS). The event was attended by former PAF Chief of Air Staff, Air Chief Marshal Kaleem Saadat. A report was published in the British Air Force magazine by Alan Warnes through his interviews with retired PAF officers. The PAF's response to the IAF air strikes was called "Operation Swift Retort."

On the most provocative, emotional and in India even anti-national question of hitting the target, the IAF has stuck to its claim that it hit the target, though the Crystal Maze 142M missile, which was to produce battle damage assessment, could not be fired. Last year, among others who expressed doubts whether the IAF missiles were on target, was Ashley Tellis of the US's Carnegie Endowment and Christine Fair of Johns Hopkins University. The Air Force magazine was more direct: Bombs aimed at a religious boarding school at Balakot...hit wooded area a few hundred metres away...all bombs overshot their targets. The CASS report refers to the mishit as "tactical error and technical inadequacy." Even so, this was the first time after the 1971 war that the IAF bombed Pakistan at Balakot. Perhaps carried away, Bhadauria described the bombings as "the most significant air action of the IAF in over four decades." That was a bit unkind to the IAF veterans, who took part supporting the Indian Peace Keeping Force (IPKF) in Sri Lanka for 22 months, and the sterling precision IAF bombings at Kargil for over three months.

Bhadauria further said that Balakot has shown that you can use the IAF and still have "escalation control." He was backed by Army Chief, Gen MM Naravane, who said: "For years we were told that if and when air (force) crosses the International Border (IB), it would escalate to a full-fledged war. Balakot demonstrated that if you play the escalatory game with skill, military ascendancy can be established in short cycles of conflict that do not necessarily lead to war." Elementary, my dear Watson?

In his paper on air escalation control circulated by the US' Stimson Centre in 2003 after Operation Parakram, IAF's Air Commode, Ramesh Phadke, argued that limited air operations against Pakistan in Pakistan-occupied Kashmir (PoK) were possible with minimal escalation. Reason: IAF to PAF air balance ratio at that time was nearly 2.5 to 1. Today, that ratio has declined to less than 1.3 to 1 (IAF 28 squadrons versus PAF 21 squadrons). The CASS report further says that the probability of crisis recurrence between India and Pakistan is high and during a crisis, neither side will be able to guarantee controlling or dominating the escalation ladder.

PAF Air Chief Marshal Mujahid Anwar Khan told the Air Force magazine that one lesson for India is not to use air power "flippantly." He said Operation Swift Retort was inevitable to demonstrate both the resolve and restraint and was designed to de-escalate. Pakistan has found wriggle room in explaining its nuclear bluff being called. The CASS report titled, "Deconstructing Balakot" reads: "Pakistan's carefully calibrated response strategy served well in dampening the fears in policy analysis that portray that any attack inside Pakistan's territory would invoke Pakistan's nuclear threshold. However, Pakistan, through its retaliation, Operation Swift Retort after Indian strikes in Balakot, demonstrated that it has valid conventional means of deterrence to raise the cost of aggression."

As someone who has studied Pakistan's military and strategic thought, I do not recall Pakistan seriously threatening the use of nuclear weapons against an enemy airstrike. The four conditions for that were clearly codified by Lt Gen Khalid Kidwai, the intellectual custodian of Pakistan's nuclear arsenal. He had said — and that has not changed till date — that Pakistan would use its nuclear weapons as weapons of ultimate resort in four eventualities: Loss of large territory, especially in Punjab; crippling military attrition; economic blockade; and largescale political destabilisation. None of these conditions was violated by the Balakot airstrikes.

One year on, AFM has said that PAF will be outnumbered but will innovate to outmanoeuvre the IAF. It does not matter what technology the IAF gets, the PAF will have the capacity to defeat

it. CASS has said that for the foreseeable future, it will be in retaliatory mode but the threat of the use of force is essential when Pakistan's support for Kashmir will go beyond political, diplomatic and moral paradigm. Kashmir has been made central to crisis and conflict.

Balakot airstrikes had the potential to escalate and spin out of control. One single factor that enabled the daring and risky operation was a strategic surprise. This is not likely to be replicated. Airstrikes are not the new-normal but a one-off like the ground surgical strikes. Surgical strikes after Uri and at Balakot have not ended terrorism. Infiltration has increased despite lockdown and unprecedented troop density in Jammu & Kashmir.

Pakistan's support for Kashmir will not cease and despite the internal constitutional changes in Jammu & Kashmir, the dispute will ultimately have to be resolved politically. The post-COVID-19 environment may provide a window to restart the process.

(The writer, a retired Major General, was Commander IPKF South, Sri Lanka and founder member of the Defence Planning Staff, currently the Integrated Defence Staff.)

<https://www.dailypioneer.com/2020/columnists/diplomacy-is-the-key.html>

THE ECONOMIC TIMES

Wed, 08 April 2020

Larsen & Toubro wins 'large' contract from Indian Army for advanced IT-enabled network

The Smart World and Communication Business of L&T Construction has secured a large order from the Indian Army to establish an unified network management system to manage, support and operate the countrywide Armed Forces Network under the NFS, the company said in a statement

New Delhi: Engineering and construction giant Larsen & Toubro on Tuesday said it has won a 'large' contract from the Indian Army for setting up an advanced IT-enabled system to operate the Armed Forces network under the Network of Spectrum (NFS).

Though the company did not mention the exact value of the contract, as per its project classification, the value of a large order ranges between Rs 2,500 crore and Rs 5,000 crore.

The Smart World and Communication Business of L&T Construction has secured a large order from the Indian Army to establish an unified network management system to manage, support and operate the countrywide Armed Forces Network under the NFS, the company said in a statement.

"This is an extremely crucial and sensitive project for the Ministry of Defence and we are proud that the Ministry has reposed their faith in our technical, engineering and solutioning capabilities to execute this project," said SN Subrahmanyan - CEO a Managing Director, Larsen & Toubro.

It involves creating a centralised network monitoring, management and control system for all the seven layers under NFS which interconnects 414 Defence stations, he added, describing the scope of the mandate.

The project involves the creation of a resilient Cloud-based IT infrastructure on Infrastructure as a service (IAAS) model.



The scope also includes Next Generation Operations System and Software based Unified Network Management System, Eight Network Operations Centers (NOCs) consisting of National NOCs, Disaster Recovery NOCs, Regional NOCs, Security Operation Centers, Tier III Data Centres and Training Infrastructure, the company said.

The facilities under this project will allow real-time monitoring of the complete IT network backbone of the Indian army and provide complete visibility of deployed Network assets, leading to optimal utilization of resources, it added.

The project is to be implemented in 18 months followed by three years of warranty and seven years of Annual Maintenance Contract (AMC) during which L&T will provide managed maintenance services.

Larsen & Toubro is an Indian multinational engaged in technology, engineering, construction, manufacturing and financial services with over USD 21 billion in revenue. It operates in over 30 countries.

<https://economictimes.indiatimes.com/news/defence/larsen-toubro-wins-large-contract-from-indian-army-for-advanced-it-enabled-network/articleshow/75022794.cms>



Wed, 08 April 2020

L&T to execute Rs 5,000 cr Army network management system

New Delhi: Indian company Larsen & Toubro (L&T), has got an order worth around Rs 5,000 crore from the Army to establish a first-of-its-kind, state-of-the-art unified network management system to manage, support and operate the countrywide armed forces network being set up under the unified Network for Spectrum (NFS) project.

It involves creating a centralised network monitoring, management and control system for all the seven layers under NFS which interconnects 414 Defence stations,” said SN Subrahmanyam, CEO and Managing Director, L&T on Tuesday. This is a sensitive project for the Ministry of Defence and we are proud that the Ministry has reposed their faith in our technical, engineering and solutioning capabilities to execute this project, he stated.

The project is to be implemented in 18 months followed by three years of warranty and seven years of Annual Maintenance Contract (AMC) during which the L&T will provide managed maintenance services including service level agreement monitoring, service impact analysis and root cause analysis for the countrywide armed forces next generation network.

The statement said the project involves the creation of a resilient Cloud-based IT infrastructure on Infrastructure as a service (IAAS) model. The scope also includes next generation operations system and Software (NGOSS) based unified network management system, eight Network Operations Centers (NOCs) consisting of national NOCs, disaster recovery NOCs and regional NOCs,

The facilities under this project — security operation centers, Tier III data centres and training infrastructure— will allow time monitoring of the complete IT network backbone of the Indian Army and provide complete visibility of deployed network assets, leading to optimal utilization of resources, L&T added.

<https://www.dailypioneer.com/2020/india/l-t-to-execute-rs-5-000-cr-army-network-management-system.html>

*Wed, 08 April 2020*

TEDBF: Indian Navy futuristic twin engine deck based fighter

In twelve years from now, a twin engine variant of India's Tejas fighter could start replacing Russian built MiG-29K jets deployed on board the Indian Navy's aircraft carriers INS Vikramaditya and Vikrant which is yet to be inducted.

Detailed concept drawings of the fighter, dubbed the Twin Engine Deck Based Fighter (TEDBF), accessed by NDTV, are being studied by the Aeronautical Design Agency (ADA) and Hindustan Aeronautics Limited (HAL) which would eventually build the fighters if their development is funded by the government.

What's more, the design of an Air Force variant of the jet, the Omni Role Combat Aircraft (ORCA), with significant design differences, is also being studied. This variant would weigh a ton less than the Naval variant since it would not need heavy reinforced landing gear required for operations from the deck of an aircraft carrier.

Sources close to the project have told NDTV that the total design and development costs for prototypes of the aircraft "would cost less than the Rs.12,780 crore India Specific Enhancement package" signed between India and France towards customising 36 Rafale fighters being inducted into the Indian Air Force.

"The total design and development costs for twin engine variants of the Tejas fighter would cost less than Rs.13,000 crores with each fighter for the Navy costing in the range of Rs. 538 crores." The Indian Air Force variant of the fighter would cost between Rs 35 crore and Rs.71 crores less than the Navy variant. The development time-scale for the project has been pegged at six years from the time initial funding has been provided.

Project designers say they could "very comfortably develop" the new twin engine Tejas variant based on the experience they have gained in testing the Naval prototype of the Tejas fighter. This prototype is expected to land on the deck of India's aircraft carrier, INS Vikramaditya, for the first time within the next few weeks.

The prototype is powered by a single US-built General Electric F404-GE-IN20 turbofan engine which is not seen to be powerful enough to justify serial manufacture of a Naval Tejas in its present avatar other than in very limited numbers. The significantly larger twin engine Tejas now being proposed would be fitted with two more powerful General Electric F414 engines and would have a significantly higher weapons payload and range.

The additional thrust provided by two engines would also guarantee a larger safety margin for pilots while taking off and landing in hot and humid tropical weather conditions out at sea in the Arabian Sea and Bay of Bengal.

Weighing 23 tonnes, the Navy Twin Engine Deck Based fighter would be significantly larger than the 13.5 ton Tejas Mk-1 fighter which has entered squadron service with the Indian Air Force and the 17.5 ton Tejas Mk-2 which is meant to be inducted into the Indian Air Force from 2030.

<https://www.defenceaviationpost.com/2020/04/tedbf-indian-navy-futuristic-twin-engine-deck-based-fighter/>

Is the F-21 Fighter the plane India really wanted?

Many nations are vying for India's latest contract

By Peter Suci

Lockheed Martin describes the F-21 as being "specifically configured for the Indian Air Force," and that it provides unmatched "Made in India" opportunities that could strengthen the nation's path to an advanced airpower future. The fighter program is a joint partnership with Lockheed Martin and Tata, and is aimed at addressing the IAF's unique requirements – while still supporting thousands of U.S. supplier jobs, including U.S.-based Lockheed Martin engineering, program management, sustainment and customer support positions.

It includes "innovative technologies" that Lockheed Martin says were derived from its F-22 and F-35 – the world's only two operational fifth-generation fighters.

The fighter was developed to compete in India's 2019 tender for 110 new warplanes, with a contract estimated at more than \$15 billion.

It is officially the F-21, but aviation experts note that it is an advanced version of the F-16 "Fighting Falcon" multirole fighter that includes some technologies developed for the F-22 "Raptor" and F-35 "Lightning II" program.

Last September it was announced that the American aerospace giant would begin supplying wings for its F-16 combat jets from a facility located in southern India. Lockheed Martin had also offered to shift the production of the F-16 line from the United States to India.

This was part of Indian Prime Minister Narendra Modi's "Make-in-India" program, whereby global firms—including those in the defense sector—would set up manufacturing centers in India as a way to build a domestic industrial base, as well as to create jobs.

India has the world's largest volunteer military in the world with more than 5.1 million personnel, but the country remains the second-largest arms importer in the world after Saudi Arabia – even as three Indian state-owned companies are among the world's top one hundred arms suppliers. The nation is addressing its failure to build a strong indigenous defense industrial base—and that could include producing the F-21, even if it is really just an improved F-16.

Seven fighters have been vying for contract and this included the F-21 from Lockheed Martin, F-18 and F-15 from Boeing, Gripen from Saab, MiG-35 and Sukhoi-35 from Rosoboronexport and Rafale from Dassault Aviation. And whatever fighter wins – at least 85 percent of the complete fleet of new aircraft will have to be constructed on Indian soil.

"In the competition, there are both single-engine and twin-engine aircraft. We are looking to prepare the qualitative requirement specifications in a way that there is a level-playing field between both the fighters and there can be a fair competition between them," top IAF sources were quoted by Asian News International.

The IAF will shortly decide which plane will best serve its needs to replace its aging fleet of MiG-21 and MiG-27 fighters/strike fighters. After it decides, the decision will then move to the Defence Acquisition Council for the approval of the tender by the Defence Ministry.

<https://nationalinterest.org/blog/buzz/f-21-fighter-plane-india-really-wanted-141287>

Indian astronauts in Russia are in good health

Four IAF pilots undergoing training for the Gaganyaan mission are fine and will soon resume training

By Hemanth CS

Bangalore: The four Indian Air Force (IAF) pilots currently undergoing training at the Gagarin Cosmonaut Training Center (GCTC) in Russia for India's maiden Human Space flight programme the Gaganyaan mission, have reported being in good health.

The pilots, who are training to become astronauts for the Gaganyaan mission, have been in Russia since February.

Due to the COVID-19 pandemic, these astronauts have temporarily stopped their training.

"The Indian candidates for the spaceflight are in good health and continue working according to their training plan. Last week they successfully passed the exam on the knowledge of the onboard systems of the manned spacecraft. In the coming days, they are to take the exam in manned spacecraft flight theory,"



Glavkosmos JSC Director General, Dmitry Loskutov told Bangalore Mirror. Glavkosmos, JSC is a subsidiary of the State Space Corporation Roscosmos with which ISRO has signed an agreement to train the four Indian astronauts.

The COVID-19 pandemic has led to many countries announcing a lockdown, including Russia.

"Russia has declared a lockdown till the end of April. Equally, lockdown has also been strongly recommended for the Indian candidates for the spaceflight; now they are getting ready for the exam independently. The doctors scrupulously control their health status and the decision to resume the full-scale training will be taken after thorough observation of the epidemic situation in the country, but no earlier than April 30," Loskutov added.

The four pilots will undergo training for 12 months before returning to India and so far, have completed a quarter of their training

The Gaganyaan mission aims to demonstrate Human Spaceflight capability to low earth orbit for a mission duration ranging from one orbital period to a maximum of seven days.

A human-rated GSLV MK-III will be used to carry the orbital module which will have necessary provisions for sustaining a three-member crew for the duration of the mission.

The total fund for the Gaganyaan programme is Rs 10,000 crore.

According to ISRO two unmanned flights, one in December 2020 and, another one in July 2021 would be undertaken as part of the programme, before the manned flight in early 2022.

<https://bangaloremirror.indiatimes.com/bangalore/others/indian-astronauts-in-russia-are-in-good-health/articleshow/75035585.cms>

Coronavirus outbreak | Amid Russian lockdown, Gaganyaan trainees healthy

Glavkosmos says training has been neither stopped nor suspended and is going on as scheduled

Countries and organisations around the world have halted routines and chosen isolation as the way to check the COVID-19 pandemic. Evidently the four Indian astronaut candidates training in Moscow are no exception to a lockdown in their own spaces — for at least this month.

While space missions have been quietly suspended and deferred in India and everywhere else.

In an e-mailed reply to *The Hindu*, Russian space company Glavkosmos JSC (Joint Stock Company) quoted its Director General Dmitry Loskutov as saying that isolation applied to the Indian astronaut trainees as employees across Moscow switched to tele-work from March 30 up to the end of April.

“Lockdown has strongly been recommended for the astronaut-elects, as well as for the personnel” of the Gagarin Research & Test Cosmonaut Training Center (GCTC), Mr. Loskutov said.

Glavkosmos stressed that the training has been neither stopped nor suspended and is going on as scheduled. They are healthy and have been working and exercising on their own for the last week or so at the GCTC.

The four candidates are pilots in the Indian Air Force. They started their year-long general training programme in early February. The finalist/s will circle Earth for a few days as part of the first Indian human space mission, Gaganyaan, which is planned for the year 2022.

The Indian Space Research Organisation (ISRO) had not replied to a similar query at the time of going to print.

The candidates are healthy and have completed 25% of the programme and continue working according to their training plan, Mr. Loskutov said.

Theory Exams

The astronaut-elects are preparing independently for next week’s theory exam on the flight theory of manned spacecraft.

Last week they passed the exam to gauge how much they knew the onboard systems of the manned spacecraft.

ISRO’s Human Spaceflight Centre and Glavkosmos signed the training agreement in June 2019.

The training includes comprehensive and biomedical training; physical practices; detailed study of the systems of the Soyuz module; manned spaceship, weightlessness training on the special Ilyushin-76MDK aircraft.

They will be taught skills required during any abnormal landing of the spaceship besides a part that is specific to handling Gaganyaan spacecraft.

<https://www.thehindu.com/news/national/coronavirus-outbreak-amid-russian-lockdown-gaganyaan-trainees-healthy/article31283578.ece>

Trials of drugs to prevent coronavirus infection begin in health care workers

By Kai Kupferschmidt

When malaria researcher Nicholas White saw coronavirus infections picking up around the world 2 months ago, he immediately thought of the impact they could have on poorer countries. “In fragile health care systems, if you start knocking out a few nurses and doctors, the whole thing can collapse,” says White, who is based at Mahidol University in Bangkok. “So we realized that the priority would be to protect them.”

White and his colleagues at the Mahidol Oxford Tropical Medicine Research Unit wondered whether widely available drugs could help. They have designed a trial in which 40,000 doctors and nurses in Asia, Africa, and Europe will prophylactically receive chloroquine or hydroxychloroquine, two old drugs against malaria. White hopes the trial will start this month, but its launch has been “incredibly difficult because of bureaucratic processes,” he says.

The international study is one of several in preparation or underway that seek to use drugs for what is called pre-exposure prophylaxis (PrEP), a strategy already widely used against HIV. The Bill & Melinda Gates Foundation is funding plans for another huge study that will test the same two drugs in Africa, North America, and Europe. Separate studies of the same drugs are planned or underway in the United States, Australia, Canada, Spain, and Mexico. Researchers are also considering other potential preventives, including nitazoxanide, a drug used to treat parasitic infections, and the antibody-laden serum from people who have recovered from an infection.

“If there was a drug that could prevent infections and that health care workers could take, that would be an enormous public health benefit,” says Jeremy Farrar, head of the Wellcome Trust, which is funding White’s effort.

PrEP studies of the malaria drugs could also be the best way to settle the heated debate—infamed by U.S. President Donald Trump’s advocacy—over whether they are a promising treatment for COVID-19, says virologist Matthew Frieman of the University of Maryland School of Medicine. The weak and equivocal studies so far were mainly done in seriously ill patients. “To show an effect you really have to treat early,” Frieman says. “I don’t know any drug that works better late in infection.” Giving a drug before exposure is as early as it gets.

White adds that chloroquine and hydroxychloroquine are good choices to test because they are widely available—a major consideration given the huge number of people who might be eligible for any drug that proves its worth. “The attraction of these drugs is that they are potentially readily deployable and we know an awful lot about them.”

In White’s proposed trial, health care workers in Asia will be randomized to take chloroquine or a placebo for 3 months, while hydroxychloroquine will be used in Africa and Europe. Participants have to take their temperature twice a day and report it, along with any symptoms, through an app or a website. The researchers will compare the number of symptomatic and asymptomatic infections in both groups, as well as the severity and duration of illness in those who become infected.

Meanwhile, a trial of a related approach called postexposure prophylaxis (PEP) started in Barcelona, Spain, in mid-March. The idea behind that study, born before Spain’s COVID-19 epidemic exploded, is that a short course of a drug might prevent disease or lessen its impact in health care workers, nursing home residents, and household contacts of COVID-19 patients who have already been exposed to the virus. “We said, we need something stronger than nonpharmacological interventions like isolation and quarantine,” says Oriol Mitjà of the Germans Trias I Pujol University Hospital, who leads the study.

In the Spanish trial, people with symptoms who test positive for COVID-19 are treated with the HIV combination drug darunavir/cobicistat plus hydroxychloroquine. Anyone known to have spent more than 15 minutes with them in the previous 5 days is treated with hydroxychloroquine for 4 days. Patients in a control group and their contacts receive no drug—there was no time to prepare an appropriate placebo, Mitjà says.

The researchers plan to compare how many new symptomatic infections occur in the two groups after 14 days. More than 1000 contacts have been included already; the first result from that subset should be available around 15 April, Mitjà says. Similar studies are underway in Minnesota, Washington, and New York.

Experience with HIV has shown that PrEP and PEP can work to reduce infections. But before large-scale studies in HIV began, scientists had an “amazing amount of data” from a monkey model and epidemiology studies suggesting the strategies would work, says Steven Deeks, an HIV researcher at the University of California, San Francisco (UCSF). “I’m not sure any of that applies to what’s happening now.”

Potential side effects of chloroquine and hydroxychloroquine, including heart arrhythmia, are another concern. “The risks that might be acceptable in someone with disease may be much less acceptable when you are treating someone who doesn’t have it,” says Annie Luetkemeyer, an infectious disease physician at UCSF. “And you’re very unlikely to be monitoring them in the same way.”

Some countries aren’t waiting for the new trials. India, for instance, has already recommended hydroxychloroquine for health care workers caring for suspected or confirmed COVID-19 cases as well as patients’ household contacts; Bangladesh has a similar policy. (White says he had to exclude both countries from the international study as a result.) There is no basis for recommending wide use of the drug, many scientists say. “The idea that it is better than nothing is not true,” White says. “It could be worse than nothing.”

That’s not just because of the potential side effects. People who think they are protected may also become less cautious and run a greater risk of infection. And broad use of the drugs will make them harder to obtain for other conditions. In addition to curing malaria, chloroquine and hydroxychloroquine are mainstays for patients with lupus and rheumatoid arthritis, Luetkemeyer says. “We better be really sure that these drugs are working before we start impacting that drug supply.”

Because the demand could be so big, there has been some debate among researchers about which dose to test. White has decided to go with the highest possible dose, to maximize the chance of getting a positive result. But the Gates-funded study plan calls for evaluating medium and low doses as well. If one of those shows an effect, more patients could benefit if supplies are low.

Even if chloroquine works, it is unlikely to confer 100% protection—and a low level of protection may not make the risk of side effects worthwhile. “If you were a health care worker and I said, ‘Here’s a medicine which you have to take every day and it reduces your risk of getting COVID-19 by 20%,’ would you take it?” White asks. Below that, people probably wouldn’t bother, he says.

White hopes to start the international trial on 22 April in the United Kingdom, but he is still navigating the “myriad rules, regulations, and sequential hurdles that govern the conduct of clinical trials.” No one is acting with ill intent, he adds, but he thinks the emergency warrants faster action. “Is it really ethical to take 3 weeks to review an application for a medicine that has been available for 70 years?”

<https://www.sciencemag.org/news/2020/04/trials-drugs-prevent-coronavirus-infection-begin-health-care-workers>

कोरोना वायरस के संक्रमण में मलेरिया की दवाई की इतनी मांग क्यों है?

पूरी दुनिया में मलेरिया की दवा की मांग कोरोना वायरस से निपटने के काम में आने की वजह से बढ़ गई है जबकि विश्व स्वास्थ्य संगठन का यह कहना है कि ये कोरोना वायरस के इलाज में कितनी प्रभावी है, इसे लेकर कोई ठोस प्रमाण मौजूद नहीं है।

जैक गुडमैन और क्रिस्टोफ़र गायल्स

कोरोना वायरस के इलाज में यह कितनी प्रभावी है, इसे लेकर मौजूद साक्ष्य क्या हैं और इसे कौन इस्तेमाल कर रहा है? इस दवाई के बारे में हमें क्या पता है?

अमरीका के राष्ट्रपति डोनाल्ड ट्रंप ने अपनी ब्रीफिंग में मलेरिया में काम आने वाली दवाई हाइड्रॉक्सीक्लोरोक्विन का बार-बार जिक्र किया है।

फेसबुक ने ब्राज़ील के राष्ट्रपति जायर बोलसोनारो का एक वीडियो ग़लत जानकारी फैलाने की वजह से हटा दिया है। इस वीडियो में बोलसोनारो दावा कर रहे हैं, "हाइड्रॉक्सीक्लोरोक्विन सभी जगहों पर काम कर रही है।"

लंबे समय से हाइड्रॉक्सीक्लोरोक्विन का इस्तेमाल मलेरिया के बुखार को कम करने में किया जा रहा है और उम्मीद है कि यह कोरोना वायरस को भी रोकने में सक्षम हो सकती है।

बीबीसी के स्वास्थ्य संवाददाता जेम्स गैलघर कहते हैं, "स्टडी में ऐसा लगता है कि हाइड्रॉक्सीक्लोरोक्विन कोरोना वायरस को रोकने में सक्षम है। डॉक्टरों की ओर से भी कहा गया है कि कुछ मामलों में यह काम कर रही है।"

फ़िलहाल हुए परीक्षणों में कोरोना के इलाज में यह कितनी प्रभावी होगी, इसे लेकर पर्याप्त सबूत नहीं मिले हैं। दूसरी ओर इस दवा का गुर्दा और लीवर पर गंभीर साइड इफेक्ट पड़ता है।

कोरोना के इलाज में मलेरिया की दवा के प्रभाव पर रिपोर्ट लिखने वाले ऑक्सफ़र्ड यूनिवर्सिटी के कोम गोबनिगी कहते हैं, "यह कितना कारगर है, यह जानने के लिए उच्च गुणवत्ता वाले रैंडम क्लिनिकल ट्रायल की ज़रूरत है।"

अमरीका, ब्रिटेन, स्पेन और चीन में 20 से ज्यादा परीक्षण चल रहे हैं। कैबिनेट मंत्री माइकल गोव बताते हैं कि ब्रिटेन में मलेरिया-रोधी दवा की कोरोना वायरस के ऊपर पड़ने वाले प्रभावों पर लगातार क्लिनिकल परीक्षण किए जा रहे हैं।

अमरीका में भी हाइड्रॉक्सीक्लोरोक्विन और एजिथ्रोमाइसिन जैसी दवाओं को साथ मिलाकर इसके कोरोना के इलाज में प्रभावी होने के ऊपर कई परीक्षण किए जा रहे हैं।

यूएस फूड एंड ड्रग एडमिनिस्ट्रेशन (एफडीए) अमरीका में किसी दवाई के इस्तेमाल की अनुमति देती है। उसने अभी इन दवाइयों को आपातस्थिति में कोरोना के सीमित मामलों में उपयोग की इजाज़त दी है।

इसका यह मतलब नहीं है कि एफडीए इन दवाइयों को प्रभावी मानती है। इसका मतलब है कि किसी खास परिस्थिति में अस्पताल अनुरोध करके इन दवाइयों का इस्तेमाल कोरोना के मरीज़ों पर कर सकता है।

अमरीका की सरकार ने कहा है कि जर्मनी की दवा कंपनी ने तीन करोड़ हाइड्रॉक्सीक्लोरोक्विन दान में दिया है और जो सरकार के पास है।

दूसरे देश भी इस दवाई का इस्तेमाल अलग-अलग स्तरों पर कर रहे हैं।

फ्रांस ने अपने डॉक्टरों को कोरोना के मरीजों को दवा देने की सलाह की इजाजत तो दी है लेकिन साथ ही में इसके साइड इफेक्ट को लेकर चेताया भी है।

भारत के स्वास्थ्य मंत्री ने स्वास्थ्य क्षेत्र में काम करने वालों कर्मियों को ऐहतियातन हाइड्रॉक्सीक्लोरोक्विन लेने की सलाह तो दी है, इसके साथ ही डॉक्टर की सलाह पर उन परिवार वालों को भी ये दवा खाने को कहा है जिन परिवारों में कोरोना के किसी मामले की पुष्टि हुई है।

हालांकि भारत सरकार की शोध संस्था ने इसके प्रयोग को लेकर चेतावनी दी है और कहा है कि यह 'प्रयोग' के स्तर पर है और आपतकालीन स्थिति में ही केवल इसका इस्तेमाल करना चाहिए।

मध्य-पूर्व के कई देशों ने अपने यहां इसके इस्तेमाल की इजाजत दी है। इन देशों में बहरीन, मोरोक्को, अल्जीरिया और ट्यूनिशिया शामिल हैं। बहरीन का दावा है कि उसने सबसे पहले अपने यहां कोरोना के मरीज पर हाइड्रॉक्सीक्लोरोक्विन का इस्तेमाल किया है।

जैसे-जैसे कोरोना के इलाज में इस दवा के प्रभावी होने की संभावना व्यक्त की जा रही है जैसे-जैसे कई देशों में इसकी मांग बढ़ी है और उसकी उपलब्धता में कमी हो रही है।

क्लोरोक्विन और इससे जुड़ी दवाइयां विकासशील देशों में पर्याप्त मात्रा में मौजूद हैं। इन देशों में मलेरिया के इलाज में इन दवाओं का इस्तेमाल होता आया है।

हालांकि धीरे-धीरे मलेरिया के ज्यादा प्रतिरोधी होने की वजह से इस दवा का प्रभाव मलेरिया के मामले में कम होता गया है।

जॉर्डन ने जमाखोरी रोकने के लिए दवाई दुकानों में इसकी बिक्री पर प्रतिबंध लगा दिया है तो वहीं कुवैत के स्वास्थ्य मंत्रालय ने सभी निजी दवा दुकानों से इसे वापस ले लिया है और सरकारी केंद्रों और अस्पतालों तक इसकी उपलब्धता को सीमित कर दिया है। कीनिया में अब यह सिर्फ डॉक्टर की पर्ची पर ही मिलेगी। कोई काउंटर पर जाकर इसे यूं ही नहीं खरीद सकता।

भारत इन दवाइयों का एक बड़ा उत्पादक देश है। भारत ने इसके निर्यात पर पाबंदी लगा दी है।

अमरीकी राष्ट्रपति डोनाल्ड ट्रंप ने भारत के प्रधानमंत्री नरेंद्र मोदी से इस दवा को अमरीका को देने का अनुरोध किया है। ऐसी रिपोर्ट है कि इस पर भारत सरकार विचार कर रही है।

2005 में इस दवा पर पाबंदी लगने के बावजूद नाइजीरिया में लोग अभी भी मलेरिया की दवा के रूप में इसका इस्तेमाल कर रहे हैं। चीन में फरवरी के महीने में इस बात का जिक्र होने के बाद कि हाइड्रॉक्सीक्लोरोक्विन कोरोना वायरस के ऊपर काम करती है।

अब राष्ट्रपति ट्रंप के बोलने के बाद दवा दुकानों के बाहर भारी भीड़ जमा हो रही है और आनन-फानन में ही पूरा स्टॉक बिक जा रहा है।

नाइजीरिया के रोग नियंत्रक केंद्रों ने लोगों से अपील की है कि वो इस दवा को लेना बंद करें और कहा है कि, "विश्व स्वास्थ्य संगठन ने कोरोना वायरस के इलाज में इस दवा के प्रभाव की पुष्टि नहीं की है।"

बीबीसी के डैनियल सेमेनोरिमा ने बताया है कि लागोस में लोग इस सलाह को अनसुना कर रहे हैं और अपने आप को सुरक्षित करने में लगे हुए हैं। इसके गंभीर नतीजे भी भुगतने पड़ रहे हैं। लागोस के अधिकारियों का कहना है कि कई लोग हाइड्रॉक्सीक्लोरोक्विन के ओवरडोज से गंभीर रूप से बीमार पड़े हैं।

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