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Coronavirus: DRDO, ITI to team up to manufacture portable ventilators

The Defence Research and Development Organisation (DRDO) and the Indian Telephone Industries (ITI) are likely to ink a deal soon to produce portable ventilators, a first of its kind in India, following the Coronavirus or Covid-19 outbreak

By Muntazir Abbas

New Delhi: The Defence Research and Development Organisation (DRDO) and the Indian Telephone Industries (ITI) are likely to ink a deal soon to produce portable ventilators, a first of its kind in India, following the Coronavirus or Covid-19 outbreak.

"DRDO wants ITI to manufacture portable ventilators and is transferring technology to us. Once, we come up a final product and after due test procedures, we'll be able to produce such ventilators," ITI Chairman Rakesh Mohan Agarwal told ETT.

In the wake of the ongoing pandemic, medical experts say that India would require several thousand ventilators and its absence may impair the country's healthcare system to respond to rising epidemic cases.

With a population of 1.33 billion, India has nearly 50,000 ventilators.

Agarwal said that ITI is well poised to fast-track the production amid the present Covid-19 situation, and have plans to undertake manufacturing in its Bangaluru facility.

ITI is a state-owned electronics product manufacturer under the Department of Telecommunications (DoT) that produces radio modems, optical networks, smart metres, and Wi-Fi access points, with the defense sector contributing to a third or nearly 35% of its overall revenue.

"Once we come up with the product prototype, ITI will be able to produce portable ventilators within the next 30 to 60 days," the top official said and added that the apparent challenge would be on the component sourcing front.

The state-controlled telecom technology company is signing the Memorandum of Understanding (MoU) with DRDO this week.

"The only thing that worries us is component sourcing. We will require components locally as well as from other countries which appears to be a cumbersome task during the current lockdown," he added.

Since March 24, India is under a 21-day lockdown to prevent community transmission of novel Coronavirus that has so far killed 150 individuals with nearly 6,000 confirmed infection cases.

Agarwal further said that portable ventilators could not be used merely in the present Covid-19 crisis but would be required in the future by the army and paramilitary forces and defense hospitals.

Meanwhile, taking a cue from carmakers worldwide, Mahindra Group, Maruti Suzuki India, and Hyundai Motor Company have expressed their keenness to manufacture ventilators locally amid the Coronavirus pandemic.

With a strong order book worth about Rs 20,000 crore, the state-owned ITI is expecting to continue with a growth momentum of nearly 35%.

In Q3, 2019, the public sector firm posted a turnover of Rs 979 crore, up 53% over the same quarter last year.

<https://telecom.economictimes.indiatimes.com/news/coronavirus-drdo-iti-to-team-up-to-manufacture-portable-ventilators/75048424>



Coronavirus pandemic: DRDO's disinfection chamber deployed at AIIMS; check features

The chamber, called the Personnel Sanitation Enclosure (PSE), has been designed at DRDO's Vehicle Research and Development Establishment (VRDE) in Ahmednagar

By Bulbul Dhawan

Coronavirus in India: DRDO's disinfection chamber now deployed at AIIMS! In order to limit the spread of coronavirus in India, several public and private institutions have pitched in to aid the government fight the pandemic. One of these organisations is the Defence Research and Development Organisation (DRDO), which has taken upon itself the task of developing equipment and technologies which will help in tackling COVID-19. One of the equipment developed by the DRDO is the disinfection chamber that was deployed at AIIMS Delhi on Tuesday, as reported by news agency ANI.

The chamber, called the Personnel Sanitation Enclosure (PSE), has been designed at DRDO's Vehicle Research and Development Establishment (VRDE) in Ahmednagar. It is a full body disinfection chamber meant to decontaminate the personnel one person at a time, the DRDO said in a statement.



Coronavirus Pandemic: Features of DRDO's Disinfection Chamber

According to a press release by the DRDO, the chamber has the following features.

- The system is equipped with soap and sanitizer and when triggered, it creates a mist of hypo sodium chloride to disinfect the personnel.
- The chamber is fitted with tanks having a total capacity of 700 litres, with the ability to disinfect around 650 personnel before requiring a refill.
- The system, the DRDO said, has been designed within a span of four days.
- It has glass panels on the side walls for monitoring the operation of the chamber. A separate cabin for the operator has also been provided for monitoring purposes.
- To ensure smooth functioning of the system at night, the chamber has been fitted with lights.

The chamber can be placed at the entry and exit points of sensitive places like hospitals, malls and office buildings to disinfect the personnel and avoid the spread of coronavirus, the press release further said.

COVID-19: What Else has DRDO done to Fight the Pandemic?

The DRDO has been working with industry members to produce critical supplies like sanitizers, masks, personal protective equipment (PPEs), detection kits and ventilators. The following steps have been taken by the organisation, another release highlighted.

Sanitizers

The DRDO labs, in compliance with the World Health Organization (WHO) guidelines, carried out the in-house production of over 1.5 lakh bottles of sanitizers at a cost of Rs 120 per litre and supplies these to Indian Armed Forces, the Union Ministry of Defence, the Delhi Police, the Parliament as well as security establishments. The method has been shared with industry partners so that they can undertake mass production of over 30,000 litres a day and provide sanitizers to the country in bulk.

Face Masks

DRDO's Gwalior lab developed N-99 mask, which is five-layered and uses the nano web filter layer. The production is being undertaken by two industry partners, DRDO said, and the

manufacturing is in progress to initially create 1 lakh masks within 5 to 6 days, and then this capacity is planned to be increased to 2 lakh a week.

PPEs

Several labs of the DRDO simultaneously worked and created different bio suits for multiple purposes. The production of these bio suits is now being undertaken by two industry partners and initially 20,000 suits will be available in a week. Later, the production capacity will be increased to 15-20,000 suits a day.

Ventilators

The DRDO labs have developed a ventilator and passed on the technology to industry partners. Moreover, one of the labs has taken the initiative to produce those critical components of the ventilators which are not available in India. The production of these ventilators can go up to 10,000 units a month.

Sample testing

The DRDO lab in Gwalior is also testing as a COVID-19 testing centre and it has been authorized by the Centre to carry out the confirmatory test for COVID-19, like the one being done in Pune's National Institute of Virology.

<https://www.financialexpress.com/lifestyle/health/coronavirus-pandemic-drdo-disinfection-chamber-deployed-at-aiims-check-features/1922256/>

Telangana Today

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DRDO installs disinfection chamber at AIIMS on trial basis

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

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 hyposodiumchloride.

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.

<https://telanganatoday.com/drdo-installs-disinfection-chamber-at-aiims-on-trial-basis>



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AIIMS gets DRDO’s disinfection chamber

New Delhi: The Defence Research and Development Organisation (DRDO) has installed a newly developed disinfection chamber at All India Institute of Medical Sciences (AIIMS) to fight against COVID-19 pandemic.

The chamber is designed by ‘Vehicle Research Development Establishment’ (VRDE), Ahmednagar, a DRDO laboratory.

“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,” a senior DRDO official said.

“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. Electrically operated pump creates a disinfectant mist of hyposodiumchloride for disinfecting on entering the chamber,” he said.

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

<https://www.dailypioneer.com/2020/state-editions/aiims-gets-drdo---s-disinfection-chamber.html>

डीआरडीओ (DRDO) ने एम्स में डिसइंफेक्शन चैम्बर स्थापित किया

नई दिल्ली: कोरोनावायरस महामारी के खिलाफ जारी लड़ाई में रक्षा अनुसंधान और विकास संगठन (डीआरडीओ) ने अखिल भारतीय आयुर्विज्ञान संस्थान (एम्स) में पूरे शरीर को संक्रमणरहित करने वाला चैम्बर स्थापित किया है।

डीआरडीओ ने यह चैम्बर खासतौर से विकसित किया है। चैम्बर कोरोनावायरस के प्रसार को नियंत्रित करने में मदद करेगा।

डीआरडीओ के एक वरिष्ठ अधिकारी ने बताया, "यह परीक्षण के आधार पर स्थापित किया गया है। हम देख रहे हैं कि यह कैसे काम कर रहा है।" अधिकारी ने समझाया कि एक बार सफल होने के बाद, यह संबंधित संगठनों में मांग के अनुसार स्थापित किया जाएगा।

पिछले हफ्ते, डीआरडीओ ने पूरे शरीर को संक्रमणरहित करने वाला चैम्बर विकसित किया, जिसे कार्मिक स्वच्छता संलग्नक और फेस प्रोटेक्शन मास्क कहा जाता है।



अहमदनगर स्थित डीआरडीओ की एक प्रयोगशाला, वाहन अनुसंधान एवं विकास प्रतिष्ठान ने पूरे शरीर को संक्रमण मुक्त करने वाले इस चैम्बर को डिजाइन किया है, जिसे पर्सनल सैनिटाइजेशन एन्क्लोजर कहते हैं।

डीआरडीओ ने कहा, "यह चैम्बर एक समय में एक व्यक्ति को संक्रमणरहित करने के लिहाज से डिजाइन किया गया है। यह एक पोर्टेबल सिस्टम है, जो सैनिटाइजर और साबुन मशीन से सुसज्जित है।"

इस चैम्बर में प्रवेश करने के बाद पैर से एक पैडल को चलाने से शरीर की सफाई शुरू हो जाती है। चैम्बर में प्रवेश करने पर, विद्युतीय रूप से संचालित पंप हाइपोसोडाक्लोराइड का एक संक्रमणनाशक धुंध बनाता है।

धुंध स्प्रे 25 सेकंड के ऑपरेशन के लिए कैलिब्रेट किया जाता है और स्वचालित रूप से ऑपरेशन पूरा होने का संकेत देता है।

प्रक्रिया के अनुसार, संक्रमणशोधन से गुजरने वाले कर्मियों को चैम्बर के अंदर रहते हुए अपनी आंखें बंद रखने की आवश्यकता होगी।

सिस्टम में कुल 700 लीटर की क्षमता के साथ छत के बीचो-बीच एक टैंक लगा है। रिफिल की आवश्यकता होने तक लगभग 650 कर्मचारी संक्रमणशोधन के लिए चैम्बर से गुजर सकते हैं।

उन्होंने कहा, "सिस्टम में मॉनिटरिंग के उद्देश्य के लिए साइड की दीवारों पर ग्लास लगा हुआ है, जिसे पैनेलों के माध्यम से देखा जा सकता है और रात के समय के संचालन के दौरान रोशनी के लिए यह रोशनी से भी लैस है। समग्र संचालन की निगरानी के लिए एक अलग ऑपरेटर केबिन प्रदान किया गया है।"

डीआरडीओ ने कहा, "इस प्रणाली का निर्माण गाजियाबाद में डास हिताची लिमिटेड की मदद से चार दिन में हुआ है। इस प्रणाली का उपयोग प्रवेश और निकास जैसे स्थानों पर कर्मियों के संक्रमण शोधन के लिए किया जा सकता है।"

<http://www.samaylive.com/nation-news-in-hindi/416626/drdo-installs-disinfection-chamber-at-aiims.html>

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DRDO develops various sanitising gadgets to fight corona

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.defenceaviationpost.com/2020/04/drdo-develops-various-sanitising-gadgets-to-fight-corona/>

*Thu, 09 April 2020*

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.

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 a 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.

<http://www.daijiworld.com/news/newsDisplay.aspx?newsID=694026>



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ITR team sanitises Baleswar town

Baleswar: To combat the menace of COVID-19, the ITR (Integrated Test Range) based at Chandipur, a premier DRDO laboratory, has risen to the societal need and emerged as a significant contributor towards preventing the deadly disease using novel ideas and innovative technologies.

As a nodal DRDO laboratory for disaster mitigation in the eastern region, a team has been formed by ITR Chandipur which is assigned with developing and implementing different mitigation measures for COVID-19 infection.

The team is constantly working towards developing and implementing innovative ideas for prevention and containment of any infection within technical premises of ITR, Defence Residential Colonies at Chandipur and Baleswar as well as various critical public places and facilities within Baleswar Town, said director ITR Dr BK Das.

The Special Task Team (STT) undertook a mass sanitization operation to disinfect not only its own areas but also other public places of Baleswar town. The team sanitised already Fandi square, District Headquarters Hospital(DHH) premises, Sahadevkhunta Police Station, JCDA office and Proof Park at Station etc .

Four numbers of in-house developed mist spray system spurting 0.5% Sodium Hypochlorite (Hypo) solution were deployed and operated by ITR fire fighting personnel under the supervision of Fire Station officials and a team of medical experts from ITR Health Care Centre.

“All emergency discussions required at the laboratory are being held over video conferencing to avoid movement of personnel. Other than the skeletal manpower other employees are working from home. A shadow office has been created within the residential colony with all technical aids to carry out office work without having the need to travel up to Chandipur,” said Dr Das.

<https://www.dailypioneer.com/2020/state-editions/itr-team-sanitises-baleswar-town.html>



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Agni-V ICBM could enter in service in this year

The latest generation of Indian-made nuclear-capable ICBM InterContinental Ballistic Missile Agni-V could enter in service in 2020 after a few additional firing tests. On December 10, 2018, India has successfully test-fired its ICBM Agni-V, according to a statement from the Indian Ministry of Defense (MoD).

The last launch operations of the Agni-V were carried out and monitored by the Strategic Forces Command (SFC) in the presence of Scientists from Defense Research and Development Organization (DRDO) and other associated officials.

Development of the Agni-V began in 2008. The ICBM features indigenously designed navigation and guidance systems including a ring laser gyroscope based inertial navigation system.

According to Indian military sources, the Agni-V ICBM is a three-stage solid-fueled missile with an approximate range of 5,500-5,800 kilometers. The exact range remains classified,

but it is assumed that the missile could have a range from 6,000 to 7,500 kilometers, and can carry a 1,500 kg nuclear warhead. India has reportedly also been working on multiple independently targetable reentry vehicles (MIRV) for the Agni-V in order to ensure a credible second-strike capability.

The Agni-V can be mounted on a launcher vehicle which is known as the Transport-cum-Tilting vehicle-5. It is a 140-ton, 30-metre, 7-axle trailer pulled by a 3-axle Volvo truck according to DRDO, Indian Defence Research and Development Organisation.

<https://www.defenceaviationpost.com/2020/04/agni-v-icbm-could-enter-in-service-in-this-year/>

