COVID-19: DRDO's Contribution



Thu, 16 April 2020

COVSACK: Kiosk for Covid-19 sample collection developed by DRDO

COVID Sample Collection Kiosk (COVSACK) will have a shielding screen that will protect the health professional from droplet/aerosols transmission while taking a COVID-19 sample By Shailaja Tripathi

COVID Sample Collection Kiosk (COVSACK) has been developed by the Defence Research and Development Laboratory (DRDL), Hyderabad. DRDL is a missile system laboratory that comes under the Defence Research and Development Organisation (DRDO).

DRDL has developed the kiosk in the consultation with the doctor's of Employees State Insurance Corporation (ESIC), Hyderabad.

The kiosk will be useful for healthcare workers while taking COVID-19 samples of infected patients. This unit will reduce the requirement to change Personal Protective Equipment (PPE) by the health workers.

COVID Sample Collection Kiosk (COVSACK):

The kiosk will be used by the health workers for collecting the samples of COVID-19 from the patients.

The patient will walk into the kiosk and oral or a nasal swab will be taken by the health worker from outside through the built-in gloves.

The shielding screen of the kiosk will protect the health professional from droplet/aerosols transmission while taking a sample.

Functions of COVSACK:

- जान पसार एवम विस्तार • The kiosk will be automatically disinfected without any human involvement; it will make the process of sample collection free from infection.
- Once the patient will leave, four nozzle sprayers in Kiosk cabin will spray disinfectant mist for 70 seconds to disinfect the empty chamber.
- It will be further flushed with UV light disinfection and water and the system will be ready for use in less than 2 minutes.
- Voice command can also be given through the two-way communication system of COVSACK.
- It is possible to use COVSACK either from the inside or from the outside as suitable for the medical professional.

The cost of COVID Sample Collection Kiosk is nearly Rs. 1 lakh. The industry-based at Belgaum, Karnataka can support 10 units per day.

DRDO had designed and developed two units and after the successful testing handed them over to ESIC Hospital, Hyderabad.

https://www.jagranjosh.com/current-affairs/kiosk-for-covid-19-sample-collection-developed-bydrdo-1586948760-1



Business Today

Thu, 16 April 2020

After Kerala, DRDO develops walk-in kiosks for coronavirus sample collection

The suspected infected patients have to walk into the COVID Sample Collection Kiosk (COVSACK) and a nasal or oral swab is taken by healthcare professionals from outside through the built-in gloves By PB Jayakumar

Key Highlights:

- DRDO develops safe swab sample collection kiosks named COVSACK
- Kerala had innovated it as WISK a week ago, modelling South Korea
- Patients walk into COVSACK and health professionals safely sit inside WISK
- No need for PPEs for sample collection, besides ensuring safety of sample collector

Protection of health worker is a big concern worldwide while dealing with COVID-19 patients. Within a week of South Korea developing walk-in kisoks to collect swab samples without human intervention, Kerala emulated them with WISK sample kiosks a week ago. Now the Defence Research and Development Laboratory (DRDL) in Hyderabad has come up with COVID Sample

Collection Kiosk (COVSACK), in consultation with the doctors of Employees' State Insurance Corporation (ESIC), Hyderabad.

In this, the suspected infected patients have to walk into the kiosk and a nasal or oral swab is taken by healthcare professionals from outside through the built-in gloves. The kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread. The shielding screen of kiosk cabin protects the health care worker from the aerosols and droplet transmission while taking the sample. This reduces



the requirement for Rs 1000-plus worth personal protection equipment (PPE) that has to be changed by healthcare workers after each sample collection, says Defence Research and Development Organisation (DRDO).

After the patient leaves the kiosk, four nozzle sprayers mounted in the kiosk cabin disinfect the empty chamber by spraying disinfectant mist for a period of 70 seconds. It is further flushed with water & UV light disinfection. The system is ready for next use in less than two minutes. Voice command can be given through two-way communication system integrated with the COVSACK. It is possible to configure COVSACK to be used either from inside or outside as required by the medical professionals.

The COVSACK costs nearly Rs 1 lakh and a manufacturer based at Belgaum, Karnataka is gearing up to make 10 units per day. The DRDO has designed and developed two units and handed over these to ESIC Hospital, Hyderabad after successful testing.

The Ernakulam government medical college hospital in Kerala last week had developed its WISK, with the help of district administration based on social media footage on COVID-19 sample collection methods used in South Korea. In the Kerala version, costing Rs 40,000, the kiosk has an ultraviolet light unit, gloves and exhaust fan and is almost like a Personal Protective Equipment small suit. In that, the health worker sits inside the kiosk and collect the throat swab using the gloves attached to the unit. The gloves would be sanitised after every sample collection. Another advantage is the unit can be mounted in an ambulance to go to hotspot areas and collect samples,

instead of suspected patients transported in ambulances to nearby designated testing centres. Kerala has also made two units and is in discussion with NGOs to set up more such units.

Meanwhile, the Ordnance Factory Board (OFB) under the Ministry of Defence has started supply of coveralls conforming to ISO Class 3 exposure standards. Manufacture of initial order of 1.10 lakh from HLL Lifecare Limited (HLL), the government's nodal agency to procure medical equipment fighting COVID-19, is in full swing and will be completed in 40 days.

The Factories Board has also developed special two-metre tents which can be used for medical emergency, screening, hospital triage and quarantine purposes. These are made up of waterproof fabric, mild steel and aluminium alloy. Supplies have already started, said a communication from the government.

<u>https://www.businesstoday.in/latest/trends/after-kerala-drdo-develops-walk-in-kiosks-for-coronavirus-sample-collection/story/401124.html</u>



Thu, 16 April 2020

Coronavirus: सैंपल लेने के लिए डीआरडीओ ने तैयार किया '<mark>को</mark>वसैक' कियोस्क, बिना पीपीई हो सकेगी जांच

नीरज राजपूत

• इस कियोस्क में मरीज को खड़ा कर दो इनबिल्ट ग्लब्स से लिया जा सकता है सैंपल।

• 2 मिनट की डिसइंफेक्शन प्रक्रिया के बाद दोबारा प्रयोग के लिए हो जाता है तैयार।

नई दिल्ली: कोरोना वायरस के टेस्ट और सैंपल लेने के लिए डीआरडीओ की हैदराबाद स्थित लैब ने एक खास कियोस्क तैयार किया है। करीब एक लाख की कीमत वाले इस कियोस्क से डॉक्टर बिना पीपीई सूट पहने भी टेस्ट कर सकता है। रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) की हैदराबाद स्थित डिफेंस रिसर्च एंड डेवलपमेंट लैब

(डीआरडीएल) ने इसे 'कोवसैक' यानि कोरोना वायरस सैंपल कलेक्शन कियोस्क नाम दिया है।

डीआरडीएल ने इस यूनिट को हैदराबाद स्थित कर्मचारी राज्य बीमा निगम (ईएसआईसी) के डॉक्टरों के परामर्श से तैयार किया है। कोरोना



50 years

वायरस परीक्षण के लिए डॉक्टर या अन्य हेल्थ वर्कर कियोस्क में अंदर प्रवेश करने वाले व्यक्ति का बाहर से ही दो इनबिल्ट ग्लब्स में नाक या मुँह से सैंपल ले सकता है। कियोस्क मानव भागीदारी की आवश्यकता के बिना स्वतः संक्रमण रहित हो जाता है। जिससे प्रक्रिया संक्रमण के फैलने से मुक्त हो जाती है।

कियोस्क केबिन की परीक्षण स्क्रीन स्वास्थ्य कर्मी को नमूना लेते समय एयरोसोल/ड्रॉपलेट ट्रांसमिशन से बचाती है। साथ ही मरीज के कियोस्क छोड़ने के बाद कियोस्क केबिन में लगे हुए चार नोजल स्प्रेयर 70 सेकंड की अवधि के लिए कीटाणुनाशक छिड़ककर खाली कक्ष को डिसइंफेक्ट कर देते हैं। यह सिस्टम दो मिनट से भी कम समय में अगले उपयोग के लिए तैयार हो जाता है। कोवसैक में टू-वे कम्युनिकेशन सिस्टम के माध्यम से वॉयस कमांड भी दिया जा सकता है। चिकित्सा कर्मियों की आवश्यकतानुसार कोवसैक को अंदर या बाहर की तरफ से समान रूप से इस्तेमाल करना संभव है। इस कोवसैक की लागत लगभग एक लाख रुपये है और कर्नाटक के बेलगाम स्थित चिन्हित इंडस्ट्री रोजाना इसकी 10 इकाइयां मुहैया कर सकती है। सफल परीक्षण के बाद ऐसे दो कियोस्क को डीआरडीएल ने ईएसआईसी अस्पताल हैदराबाद को सौंप दिया है।

https://www.abplive.com/news/india/drdo-prepares-kovsack-kiosk-to-sample-corona-virus-without-ppeann-1352185/amp

LegendNews

Thu, 16 April 2020

DRDO ने बनाया कोरोना सैंपल कलेक्शन के लिए ऑटोमेटिक Kiosk

नई दिल्ली: कोरोना से लड़ने में DRDO को एक बड़ी कामयाब मिली है, DRDO ने डिवाइस 'सैंपल कलेक्शन करने वाला Kiosk (COVSACK)। दरअसल कोरोनोवायरस महामारी के खिलाफ चल रहे प्रयासों, में रक्षा अनुसंधान और विकास संगठन (डीआरडीओ) ने वैज्ञानिक प्रयासों का उपयोग उत्पादों को त्वरित रूप से विकसित करने के लिए लगातार कर रही है। ऐसे में डीआरडीओ (डिफेंस रिसर्च एंज डेवलपमेंट ऑर्गनाइजेशन) ने सैंपल कलेक्शन कियोस्क

बनाया है। यह देश में पहली बार बना एक ऐसा कियोस्क है, जहां स्वास्थ्यकर्मी बिना पीपीई यानी किट के भी कोरोना संदिग्धों का सैम्पल ले सकते हैं।

डीआरडीओ का इस पर कहना है कि "यह कियोस्क स्वास्थ्य कर्मियों को उन रोगियों से नमूने एकत्र करने में मदद करेगा जो संभवतः संक्रमित हो सकते हैं। नमूने व्यक्तिगत स्वास्थ्य उपकरण (पीपीई) किट पहने बिना भी स्वास्थ्य कर्मियों द्वारा एकत्र किए जा सकते हैं।" गौरतलब है कि COVSACK की लागत



लगभग एक लाख रुपये है। डीआरडीओ ने दो इकाइयों को डिजाइन और विकसित किया है और सफल परीक्षण के बाद इन्हें ईएसआईसी अस्पताल, हैदराबाद को सौंप दिया है।

गौरतलब है कि डीआरडीओ प्रयोगशालाएं विशेष फेस मास्क और व्यक्तिगत सैनिटेशन चैंबर्स के वॉल्यूम उत्पादन के लिए उद्योग भागीदारों के साथ काम कर रही हैं। वहीं अब स्वास्थ्यकर्मियों को कोरोना से बचाने के लिए डीआरडीओ को यह एक बड़ी कामयाबी मिली है। दरअसल COVID-19 वायरस अधिकतर कोरोना संक्रमित मरीजों के संपर्क में आने की वजह से फैलता है। जब कभी संक्रमित व्यक्ति के संपर्क में कोई भी आदमी आता है तो वह भी कोरोना से पीड़ित हो जाता है। ऐसे में स्वास्थ्यकर्मी जो मरीज का इलाज या फिर देखभाल कर रहे होते हैं वे सबसे ज्यादा कोरोना से प्रभावित होते हैं।

सैंपल कलेक्शन करने वाला Kiosk (COVSACK) कैसे करता है काम ?

Kiosk (COVSACK) को इस तरह से डिजाइन किया गया है कि इसे मानव निर्मित हस्तक्षेप के बिना स्वचालित रूप से डिसइन्फेक्ट किया जा सकता है, यानी ये ऑटोमेटिक है। इसकी अंतर्निर्मित सुविधाओं की मदद से बिना किसी इंसानी मदद से ये चलता रहेगा। इसके अलावा नमूने लेते समय चिकित्साकर्मियों को पीपीई पहनने की कोई आवश्यकता नहीं होगी। ये चेंबर ऐसे बनाया गया है कि स्वास्थ्यकर्मी बाहर से संदिग्ध मरीज का सैम्पल ले सकते हैं। इसमें मरीज चेम्बर के अंदर जाता है और स्वास्थ्य कर्मी बाहर रहता है। साथ ही इसमें मरीज से बात करने के लिये कॉम्युनिकेशन सिस्टम बनाया गया है। इसकी शील्ड स्क्रीन मरीज के ऐरो सोलोस से स्वास्थ्यकर्मी को बचाती है जब वो सैम्पल ले रहे होते हैं। साथ ही आटोमेटिक तौर पर कियोस्क में ही बने सप्रयर्स और यूवी लाइट की मदद से सेनेटाइज हो जाता है। इनमें डिसइन्फेक्ट घोल और पानी का छिड़काव करने वाले इन-बिल्ट स्प्रेर्स की मदद से इसे स्वचालित रूप से डिसइन्फेक्ट किया जा सकता है। इसके बाद यूवी लाइट के माध्यम से कीटाणुशोधन किया जाता है। इसमे हर दो मिनट के बाद एक मरीज का सैम्पल लिया जा सकता है। इसका इस्तेमाल कोरोना के लिये बने अस्पताल में शुरू हो चुका है।

http://legendnews.in/drdo-creates-automatic-kiosk-for-corona-sample-collection/

THE ASIAN AGE

Thu, 16 April 2020

DRDO develops COVID sample collection kiosk which protects health and sanitation workers from possible infection

Healthcare workers can collect samples from outside a booth, protected by a screen from the potential carrier of the contagion inside By Aksheev Thakur

The Defence Research Development Organisation (DRDO) has developed a COVID Sample Collection Kiosk (COVSACK) to enable health care workers to collect samples for testing from persons suspected to have been infected, without coming into direct contact with them.

Covsack does away with the need for health workers to wear Personal Protective Equipment (PPE) while collecting oral samples of people coming in for Covid testing.

The Kiosk is designed for automatic disinfection, once again eliminating the need for human personnel from coming in contact with a possibly contaminated environment. Sprayers with disinfectant solution, water and UV lights are used to sanitise the booth.

How it Works

A person who arrives for testing enters the kiosk from where their oral oral swabs are collected by healthcare workers

outside the chamber. A screen protects the healthcare worker from droplets that might be emitted by the breath, cough or sneeze of a potential carrier of the contagion.

The auto-disinfection sprayers mounted in the kiosk spray 1% sodium hypochlorite solution for a period of 1 minute to sanitise the walls, gloves and insides of the chamber, after the person being tested exits. The automated system then flushes the cabin with water from the inbuilt sprayers after which it disperses UV light to complete the disinfection process.

After this, the next person is allowed in for sample collection.

<u>https://www.asianage.com/technology/in-other-news/150420/drdo-develops-covid-sample-collection-kiosk-which-protects-health-and-sanitation-workers-from-possible-infection.html</u>



THE TIMES OF INDIA

Thu, 16 April 2020

DRDO develops Covid-19 sample collection kiosk to help healthcare workers

New Delhi: Stepping up its efforts to fight coronavirus, Defence Research & Development Laboratory (DRDL), Hyderabad has developed COVID Sample Collection Kiosk (COVSACK) for healthcare professionals. This initiative comes after DRDO recently announced that it is making bio suits with a special sealant used in submarine applications for healthcare workers and also tweaked fire fighting equipment into machines to spray disinfectants to sanitise roads and other surfaces.

As far as the kiosk is concerned, the unit has been developed by DRDL in consultation with the doctors of Employees' State Insurance Corporation (ESIC), Hyderabad. The COVSACK kiosk will be used by healthcare workers for taking COVID-19 samples from suspected infected patients. Patient under test walks into the Kiosk and a nasal or oral swab is taken by a health care professional from outside through the built in gloves.

The kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread. The shielding screen of the kiosk cabin protects the health care worker from the aerosols/droplet transmission while taking the sample. This reduces the requirements of PPE change by health care workers.

After the patient leaves the Kiosk, four nozzle sprayers mounted in the kiosk cabin disinfect the empty chamber by spraying disinfectant mist for a period of 70 seconds. It is further flushed with water & UV light disinfection.

"The system is ready for next use in less than two minutes. Voice command can be given through a two-way communication system integrated with the COVSACK. It is possible to configure COVSACK to be used either from inside or outside as required by the medical professionals," as per a press release.

These kiosks cost nearly Rs 1 lakh and the identified industry based at Belgaum, Karnataka can support 10 units per day. The DRDO has designed and developed two units and handed over these to ESIC Hospital, Hyderabad after successful testing.

<u>https://timesofindia.indiatimes.com/gadgets-news/drdo-develops-covid-19-sample-collection-kiosk-</u> to-help-healthcare-workers/articleshow/75154468.cms

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REPUBLICWORLD.COM

Thu, 16 April 2020

DRDO develops unique Covid-19 testing kiosk which does not require PPEs; Details here

DRDO has developed the first-of-its-kind machinery for COVID-19 sample collection which eliminates the use of PPEs and the risk of doctors getting infected By Gloria Methri

Mumbai: The Defence Research and Development Organization (DRDO) in Hyderabad has developed the first-of-its-kind machinery for COVID-19 sample collection which eliminates the use of PPEs with no physical contact between patients and doctors and the risk of doctors getting infected. The device is known as 'Covsack'. Taking a cue from the machinery used for titanium wielding of missiles, the DRDO developed the state-of-art device within three days of time.

How Does the Device Work?

Speaking exclusively to Republic TV, Dr Doshi explained the mechanism of this unique product.

"It has a state-of-the-art system in the product. The patient can enter the machinery the doctor can take the blood samples from outside using the gloves. There is a mic for communicating with the patient, and a light system for focusing. The device is air-tight and ensures no leakage of the virus," the DRDO official said.

It takes only 10 to 15 minutes to test a patient and the machine sanitises automatically using chemical sprays and water pipelines after the patient exits. Within 60 to 70 seconds, the device is ready for the next test, he added.

The DRDO is set to conduct a demonstration, following which it will begin the manufacturing process in full swing. Currently, the Organisation based in Hyderabad holds the manufacturing capacity of 10 devices per day and they are trying to ramp up the capacity to deliver more products to hospitals.

As the country is facing a shortage of PPE kits for all health workers treating COVID-19 patients, this machinery will be a massive help in ensuring the safety and protecting of medical professionals.

<u>https://www.republicworld.com/india-news/general-news/drdo-develops-unique-covid-19-testing-kiosk-which-does-not-require-ppe.html</u>



Thu, 16 April 2020

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After the patient leaves the Kiosk, four nozzle sprayers mounted in the kiosk cabin disinfect the empty chamber by spraying disinfectant mist for a period of 70 seconds. It is further flushed with water & UV light disinfection.

"The system is ready for next use in less than two minutes. Voice command can be given through a two-way communication system integrated with the COVSACK. It is possible to configure COVSACK to be used either from inside or outside as required by the medical professionals," as per a press release. These kiosks cost nearly Rs 1 lakh and the identified industry based at Belgaum, Karnataka can support 10 units per day. The DRDO has designed and developed two units and handed over these to ESIC Hospital, Hyderabad after successful testing.

https://www.gadgetsnow.com/tech-news/drdo-develops-covid-19-sample-collection-kiosk-to-helphealthcare-workers/articleshow/75154592.cms

THE ECONOMIC TIMES

Thu, 16 April 2020

Tens of thousands of Chinese PPE kits fail India safety test

India continues to see a shortfall in the availability of personal protection equipment (PPE) for healthcare even as the government significantly ramps up domestic production and some kits from China failed quality tests By Teena Thacker, Anandita Singh Mankotia

New Delhi: India continues to see a shortfall in the availability of personal protection equipment (PPE) for healthcare even as the government significantly ramps up domestic production and some kits from China failed quality tests. Many kits made in China, the world's main supplier, that were donated to the Indian government, were found unusable because they failed safety checks, a person aware of the matter told ET. Of 170,000 PPE kits that arrived in India on April 5, about 50,000 failed quality test.

"Two small consignments with 30,000 and 10,000 PPE kits, too, failed tests," the person said.

The kits were tested at the Defence Research & Development Organisation laboratory in Gwalior. While government officials said they are procuring CE/FDAcertified PPE kits only, some consignments received as donations failed the quality tests and cannot be used. "Kits that are not FDA/ CE-approved have to pass quality tests in India," the person said.

Consignments that failed the quality tests are those received as donations from big private companies in India, the person said, without identifying the donors.

To meet the shortfall, an order for an additional 1 million suits has been placed through traders, including a Singaporean company, people with knowledge of the plan said. However, all suits will be sourced from China only.

"By the end of May first week, we should have these suits. More orders are being placed," they said. The government estimates India will



be in a comfortable position if it had 2 million PPE suits. Government officials said there is no need to panic.

"The number of orders being placed is growing. China is the major supplier. We were totally dependent on imports earlier and never expected that there would be a surge in demand," a senior government official said, adding that domestic manufacturing is ramping up, too.

"Domestic PPE production has increased to 30,000 kits a day, hitting the target a week earlier than scheduled, and is expected to touch 50,000 by the end of the month. Cumulatively, we have produced over 150,000 suits and should be able to manufacture an additional 100,000 by the weekend," the people said.

India has been procuring additional machines needed to manufacture the suits. "Another 30 hot air seam sealing machines will soon be sourced," an official said, Meanwhile, PTI reported on Wednesday that China has asked all the countries to import these items through reputed Chinese firms cleared by the government and vowed to punish those involved in counterfeit behaviour.

<u>https://economictimes.indiatimes.com/industry/healthcare/biotech/tens-of-thousands-of-chinese-ppe-kits-fail-india-safety-test/articleshow/75171817.cms?from=mdr</u>

BUSINESS INSIDER INDIA

Thu, 16 April 2020

After 50,000 PPE kits from China fail quality tests, India ramps up in-house production

By Prerna Sindwani

- India needs over a lakh PPE (Personal Protective Equipment) kits per day.
- The country placed orders for 15 million PPE kits, including rapid testing kits from China.
- However, of the 1.7 lakh kits imported on April 5, nearly 50,000 failed the quality tests as per Indian standards, according to an ET report.
- The in-house production of PPE kits has also gone up to 30,000 per day.
- A Reuters report said that India needs at least 38 million masks and 6.2 million PPEs to fight the global pandemic.

India needs over a lakh PPE (Personal Protective Equipment) kits per day but has an acute shortage of these kits — including N-95 masks, head covers and glasses. Even the medical staff is low on masks and suits that could save them from Coronavirus infection.

A Reuters report said that India needs at least 38 million masks and 6.2 million PPEs to fight the global pandemic.

The government has ramped up the domestic production roping in the textile industry to prepare masks. It also ordered 15 million export orders of PPE kits — including the rapid testing kits from China.

50,000 PPE kits from China failed the quality tests

However, as many as 50,000 PPE kits from China failed the quality tests as per Indian standards, according to an ET report. These were from the April 5 lot of 170,000 PPE kits imported. The report said that the equipment and kits supplied to India were of no use since it failed the safety checks at the Defence Research & Development Organisation (DRDO) laboratory in Gwalior.

"Two small consignments with 30,000 and 10,000 PPE kits, too, failed tests," ET reported citing sources.

China has already been facing criticism from the European countries over the quality of equipment exported. This may be attributed to surge in the global demand for equipment amid the Coronavirus concerns.

India to import PPE kits from South-Asian countries

India has now shifted the focus to other South-Asian countries for imports. "A Singapore-based online platform has been identified which can supply 10 lakh PPE kits and an order has been placed through the Ministry of External Affairs to procure them. Another supplier-based in Korea, who has tie-ups with production companies in Vietnam and Turkey has been identified with daily production capacity of over 1 lakh PPE kits. Orders are being placed on this company through MEA for supplying 20 lakh PPE kits," Ministry officials reportedly said.

"By the end of May first week, we should have these suits. More orders are being placed," the government officials said. In fact, the in-house production of PPE kits went up to 30,000 per day.

A shortage of these kits are being felt across the world as countries close borders and India relies heavily on imports.

"The shortage of PPE was there, because the raw material was always imported from other countries. But the government has addressed the issue by looping in the textile workers," said Gautam Bhansali, member of Maharashtra's state taskforce for Coronavirus.

<u>https://www.businessinsider.in/india/news/after-50000-ppe-kits-from-china-fail-quality-tests-india-ramps-up-in-house-production/articleshow/75173170.cms</u>



50 years

Thu, 16 April 2020

Covid-19: Railways plans to produce over 1.3 lakh coveralls for healthcare personnel by May-end

New Delhi: The Railways will produce over 30,000 coveralls for COVID-19 healthcare personnel this month and it plans to manufacture 1 lakh more of the personal protective equipment (PPE) in May, the national transporter said on Wednesday.

The prototype of the coveralls -- one-piece protective garments -- has been cleared with the highest grades by the DRDO's authorised laboratory in Gwalior after prescribed tests, it said.

"Production units, workshops and field units have started manufacturing the personal protective equipment coveralls for medical and healthcare personnel who get directly exposed to the COVID-19 disease when working amongst infected patients," the Railways said in a statement.

"The Indian Railways will produce over 30,000 such coveralls in April 2020 and plans to manufacture 1,00,000 of the same in May 2020," it said.

The Jagadhari Workshop of the Northern Railways had taken the initiative to design and manufacture the prototype of the coverall, the statement said.

The prototype was tested by the Defence Research Development Establishment Laboratory of the DRDO at Gwalior. This lab is authorised for conducting such tests. It passed all the tests conducted by the DRDE with the highest grades, it said.

"Taking this initiative forward, the Railways has been able to procure and distribute to its workshops and other units sufficient raw material for manufacturing more than 30,000 PPE coveralls in the current month," the national transporter said.

"Production has started and the Railway"s own doctors, the end users of these coveralls, have also been involved in trying out these coveralls as their production is ramped up," it said.

According to Union Health Ministry, the death toll due to the coronavirus rose to 392 while the number of cases in the country climbed to 11,933 on Wednesday.

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

<u>https://www.outlookindia.com/newsscroll/covid19-railways-plans-to-produce-over-13-lakh-coveralls-for-healthcare-personnel-by-mayend/1803502</u>



Thu, 16 April 2020

Railways to make 30K PPE in April, 1 lakh in May to meet demand

New Delhi: With the growing demand for personal protective equipment (PPE) across the country amid the novel coronavirus crisis, the Indian Railways on Wednesday said that it plans to supply 30,000 PPE to medical professionals by April-end.

The national transporter also said that it plans to manufacture one lakh PPE in May.

A Railway Ministry spokesperson said that the production units, workshops and field units have started manufacturing PPE coveralls for healthcare personnel, who get directly exposed to coronavirus while treating infected patients.

"Indian Railways will produce over 30,000 such coveralls in April 2020 and plan to manufacture one lakh in May," the official said.

"In order to fill the gap in availability and requirement of PPE, the Jagadhari workshop of Northern Railway had taken the initiative to design and manufacture the prototype PPE coverall. The prototype was tested by Defence Research Development Establishment (DRDO) Laboratory at Gwalior, authorised for conducting such tests," he said, adding that it had cleared the test with the higest grades.

The official said that Railway doctors, medical professionals, other health workers and caregivers are working tirelessly to fight coronavirus.

He said that as a first line of defence against contracting coronavirus, the health professionals need to be provided with special impervious coverall that acts as a barrier to the virus as well as other disease-carrying fluids.

The official pointed out that taking the initiative forward, Indian Railways has been able to procure and distribute to its workshops and other units sufficient raw material for manufacturing more than 30,000 PPE coveralls in April.

"The production has started and Railway's own doctors, the end-users of these coveralls, have also been involved in trying out these coveralls as their production is ramped up. To meet the growing requirement, Indian Railways have set the target of manufacturing another one lakh PPE coveralls in May and sourcing appropriate raw material has started," he said.

Planning for any future requirement, the Railways has already converted 5,000 coaches into isolation wards for over 80,000 Covid-19 patients.

The 21-day nationwide lockdown from March 24 to April 14 was extended till May 3 by Prime Minister Narendra Modi to combat the spread of the pandemic.

The Railways has also extended the suspension of passenger, mail and express train services till May 3 and also stopped passenger bookings until further orders.

http://www.daijiworld.com/news/newsDisplay.aspx?newsID=696911



Thu, 16 April 2020

Railways to produce over 30,000 PPE coveralls in April; 1 lakh by May

New Delhi: Indian Railways production units, workshops and field units have started manufacturing Personal Protective Equipment (PPE) Coveralls for medical and healthcare personnel who get directly exposed to the COVID-19 disease when working amongst infected patients.

"Indian Railways will produce over 30,000 such coveralls in April 2020 and plan to manufacture 1,00,000 of the same in May 2020. The prototype coveralls have already cleared the prescribed tests with the highest grades at the authorised DRDO laboratory at Gwalior," said the Ministry of Railways in a statement.

Jagadhari Workshop of Northern Railway had taken the initiative to design and manufacture a prototype PPE coverall. The prototype coverall was tested by Defence Research Development Establishment Laboratory of DRDO at Gwalior, authorised for conducting such tests.

The coverall samples passed all the tests conducted by DRDE with the highest grades, the Ministry informed.

Railways have been able to procure and distribute to its workshops and other units sufficient raw material for manufacturing more than 30,000 PPE coveralls in the current month (April 2020). Production has been started and Indian Railway's own doctors, the end users of these coveralls, have also been involved in trying out these coveralls as their production is ramped up.

The Civil Aviation Ministry on Tuesday said all international and domestic commercial passenger flights will remain suspended till midnight of May 3. Suspension of Railway passenger services is extended till May 3, freight movement to continue.

Railways have set the target of manufacturing another 1,00,000 PPE coveralls in May, and sourcing of appropriate raw material has started. "All this has been done despite there being a major global shortage of appropriate raw material as well as machinery for manufacturing PPE coveralls. Behind this endeavour is the timetested capability of Indian Railway's workshops and Production Units of manufacturing and maintaining some of the safest railway rolling stock in the world. The same capabilities, expertise, protocols and procedures usually followed for design, manufacturing and use of rolling stock, have been utilised for enabling field units and workshops to start manufacturing high quality PPE coveralls so rapidly," the Ministry informed in the statement.

A day after Prime Minister Narendra Modi announced the extension of lockdown, the central government on Wednesday issued a detailed set of guidelines to be followed till May 3.

Indian Railways' Doctors, Medical Professionals, other health workers and care-givers are working tirelessly fighting the COVID-19 disease. All these personnel are directly exposed to the COVID-19 disease when working amongst infected patients. As a first line of defence against contracting the novel Coronavirus, they need to be provided with a special kind of impervious coverall that acts as a barrier to the virus as well as other disease carrying fluids.

The Railways has also extended the suspension of passenger, mail and express train services till May 3 and also stopped passenger bookings until further orders. The 21-day nationwide lockdown from March 24 to April 14 was extended till May 3 by Prime Minister Narendra Modi to combat the spread of the pandemic.

<u>https://punemirror.indiatimes.com/news/india/man-in-bhopal-accidentally-drinks-acid-stored-in-a-beer-bottle-dies/articleshow/75161670.cms</u>



Wed, 15 April 2020

Indian Navy wants feasibility study to see if P-8I can be armed with Long-Range Cruise Missiles

Armed with just lightweight air-launched Mk 54 torpedoes and Harpoon Block II anti-ship missiles, India's P-8I long-range maritime reconnaissance aircraft fleet being built and integrated by Boeing in future will get major offensive firepower as it plans to get an air-launched variant of Long-Range Land Attack Cruise Missile (LRLACM) developed by India based on India's first home-grown subsonic cruise missile, Nirbhay, integrated into the platform if it gets clearance after conducting feasibility studies.

Aeronautical Development Establishment (ADE) is developing an air-launched variant of LRLACM with sea-skimming capabilities both for the Air force and Navy. LRLACM with a range of over 1000 km has been planned for both Air force and Naval Aircrafts. Indian Navy will be getting four additional P-8I long-range maritime reconnaissance aircraft in May and has been

cleared to procure six more at a later stage which will take the total fleet to 18.

P-8I is equipped with radar, optical and sonar sensors, and it is armed with anti-ship missiles and torpedoes. It's designed to patrol the oceans to detect and attack threats including hostile submarines capable of firing off nuclear missiles. P-8I can carry 126 sonobuoys internally, four Boeing AGM-84 Harpoon anti-ship missiles on hard points beneath its wing and Mk 54 lightweight hybrid torpedoes within an internal bomb bay.

Internal weapons bay located at the rear of the P-8I are capable of accommodating Mk-54



AGM-84K SLAM-ER missile on a P-8A Poseidon at Naval Air Station Jacksonville in Florida

torpedoes, Mark 82 depth charges for ASW operations, Mines, Sonar buoys and Survival Gear and are not designed to carry long-range cruise missiles like LRLACM. Since P-8I is constructed from a 737-800 commercial airliner's air frame, so it is also not possible to slung under the belly a cruise missile due to lower ground clearance space.

P-8I has four under wing hard-points for AGM-84D Harpoon and, likely, the existing wing hard points will likely be used to carry LRLACM in future which will require some feasibility studies which will come in handy from studies done by the Boeing which is has been made in charge of similar program for the P-8A Poseidon under commands of US Naval Air Systems Command (NAVAIR) to arm them with Long Range Anti-Ship Missiles or American origins.

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https://idrw.org/indian-navy-wants-feasibility-study-to-see-if-p-8i-can-be-armed-with-long-rangecruise-missiles/#more-225300