



'NavRakshak PPE' has won the best innovation award in recently concluded tri-services (Army, Navy & Air Force) 'Innovation Hackathon' during **Armed Forces Medical Research Conference 2021 at Armed Forces Medical College, Pune**. Out of several innovation entries from the armed forces Medical personnel, NavRakshak could qualify the stringent criteria of a complete innovation. NavRakshak is the **first Trademark Brand** of the Tri-services which has been invented by **Surg Cdr Arnab Ghosh**, a physician of Indian Navy at Institute of Naval Medicine, in collaboration with Naval Dockyard, Mumbai.



Since the early phases of Covid 19 pandemic NavRakshak played a crucial role in the fight against Covid-19 in this country. Being a breathable PPE with **highest SBPRT score** (protection parameter) it was comfortable to wear, being an un-taped and uncoated PPE, it did not require seam sealing machines and it was easy for MSMEs to manufacture it in bulk with small investments. It was totally a Make-in-India product. It has served the country with its innovative fabric, design and wide availability. It is available in GeM, Amazon, Flipkart and other popular e-commerce sites. The principal innovator of NavRakshak PPE was felicitated in the above conference for winning the innovation Contest.

Key Features of 'NAVRAKSHAK' PPE

- Excellent Breathability hence comfortable to use for extended working hours.
- Design, Concept and Technology meet 'Made-in-India' (self-Reliance program of Government of India) campaign criteria. NavRakshak placed India in a Global map for producing its own kind or type of PPE.
- 'NavRakshak' PPE is made of superior quality SSMMS fabric which passed the synthetic blood penetration resistance test from Institute of Nuclear Medicine and Allied Sciences (INMAS), DRDO by scoring highest (6/6 equivalent to 20 kPa pressure).
- Because of extreme hydrophobicity it passes the SBPRT with the highest score.

- A patent has been filed by the Indian Navy through Intellectual Property Facilitation Cell (IPFC), Ministry of Defence (MoD) for NavRakshak.
- Due to its simple yet innovative stitching technique this PPE can be manufactured with basic tailoring machines which will boost up the MSME industries.
- The technology has been transferred to 06 vendors across the country through National Research Development Corporation (NRDC).
- The Trademark name of the innovation is 'NavRakshak', developed by Indian Navy facilitated by NRDC, a Govt. of India Enterprise has been registered.
- Being Non-Woven without any Polymer coating or **Plasticized** tapes, they are Environment-Friendly unlike other variants which are with Plastics which are not Bio degradable hence detrimental to the Environment and a huge burden to the nation's economy in the long run.
- NavRakshak PPE can be purchased by the following links of GeM. In other sites one can search with the brand name.

<https://mkp.gem.gov.in/safety-apparel-navrakshak-personal-protection-equipment-ppe-kit-defense-/search#/?q=NavRakshak>

Following are the OEMs of NavRakshak.

List of NRDC Licensees of NavRakshak PPE Suit					
S.No.	Company Name	City	Contact Person	Email	Mobile
1	Greenfield Vintrade Pvt Ltd (Mahanadi Group)	24/97, Jessore Road No. 1, Motilal Colony, Airport Gate, Dum Dum, Kolkata - 700028	Mr. Tanumay Paul, Sanjay Singh	tanmay@mahanadigroup.com , kolkatasanjaysingh@gmail.com	9836117444, 9143255533
2	Vaishnavi Global Pvt Ltd	C-1, Orchid Enclave, JB Nagar, Andheri (East), Mumbai- 400059	Mr. Rishi Rajkumar Mehra (Director)	rishi@vgpl.in , arvind@vgpl.in , vaishnaviglobal@gmail.com	9821186773
3	Bharat Silks Pvt Ltd	526/01, S R Compound, 1st Main, B G Road, Bangalore- 560076	Mr Dinmani Goenka	gowrisankarK@bharatsilks.com , dinmaniG@bharatsilks.com	9886022240, 9886299946
4	SureSafety(India) Ltd	42, A/B, Yoginagar Township, Channi Road, Vadodara-391740	Mr Sushil Behl(Director-Strategic Advisory Board)	sushil@suresafety.com	9825063176
5	Swaps Couture	Unit 161, 5B Sanjay Building, Mittal Industrial Estate,	Ms Swapnila K Purecha	swapnila@swapsco.com	9833051446
6	Indian Garment Company	Plot No. 5,6,25,26, First Floor (Above Easyday), New Shivaji Nagar, Shahganj, Agra-282010	Mr. R K Nayyar	agraigc@gmail.com	9760008189



NAVRAKSHAK PPE

A Breathable, Uncoated and Untapped PPE



Inventor: Surg Cdr Arnab Ghosh

**MBBS, MD (Gold Medallist), DNB, MNAMS (Medicine),
WIPO Certified- Essentials of Patents & PCT,
Certified Spl-Indian Biomedical Skill Consortium**

Unit: Technology Development Acceleration Cell, IHQ MoD (Navy)



69TH ARMED FORCES MEDICAL RESEARCH CONFERENCE 2021

- **Hackathon 2021:** 30 sort-listed entries from Tri-services.
- Only one Invention cleared all the selection criteria set by a jury of 6 members.
- 1st prize in AFMRC declared by DGAFMS on 03 Feb 2021.
- Surg Cdr Arnab Ghosh won the best Innovation Award 2021 in the session 'Avishkar 2021' for inventing a breathable PPE which completed the entire innovation journey from idea to prototype in just 2 months. It is the first patent-applied product called NavRakshak PPE (in the history of tri-services) which underwent full commercialisation and gave all the healthcare workers of the country a new life. It has been procured by various Govt and private organisations in bulk.
- This is for the 4th consecutive time Surg Cdr Arnab Ghosh has won the innovation hackathon organised by the Armed Forces Medical Services.
- 03 consecutive wins in the innovation since the inception of contest '**Avishkar**' during AFMRC **by Surg Cdr Arnab Ghosh.**