An enterprise of DSIR, Ministry of Science and Technology, Govt. of India, NRDC Licenses NavRakshak PPE Suit Manufacturing Know-how to Five MSMEs Developed by Indian Navy

- National Research Development Corporation (NRDC) has licensed the manufacturing know-how of a PPE Suit being named as NavRakshak to five MSMEs to meet the ongoing country wide demand of quality PPE kits.
- These five manufacturers put together are planning to mass produce more than 10 million PPEs per year.
- The manufacturing know-how of NavRakshak PPE has been developed at the Innovation Cell of the Institute of Naval Medicine, INHS Asvini Hospital (Mumbai) of the Indian Navy from where the name ‘NavRakshak’ is derived.
- The PPE has been tested and certified at the INMAS, DRDO which is one of the nine NABL accredited labs authorised by Ministry of Textile currently in India for PPE prototype sample testing as per the prevailing ISO standards and Ministry of Health & Family Welfare/Ministry of Textile guidelines and has been found to meet the synthetic blood penetration resistance criteria for both the fabric, suit, and seam.

Advantages of NavRakshak

- It is cost effective as it does not require any major capital investment and can be adopted even by gown manufacturing units using basic stitching expertise.
- The technology and quality of fabric is so superior that there is no need of sealing around the seam of the PPE suit, thus eliminating the need of importing costly sealing machines and tapes.
- The PPE fabric even does not require any lamination with polymer or plastic-like film.
- This enables the PPE to permeate heat and moisture from the skin of the user.
- It gives protection but does not compromise on comfort.
- This uniqueness of the PPE makes it way different from the existing PPEs which are being used during the ongoing COVID pandemic.
- The PPE suit is available in single-ply as well as double-ply versions as per the need of the end use conditions.
- It also comes with a head gear; face mask and shoe cover up to the mid-thigh level.
- NavRakshak has been designed by a Naval doctor incorporating personal experience in using the PPE for the comfort and protection of the doctors.
- The enhanced breathability factor in the PPE suit makes it an attractive proposition to be used by the frontline health workers who are required to wear these suits for long hours and face extreme discomfort while working.
- Since the concept of using uncoated, unlaminated or untapped PPE has been provided for the first time, and using such PPE was not practised at all, there was a need to protect the IP rights of this innovation.
- A patent application has been filed for the NavRakshak PPE by the inventors through NRDC.
- This technology can resolve many issues at one go.
- It makes manufacturing easy without requiring big capital investment.
- It does not require coating and taping related equipment.
- Therefore, foreign import and costly machines are not required.
- It gives protection as well as comfort to the user.
Above all, it gives self-sustainability to the country.