Durable prefabricated isolation centre cum hospital facility inaugurated

New Delhi, Nov 04 (India Science Wire): The outbreak of COVID-19 pandemic has paved way for the establishment, development and enhancement of many health facilities. In this array, the Council of Scientific and Industrial research (CSIR) constituent laboratory, namely CSIR-Structural Engineering Research Centre (CSIR-SERC) worked on the concept of a make-shift hospital and made modifications to its post-disaster shelter design.

Dr Harsh Vardhan, Minister of Science and Technology, Minister of Health and Family Welfare and Minister of Earth Sciences inaugurated the ‘Prefabricated Isolation Centre for COVID19’ and dedicated it to 04 Bn National Disaster Response Force (NDRF) campus Arakkonam, Tamil Nadu, in a modular form. CSIR-SERC and NDRF worked together with synergy and completed the assembly of the structure within a short time. Later on 04 BN NDRF Arakkonam has completed the furnishing of the hospital.

The laboratory introduced a foldable and framed steel structure, such that a single person can carry a couple of frames on his shoulder and assemble these at any site without much loss of time. Towards achieving a high technology readiness level, it was decided that CSIR-SERC shall demonstrate the concept of this make-shift hospital through setting up of a 10-bedded facility.

The system at Arakkonam is designed to have features like rapid erection, foldable, light in weight, safe, comfortable, economical, re-buildability, with adequate thermal insulation and waterproofing feature and make use of locally available skills.

The prefabricated frames structure is made of steel. The structure is divided into lighter sizes which can be easily handled, assembled and transported to remote sites of India even by head load. If a larger space is required more bays can be added. A two bay shelter can be erected at site in one day with complete cladding by two skilled fitters, one semiskilled helper and the help of the beneficiaries.

These pre-fabricated makeshift hospital structures not only excel in rapid installation with minimum assistance and equipment but are also easy to store and transport, cost-effective, extendable. The additional features include anti-ultraviolet nature to protect the people from harmful U-V rays, multipurpose usage of space, high structural performance and construction from water and wind resistance, fire retardant, durability, renewable and anti-bacterial materials.

The Disaster Management authorities can keep such frame shelters ready and transport them to the site of a disaster for an immediate need in different states. By modularly adding more bays, shelters can be constructed for medical teams, godowns, schools, rest houses and also tourist huts in peacetime. (India Science Wire)

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