

FOLDED TRC PANELS FOR BOUNDARY WALLS

An indigenous prefabrication technology that can transform the boundary wall sector

The boundary wall sector is experiencing huge demand from infrastructure projects, agricultural sector, fencing for public facilities and parks, etc. For boundary walls sector, innovative materials that enhances durability at low-cost is the need of the day. Textile reinforced concrete (TRC) is an ideal material due to its advantages such as durability, light-weight, mass production, precast nature and easy transportability. CSIR-Structural Engineering Research Centre (CSIR-SERC), Chennai has developed folded TRC boundary walls that can achieve 30% reduction in overall cost.

FEATURES / HIGHLIGHTS

- First of its kind application that uses TRC
- Prefabrication method for folded TRC panel production rate is 32m²/hr
- Low weight to strength ratio of folded TRC panel is 0.84
- Easy to fabricate and install; non-corrosive and highly durable
- Reduction in cement consumption and unit weight of reinforcement
- Suitable for mass production at factories and sites
- Make in India - effective substitute for present technology



Flexure test on folded TRC fence panels



Demonstration of field implementation

TECHNICAL DETAILS

- Folded TRC panel consists of a cementitious binder and layers of alkali resistant glass textiles as reinforcement
- Folded TRC panels are available in 2m and 1m length specifications. They can be easily inserted to concrete post with groove
- Pre-fabricated folded TRC panels developed and validated under static load at laboratory level towards boundary wall construction applications

APPLICATIONS

- Boundary walls for highway, residential and infrastructure projects
- Fencing in agricultural sector and to protect livestock; fencing for protecting public facilities and parks



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