What is CFCC Grid??

“CFCC Grid” is a grid type concrete reinforcement which is made of CFCC*.
CFCC is ideal as reinforcement for concrete structure in salt water area because of its characteristics of high corrosion resistance, lightweight, and high tensile strength.

* “CFCC” stands for Carbon Fiber Composite Cable.
* CFCC U 5mm dia. is normally used for CFCC grids.
* CFCC U is a rod type CFRP which consists of twisted carbon fibers and a matrix resin.
**High Corrosion Resistance**  
CFCC is corrosion free, and has superior acid and alkali resistance. Consequently, even in the salt water areas, there is no need to make thicker concrete covers in concrete constructions.

**Lightweight**  
CFCC’s specific gravity is 1/5 of steel. It enables workers to transport and cut CFCC easily and to carry out the construction with no effort at any field.

**High Tensile Strength**  
CFCC’s tensile strength is double of steel reinforcement bars.

<table>
<thead>
<tr>
<th>Diameter of CFCC</th>
<th>Spacing ℓ mm</th>
<th>Extension a mm</th>
<th>Cross-sectional area of CFCC mm²</th>
<th>Tensile capacity of CFCC kN/pc</th>
<th>Modulus of tensile elasticity of CFCC kN/mm²</th>
<th>Unit weight of CFCC g/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>Arbitrary length</td>
<td>Arbitrary length</td>
<td>15.2</td>
<td>38</td>
<td>167</td>
<td>30</td>
</tr>
</tbody>
</table>

**Example of Applications**

- CFCC can be used as a shoe seat mortal reinforcement member. In the case of shoe seat mortal, it may be difficult to secure a thick concrete cover, and you may be worried about rust in future. Applying CFCC grids instead of steel grids solves this problem.
- CFCC can be used as reinforcement for the mouth of concrete structures. To control cracks at the mouth or the corner of a concrete structure, reinforcing the concrete cover by CFCC is the best solution.

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**Example of Countermeasure for Salt Damages at the Shoe Seat Mortal**

-Shoe seat mortal
-Main beam
-Bearing shoe
-CFCC Grid
-Pier

Example of Countermeasure for Salt Damages at the Shoe Seat Mortal