

Dar El Salam Hospital (Hermil)

Project:

Renovation of Dar El Salm Hospital using the MBrace FRP System

Location:

Cairo

Project completion:

2010

Owner/s:

Ministry of Health and Population

Main Contractor:

Arab Contractor – Cairo Branch

Applicator:

Arab Contractor – Bridge Branch– Repair unit

FRP Designer & Consultant:

GS Consultant

Products used:

MasterProtect 2020 (10 ton)

Mbrace 4000 (1500 kg)

Mbrace Laminte 50x1.2 (4000 LM)

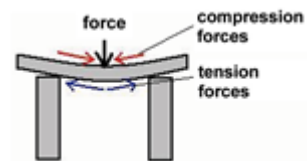


The background

Dar El Salam hospital (Hermail) consists of 5 floors above ground and a basement. It was created with a capacity of 174 beds at a cost of 185 million pounds and stopped working since 3 years because of its violation of the permits and converted the basement which was designed as a parking area to a services area for the hospital as a kitchen and laundry facilities and a pharmacy.

The challenge

The major structural problems of the hospital originate from tensile stresses which occur at different areas on the building due to the usage change of each floor than which it was designed before.



Mbrace Composite Strengthening System



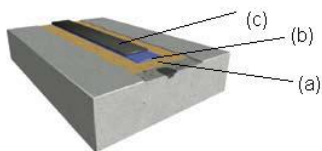
Our solution

The Mbrace FRP composite strengthening system is the Ideal solution for this case as it's provide a high tensile strength and excellent for supplemental flexural and shear reinforcement of concrete slabs and beams.

Mbrace System build-up:

The Mbrace composite system consists of:

- MasterProtect 2020 as a Repairing & leveling Epoxy Mortar
- Mbrace 4000 as an adhesion of carbon laminates
- Mbrace Laminte as a prefabricated composite carbon fiber laminate.



a) Concrete 2100
 b) Mbrace Laminte Adhesive
 c) Mbrace Laminte

Mbrace Features and Benefits:

- An increase in load-bearing capacity (e.g. in structural conversion, following a change in load capacity)
- A reduced deflection due to serviceability/ working loads (increase in rigidity/stiffness)
- An increase in structure fatigue strength
- An ability to limit or assist in crack control (increase in durability from chlorides and freeze/thaw)
- An exact amount of reinforcement to be calculated and placed in relation to the performance required or the flow of stress
- Less and faster maintenance, thereby reducing long-term, ongoing costs
- MASTER BUILDERS SOLUTIONS provided the technical and after sales support
- MASTER BUILDERS SOLUTIONS provided the total solution for the client

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