



Project Overview

FRP STRENGTHENING OF CONCRETE SLAB IN MEDICAL CENTER

Name: AZ Rheumatology Associates
Type: Health Facility
Location: Tucson, Arizona
Completed: April 2009

PROBLEM

The installation of an MRI in a rheumatologic center generated an additional dead load of 4100 lbs. The existing floor system did not have the flexural capacity to withstand these additional loads and needed strengthening. The reinforcement had to occur from the top of the slab as the room below had to stay in service.



SOLUTION

QuakeWrap® FRP Strengthening System was selected since the strengthening could take place while the medical center remained in operation. In order to restrict the affected area to just the filling room, QuakeWrap® uniaxial carbon fabric VU18C was installed on the top face of the slab. The application was designed to transfer the full load of the MRI towards the joists running parallel to the wall. After installation the surface was slightly sanded in order to get a good bond with the cement layer which was consequently applied on the whole floor slab before the MRI installation. The entire project was completed in 4 hours. The nearly odorless QuakeBond™ resin facilitated work inside the operating hospital.



Technical Highlights

- 80 ft² of floor was strengthened to resist a dead load of 4100 lbs due to an MRI
- Strengthening was done from top of slab with minimal disturbance to the hospital operations

Credits

Consultant: Hess Engineering, Tucson, AZ
General Contractor: Pro Imaging, San Diego, CA



“The FRP Retrofit Experts”