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## Emergency repair of masonry of Renocentese Bell Tower, Emilia-Romagna, Italy

During May 2012 the region Emilia-Romagna has suffered due to major earthquake activity. A large number of RC and masonry buildings were in need of emergency repair to prevent collapse. Within the structures more damaged were the bell towers with exposed or plastered bricks.

Fibrwrap provided a design-build solution for emergency repair for the Renocentese Bell Tower so that the residents of nearby properties could return safely to their homes.

After the first phase, which entailed the application of a fiber-reinforced concrete jacket with shotcrete technique at the bottom part of the tower, then a combination of Tyfo® FIBRWRAP® Systems both Glass (SEH) and Carbon (SCH) was used to wrap the lower part of the belltower, in 2 layers, creating this way a sort of vertical and horizontal supporting grid.

Finally the cracks of the masonry wall were repaired by injection of a specially mixed lime based mortar from the inside of the bell tower.

All the works were completed in almost one month and it was possible to secure the area for the residents of the nearby properties.

Project: Emergency repair of masonry of Renocentese Bell Tower, in Italy

Location: Emilia-Romagna, Italy

Client: Comune di Renocentese

**Duration:** 4 weeks

## **Scope of Works:**

Emergency consolidation of masonry bell tower with shot mortar Glass and carbon fabrics at the external brick surface Injection of cracks at the internal side







