

Strengthening of the Frame Structure with carbon fiber wrapp at the Timisoreana Brewery, Romania

Location: Romania

General assessment: The industrial building vertical structure is a spatial frame as detailed given. The foundation system consists of isolated reinforced concrete foundations under columns. The reinforced concrete monolithic floors are made of secondary and main beams and a one-way reinforced slab,

Problem: main problems were local damage of some structural elements and inadequate reinforcement of columns and beams at seismic actions. Local damage was noticed and assessed at slabs, main girders, secondary beams, and columns. The damage consisted of concrete carbonation

Solution: strengthening of existing structural elements and/or the structural system by increasing the strength stiffness and ductility of the weak structural elements.

The column was strengthened at the ground storey by longitudinal carbon fibre polymer composites (CFRP) as on each side of 100 mm width and 1.2 mm thickness. (230 GSM)

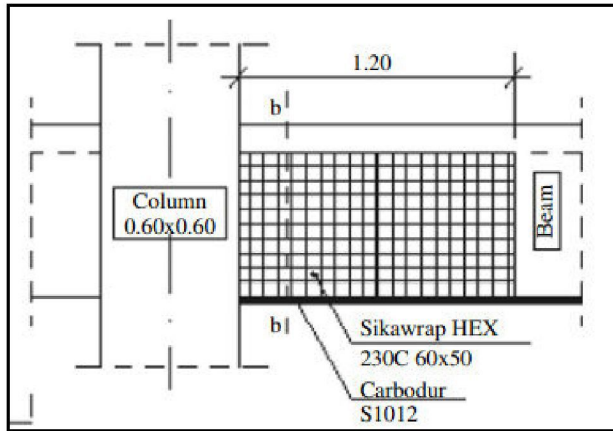
Ref: Case Studies of Rehabilitation, Repair, Retrofitting, and Strengthening of Structures, IABSE, AIPC, IVBH / www.iabse.org



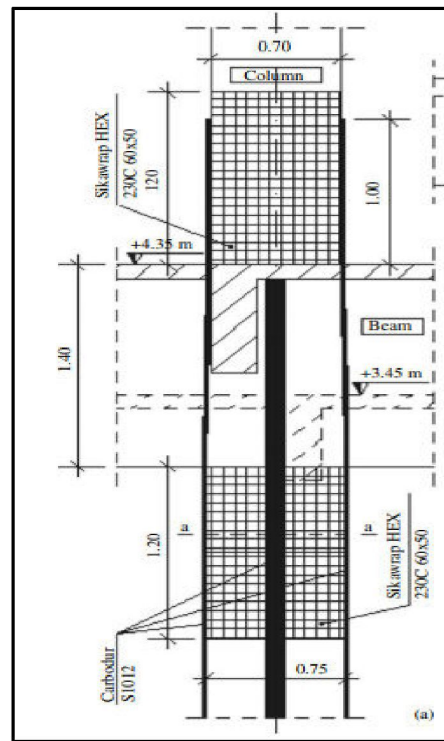
Beam wrapping



column wrapping



Beam Detailing



Column detailing