**Retrofitting of Reinforced Concrete Frames using Steel Bracing**

**Abstract:**

Steel braced frame is one of the structural structures used to face up to earthquake masses in multi-storied buildings. Many present strengthened concrete buildings need to retrofit to overcome the deficiencies to withstand seismic hundreds. The use of steel bracing systems for strengthening or retrofitting seismically inadequate strengthened concrete frames is a viable solution for reinforcing earthquake resistance. Bracing device reduces bending moments and shear forces within the columns. The lateral load is transferred to the foundation via axial action. Overall weight of the existing structure will not alternate appreciably after the software of the bracings. Metal bracing is least expensive, easy to erect, occupies less space and has flexibility to layout for assembly the desired electricity and stiffness. The bracing gadget improves not best the lateral stiffness and power capability however also the displacement capacity of the shape. Inside the present have a look at, the seismic overall performance of strengthened concrete (RC) homes rehabilitated using concentric steel bracing is investigated. The bracing is furnished for peripheral columns. a ten storey constructing is analyzed for seismic zone III as per IS 1893-2002 the usage of ETABS software program. The models are retrofitted with diverse metallic bracing structures on periphery columns storey wise and analyzed for seismic forces. The building is analyzed for models with Diagonal bracing, ‘V’ type bracing, Inverted ‘V’ type bracing, blended ‘V’ kind bracing, ‘X’ kind bracing, ‘k’ type bracing and in comparison with an un braced frame. The effectiveness of numerous forms of metallic bracing in rehabilitating a 10 storey constructing is tested. The impact of the distribution of the metallic bracing alongside the peak of the RC frame at the seismic performance of the rehabilitated building is studied. The principle parameters on this examine to examine the seismic analysis of homes are lateral displacement, storey go with the flow, axial forces inside the columns, Base shear. The percentage reduction in lateral displacement is observed out. It's far found that the ‘X’ sort of metal bracing extensively contributes to the structural stiffness and reduces the maximum storey drifts of the frames. The bracing systems enhance now not simplest the lateral stiffness however also the displacement capacity of the shape.