Design Modification of Surabaya’s Trillium Building Using Steel-Concrete Composite Beam

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Abstract

Trillium Building is 35 storeys, the actual building was designed using reinforced concrete but for comparison study this building is now modified by using steel-concrete composite. The benefit of this composite design is less steel, smaller the beam section, the stiffness of the floor could be increased, the beam could support a longer span, the capacity to loads increasing.

In this final project will recover redesigning with steel-concrete composite structure. Include in this redesign was slab, stairs, concrete roof, secondary beam, primary beam, column and foundation, The design of this building structure uses Dual System, Ordinary Moment Resisting Frame (OMRF) and Concentric Braced Frame type Inverted V Braced.

The purpose of this final project is to make a rationally composite building structure that fulfill safety factor by SNI 03-2847-2002, SNI 03-1729-2002, SNI 03-1726-2002, and PPIUG 1983.

Keyword: Trillium Building, Composite, Dual System
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