

Addendum #2 to
SDI Composite Deck Design Handbook (March 1997 edition)
August 2010

Since the publication of this handbook, SDI design recommendations related to moving loads from forklifts has been revised. This Addendum is being provided to alert designers to this change. An updated edition of the handbook is currently being prepared, and these changes will be fully implemented within the updated handbook.

Composite floor deck is not recommended as the only concrete reinforcement for use in applications where the floor is loaded with repeated forklift or similar heavy wheeled traffic. (Forklifts are defined as small powered industrial vehicles with a power operated forked platform in front that can be inserted under loads to lift and move them. The definition of forklifts does not include manually operated “pallet jacks.”) Loading from forklifts includes not only moving gravity loads, but also includes vertical impact loading and in-plane loading effects from starting, stopping, and turning. The repetitive nature of this loading, including impact and in-plane effects are perhaps more detrimental to the slab-deck performance than the gravity loads. Floors subject to forklift traffic should be designed as continuous structural concrete slabs in accordance with ACI 318 requirements, using steel deck as a stay-in-place form only. Due consideration for the stiffness of the supporting framing should be given by the designer.

Composite floor deck has successfully been used in applications that are loaded by occasional “scissor lift” use, and in warehouses with industrial racks without forklift traffic and in areas serviced by “pallet jacks.” Proper analysis and design for moving and point loads must be performed.