

Title (en)
FIRE RESISTANT STEEL-CONCRETE FLOOR STRUCTURE

Title (de)
FEUERBESTÄNDIGE STAHL-BETON-BODEN KONSTRUKTION

Title (fr)
CONSTRUCTION DE DALLE EN ACIER-BÉTON IGNIFUGE

Publication
EP 3102753 B1 20180606 (EN)

Application
EP 14705422 A 20140205

Priority
IB 2014058803 W 20140205

Abstract (en)
[origin: WO2015118379A1] A steel-concrete floor structure (10), designed for having a prescribed fire resistance when exposed to a prescribed fire scenario in a fire compartment immediately below the steel-concrete floor structure (10), comprises horizontally extending structural steel members (12) and a concrete slab (14). In normal operation, these structural steel members (12) have to take the main part of the tensile stresses generated by the bending moment. It further comprises a plurality of tension members (34), each of these tension members (34) horizontally extending through the concrete slab (14) between two anchor points. These anchor points (36, 36', 36'', 36''') are arranged in one or more fire resistant bearing structures (38, 38', 38'') within the fire compartment, and/or in one or more external bearing structures (38'''), so that, when the strength and stiffness of the horizontal structural steel members (12) substantially diminish in the prescribed fire scenario, the tension members (34) extending through the concrete slab (14) are capable of supporting the loaded slab (14) by catenary effect and of limiting the deflection thereof.

IPC 8 full level
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CPC (source: EP)
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