

Title (en)
INTERNALLY-ELECTRIFIED CEMENTITIOUS TILE

Title (de)
INTERN ELEKTRIFIZIERTE ZEMENTARTIGE FLIESE

Title (fr)
TUILE CIMENTAIRE À ELECTRIFICATION INTERNE

Publication
EP 2715007 A1 20140409 (EN)

Application
EP 11770528 A 20110708

Priority
• IT MI20111004 A 20110601
• IT 2011000235 W 20110708

Abstract (en)
[origin: WO2012164593A1] A tile made of precompressed reinforced concrete usable in the covers/roofs of industrial sheds has a wing-like profile and includes at its interior an entire electrical wiring embedded in the concrete for supplying power to the 42 LED lamps in 3-Watt technology, such lamps extremely flat and distributed over its entire length. The lamps are included in rectangular metal ceiling light fixtures comprising a casing incorporated in the concrete coupled to a cover extractable from the intrados equipped with window protected by polycarbonate panel. The sections of cable of the wiring are butted with standard MIL connectors and bring three-phase current at 400 V, 50 Hz, together with two screened pairs of signaling wires. The ceiling light fixture includes a circuit board with the power units, a CPU, two PIR sensors for controlling the starting, and an outlet for maneuvering a remote actuator. The wiring interconnects several rows of tiles by means of a backbone connected to the distribution network and to a management PLC of the plant. The electrified tile is formed in an iron formwork in which the ceiling light fixtures are placed, already completely assembled and mutually connected by means of spiraled sections of cable in order to vary their length. Before installation, each ceiling light fixture is frontally fixed to a magnetized counter-formwork in order to keep it stably in position during and after the casting of the concrete mixture. After the dismantling, the counter-formwork is removed.

IPC 8 full level
E04C 2/52 (2006.01); **F21V 33/00** (2006.01); **H02G 3/36** (2006.01)

CPC (source: EP US)
E04C 2/521 (2013.01 - EP US); **F21V 33/006** (2013.01 - EP); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)
See references of WO 2012164593A1

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