

Title (en)

COMPOSITE CONCRETE ROOF FOR AN OUTER LNG CONTAINMENT TANK AND METHOD OF MAKING THE SAME

Title (de)

VERBUNDBETONDACH FÜR EINEN ÄUSSEREN FLÜSSIGERDAS-SICHERHEITSBEHÄLTER UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TOIT EN BÉTON COMPOSITE POUR UN RÉSERVOIR DE CONFINEMENT DE GAZ NATUREL LIQUÉFIÉ (GNL) ET PROCÉDÉ DE FABRICATION DE CELUI-CI

Publication

EP 2379822 A1 20111026 (EN)

Application

EP 09835654 A 20091217

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Abstract (en)

[origin: US2010154320A1] A method for constructing a composite concrete roof on an outer LNG containment tank is disclosed. The roof includes a roof assembly and a plurality of precast reinforced concrete roof elements. The roof assembly is mounted on a tank shell. At least some of the roof elements including a concrete body and embedded metal plates adapted to be welded to the roof assembly. The roof elements are welded to the roof assembly to provide additional strength and stiffness to the roof assembly. Preferably, no or minimal cast in place concrete structural joints are needed to join the roof elements to the roof assembly and or top of the shell. Ideally, the roof assembly includes a membrane and mounting beams connected to the membrane. The embedded plates of the roof assemblies are welded to the mounting beams on the roof assembly. The method may further include mounting or welding the roof elements to the roof assembly while workers access the interior of the shell to perform work therein. A tank having a composite concrete roof made according to the above method is also disclosed.

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