

Title (en)

SUBMERGED CABLE-STAYED FLOATING TUNNEL STRUCTURE

Title (de)

GETAUCHTE, SEILGESPANNTE, SCHWIMMENDE TUNNELSTRUKTUR

Title (fr)

STRUCTURE DE TUNNEL FLOTTANTE À HAUBANS SUBMERGÉS

Publication

EP 3865627 A1 20210818 (EN)

Application

EP 21152291 A 20210119

Priority

CN 202010063382 A 20200120

Abstract (en)

Disclose in the present invention is a submerged cable-stayed floating tunnel structure, comprising a submerged floating tunnel, a pair of shore connecting structures, a cable anchor system, a buoyancy-to-weight ratio system adjustment, an anti-collision warning system and an escape system. The pair of shore connecting structures are respectively located on shore slopes on two sides; and the pair of shore connecting structures are respectively connected between two ends of the submerged floating tunnel and a pair of land slope tunnels, the submerged floating tunnel is formed by connecting a plurality of pipe segments; the cable anchor system employs a two-way single cable plane or a two-way double cable plane and comprises four cable receiving shafts, four groups of cable steering piers, cable ramps, and multiple strands of stay cables; the buoyancy-to-weight ratio adjustment system comprises a buoyancy-to-weight ratio adjustment device in a tunnel pipe segments and buoyancy-to-weight ratio adjustment devices in the shore connecting structures; the anti-collision warning system comprises a warning buoy device and a submerged warning anchor cable device; and the escape system comprises an automatic alarm system, an escape time extension system, and escape routes. The submerged cable-stayed floating tunnel structure in the present invention withstands pressure more reasonably, and reduces the impact of adverse sea conditions during construction.

IPC 8 full level

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CPC (source: CN EP)

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Citation (search report)

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