

Title (en)
INCREMENTAL LAUNCHING PROCESS FOR A SUBMERGED CABLE-STAYED FLOATING TUNNEL

Title (de)
HERSTELLUNGSVERFAHREN FÜR EINEN IN EINEM GEWÄSSER SCHWIMMENDEN UND MITTELS SEILEN ABGESPANNTEN TUNNEL

Title (fr)
PROCESSUS DE LANCEMENT PROGRESSIF D'UN TUNNEL FLOTTANT À HAUBANS IMMERGÉ

Publication
EP 3882399 A1 20210922 (EN)

Application
EP 21152316 A 20210119

Priority
CN 202010063396 A 20200120

Abstract (en)
The present invention discloses an incremental launching process for a submerged cable-stayed floating tunnel. The process includes: prefabricating all the pipe parts of a submerged floating tunnel in a fabrication yard; transporting the pipe parts from a launching-side land slope tunnel into a launching-side shore connection structure, then conducting secondary outfitting, connecting before and after pipe parts and pushing the pipe parts into water in a seal state in turn, and then pushing the pipe parts into a receiving-side shore connection structure; installing stay cables on the pipe parts and pulling them onto cable anchorage piers one by one with the pushing operation; after the pushing operation, pouring concrete on outer surfaces of the pipe parts located in two ends of the submerged floating tunnel in the launching-side shore connection structure and the receiving-side shore connection structure to complete the consolidation of the pipe parts located in two ends of the submerged floating tunnel; and adjusting the buoyancy-weight ratio by adjusting ballast water capacity of each pipe part and sealing-off and covering anchorage. The incremental launching process of the present invention is less affected by wind, waves, currents, ship waves and so on, thereby reducing the risk of offshore construction greatly, and the present invention has advantages of high construction efficiency and short construction period.

IPC 8 full level
E02D 29/063 (2006.01); **E02D 29/067** (2006.01); **E02D 29/07** (2006.01)

CPC (source: CN EP)
E02D 29/063 (2013.01 - EP); **E02D 29/067** (2013.01 - CN EP); **E02D 29/07** (2013.01 - EP); **E02D 2250/0061** (2013.01 - CN); **E02D 2250/0092** (2013.01 - CN)

Citation (search report)

- [A] CN 1590658 A 20050309 - LIU JISHENG [CN]
- [A] GB 2016065 A 19790919 - PRECONTRAINTE STRUCTURES SOC F
- [A] US 5899635 A 19990504 - KUJA MICHAEL W [US], et al
- [A] CN 107700543 A 20180216 - CCCC FIRST HARBOR ENG CO LTD, et al

Cited by
CN116104132A; CN114427196A; CN113878704A; CN114934451A

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3882399 A1 20210922; **EP 3882399 B1 20230830**; CN 111254982 A 20200609; CN 111254982 B 20210514

DOCDB simple family (application)
EP 21152316 A 20210119; CN 202010063396 A 20200120