

Title (en)
HIGH-VOLTAGE DYNAMIC SUBMARINE CABLE

Title (de)
DYNAMISCHES HOCHSPANNUNGSUNTERSEEKABEL

Title (fr)
CÂBLE SOUS-MARIN DYNAMIQUE HAUTE TENSION

Publication
EP 4163931 A1 20230412 (EN)

Application
EP 20948042 A 20201105

Priority
• CN 202010772564 A 20200804
• CN 2020126858 W 20201105

Abstract (en)
A high-voltage dynamic submarine cable, comprising an electric unit, an optical unit (8), a filling strip, an inner sheath (9), an armor layer (10) and an outer sheath (11). The electric unit, the optical unit (8) and the filling strip are intertwined to form a submarine cable core, and the submarine cable core is wrapped with the inner sheath (9) and the outer sheath (11); the armor layer (10) is arranged between the inner sheath (9) and the outer sheath (11); the electric unit comprises a conductor (1); a co-extrusion structure layer (2), a water-blocking buffer layer (3), a corrugated copper sleeve (4) and a split-phase sheath (5) are sequentially wrapped outside the conductor (1); a plurality of annular or threaded relief structures are rolled on the outer side face of the corrugated copper sleeve (4) in the axial direction; and the water-blocking buffer layer (3) and the split-phase sheath (5) are in contact with and fill the relief structures on the corrugated copper sleeve (4). The submarine cable has an excellent radial water blocking effect, guarantees normal use of an ultra-clean high-voltage insulating material in deep and far-sea, high-salinity and high-water-pressure environments, provides guarantee for reliable operation of a floating booster station of future floating wind fields, and guarantees the use function of the high-voltage dynamic submarine cable.

IPC 8 full level
H01B 7/14 (2006.01); **H01B 7/282** (2006.01)

CPC (source: CN EP)
H01B 7/14 (2013.01 - CN EP); **H01B 7/187** (2013.01 - CN); **H01B 7/20** (2013.01 - EP); **H01B 7/226** (2013.01 - CN); **H01B 7/282** (2013.01 - EP); **H01B 7/2825** (2013.01 - CN EP); **H01B 7/285** (2013.01 - CN EP); **H01B 9/006** (2013.01 - CN); **H01B 9/021** (2013.01 - CN); **H01B 7/187** (2013.01 - EP); **H01B 7/226** (2013.01 - EP); **H01B 7/32** (2013.01 - EP); **H01B 9/005** (2013.01 - EP); **H01B 13/221** (2013.01 - EP)

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4163931 A1 20230412; **EP 4163931 A4 20240605**; CN 111883310 A 20201103; CN 111883310 B 20211123; WO 2022027849 A1 20220210

DOCDB simple family (application)
EP 20948042 A 20201105; CN 202010772564 A 20200804; CN 2020126858 W 20201105