

Title (en)

Waved steel production riser, offshore hydrocarbon production system, and method of producing a hydrocarbon stream

Title (de)

Gewellte Stahlproduktionssteigleitung, Offshore-Kohlenwasserstoffherstellungssystem und Verfahren zur Erzeugung eines Kohlenwasserstoffstroms

Title (fr)

Colonne montante de production d'acier ondulé, système de production d'hydrocarbures en mer et procédé de production d'un flux d'hydrocarbure

Publication

EP 2886787 A1 20150624 (EN)

Application

EP 13198737 A 20131220

Priority

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Abstract (en)

A waved steel production riser (100), which in addition to a primary buoyancy section (103) wherein the waved steel production riser is provided with a first set of external buoyancy modules (130) and an upward buoyancy force in the body of water is greater than a downward gravity force, further comprises an auxiliary buoyancy section (106) in the hanging section (102) in which the waved steel production riser is provided with a second set of external buoyancy modules (120) and wherein the upward buoyancy force in the body of water is smaller than the downward gravity force. The sag point (125) is located within the auxiliary buoyancy section. The waved steel production riser may be used in a method for producing a hydrocarbon stream, whereby mineral hydrocarbon fluids produced from a subsea hydrocarbon reservoir are conveyed to a floating structure via the waved steel production riser.

IPC 8 full level

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CPC (source: EP)

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Citation (applicant)

CHAU NGUYEN, DEEP OFFSHORE TECHNOLOGY (DOT) INTERNATIONAL CONFERENCE, 30 November 2010 (2010-11-30)

Citation (search report)

- [XYI] WO 2013061033 A2 20130502 - WELLSTREAM INT LTD [GB]
- [YA] WO 2006073887 A2 20060713 - SEAHORSE EQUIP CORP [US], et al
- [A] US 2012263542 A1 20121018 - HOVDE GEIR OLAV [NO]
- [A] EDMUNDO ANDRADE ET AL: "Optimization Procedure of Steel Lazy Wave Riser Configuration for Spread Moored FPSOs in Deepwater Offshore Brazil", PROCEEDINGS OF OFFSHORE TECHNOLOGY CONFERENCE, 1 January 2010 (2010-01-01), pages 3 - 6, XP055114753, ISBN: 978-1-55-563304-2, DOI: 10.4043/20777-MS

Cited by

US9708864B2; IT202100016124A1; WO2022267624A1; WO2022269372A1

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