HOLLOW CYLINDRICAL PIER FOR FIXING OFFSHORE PLATFORM STRUCTURE TO BED AND METHOD OF INSTALLING AND CONSTRUCTING SAME

ABSTRACT OF THE DISCLOSURE

Provided is a method of installing and constructing a hollow cylindrical pier for fixing an offshore platform structure to the bed, wherein a steel cylinder (101) with an inner diameter slightly greater than the hollow cylindrical pier is driven into the bed (2) until at least the bearing stratum is reached to ensure fixing, and part of the steel cylinder (101) is exposed above the water surface (1); draining ponding inside the steel cylinder (101), and excavating bed sediment inside the steel cylinder (101); cutting off the steel cylinder (101); hoisting a first hollow cylindrical pier section (1A) with a sealed bottom end vertically downwards from the water surface (1) towards the steel cylinder (101), pre-tensioning an overlapping hollow cylindrical pier section on the hollow cylindrical pier section via a shear key structure and then fixedly connecting same with the previous hollow cylindrical pier section, and hoisting same in turn such that after the sealed bottom end of the first hollow cylindrical pier section (1A) reaches near the bottom end of steel cylinder (101), at least part of the lastly hoisted overlapping hollow cylindrical pier section is exposed above the water surface (1); and pouring concrete (107) into a gap between the steel cylinder (101) and the hollow cylindrical piers. Further provided are a method of installing and constructing an offshore platform structure and a hollow cylindrical pier for fixing to the bed and an offshore platform structure.

Fig. 3