FPSO mooring configuration based on Malaysia's environmental criteria

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Abstract

For floating offshore structures or referred to as floaters, the mooring system is vital for station keeping. One of the mooring system used in the FPSO (floating production storage offloading) vessel is the turret system. A turret is a device directly built into the moored vessel for the purpose of weathervaning and attached to the seabed by catenary anchor lines. There are two types of turret used in the construction of FPSO which are the internal and external turret. This analysis involve the designing and performing hydrodynamic analysis for the FPSO based on local environmental criteria. For the research, the analysis involved mooring analysis of the anchor lines tension by using specific engineering software, ANSYS. The result will suggest the ultimate mooring configuration that is suitable for the area of research.

Keyword : ANSYS software; Environmental criteria; FPSO; Hydrodynamic analysis; Mooring configuration; Turret system