The motion performance and mooring system of deepwater semi-submersible drilling unit(PDF)

Title:	The motion performance and mooring system of deepwater semi-submersible drilling unit

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关键词： deepwater semi-submersible drilling unit; motion response; response amplitude operators (RAO); mooring system

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摘要： This paper analyzes the motion performance and mooring system of deepwater semi-submersible drilling unit in the district of the South China Sea using the MOSES procedure system. After the 3-D panel model of the unit was built, the 3-D diffraction-radiation theory was used to obtain the hydrodynamic loads on the wet surfaces and the response amplitude operators (RAO) of the unit. According to the environmental data, the short-term motion response to motion performance of the unit is predicted by the spectral method. Then a time-domain calculation was done to analyze the motion of the unit with its mooring system. The research results can be a reference for the model test of unit.

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