# ELEMENTS CONSTITUENT FOR THE DESIGN OF A RISER SYSTEM IN AREAS DEEP WATER AND EXTREME DEEP WATER APPLIED FOR OFFSHORE DRILLING

# *ELEMENTE CONSTITUTIVE PENTRU PROIECTAREA UNUI SISTEM DE RISERE APLICAT ÎN FORAJUL OFFSHORE ÎN ZONE CU APE ADÂNCI ȘI EXTREM DE ADÂNCI*

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***Abstract:*** *Riser systems are integral components of the offshore developments used to recover oil and gas stored in the reservoirs below the earth's oceans and seas. These riser systems are used in all facets of the development offshore process including exploration and exploitation wells completion/intervention, and production of the hydrocarbons. Their primary function is to facilitate the safe transportation of material, oil and gases between the seafloor oceans and seas and the marine platform. As the water depth increases, the working conditions of this system becomes challenging due to the complex forces and extreme environmental conditions which are impacting the operational mode as well as the stability.*

*In this paper several aspects concerning riser mechanics and the behaviour of the riser column will be evaluated against different operational situations.*

**Keywords:** deep water and extreme deep water, oil, gas, riser system, drilling platform, marine currents, pressure, temperature, effort, wave.

***Rezumat:*** *Sistemele riser sunt componente integrante ale dezvoltării offshore, utilizate pentru recuperarea petrolului și gazelor depozitate în rezervoare sub oceanele și mările terestre. Aceste sisteme riser sunt utilizate în toate aspectele*

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