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Comparison of Wind and Wave Calculations; Conductor Shielding Factor; 2.5.2 Current Force; Design Current Profiles; Current Profile; 2.5.3 Earthquake Load; Strength Requirements; Ductility Requirements; Topside Structure, Appurtenances and Equipment; 2.5.4 Ice Loads; 2.5.5 Other Loads; Marine Growth; Scour; 2.6 Design for Ultimate Limit State (ULS); 2.6.1 Load Factors; 2.6.2 Extreme Environmental Situation for Fixed Offshore Platforms; 2.6.3 Operating Environmental Situations-Fixed Platforms  
2.6.4 Partial Action Factors for Platform Design  
2.7 Collision Events; 2.7.1 Vessel Collision; Accidental Impact Energy; Total Kinetic Energy; Dropped Objects; 2.8 Fires and Explosions; 2.9 Material Strength; 2.9.1 Steel Groups; 2.9.2 Steel Classes; Structural Steel Pipe; Selections for Conditions of Service; Cement Grout; References; 3 Offshore Structure Platform Design; 3.1 Introduction; 3.2 Preliminary Dimensions; 3.2.1 Approximate Dimensions; 3.3 Bracing System; 3.4 Jacket Design; 3.5 Structure Analysis; 3.5.1 Global Structure Analysis; 3.5.2 The Loads on Piles; 3.5.3 Modeling Techniques  
Joint Coordinates  
Local Member Axes; Member Effective Lengths; Joint Eccentricities; 3.5.4 Dynamic Structure Analysis; Natural Frequency; 3.5.5 In-place Analysis According to ISO 19902; 3.6 Cylinder Member Strength; 3.6.1 Cylinder Member Strength Calculation According to ISO 19902; Axial Tension; Axial Compression; Column Buckling; Local Buckling; Bending; Shear; Torsional Shear; Hydrostatic Pressure; Hoop Buckling; Tubular Members Subjected to Combined Forces without Hydrostatic Pressure; Axial Tension and Bending; Axial Compression and Bending  
Tubular Members Subjected to Combined Forces with Hydrostatic Pressure

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#### Sommario/riassunto

With most of the easy gas and oil reserves discovered and prices rebounding, companies are now drilling far offshore in extreme weather condition environments. As deepwater wells are drilled to greater depths, engineers and designers are confronted with new problems such as water depth, weather conditions, ocean currents, equipment reliability, and well accessibility. Offshore Structure Design, Construction and Maintenance covers all types of offshore structures and platforms employed worldwide. The ultimate reference for selecting, operating and maintaining offshore structure

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