



CCS Rule Change Notice For:
**RULES FOR CLASSIFICATION OF OFFSHORE FLOATING
INSTALLATIONS**

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Beijing

PART ONE PROVISIONS OF CLASSIFICATION

CHAPTER 2 SCOPE AND CONDITIONS OF CLASSIFICATION

Section 3 CHARACTERS OF CLASSIFICATION AND CLASS NOTATIONS

2.3.2 Class notations

Class Notations Table 2.3.2.5

Class notation	Description	Technical requirements to be met
C Special systems and facilities notation		
PM	Position mooring system	Floating production units or platforms provided with position mooring systems are to be added this notation. Chapter 6, PART NINE of the Rules
PM-TA	Thruster assisted mooring	Floating production units or platforms provided with thruster assisted mooring systems are to be added this notation. Chapter 6, PART NINE of the Rules
PM-V	Position mooring system in vicinity of other structures	Floating production units or platforms provided with position mooring systems in vicinity of other structures are to be added this notation. Chapter 6, PART NINE of the Rules

PART NINE OTHER TYPES OF FLOATING UNITS AND SPECIAL SYSTEMS

CHAPTER 6 POSITIONING SYSTEMS

Section 1 GENERAL PROVISIONS

6.1.2 Class notations

6.1.2.1 PM, PM-TA or PM-V: to be assigned to the offshore floating units in compliance with the relevant provisions in this Chapter.

6.1.2.2 Floating production units or platforms provided with thruster assisted mooring systems are to be added this notation.

6.1.2.3 Floating production units or platforms provided with position mooring systems in vicinity of other structures are to be added this notation.

Section 3 MOORING DESIGN AND DESIGN CRITERIA

6.3.9 Transient analysis

~~6.3.9.5 The spacing between the unit and adjacent structures is to be maintained sufficient, and may generally be required no less than 10m.~~

6.3.11 Design criteria for position mooring systems

6.3.11.3 Design of mooring line

Safety Factors of Mooring Line Tension Table 6.3.11.3 (1)

	Quasi-static	Dynamic
Intact survival condition	2.00	1.67
Damaged survival condition (new balance position)	1.43	1.25
Damaged survival condition (transient state)	1.18	1.05

If various analysis methods are adopted, alternative factors of safety are acceptable, which ensure the safety of floating production units or platforms and are approved by CCS.

6.3.11.6 CLEARANCE

(1) Contact between floating production units or platforms, its mooring components, and other marine installations should be avoided with a comfortable margin, especially under severe environments.. Under normal operating environment or in areas of mild environment, close proximity mooring can be acceptable, assuming some clearance criteria are met.

The clearances between floating production units or platforms, its mooring components, and other marine installations should be determined for the conditions specified in table 6.3.11.6. To determine clearance criteria, many factors should be considered, such as environment, water depth, the size of floating vessel or platform, risk of injury, asset and environmental damage, etc.

Recommended analysis methods and conditions table 6.3.11.6

Limit state	Analysis method	Conditions to be analysed
ULS	Intact	Dynamic
	Transient ¹	Quasi-static or Dynamic
FLS	Intact	Dynamic

¹ Applicable only if another installation is in proximity to the mooring.

(2) Where a mooring line crosses a pipeline within the elevated part of its catenary, a minimum vertical clearance of 10 m under the intact condition should be maintained. A mooring line may contact a protected pipeline provided this contact remains throughout the full range of predicted intact line tensions thus the contact point must not occur in the thrash zone.

(3) Where a mooring line crosses another mooring line, a minimum vertical clearance of 10 m under the intact condition should be maintained if one of the mooring line at the crossing is grounded. The minimum clearance should be increased to 20 m if both lines are suspended at the crossing.

(4) A minimum horizontal clearance of 10 m should be maintained between the moored floating production units or platforms (or its mooring lines) and any other installation. This clearance is required for all conditions as defined in 6.3.1.2.

(5) If a marine installation lies in the dragging path between the anchor and floating production units or platforms, the final anchor position should allow at least 300 m drag before contacting the marine installation. Otherwise the anchor should be at least 100 m from the marine installation.

(6) Consideration shall be given to the detrimental effects of contact between mooring lines and other vessel structures such as anchor bolsters.