IRCLASS
Indian Register of Shipping

CELEBRATING 50 YEARS OF EXCELLENCE

RULES AND REGULATIONS FOR THE CONSTRUCTION AND CLASSIFICATION OF **FLOATING OFFSHORE UNITS**

RULES CHANGE NOTICE NO. 2

March 2025

General Information

This Rules Change Notice gives the new additions and amendments to the 'Rules and Regulations for the Construction and Classification of Floating Offshore Units' along with the effective dates from which these changes are applicable.

These new additions and amendments are to be read in conjunction with the requirements given in the July, 2024 edition of the Rules and 'Rules Change Notice No.1 December, 2024'.

The Part / Chapters where amendments are made and their effective dates are indicated in **TABLE 1**. The actual requirements, arranged in the order of Part / Chapter / Section / Sub-section / Clause, have been given subsequently.

For ease of reference, the newly added text has been highlighted by underlining and the deleted text by striking through.

RULES AND REGULATIONS FOR THE CONSTRUCTION AND CLASSIFICATION OF FLOATING OFFSHORE UNITS– July 2024

RULES CHANGE NOTICE No. 2 – March 2025

TABLE 1 – AMENDMENTS INCORPORATED IN THIS NOTICE

These amendments will come into force as indicated in the Table

Section / Clause	**Subject/ Amendments**
Chapter 4: Hull Structure *The amendments are applicable to FOUs contracted for construction on or after 1 July 2025.*	
7/ 7.4.4.1	The f_v factor to be used in the formula for evaluation of heave acceleration for strength assessment, and fatigue assessment is clarified.
13/ Table 21	The design load sets in Table 21 are corrected for proper correspondence to the acceptance criteria provided in Table 22.

Chapter 4

Hull Structure

Section 7

FOU Motions and Accelerations

7.4 FOU Accelerations at the center of gravity

7.4.4 Heave Acceleration

7.4.4.1 The vertical acceleration due to heave is to be taken as:

$$a_{heave} = f_V a_0 g \qquad [m/s^2]$$

Where:

$f_V = 1$ for scantling requirements and strength assessment

$f_V = \left(\frac{C_{b-LC}}{C_b}\right)^2 \left(1.2 - \frac{L}{100}\right)$ for fatigue strength evaluation

$C_{b\text{-}LC}$: block co-efficient for the considered loading condition

Section 13

Cargo Tank Region

Table 21 : Design load sets for plating and local support members

Structural Member		Design Load set	Load Component	Draught	Remark
Keel, Bottom Shell, Bilge, Side Shell, Sheer Strake		1	P_{ex}	T_{sc}	Sea pressure only
		2	P_{ex}	T_{sc}	
		7~~7~~	P_{in}-P_{ex}~~P_{in}-P_{ex}~~	$0.25T_{sc}$~~T_{bal}~~	Net pressure difference between water ballast pressure and sea pressure
		8	P_{in}-P_{ex}	T_{bal}	
Deck	**In way of cargo tanks**	~~1~~2	P_{ex}	T_{sc}	Green sea pressure only for other loads on deck
		3	P_{in}	-	Cargo pressure only
		4	P_{in}	$0.6T_{sc}$	
		11	$P_{in\text{-}flood}$	-	
	In way of tanks other than cargo tanks	~~1~~2	P_{ex}	T_{sc}	Green sea pressure only for other loads on deck
		5	P_{in}	$0.25T_{sc}$	Water ballast or other liquid pressure only
		6	P_{in}	T_{bal}	
		11	$P_{in\text{-}flood}$	-	
	Any location	9~~9~~	P_{dk}~~P_{dk}~~	-~~T_{bal}~~	Distributed or concentrated loads only. Simultaneously occurring green sea pressure may be ignored
		10	P_{dk}	T_{bal}	
Inner bottom, Inner hull, Hopper side		3~~3~~	P_{in}~~P_{in}~~	-~~$0.6T_{sc}$~~	Cargo pressure only
		4~~4~~	P_{in}~~P_{in}~~	$0.6T_{sc}$~~-~~	
		5	P_{in}	$0.25T_{sc}$	Water ballast or other liquid pressure only
		6	P_{in}	T_{bal}	
		11~~5~~	$P_{in\text{-}flood}$~~P_{in}~~	~~T_{bal}~~	
Longitudinal bulkhead, Centerline bulkhead		3~~3~~	P_{in}~~P_{in}~~	-~~$0.6T_{sc}$~~	Pressure from one side only. Full cargo tank with adjacent cargo tank empty. Two cases are to be evaluated: 1. Inner empty, outer full 2. Inner full, outer empty
		4~~4~~	P_{in}~~P_{in}~~	$0.6T_{sc}$~~-~~	
		11	$P_{in\text{-}flood}$	-	
Transverse Bulkhead	**In way of cargo tanks**	3~~3~~	P_{in}~~P_{in}~~	-~~$0.6T_{sc}$~~	Pressure from one side only. Full cargo tank with adjacent fwd or aft cargo tank empty. Need to evaluate 2 cases 1) Fwd empty, aft full 2) Fwd full, aft empty
		4~~4~~	P_{in}~~P_{in}~~	$0.6T_{sc}$~~-~~	
		11	$P_{in\text{-}flood}$	-	
	In way of tanks other than cargo tanks	5~~5~~	P_{in}~~P_{in}~~	$0.25T_{sc}$~~T_{sc}~~	
		6~~6~~	P_{in}~~P_{in}~~	T_{bal}~~$0.25T_{sc}$~~	
		11	$P_{in\text{-}flood}$	-	
Other tank boundaries. e.g Girders, floors and stringers		5~~5~~	P_{in}~~P_{in}~~	$0.25T_{sc}$~~T_{bal}~~	Pressure from one side only. Full tank with adjacent tank empty. Need to evaluate 2 cases, see above
		6~~6~~	P_{in}~~P_{in}~~	T_{bal}~~$0.25T_{sc}$~~	
		11	$P_{in\text{-}flood}$	-	

Note:
T_{sc}: Scantling draught
T_{bal}: minimum ballast draught

1. Description of design load set is provided in Table 22
2. The boundaries of void and dry space not forming part of the hull envelope are to be evaluated using Design Load Set 11.
3. The above load sets are to be checked considering on-site, transit and inspection/maintenance conditions. For transit and inspection maintenance conditions, if the draught of the unit does not correspond to draughts mentioned for the load sets mentioned above, then the consideration of draughts for the checks is to be decided by IRS.
4. For structural members/configurations not covered by above specifications, the applicable Design Load sets to determine the scantling requirements of structural boundaries are to be selected so as to specify a full tank on one side with the adjacent tank or space empty. The boundary is to be evaluated for loading from both sides. Design Load Sets are to be selected based on the tank or space contents and are to maximize the pressure on the structural boundary, the draught to use is to be taken in accordance with the Design Load Set and this table. Design Load Sets covering the *S* and *S+D* design load combinations are to be selected.

Table 22 : Design Load Set specification

Design Load set	Load Component	Design load combination	Acceptance criteria set	Parameters for dynamic load calculations		
				DLCF Table selection	*GM*	$R_{roll\text{-}gyr}$
Hull Envelope (primary and local support members)						
1	Sea Pressure	*S*	AC1	-		
2		*S+D*	AC2	Full Load	0.12*B*	0.35*B*
Cargo Tank Boundaries						
3	Cargo tank pressures	*S*	AC1	-		
4		*S+D*	AC2	Full Load	0.24*B*	0.40*B*
Boundaries of water ballast and other tanks						
5	Water ballast or other tank pressures	*S*	AC1	-		
6		*S+D*	AC2	Ballast	0.33*B*	0.45*B*
7	Net pressures (ballast – sea)	*S*	AC1	-		
8		*S+D*	AC2	Ballast	0.33*B*	0.45*B*
Decks (primary and local support members)						
9	Distributed pressures and concentrated loads	*S*	AC1	-		
10		*S+D*	AC2	Ballast	0.33*B*	0.45*B*
11	Flooded condition (Accidental)	*A*	AC2	-		
Hull Envelope (primary support members)						
12	Net pressure (Cargo – Sea)	*S*	AC1	-		
13		*S+D*	AC2	Loaded	0.24*B*	0.40*B*
14	Average pressure (cargo & sea)	*S*	AC1	-		
15		*S+D*	AC2	Loaded	0.12*B*	0.35*B*
16		*S+D*	AC2	Loaded	0.24*B*	0.40*B*

End of Chapter