RULES
FOR THE CLASSIFICATION AND CONSTRUCTION OF MOBILE OFFSHORE DRILLING UNITS

PART VII
HELICOPTER FACILITIES

July
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GDAŃSK

RULES FOR CLASSIFICATION AND CONSTRUCTION OF MOBILE OFFSHORE DRILLING UNITS
developed and edited by Polski Rejestr Statków S.A., hereinafter referred to as PRS, consist of the following Parts:

Part I – Classification Regulations
Part II – Construction, Strength and Materials
Part III – Subdivision, Stability and Freeboard
Part IV – Machinery Installations
Part V – Fire Safety
Part VI – Electrical Installations
Part VII – Helicopter Facilities

whereas the "Materials and Welding" are to comply with the applicable requirements of *Part IX – Materials and Welding* of the *Rules for the Classification and Construction of Sea-going Ships*.

This *Part VII* was approved by the PRS Board on 12 July 2024 and enters into force on 15 July 2024.

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PRS/RP, 07/2024

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1 GENERAL REQUIREMENTS

1.1 Introduction

This *Part VII* has been developed in the editorial layout reflecting the layout of technical requirements contained in Chapter 13 of the *Code for the construction and equipment of mobile offshore drilling units (MODU* Code, the *"Code"* in short*)* and IACS Unified Requirements – UR, cited in the original version, treated as a source documents, marked in the text with the appropriate colour of the font. At the end of the paragraph/ section there is the name and number of the paragraph/ section of the source document (if the number is not consistent with the source document).

The text of this *Part VII* contains additional and specific PRS requirements/ recommendations/ interpretations, which are marked in black.

The purpose of such an editorial layout is easy verification the implementation of all applicable requirements and in the future to simplify procedure of implementing into *Rules* subsequent changes of the source documents.

At the end, there is a summary of currently applicable IMO documents and IACS Resolutions related to this *Part VII* (if applicable).

1.2 Application

1.2.1 This *Part VII* applies to the design and construction of mobile offshore drilling units of all types, as defined in sub-chapter 1.2 of *Part I* of the Rules, hereinafter referred to as "units", which are assigned a class mark in accordance with sub-chapter 3.2 of this *Part I*.

1.2.2 Whenever this *Part VII* leaves certain technical solutions to the discretion of the Administration, then PRS, acting as Recognized Organisation (RO), will make relevant decisions in cooperation with the Administration, in accordance with the provisions of the relevant Agreement with the Administration.

1.2.3 For technical requirements regarding the construction of the helideck, reference is made to regulations of national civil aviation authorities in the unit's area of operation, applicable international standards of the International Civil Aviation Organization (ICAO) and recommended practices developed in accordance with the Memorandum of Understanding between IMO and ICAO.

2 DOCUMENTATION FOR THE UNIT

The scope of documentation required for consideration and approval is given in subchapters 4.2 to 4.5 of *Part I* of the Rules. Additional, the following documentation is required:

1. Plan of the helideck;
2. Construction drawings of the landing platform;
3. Calculations of the strength of the structures supporting the landing platform;
4. Plan of obstacle-free sectors;
5. Plan of limited obstacle sectors;
6. Plan of touchdown and lift-off areas;
7. Plan for marking and lighting of helideck.

3 SCOPE OF SUPERVISION

The scope of classification supervision of a newly constructed or reconstructed unit is specified in Chapter 2 of *Part I* of the Rules.

4 TECHNICAL REQUIREMENTS

4.1 General

Each helideck should be of sufficient size and located so as to provide a clear take-off and approach to enable the largest helicopter using the helideck to operate under the most severe conditions anticipated for helicopter operations.

4.2 Definitions

General definitions of the terminology used in this *Part VII* are given in sub-chapter 1.2 of Part I – Classification Regulations.

For the purposes of this *Part VII*, unless expressly provided otherwise, the specific terms used therein have the meanings defined in this section.

4.2.1 ***Final approach and take-off area (FATO)*** is a defined area over which the final phase of the approach manoeuvre to hover or landing of the helicopter is intended to be completed and from which the take-off manoeuvre is intended to be commenced. (MODU Code,13.2.1)

4.2.2 ***Limited obstacle sector (LOS)*** is a sector extending outward which is formed by that portion of the 360° arc, excluding the obstacle-free sector, the centre of which is the reference point from which the obstacle-free sector is determined. Obstacles within the limited obstacle sector are limited to specified heights. (MODU Code,13.2.2)

4.2.3 ***Obstacle*** is any object, or part thereof, that is located on an area intended for the movement of a helicopter on a helideck or that extends above a defined surface intended to protect a helicopter in flight. (MODU Code,13.2.3)

4.2.4 ***Obstacle-free sector*** is a complex surface originating at, and extending from, a reference point on the edge of the FATO of a helideck, comprised of two components, one above and one below the helideck for the purpose of flight safety within which only specified obstacles are permitted. (MODU Code,13.2.4)

4.2.5 ***Touchdown and lift-off area (TLOF)*** is a dynamic load-bearing area on which a helicopter may touch down or lift off. For a helideck it is presumed that the FATO and the TLOF will be coincidental. (MODU Code,13.2.5)

4.3 Construction

4.3.1 The helideck should be of a design and construction, adequate for the intended service and for the appropriate prevailing climatic conditions, approved to the satisfaction of the Administration. (MODU Code,13.3.1)

4.3.2 Except as provided for in par. 4.3.3 (MODU Code, 13.3.3), the helideck should meet the following provisions, with reference to the ICAO Convention, Annex 14, Volume II (Heliports), taking into account the type of helicopter used, the conditions of wind, turbulence, sea state, water temperature and icing conditions:

- **.1** the helideck should be of sufficient size to contain an area within which can be drawn a circle of diameter not less than D for single main rotor helicopters;
- **.2** a helideck obstacle-free sector should comprise of two components, one above and one below helideck level (see figure 13-1):
  - **.2.1** above helideck level: The surface should be a horizontal plane level with the elevation of the helideck surface that subtends an arc of at least 210° with the apex located on the periphery of the D reference circle extending outwards to a distance

that will allow for an unobstructed departure path appropriate to the helicopter(s) the helideck is intended to serve; and

.2.2 below helideck level: Within the (minimum) 210° arc, the surface should additionally extend downward at a 5:1 falling gradient from the edge of the safety net below the elevation of the helideck to water level for an arc of not less than 180° that passes through the centre of the FATO and outwards to a distance that will allow for safe clearance from the obstacles below the helideck in the event of an engine failure for the type of helicopter(s) the helideck is intended to serve (see figure 13-1);

.3 for single main rotor helicopters, within the 150° LOS out to a distance of 0.12 D, measured from the point of origin of the LOS, objects should not exceed a height of 0.25 m above the helideck. Beyond that arc, out to a distance of an additional 0.21 D, the maximum obstacle height is limited to a gradient of one unit vertically for each two units horizontally originating at a height of 0.05 D above the level of the helideck (see figure 13-2 *);

* Where the dynamic load bearing area of the helideck enclosed by the FATO perimeter marking is a shape other than circular, the extent of the LOS segments are represented as lines parallel to the perimeter of the landing area rather than arcs. Figure 13-2 has been constructed on the assumption that an octagonal helideck is provided.

.4 objects the function of which requires that they be located on the helideck within the FATO should be limited to landing nets (where required) and certain lighting systems and should not exceed the surface of the landing area by more than 0.025 m. Such objects should only be present provided they do not cause a hazard to helicopter operations; and

.5 operations by tandem main rotor helicopters should be specially considered by the Administration. (MODU Code,13.3.2)

4.3.3 For benign climates as determined by the coastal State, taking into account the type of helicopter used, the conditions of wind, turbulence, sea state, water temperature and icing conditions, the helideck should meet the following:

.1 the helideck should be of sufficient size to contain a circle of diameter no less than 0.83 D;

.2 a helideck obstacle-free sector shall comprise of two components, one above and one below helideck level (see figure 13-1):

.2.1 above helideck level: The surface should be a horizontal plane level with the elevation of the helideck surface that subtends an arc of at least 210° with the apex located on the periphery of the D reference circle extending outwards to a distance that will allow for an unobstructed departure path appropriate to the helicopter(s) the helideck is intended to serve, and

.2.2 below helideck level: Within the (minimum) 210° arc, the surface should additionally extend downward at a 5:1 falling gradient from the edge of the safety net below the elevation of the helideck to water level for an arc of not less than 180° that passes through the centre of the FATO and outwards to a distance that will allow for safe clearance from the obstacles below the helideck in the event of an engine failure for the type of helicopter(s) the helideck is intended to serve (see figure 13-1);

.3 for single main rotor helicopters, within 0.415 D to 0.5 D objects should not exceed a height of 0.025 m. Within the 150° LOS out to a distance of 0.12 D, measured from the point of origin of the LOS, objects should not exceed a height of 0.05 m above the helideck. Beyond that arc, out to a distance of an additional 0.21 D, the LOS rises at a rate of one unit vertically for each two units horizontally originating at a height of 0.05 D above the level of the helideck (refer to figure 13-3 *);

* Where the dynamic load bearing area of the helideck enclosed by the FATO perimeter marking is a shape other than circular, the extent of the LOS segments are represented as lines parallel to the perimeter of the landing area rather than arcs. Figure 13-3 has been constructed on the assumption that an octagonal helideck is provided.

.4 objects the function of which requires that they be located on the helideck within the FATO should be limited to landing nets (where required) and certain lighting systems and should not exceed the surface of the landing area by more than 0.025 m. Such objects should only be present provided they do not cause a hazard to helicopter operations; and

.5 operations by tandem main rotor helicopters should be specially considered by the Administration. (MODU Code,13.3.3)

4.3.4 The helideck should have a skid-resistant surface. (MODU Code,13.3.4)

4.3.5 Where the helideck is constructed in the form of a grating, the underdeck should be such that the ground effect is maintained. (MODU Code,13.3.5)

4.4 Arrangements

4.4.1 The helideck should have recessed tie-down points for securing a helicopter.

4.4.2 The periphery of the helideck should be fitted with a safety net except where structural protection exists. The net should be inclined upwards at an angle of 10° and outwards from below the edge of the helideck to a horizontal distance of 1.5 m and should not rise above the edge of the deck. (MODU Code,13.4.2)

4.4.3 The helideck should have both a main and an emergency personnel access route located as far apart from each other as practicable. (MODU Code,13.4.3)

4.4.4 Reference should be made to sec. 17.5 of *Part V* (MODU Code, 9.16.5) concerning helideck drainage. (MODU Code,13.4.4)

4.5 Visual aids

Wind direction indicator

4.5.1 A wind direction indicator should be located on the unit which, in so far as is practicable, indicates the wind conditions over the TLOF in such a way as to be free from the effects of airflow disturbances caused by nearby objects or rotor downwash. It should be visible from a helicopter in flight or in a hover over the helideck. Where the TLOF may be subject to a disturbed air flow then additional wind direction indicators located close to the area should be provided to indicate the surface wind on those areas. Placement of the wind direction indicators should not compromise obstacle-protected surfaces. (MODU Code,13.5.1)

4.5.2 Units on which night helicopter operations take place should have provisions to illuminate the wind direction indicators. (MODU Code,13.5.2)

4.5.3 A wind direction indicator should be a truncated cone made of lightweight fabric and should have the following minimum dimensions:

Length	1.2 m
Diameter (larger end)	0.3 m
Diameter (smaller end)	0.15 m

4.5.4 The colour of the wind direction indicator should be so selected as to make it clearly visible and understandable from a height of at least 200 m above the heliport, having regard to background. Where practicable, a single colour, preferably white or orange, should be used. Where a combination of two colours is required to give adequate conspicuity against changing backgrounds, they should preferably be orange and white, or red and white, and should be arranged in five alternate bands the first and last band being the darker colour. (MODU Code, 13.5.4)

Heliport identification marking

4.5.5 A heliport identification marking should be located at the centre of the touchdown/ positioning marking described in paragraphs 4.5.12 to 4.5.14 (MODU Code, 13.5.12 to 13.5.14). It should consist of a white "H" that is 4 m high, 3 m wide, with a stroke width of 0.75 m. (MODU Code,13.5.5)

D-value marking

4.5.6 The actual D-value of the helideck should be painted on the helideck inboard of the chevron provided in accordance with paragraph 4.5.15 (MODU Code 13.5.15) in alphanumeric symbols of 0.1 m in height. (MODU Code,13.5.6)

4.5.7 The helideck D-value should also be marked around the perimeter of the helideck in the manner shown in figure 13-4 in a colour contrasting (preferably white: avoid black or grey for night use) with the helideck surface. The D-value should be to the nearest whole number with 0.5 rounded down, e.g., 18.5 marked as 18. Markings for some helicopters may require special consideration. *(MODU Code,13.5.7)

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* Helidecks designed specifically for AS332L2 and EC 225 helicopters, each having a D-value of 19.5 m, should be rounded up to 20 in order to differentiate between helidecks designed specifically for L1 models.

Maximum allowable mass marking

4.5.8 A maximum allowable mass marking should be located within the TLOF and so arranged as to be readable from the preferred final approach direction, i.e. towards the obstacle-free sector origin. (MODU Code,13.5.8)

4.5.9 The maximum allowable mass marking should consist of a two- or three-digit number followed by a letter "t" to indicate the allowable helicopter mass in tonnes (1,000 kg). The marking should be expressed to one decimal place, rounded to the nearest 100 kg. Where States require that a maximum allowable weight is indicated in pounds, the marking should consist of a two- or three-digit number to indicate the allowable helicopter weight in thousands of pounds, rounded to the nearest 1,000 pounds. (MODU Code,13.5.9)

4.5.10 The height of the figures should be 0.9 m with a line width of approximately 0.12 m and be in a colour (preferably white) which contrasts with the helideck surface. Where possible the mass marking should be well separated from the installation identification marking in order to avoid possible confusion on recognition. (MODU Code,13.5.10)

LOF perimeter marking

4.5.11 The TLOF perimeter marking should be located along the perimeter of the TLOF and should consist of a continuous white line with a width of at least 0.3 m. TLOF perimeter markings are typically for a 1 D or 0.83 D value (see figures 13-2 and 13-3). (MODU Code,13.5.11)

Touchdown/positioning marking

4.5.12 A touchdown/positioning marking should be located so that when the pilot's seat is over the marking the whole of the undercarriage will be within the TLOF and all parts of the helicopter will be clear of any obstacle by a safe margin. (MODU Code,13.5.12)

4.5.13 The centre of the touchdown/positioning marking should be concentric to the centre of the TLOF*. (MODU Code,13.5.13)

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* The marking may be offset away from the origin of the obstacle-free sector by no more than 0.1 D where an aeronautical study indicates such offsetting to be beneficial, provided that the offset marking does not adversely affect the safety of operations.

4.5.14 A touchdown/positioning marking should be a yellow circle and have a line width of 1 m. The inner diameter of the circle should be half the D-value of the largest helicopter for which the TLOF is designed. (MODU Code,13.5.14)

Helideck obstacle-free sector marking

4.5.15 Except as provided in paragraph 4.5.16 (MODU Code 13.5.16), a helideck obstacle-free sector marking should be located on the TLOF perimeter marking and indicated by the use of a black chevron, each leg being 0.8 m long and 0.1 m wide forming the angle in the manner shown in figure 13-4. The obstacle-free sector marking should indicate the origin of the obstacle-free sector, the directions of the limits of the sector and the verified D-value of the helideck. Should there not be room to place the chevron where indicated, the chevron marking, but not the point of origin, may be displaced towards the circle centre. (MODU Code,13.5.15)

4.5.16 For a helideck less than 1 D (i.e. a helideck meeting paragraph 4.3.3 (MODU Code 13.3.3), a helideck obstacle free sector marking should be located at a distance from the centre of the TLOF equal to the radius of the largest circle which can be drawn in the TLOF or 0.5 D whichever is greater. (MODU Code,13.5.16)

4.5.17 The height of the chevron should equal the width of the TLOF perimeter marking, but should be not less than 0.3 m. The chevron should be black in colour and may be painted on top of the TLOF perimeter marking in paragraph 4.5.11 (in MODU Code 13.5.11). (MODU Code,13.5.17)

Unit identification markings

4.5.18 The name of the unit should be clearly displayed on unit identification panels located in such positions that the unit can be readily identified from the air and sea from all normal angles and directions of approach. The height of the figures should be at least 0.9 m with a line width of approximately 0.12 m. The unit identification panels should be highly visible in all light conditions and located high up on the unit (e.g., on the derrick). Suitable illumination should be provided for use at night and in conditions of poor visibility. (MODU Code,13.5.18)

4.5.19 The unit's name should be provided on the helideck and be positioned on the obstacle side of the touchdown/positioning marking with characters not less than 1.2 m in height and in a colour contrasting with the background. (MODU Code,13.5.19)

Perimeter lights

4.5.20 The perimeter of the TLOF should be delineated by green lights visible omnidirectionally from on or above the landing area. These lights should be above the level of the deck but should not exceed 0.25 m in height for helidecks sized in accordance with paragraph 4.3.2 (MODU Code 13.3.2) and 0.05 m in height for helidecks sized in accordance with paragraph 4.3.3 (MODU Code

13.3.3). The lights should be equally spaced at intervals of not more than 3 m around the perimeter of the TLOF, coincident with the white line delineating the perimeter in paragraph 4.5.10 (MODU Code 13.5.10). In the case of square or rectangular decks there should be a minimum of four lights along each side including a light at each corner of the TLOF. Flush fitting lights may be used at the inboard (150° limited obstacle sector origin) edge of the TLOF where there is a need to move a helicopter or large equipment off the TLOF. (MODU Code,13.5.20)

4.5.21 Perimeter lights should meet the chromaticity characteristics given in table 13-1, and the vertical beam spread and intensity characteristics given in table 13-2. (MODU Code,13.5.21)

Table 13-1 – Perimeter lighting chromaticity

Yellow boundary	x = 0.36 – 0.08y
White boundary	x = 0.65y
Blue boundary	y = 0.9 – 0.171x

Table 13-2 – Green perimeter lighting intensity

Elevation	Intensity (cd)
0° - 90°	60 max*
>20° - 90°	3 min
>10° - 20°	15 min
0° - 10°	30 min
Azimuth +180° -180°	

* If higher intensity lighting is provided to assist in conditions of poor visibility during daylight, it should incorporate a control to reduce the intensity to not more than 60 cd for night use.

Helideck floodlights

4.5.22 Helideck floodlights should be located so as to avoid glare to pilots, and provision should be made for periodically checking their alignment. The arrangements and aiming of floodlights should be such that helideck markings are illuminated and that shadows are kept to a minimum. Floodlights should conform to the same height limitations specified in paragraph 4.5.20 (MODU Code 13.5.20) for perimeter lights. (MODU Code,13.5.22)

Obstacle marking and lighting

4.5.23 Fixed obstacles and permanent equipment, such as crane booms or the legs of self-elevating units, which may present a hazard to helicopters, should be readily visible from the air during daylight. If a paint scheme is necessary to enhance identification by day, alternate black and white, black and yellow, or red and white bands are recommended, not less than 0.5 m nor more than 6 m wide. (MODU Code,13.5.23)

4.5.24 Omnidirectional red lights of at least 10 cd intensity should be fitted at suitable locations to provide the helicopter pilot with visual information on objects which may present a hazard to helicopters and on the proximity and height of objects which are higher than the landing area and which are close to it or to the limited obstacle sector boundary. Such lighting should comply with the following:

.1 Objects which are more than 15 m higher than the landing area should be fitted with intermediate red lights of the same intensity spaced at 10 m intervals down to the level of the landing area (except where such lights would be obscured by other objects).

.2 Structures such as flare booms and towers may be illuminated by floodlights as an alternative to fitting the intermediate red lights, provided that such lights should be arranged such that they will illuminate the whole of the structure and not interfere with the helicopter pilot's night vision.

.3 On self-elevating units the leg(s) nearest the helideck may be illuminated by floodlights as an alternative to fitting the intermediate red lights, provided that such lights should be arranged such that they will not interfere with the helicopter pilot's night vision.

.4 Alternative equivalent technologies to highlight dominant obstacles in the vicinity of the helideck may be utilized in accordance with the recommendations of the ICAO. (MODU Code,13.5.24)

4.5.25 An omnidirectional red light of intensity 25 to 200 cd should be fitted to the highest point of the unit and, in the case of self-elevating units, as near as practicable to the highest point of each leg. Where this is not practicable (e.g., flare towers) the light should be fitted as near to the extremity as possible. (MODU Code,13.5.25)

Status lights

4.5.26 Status lights should be installed to provide warning that a condition exists on the unit which may be hazardous for the helicopter or its occupants. The status lights should be a flashing red light * (or lights), visible to the pilot from any direction of approach and on any landing heading. The system should be automatically initiated when the toxic gas alarm under paragraph 5.7.2 of MODU Code is initiated as well as being capable of manual activation at the helideck.

* The aeronautical meaning of a flashing red light is either "do not land, aerodrome not available for landing" or "move clear of landing area".

It should be visible at a range in excess of the distance at which the helicopter may be endangered or may be commencing a visual approach. The status light system should:

.1 be installed either on or adjacent to the helideck. Additional lights may be installed in other locations on the unit where this is necessary to meet the requirement that the signal be visible from all approach directions, i.e. 360° in azimuth;

.2 have an effective intensity of at least 700 cd between 2° and 10° above the horizontal and at least 176 cd at all other angles of elevation;

.3 be provided with a facility to enable the output of the lights (if and when activated) to be dimmed to an intensity not exceeding 60 cd while the helicopter is landed on the helideck;

.4 be visible from all possible approach directions and while the helicopter is landed on the helideck, regardless of heading with a vertical beam spread as describe above;

.5 use lights that are 'red' as defined by ICAO*;

* Reference is made to the ICAO Convention, Annex 14, Volume 1, Appendix 1, Colours for aeronautical ground lights.

.6 flash at a rate of 120 flashes per minute and, if two or more lights are needed to meet this requirement, they should be synchronised to ensure an equal time gap (to within 10%) between flashes. Provision should be made to reduce the flash rate to 60 flashes per minute should a helicopter be on the helideck. The maximum duty cycle should be no greater than 50%;

.7 have facilities at the helideck to manually override the automatic activation of the system;

.8 reach full intensity in not more than three seconds at all times;

.9 be designed so that no single failure will prevent the system operating effectively. In the event that more than one light unit is used to meet the flash rate requirement, a reduced flash frequency of at least 60 flashes per minute is acceptable in the failed condition for a limited period; and

.10 where supplementary 'repeater' lights are employed for the purposes of achieving the 'on deck' 360° coverage in azimuth, these should have a minimum intensity of 16 cd and a maximum intensity of 60 cd for all angles of azimuth and elevation. (MODU Code, 13.5.26)

4.6 Motion sensing system

Vessel motions represent a potential hazard to helicopter operations. Surface units should be equipped with an electronic motion-sensing system capable of measuring or calculating the magnitude and rate of pitch roll and heave at the helideck about the true vertical datum. A motion-sensing system display should be located at the aeromobile VHF radiotelephone station provided in accordance with section 11.6 of MODU Code, so that this information may be relayed to the helicopter pilot. The form of the report should be agreed with the aeronautical service provider. (MODU Code,13.5.6)

4.7 Exemptions

Administrations should consider exemptions from or equivalencies to the provisions of this *Part VII* (this chapter of MODU Code) regarding markings and landing aids when:

.1 the Administration is provided with evidence that the coastal State in whose waters the MODU is operating has notified the ICAO of differences to its requirements for visual aids; or

.2 the Administration is provided with evidence that the coastal State in whose waters the MODU is operating has established requirements for visual aids that differ from the provisions of this chapter. (MODU Code,13.5.7)

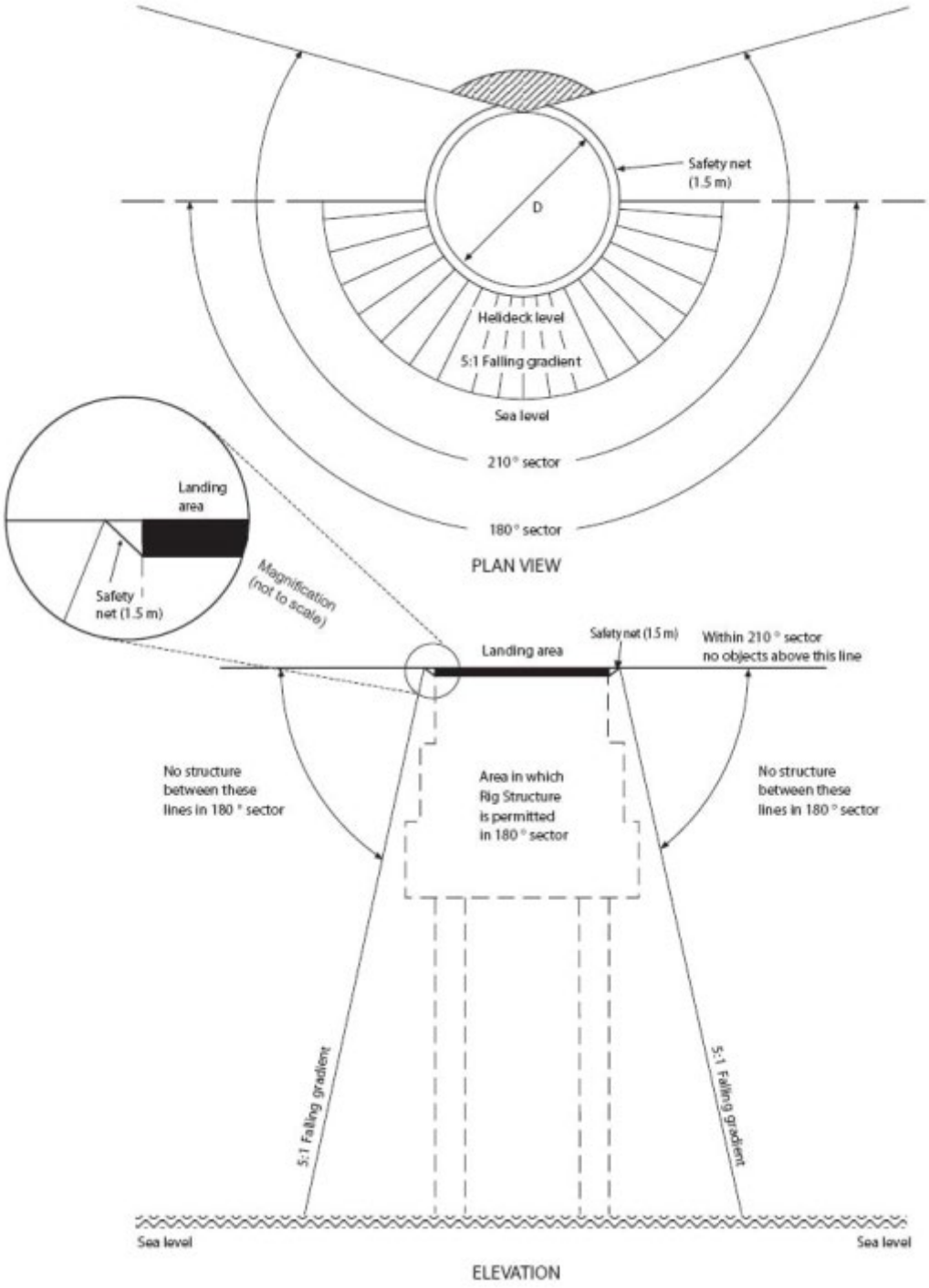

Figure 13-1 – Obstacle free areas – below landing area level

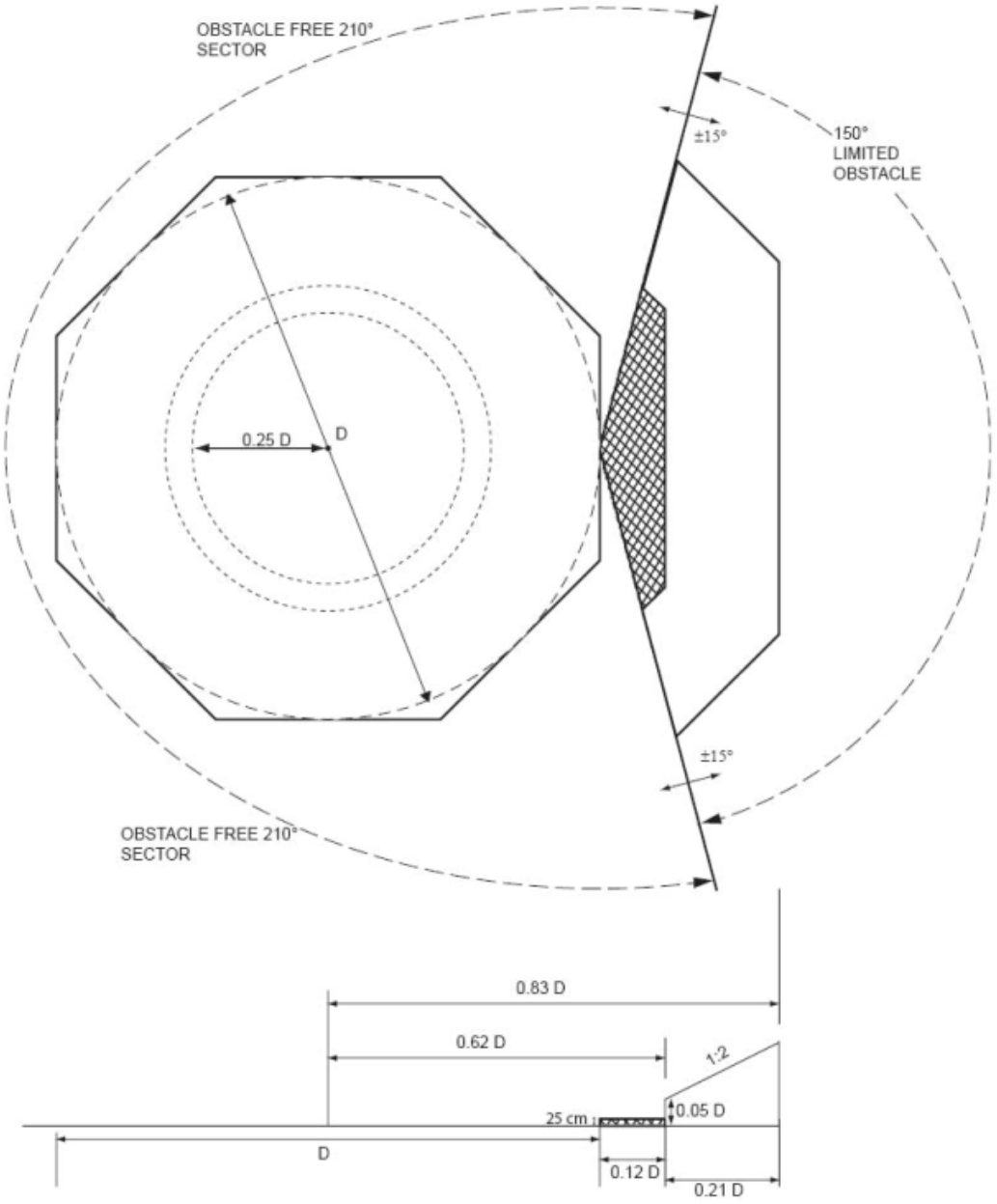

Figure 13-2 – Helideck obstacle limitation sector: single main rotor helicopters

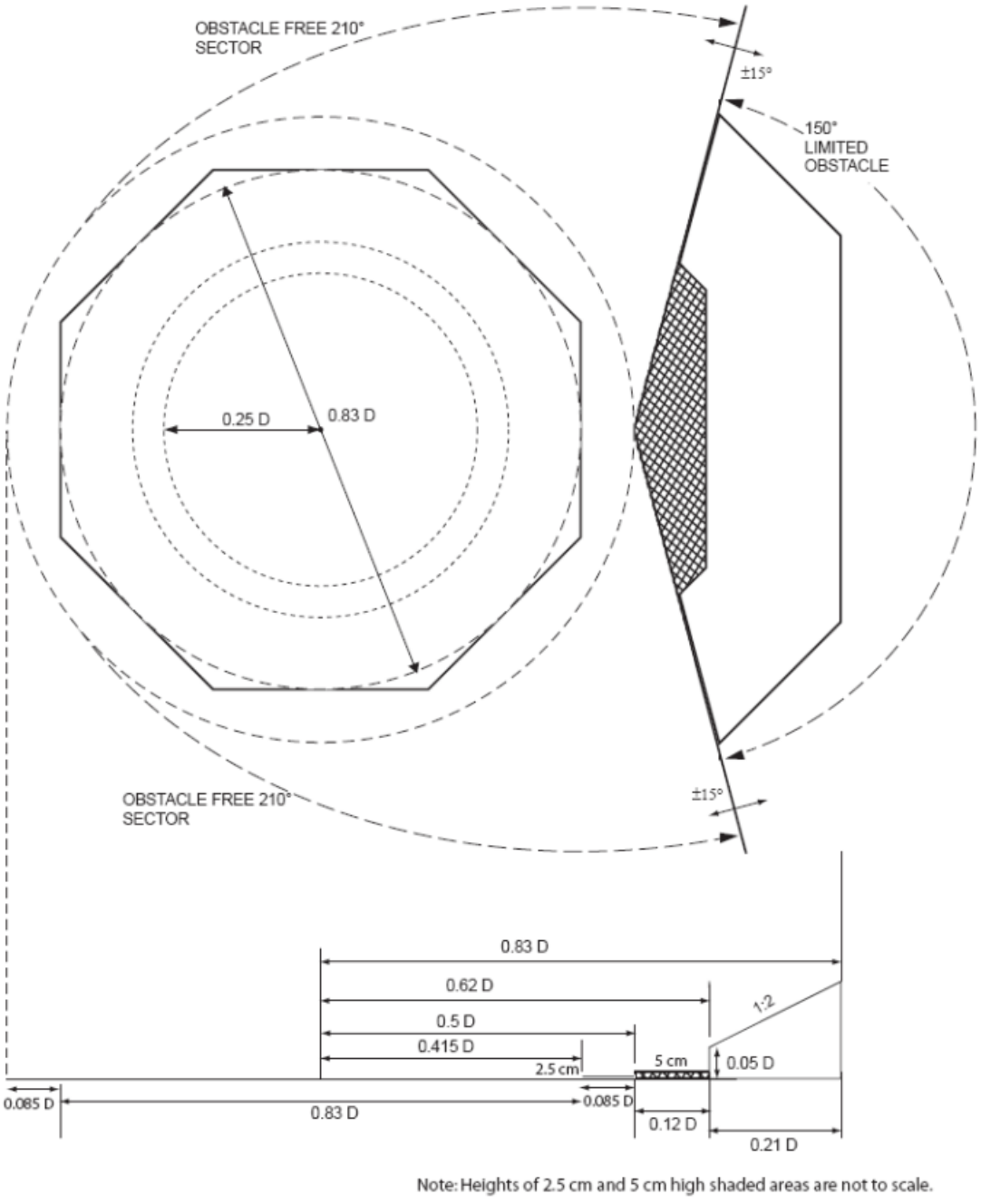

Figure 13-3 – Helideck obstacle limitation sector: single main rotor helicopters for benign climate conditions as accepted by the coastal State

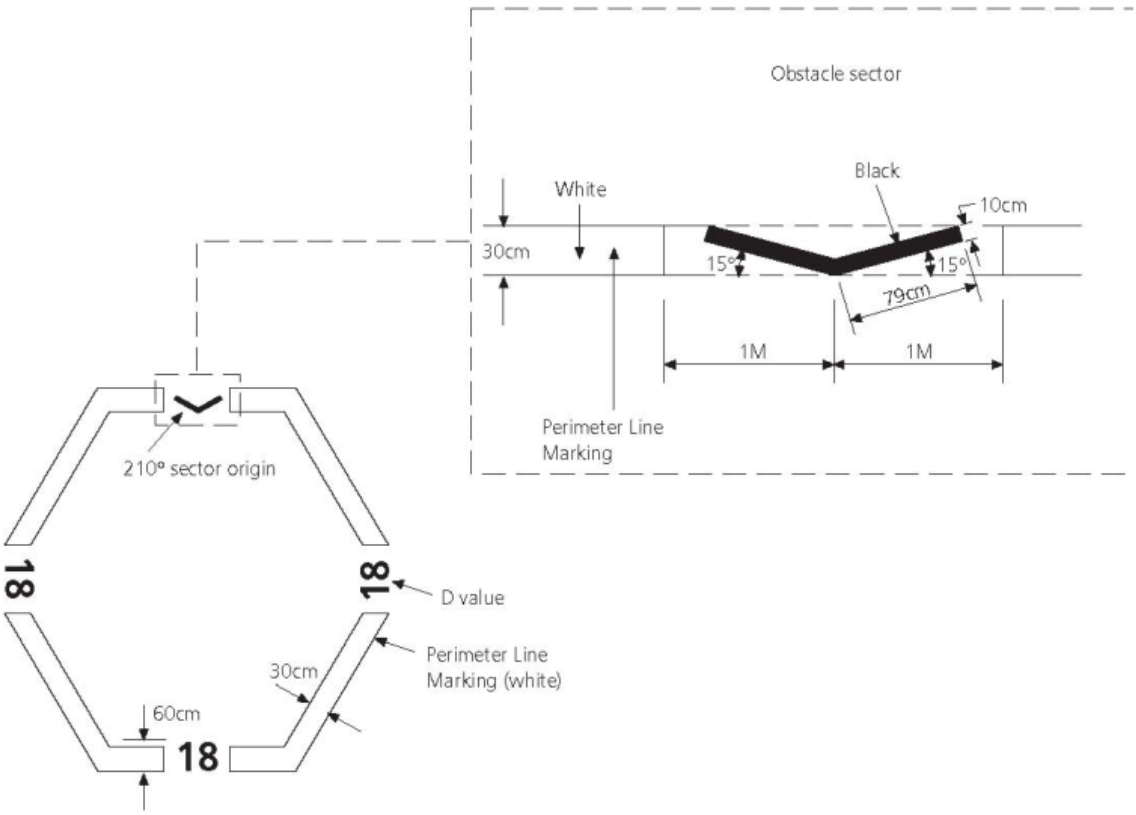

Figure 13-4 – Obstacle-free sector marking

IACS UR D3/Rev.6 - General design parameters

(…)

D3.10 Helicopter deck

D3.10.1 General

Plans showing the arrangement, scantlings and details of the helicopter deck are to be submitted. The arrangement plan is to show the overall size of the helicopter deck and the designated landing area. If the arrangement provides for the securing of a helicopter or helicopters to the deck, the predetermined position(s) selected to accommodate the secured helicopter, in addition to the locations of deck fittings for securing the helicopter, are to be shown. The helicopter for which the deck is designed is to be specified, and calculations for the relevant loading conditions are to be submitted. The identification of the helicopter which is used for design purposes should be included in the Operating Booklet.

D3.10.2 Structural design

Scantlings of helicopter decks and supporting structure are to be determined on the basis of the following design loading conditions in association with the allowable stresses shown in Table 1.

(i) Overall distributed loading: A minimum distributed loading of 2 kN/m^2 (42 lb/ft^2) is to be taken over the entire helicopter deck.

(ii) Helicopter landing impact loading: A load of not less than 75% of the helicopter maximum take-off weight is to be taken on each of two square areas, 0,3 m x 0,3 m (1 ft x 1 ft). The deck is to be designed for helicopter landings at any location within the designated area. For the design of girders, stanchions truss supports, etc., the structural weight of the helicopter deck should be considered in addition to the helicopter impact loading. Where the upper deck of a superstructure or deckhouse is used as a helicopter deck and the spaces below are normally manned (quarters, bridge, control room, etc.) the impact loading is to be multiplied by a factor of 1,15.

(iii) Stowed helicopter loading: If provisions are made to accommodate helicopters secured to the deck in a predetermined position, the structure is to be designed for a local loading equal to the manufacturer's recommended wheel loadings at maximum take-off weight, multiplied by a dynamic amplification factor based on the predicted motions of the unit for this condition, as may be applicable for the unit under consideration. In addition, a uniformly distributed loading of 0,5 kN/m^2 (10,5 lb/ft^2), representing wet snow or ice, is to be considered, if applicable. For the design of girders, stanchions, truss supports, etc., the structural weight of the helicopter deck should also be considered.

Table 1
Allowable stresses

Condition	Allowable stress		
	Plating	Beams	Girders, stanchions, truss supports, etc.
1. Overall distributed loading	0,6 σ_y	0,6 σ_y	0,6 σ_y*
2. Helicopter landing impact loading	(See Note 1)**	σ_y	0.9 σ_y
3. Stowed helicopter loading	σ_y	0.9 σ_y	0.8 σ_y

σ_y = specified minimum tensile yield strength of the material

* For members subjected to axial compression, the yield stress or critical buckling stress, whichever is less, is to be considered.

** To the satisfaction of PRS, in association with the method of analysis presented. PRS may consider an allowable stress that exceeds σ_y, provided the rationale of the analysis is sufficiently conservative.

NOTES

1. The thickness of plating for the overall distributed loading condition is not to be less that the minimum required by the Rules.
2. Helicopters fitted with landing gear other than wheels shall be specially considered by PRS.
3. Wind loadings and possible wave impact loadings on helicopter decks are to be considered in a realistic manner, to the satisfaction on PRS.

List of IACS resolutions implemented to *Part VII*

Unified Requirements (UR)

D3.10/Rev.6 General design parameters