CHAPTER 6

INSTRUCTIONS FOR REGULARIZATION OF HELIPORTS ON OFFSHORE PLATFORMS AND MERCHANT SHIPS

SECTION I

PROCEDURES FOR REGULARIZATION OF HELIPORTS

0601 – OBJECT

To establish the instructions for registration, certification and homologation of heliports on board of offshore platforms and merchant ships, Brazilian or foreign, operating in waters under Brazilian jurisdiction.

0602 - DEFINITIONS

a) Heliport – means a heliport on board of offshore platforms or merchant ships, Brazilian or foreign, operating in waters under Brazilian jurisdiction.
b) Applicant – Ship Owner, Freighter, Operator or their representative requesting regularization services for heliports.
c) Registration – official act of registration of the heliport at Diretoria de Portos e Costas (DPC) (Department of Ports and Coast).
d) Certification – official act by means of which DPC certifies that a heliport presents the necessary safety conditions for helicopters operating in waters under Brazilian jurisdiction.
e) Homologation – official act by means of which Departamento de Aviação Civil (DAC) (Department of Civil Aviation) of the Aeronautic Command authorizes the operation of helicopters in a heliport.
f) Interdiction – official act by means of which the Aeronautic Command issues the definite or temporary suspension of air operation of the heliport.
g) Requirement – non-compliance with any of the items established herein.

0603 – PROVISORY AUTHORIZATION

a) In order to supply the immediate operation needs, the Owner of the offshore platform or merchant ship coming from abroad may request from Diretoria de Aeronáutica da Marinha (DAerM) a 60 day provisory authorization for air operations in the heliport, using Model no. 1 attached hereto as Exhibit 6-B, Request for Provisory Authorization. The request shall be attached with the documents listed in Model no 1.
b) To obtain the provisory authorization the heliport must already have a valid homologation issued by a foreign official civil aviation board, or association with competent delegation of powers from such board.
c) If the documents presented to DaerM are considered satisfactory, DAerM shall sent a favorable opinion to DPC for the concession of the requested provisory authorization, and ask for releasing the operations of the heliport for a period of 60 days.
d) During the term of the provisory authorization, the heliport shall comply with the instructions herein and apply for the regular certification and homologation process.

0604 – INITIAL AND RENEWAL INSPECTIONS

a) The technical parameters established for heliports shall be evaluated by inspections conducted by an Inspection Commission, constituted in accordance with the indications of DAerM.

b) To start the operations in waters under Brazilian jurisdiction, the heliports must be submitted to the Initial Inspection to obtain registration, certification and homologation.
c) The Applicant must request the Initial Inspection using the Inspection Request Form, document of Model no. 2, attached as Exhibit 6-B. Application must be delivered, with clear indication of the date of receipt of application stamped by the secretary of DAerM, at least 10 business days prior to the date the Applicant wishes the inspection to be performed.
d) After the initial homologation is granted, heliports must be submitted to regular Renewal Inspections.
e) The Renewal Inspections must occur before the end of the Homologation Order term, so that the maintenance of the technical conditions of the heliport can be checked and the certification and homologation renewed.
f) The request for Renewal Inspection shall be submitted using the Request for Renewal Inspection Form, Model no. 2, attached as Exhibit 6-B. The Applicant must file the Request at least three months before the date required for the inspection to be performed.
g) In case of Initial or Renewal Inspections, application must be attached with the documents listed in Model no. 2, Exhibit 6-B, Request for Inspection. The Heliport Registration Card, Model no. 3 of Exhibit 6-B, must be filled in with all the updated data on the heliport. After the homologation process begins, any and all eventual changes of the information in the card delivered to DAerM must be updated and a new Heliport Registration Card, correctly filled in, delivered to DAerM.
h) The amounts due for the performance of the Initial and Renewal inspections are listed in Exhibit 10-D of Chapter 10.
i) Expenses incurred by the Inspection Commission, arising from the performance of the Initial or the Renewal inspections, such as airfares to the destination city, road and urban transportation and lodging, shall be borne by the Applicant. For planning purposes, the following aspects should be considered:
- the inspections will be conducted during daytime, lasting 4-hours, in average;
- inspectors shall be transferred to Applicant's heliport by helicopter; and
- during the inspections the heliport must be available for the inspection committee and cannot be used for any other purposes.
j) After the Initial or Renewal inspections, DAerM will issue the Heliport Inspection Term – TVH, to the Applicant (Model no. 4, Exhibit 6-B), with copies to DPC and Capitania dos Portos, or the Department, or Agency of jurisdiction in the area where the ship or platform will operate.

0605 – INSPECTION FOR SUSPENSION OF REQUIREMENTS
a) DPC will be the Military Organization responsible for the performance of the Inspection for Suspension of Requirements, which checks the compliance with the requirements contained in the TVH.
b) Requirements directly affecting the safety of air operations will be referred to as Impeding Requirements and will determine the temporary interdiction of the heliport by the DAC. The Owner will be given a 60-day period, extendable for another 30 days, on DAC's criteria, to obtain the suspension of the Impeding Requirements. After the given period, if the Owner does not comply with the requirements and such compliance is checked and requirement is cancelled by DPC, DPC will request the cancellation of the Homologation Order. After the cancellation of the Homologation Order, for the heliport to be authorized to operate again, DAerM must perform a new Initial Inspection.
c) If a requirement is classified as Non-Impeding, the applicant may operate the heliport for a period of 60 days, extendable for another 30 days, at DAC' criteria. After the given

period, if the Owner does not comply with requirement and such compliance is checked and cancelled by DPC, DPC will request the cancellation of the Homologation Order. After the cancellation of the Homologation Order, for the heliport to be authorized to operate again, DAerM must perform a new Initial Inspection.

d) The Applicant must inform the compliance with the requirements to DPC, using the document "Information of Compliance with Requirements", Model no. 5 of Exhibit 6-B. The information must be provided, at least, ten days prior to the term allowed to the suspension of the requirement. The non-compliance with the precedence stipulated herein can lead to the cancellation of the Homologation Order, pursuant to items b) and c) above. The date of the information of the compliance with the requirement will be as shown in the receipt protocol of the document "Information on Compliance with Requirement", Model no. 5 of Exhibit 6-B, by the secretary of DPC.

e) To check the compliance with the requirements, a Suspension of Requirement Inspection will be performed by DPC, and the Owner must pay the amount established in Exhibit 10-D of Chapter 10.

f) The expenses incurred by the Inspection Committee for the Inspection for Suspension of Requirement shall be borne by the Applicant, including airfares to the destination city, road and urban transportation, lodging.

0606 – UNEXPECTED INSPECTION

a) DAerM may perform inspections, at any time, to check the maintenance of the technical conditions of the heliport and such inspections are referred to as Unexpected Inspections.

b) After the Unexpected Inspection, a TVH will be issued to the owner, representative, etc. with copies to DPC and Shipping Office, Department or the Agency of jurisdiction in the area where the ship or the platform operates.

c) The procedures established in item 0605 shall be adopted for suspension of eventual requirements.

d) In case of requirements relative to the design of the platform or merchant ship that were not noticed at the time of the Initial or Renewal inspections, a note will be made in the TVH, determining the suspension of the requirements until the next inspection scheduled for the heliport.

e) The Unexpected Inspections will not be considered for computing the term of validity of the Homologation Order of the heliport.

0607 – CERTIFICATION

a) The Certification of the Heliport will be issued by DPC, in accordance with Model no. 6 of Exhibit 6-B, upon receipt of the TVH issued by DAerM, as long as there are no pending requirements.

b) In case there are non-impeding requirements at the time of the Initial or Renewal inspections, DPC shall request DAC to allow the air operation of the heliport, although the Certification will not be issued. Only after the compliance with the pending requirements DPC will issue the Certification of the Heliport and forward to DAC.

c) In case of impeding requirements, DPC will instruct DAC to interdict the heliport until the requirement is complied with, pursuant the procedures established in item 0605.

d) Applicant shall send yearly to DPC the Certificate of Maintenance and Technical Conditions of the Heliport, Model no. 7 of Exhibit 6-B, with a copy to DAerM within 20 days from the end of the yearly term of the Homologation Order issued by DAC. If this document is not presented within the given period, the validity of the Certification will be automatically cancelled, consequently causing the cancellation of the Homologation, and DPC shall request DAC to interdict the heliport, as well as the cancellation of the

competent Homologation Order. In this case, for the heliport to be released to operate again, a new Initial Inspection must be applied to before DAerM.
e) The certification of the heliport will be valid for five years, and may indefinitely renewed for equal periods of time, by Renewal Inspections, pursuant to item 0604.
f) DPC shall forward the Certification of the Heliport to DAC, together with Heliport Registration Card, to support the emission of the Homologation Order. Copies of the Certification shall be sent to the Applicant, DAerM and Shipping Office, Department or Agency of jurisdiction in the area where the ship or the platform operates.
g) DPC may cancel the certification at any time, in case technical parameters and/or safety conditions of the operations are compromised.

0608 – HOMOLOGATION
a) The Homologation Order for Heliport (Model no. 8, Exhibit 6-B) will be issued by DAC. This issue will be processed after DPC sends the Certification and Heliport Registration Card to DAC.
b) After the issue of the Homologation Order, DAC shall send copies of the documents to the Applicant, DPC, DAerM, Shipping Office, Department or Agency of jurisdiction in the area where the ship or the platform operates.
c) The Homologation Order will be valid for five years.

0609 – CHANGE OF PARAMETERS
a) If it is necessary to change the parameters of the Homologation Order, the Applicant must request this change from DAerM, with copies to DPC and Shipping Office, Department or Agency of jurisdiction in the area where the ship or the platform operates, by filling in the Request for Change of Parameters form (Model no. 9 of Exhibit 6-B), attaching the documents listed in the model.
b) If the changes do not imply in substantial changes in the characteristics of the heliport, DAerM will inform DPC of its favorable opinion for the issue of a new Homologation Order including the requested changes (Model no. 10 of Exhibit 6-B), which will have the same validity term of the previous Homologation Order.
c) If DAerM identifies the requested changes as changes needing an inspection to check the changes of the parameters, the Applicant shall be notified, with copies to DPC and Shipping Office, Department or Agency of jurisdiction in the area where the ship or the platform operates. A Provisory Authorization may be granted as provided in item 0603.
d) The Inspection for Checking Change of Parameters will be conducted after the payment of the charge indicated in Exhibit 10-D.
e) Expenses incurred by the Inspection Commission in connection with the Inspection for Checking Change of Parameters, including airfare to the destination city, road and urban transportation, lodging, shall be borne by the Applicant.
f) The Inspection for Checking Change of Parameters does not imply in changes to the term of the previous Homologation Order.
g) After the Inspection for checking Change of Parameters, DAerM shall send the TVH (Model no. 4) to the Applicant, with copies to the DPC and Shipping Office, Department or Agency of jurisdiction i the area where the ship or the platform operates, indicating the new parameters.

0610 – POSITIONING OF SHIPS AND PLATFORMS
a) Requests for displacement of Brazilian or foreign platforms and merchant ships, equipped with heliports, either when entering or leaving waters under Brazilian jurisdiction, shall be filed by the interested party, informing such displacement directly to

the Shipping Office, Department or Agency of jurisdiction in the area where the ship or the platform operates, the Direction for Hydrograph and Navigation (DHN) and DAC, within 48 hours. Equal request shall be made in the case of repositioning of platforms and FPSO/FSU. The requests shall inform the original position and the suspending time, the position and estimated time of arrival at the new position, as well as the estimated time for intermediary night positions, if necessary.

b) The Applicant shall give special attention to the position of the platform and/or ship, in order to avoid interfering with other heliports in the same area.

c) Whenever technical reasons are not impeding, at the final positioning of the platform/ship, the Free from Obstruction Sector, item 0613 c), should be aligned with the direction of the average predominant wind in the area and the Sector with Obstructions of Limited Height positioned at the right side of the Area for Final Approach and Take Off.

SECTION II

DEFINITIONS AND TECHNICAL PARAMETERS ESTABLISHED FOR HELIPORTS

06111 – DEFINITIONS

a) Area for Final Approach and Take Off – defined area where the final stage of the approach maneuver for scud flight or landing is completed and from which the take off starts.

b) Landing Area – part of the Area for Final Approach and Take Off, with specific dimensions, over which the helicopter should touch the ground when landing.

c) Maximum Length of Helicopter (B) – distance measured from the main rotor blade tip to the rear rotor blade tip (or the rear end of the structure), or from the front rotor blade tip to the rear rotor blade tip, on helicopters equipped with two main rotors. In both cases, the blades referred to are located on the longitudinal direction of the helicopter.

d) Diameter of the Heliport (L) – diameter of the largest circle fitting in the Area for Final Approach and Take Off.

e) H—Platform - platform with a crew over 5 (five) people.

f) D—Platform or Sporadic Landing Platform – platform with a crew up to 5 (five) people.

g) Fixed Offshore Platform – permanent construction for activities related to oil and gas prospecting and exploiting. Not considered as a vessel.

h) Mobile Offshore Platform – general denomination of vessels used directly in the activities of prospecting, exploiting, production and/or storage of oil and gas. Including the semi submersible and jack up units, drilling vessels, tension leg units, spar units, fixed production, storage and transfer units (FPSO) and fixed storage and transfer units (FSU). Vessels used for other works or services, with construction characteristics similar to those of the units defined above, shall not be considered as “platforms” for application of the requirements provided in his standard and other codes related to oil and gas extraction activities.

i) Reference Point – is the point located on the perimeter line of the Area for Final Approach and Take Off, carefully chosen, based on the existing structures on the area around the heliport and which will be a reference to define the Sector Free from Obstructions and the Sector with Obstructions of Limited Height.

0612 – CATEGORIES OF HELIPORTS

Based on the maximum length (B) of the largest helicopter to operate, heliports shall be classified in accordance with table 1 below:

TABLE 1

HELIPORT CATEGORY	MAXIMUM LENGTH (B) OF THE LARGEST OPERATING HELICOPTER
H1	Up to (exclusive) 15m
H2	From 15m to 24m

0613 – TECHNICAL PARAMETERS

a) Area for Final Approach and Take Off – the largest possible area should be used, to contain a circle with diameter (L) equal or larger to the maximum length (B) of the largest helicopter to operate on the heliport, with any geometric form (for merchant ships, figures 1, 8, 10 and 11, and for offshore platforms, figure 1 of Exhibit 6-A).

For heliports on merchant ships and offshore platforms continuously operating in Brazil before May 09, 1988, the Area for Final Approach and Take Off shall be big enough to contain a circle with diameter (L), at least equal to 90% of the maximum length (B) of the largest helicopter to operate on the heliport, with any geometrical form (see figures 2 and 9 for merchant ships and figure 2 for offshore platforms shown on Exhibit 6-A).

No obstruction will be allowed within the Area for Final Approach and Take Off.

b) Landing Area - the dimension of this area shall be that of a circle with internal diameter equal to 0.5(B) of the largest helicopter to operate. This circle shall be concentric with an imaginary circle with diameter (B), contained in the Area for Final Approach and Take Off (figures 1, 2 and 3 of Exhibit 6-A). Landing Areas not concentric with the imaginary circle will be allowed, as long as the largest helicopter to operate, when on the ground, is totally contained in the Area for Final Approach and Take Off. The center of the landing area may be displaced only over the bisectrix of the angle of the Sector Free from Obstruction in the direction of the outer edge of the helicopter.

No obstructions will be allowed in the Landing Area.

c) Sector Free from Obstructions - a 210º section where no obstructions are allowed. The Sector is limited in the horizontal plan coinciding with the heliport plan by the following limits:

- Lateral – semi-straight lines originating from the reference point, with an angle of 210º between them and located out of the Area for Final Approach and Take Off.
- External – line parallel to the limit line of the Area for Final Approach and Take Off, distant 370m from the limit line.

The maximum heights allowed for essential equipment, relative to the heliport, such as lamp fixtures and fire fighting equipment, located in the Sector Free from Obstructions, outside the Area for Final Approach and Take Off shall not be over 0.25m (Exhibit 6-A, figure 6).

For heliports located aft or forward of merchant ships and offshore platforms, the 210º Sector Free from Obstructions is represented by figures 1 and 8 on exhibit 6-A.

For heliports located aft or forward of merchant ships and offshore platforms, under continuous operation in Brazil before May 9, 1988, if the technical conditions do not allow a 210º Sector, and after technical evaluation by DAerM, the Sector Free from Obstructions may be 180º (Exhibit 6-A, figures 2 and 9). This condition will be evaluated on the next Renewal Inspection for such heliports.

For heliports located amidships on merchant ships, the Sector Free form Obstructions must have, at least, the dimensions indicated in Exhibit 6-A, figure 10.

No obstructions will be allowed inside the Area for Final Approach and Take Off or the Landing Area.

The bisectrix of the angle corresponding to the Sector Free from Obstructions shall pass through the center of the Landing Circle.

d) Sector with Obstructions of Limited Height – 150º sector, adjacent to the Sector Free from Obstructions, where limited height obstructions in relation to the level of the heliport are allowed; The Sector is limited in the horizontal plan coinciding with the heliport plan by the following limits:

Lateral – semi-straight lines originating from the reference point, coinciding with the semi-straight lines defined for the Sector Free from Obstruction, with 150º angle between them (complementary angle of the angle of the Sector Free from Obstruction) and located outside the Area for Final Approach and Take Off.

External – arc of the circle originating in the center of the heliport and ratio 50% L added to 25% B.

The heights of the obstructions will be limited by 1:2 slope ramps (one vertical unit for two horizontal units), in directions parallel to the bisectrix of the 150º angle, starting from the limit lateral lines of this sector and the height of 0,25m (figures 1 and 8, Exhibit 6-A).

The maximum height of the obstructions located in the Sector with Obstructions of Limited Height may be calculated using the following formula: Hmax = W/2 + 0.25m, where,

Hmax – maximum height allowed in the sector, in meters

W – distance, in meters, between the obstruction and the semi-straight line defining the lateral limits of the sector, measured parallel to the bisectrix of the 150º angle.

For heliports located amidships on merchant ships, the height of the obstructions in this sector are limited by a 1:5 slope ramp (one vertical unit for five horizontal units), in the direction to the bisectrix of the angle, starting from the limit lines of this sector and the 0.25m height (figure 10, Exhibit 6-A);

The maximum height for obstructions in the Sector with Obstruction of Limited Height in heliports located amidships in merchant ships can be calculated using the following formula: Hmax = W/2 + 0.25m, where,

Hmax – maximum height allowed in the sector for amidships heliports, in meters.

W – distance, in meters, between the obstruction and the semi-straight line defining the lateral limits of the sector, measured in a parallel to the bisectrix of the 150º angle.

For heliports located aft or forward of merchant ships and offshore platforms, under continuous operation in Brazil before May 9, 1988, the Sector with Obstruction of Limited Height is defined as the sector between the limit lines of the Sector Free from Obstruction and the circle with ratio of 70% of the maximum length of the largest helicopter to operate on the heliport, originating from the center of the heliport. The height of the obstructions, in this sector, shall be limited by a 1:2 slope ramp (one vertical unit for two horizontal units), in the direction parallel to the bisectrix of the angle of the Sector Free from Obstruction, starting from the limit lines of this sector, with 0,25m height (figures 2 and 9 of Exhibit 6-A).

e) Structural Project – the Area for Final Approach and Take Off shall have enough strength to support the weight of the heaviest helicopter to operate on the heliport, besides those foreseen due the number of people, equipment and other load. The impact load (dynamic weight) shall be considered as support load for the Landing Area, total of 150% the weight of the heaviest helicopter to operate on the heliport, distributed over the main supports of the landing gear (75% on each support), considering the application area equal to 0,09m^2 per tire or ski. An original document or certified copy of the certificate assuring the strength of the floor stated in the Heliport Registration Card shall be presented;

f) Access – at least two accesses (one may be emergency) for heliports of H1 category heliports and three accesses (one may be emergency), for H2 category heliports, preferably with equidistant spacing.

g) Drainage – All the heliport shall be provided with efficient drainage system, with capacity to guarantee the total drainage of spilt fuel directly overboard, avoiding puddles or overflowing to other decks or compartments of the platform or ship. Gutters may be used around the heliport and drainage points inside the Final Landing and Take Off Area, as shown in Exhibit 6-A, figures 4 and 12.

h) Rigging rings or holes – Rings shall be provided for rigging helicopters and anti-skidding nets, as follows:

1) on the limit of the Area for Final Approach and Take Off connecting rings shall be installed for rigging the cables to tie up the anti-skidding net (Exhibit 6-A, figure 4). Space between the rings shall be 1.35 to 1.50m.

2) the helicopters shall be rigged with angles within the limits recommended by the manufacturers. The rigging rings or holes shall withstand the weight of the largest helicopter to operate on the heliport. When located inside the Area for Final Approach and Take Off or the Landing Area, the rings shall be retractable, so that they will not constitute obstructions (see figure 4 of Exhibit 6-A).

i) Anti Skidding Net - Every heliport must be equipped with an anti-skidding net, o sisal or hemp fibers**,** 20 mm diameter, forming 45 cm squares or diamonds.

The minimum dimensions required for the net are the following, in accordance with the category of the heliport:

TABLE 2

HELIPORT CATEGORY	DIMENSIONS OF THE NET (in meters)
H1	6 x 6
H2	12 x 12

H2 heliports on platforms with 90%B condition, according to item a of this item, shall have the dimensions of the net reduced to 6m x 6m.

The net shall be attached to rings installed within the limits of the Area for Final Approach and Take Off with sisal or hemp rope, material similar to the material the net, and the minimum strength of the attachment cables shall be 2225N.

The cables attached to the rings shall be spaced at 1.35 to 1.50m (figure 4 of Exhibit 6-A).

The fixed platforms shall not use anti-skidding net.

j) Protection Screen - Protection screens shall be installed around the heliports, except when there is an structural protection providing enough safety for the personnel involved in air operations. The screen shall be of a flexible uninflammable material. This screen shall be 1,5m wide, maxim 4" x 4" mesh. The lower edge of the protection screen shall be in the same level of the heliport or lower, including the drainage channel in the heliport area, if existing. The upper edge of the protection screen shall be slightly above the heliport level, but shall not exceed 25 cm in height relative to that level. The screen shall have an approximate inclination of 10º up in relation to the horizontal plan.

The protection screen shall not be over stretched, avoiding jumping board action, and, if lateral and longitudinal beams are installed to improve the strength of the screen, they shall not cause injuries to people who, eventually, may be supported by the screen.

The screen shall be strong enough to withstand, without damage, to a 75-kilo weight falling from a height of one meter. The Owner must sign and present a declaration stating that the protection screen was submitted to tests with the stipulated load,

performed by specialized company or by the engineering section of the company operating the ship or platform.
Note: The regulations in this item shall be complied with within a six-month period, as of the date of the publication of these standards in the Official Gazette (DOU).

0614 – DAY SIGNALING
a) Heliport Floor - shall be painted in dark green or dark gray, with anti-skidding paint.
b) Identification Sign – The identification sign of the heliport located in an offshore platform and merchant ships is the letter "H" painted in white in the middle of the Landing Area. For offshore platforms, dimensions indicated in figure 7 of Exhibit 6-A shall be observed, and painting should be oriented in parallel with the final approach and take off direction, the horizontal line of the "H" coinciding with the bisectrix of the free from obstructions angle; for merchant ships, the dimensions and position indicated in figures 7, 8, 9, 10 and 11 do Exhibit 6-A shall be observed.
c) Limits of the Area for Final Approach and Take Off – The perimeter of the Area for Final Approach and Take Off shall be marked with a 0,30m wide continuous white strip (figures 1, 2 and 3 of Exhibit 6-A).
d) Chevron – geometric figure painted in black on the floor of the platform, in the form of a "V", where the vortex defines the origin of the Sector Free from Obstruction. Each "leg" of the chevron shall be 0.79m long and 0.1m wide, forming an angle as indicated in figure 14 of Exhibit 6-A.
e) Limits of the Landing Area – The limits shall be marked with 1.0 m wide circle, painted in yellow in accordance with the dimensions indicated in figures 1, 2 and 3 of Exhibit 6-A.
f) Maximum Allowable Load – shall be painted in yellow on the lower right corner, which is considered to be the preferential approaching direction, having at its right side the Sector with Obstructions of Limited Height; following items shall be observed:
1) whole number values up to 9 tons: shall be painted with one digit only, using the normal size of the reference squares (35 x 35 cm, shown in figure 7 of Exhibit 6-A).
2) whole number values equal or over 10 tons: shall be painted in two digits, using the size of the reference squares reduced by 1/3 (23 x 23 cm, as shown in figure 7 of Exhibit 6-A).
3) decimal values: shall be painted in tenths of ton without rounding up. The reference squares shall have their size reduced to 17 x 17 cm, after whole number values with one digit, and to 11 X 11 cm, after whole number values with two digits.
g) Heliport Prefix - the heliport prefix (IRIN) shall be painted in yellow on the right upper corner, considered to be the preferred approaching direction, having on the right the Sector with Obstructions of Limited Height (figure 3 of Exhibit 6-A). The dimensions of the prefix are indicated in figure 7 of Exhibit 6-A. If the available space is not large enough for the prefix, the size of the letters shall be reduced to 1/3 or 1/2, in accordance to notes 2 and 3 of figure 7 of Exhibit 6-A.
h) Safety Notices – shall be on visible panels, painted in black letters over yellow background, including recommendations to be followed by passengers boarding or leaving the helicopters and by the other users of the helicopters, with the characteristics below:
1) boarding: 0.80 x 1.60m panels located on the heliport access stairs (figures 3, 4 and 5 of Exhibit 6-A); and
2) leaving: panels next to the limit of the Area for Final Approach and Take Off, which can also be placed on the protection screen, at the maximum height of 0,25m

over the floor of the heliport, with the necessary length, well visible by the leaving passengers (figure 5 of Exhibit 6-A);
The notices for boarding or leaving passengers may be painted in the protections of the offshore platforms and merchant ships, with heliports located at the same level of the decks, as long as they are visible

i) Wind Direction Indicator (wind sock) –wind direction indicator, placed on a visible location, but not subject to turbulence, and not to constitute danger to the helicopters maneuvers. The wind direction indicator must be of highly resistant fabric, orange or yellow in color, where the weather conditions provide better contrast capacity. The specifications for this indicator are shown on figure 5 of Exhibit 6-A;

j) Platform Identification – Companies may use the space on the left of the letter "H" (on the opposite side to the IRIN and the maximum allowable load), limited to the height of the letter "H", between the Landing Area and the limit of the Area for Final Approach and Take Off, to identify the platform or ship. The symbols used are up to Operator's criteria, but it shall not create any doubts as to the IRIN and Maximum Allowable Load, on the right side of the heliport (figure 3 of Exhibit 6-A).

0615 – NIGHT SIGNALING

a) Lamps on Limits of the Area for Final Approach and Take Off – Irrespective of the shape of the heliport, yellow lamps must be placed, at every 2 or 4 meters, at the height indicated in figure 6 of Exhibit 6-A, tangent to the limit line of the Area for Final Approach and Take Off, being allowed a maximum distance of 0.50m from this line, at the height of 0.25m. The material used on the lamps shall frangible or "turtle" type. As an alternative solution in the case of ships, level headlights may be used to light the heliport (figure 13 of Exhibit 6-A). These lights must not dazzle the view of the pilot when on the final approach.
Concerning heliports on merchant ships and offshore platforms under continuous operation in the country prior to February 11, 2000, the lights indicating the limits of the Area for Final Approach and Take Off shall be positioned, irrespective of the shape of the heliport, alternately in blue and yellow, odd numbers on each side, at each 2 and 4m, at the height of 0.25m, being the yellow lamps always located on the ends of the area.

b) Obstruction Lights - red lamps shall be installed on the obstructions and on the obstruction points existing near the Area for Final Approach and Take Off of the heliport and on the high points of the platform and of the ship, which may constitute hazard danger areas for aerial operations. Such lamps must be round and have minimum reach of 10 nautical miles (MN).
When it is no possible to install lights in the obstructions, floodlights shall be used to light them, as an alternative solution. The floodlights shall be positioned to avoid glare on the pilot eyes during landing and take off.

Wind Direction Indicator (wind sock) – White lights shall be installed for lighting the Wind Direction Indicators. The light rays shall be positioned to avoid glare on the pilot eyes.

0616 - FIRE PREVENTION AND FIGHTING IN HELIPORTS AND RESCUE

The requirements indicated in this item are the minimum necessary for these services to be conducted immediately in the heliport or surroundings.

a) Protection Level – The protection level for rescue and fire fighting services shall be based on the category of the heliport, as determined by the maximum length (B) of the largest helicopter to operate.

b) Classification – for fire prevention and fighting purposes, the helicopters shall be classified as follows:
H1 – (B) of the largest operating helicopter: up to 15m (exclusive); and
H2 – (B) of the largest operating helicopter: from 15 to 24m.

c) Equipment Specification and Heliport Material

1) Fire Fighting Agent

The main fire fighting agents shall be water based foam and fluorine protein foam.
The water quantities for production of foam and complementary agents necessary to provide the heliports, according to their categories are indicated in the table 3 below:

TABLE 3

CATEGORY OF HELICOPTER	WATERYT OR FLUORINE PROTEIN FOAM		COMPLEMENTARY AGENT CHEMICAL POWDER (Kg)	MAXIMUM CAPACITY OF GENERATING LIQUID TANK (l)
	Water(l)	Ratio for discharge of foam solution (l/min)		
H1	2500 (*)	250	45	250 (**)
H2	5000 (*)	500	45 (2 units)	500 (**)

Notes:
(*) tank for minimum water storage, when applicable
(**) this quantity can be stored in gallons, located near the heliport. Such gallons must have large capacity and be located near the heliport to allow constant feeding of the foam guns.
Whichever the type of extinguisher used, there must be trained personnel to operate it.

2) Material Required for the Heliports

Heliports shall be provided with resources allowing immediate action in case of accidents. The minimum material required shall include the following items:

2.1) Tools

- Axe for rescue (over 3 kg);
- crowbar minimum 1 m;
- big wire cutting scissors 0,60m;
- articulated or supported ladder, height compatible with the dimensions of the largest helicopter to operate on the heliport;
- manual metal saw;
- universal insulated 8” pliers;
- 10” screwdriver;
- two sailor knives (6”, with sheath);
- portable flashlight;
- four basic fire protection individual outfits (material should be high temperature resistant and non flame spreading);
- four safety glasses;
- four ear protectors;
- four pairs of boots (anti-skidding soles, no hooks, no clamps); and
- one fireproof safety belt and line.

2.2) Fire Extinguishers

2.2.1 – On H2 category heliports:
- two chemical powder extinguishers; and

- three foam guns.

2.2.2 – On H1 category heliports:

- one chemical powder extinguisher; and
- two foam guns.

Notes:

(a) the guns must be positioned so that, in case of fire in the aircraft, the fire may be fought from two different positions, according to wind direction (preferably 120º apart); and

(b) one of the guns, when necessary (height of obstruction, water pressure line, etc.), may be substituted by a water pressure hose connection with discharge capacity similar to the one indicated on table 3.

3) First Aid Material

- one "Neil Robertson" or "Strokes" stretcher;
- one cervical collar;
- one first aid kit;
- one oxygen bottle and two masks;
- one tracheotomy tube.

4) Support Material

- one scale, 200 kg minimum capacity, placed near the heliport, to weigh personnel, luggage or material to be shipped on the helicopter;
- two pairs of wedges; and
- four nylon or metallic straps for aircraft rigging.

5) Rescue Vessel

- one Rescue Vessel with capacity to rescue shipwrecked people in a quantity compatible with the largest helicopter to operate in the platform or merchant ship.

d) Specification of Material and Equipment for Heliport on Unoccupied Platforms

The heliport located on unoccupied platforms shall be used only for occasional landings, where the rescue capacity is reduced, and there is no Take Off and Landing Agents (ALPH) or fire fighting team.

When there is a crew on board (one to five) the platform shall have persons able to operate a transmitter/receiver radio and a fire fighting hose.

Such heliport shall be equipped with the following resources:

1) Material Required for Heliports on Unoccupied Platforms

The heliports must be provided with resources allowing immediate action in case of accidents. The minimum material requested is listed blow:

1.1) Tools

- one axe for rescue (over 3 kg);
- one crowbar, at least 1m long;
- one sailor knife (6", sheath);
- portable flashlight;
- two safety glasses;
- two ear protectors; and
- two pairs of boots (anti-skidding soles, no hooks, no clamps)

1.2) Fire Extinguishers

- one outlet for water pressure hose equipped with nozzle and connection to the foam generator, with discharge capacity similar to that indicated on Table 3.

d) General Considerations

The tools, first aid material and support material shall be kept in places duly protected from sun and rain, adequately signaled and painted red. Such places shall be easily accessible, allowing moving of the material to the heliport in, at the most, one minute.

SECTION III

COMMUNICATIONS AND NAVIGATION SYSTEMS

0617 – DEFINITIONS

a) Stationary Heliports – heliports located on offshore platforms or merchant ships will be homologated to operate in a fixed geographical position, in waters under Brazilian jurisdiction, allowed a maximum variation of two miles from the authorized position. The position shall be registered in the Heliport Registration Card and will be published in the Homologation Order, always mentioning the geographical coordinates, up to tenths of minutes. The operation of aircraft on Stationary heliports will be restricted to the position indicated in the Homologation Order, except under special conditions (necessary movements), with the express authorization of DAC.

b) Variable Position Heliports - heliports located on offshore platforms or merchant ships which, due to the nature of their operation, will be homologated to operate on any geographical position in waters of Brazilian jurisdiction.

Note: the definitions above are fundamental for the identification of the radio-navigation aids that will be available during the operation of the heliport. The change in the framing of a heliport requires a previous evaluation by DAerM and DECEA, authorization by DPC and issue of a new Order by DAC.

0618 – REQUIREMENTS AND HOMOLOGATIONS

In order to provide better safety for air operation, the platform or ship must have a radio light to help helicopter navigation, specially its orientation to the heliport, and aeronautic radio communications equipment for landing and taking off of helicopters on the heliport.

a) A NDB, Permitted Station for Telecommunications and Air Traffic (EPTA), which frequency assures reception at a distance of 30 nautical miles (MN) by an aircraft flying at least 2.000 feet high. EPTA must be duly homologated by the Department of Air Space Control (DECEA), through the Regional Agencies, in accordance with IMA 63-10, issued by the Aeronautic Command. The Stationary Heliports positioned at a distance equal or under 30 MN from the shore or from another Stationary Heliport with a duly homologated NDB, are released from the requirement of having a NDB;

b) For communications between the platform/ship and the aircraft, there shall be an EPTA, duly homologated by DECEA, through a Regional Agency, in accordance with IMA 63-10, issued by the Aeronautic Command. Such EPTA shall be able provide the following information to the helicopters:

- direction and intensity of the true wind over the heliport;
- direction and intensity of the relative wind over the heliport;
- temperature over the heliport;
- position of rolling, pitching and heaving of the vessel;
- sea conditions, including water temperature;
- weather conditions; and
- air traffic on the surrounding areas.

c) the owners shall send to DAerM copies of the homologation Certificates, or EPTA Authorizations granted by DECEA.

Note: 1) Regarding aspects related to the Navigation System, the NDBs that are not homologated must be turned off, immediately, as of the date of publication of the rules established herein in the Official Gazette. The term for the fulfillment of the new

requirements indicated in this section, for the homologation of the NDB is of 1 (one) year, as of the same date; and
2) The requirements related to the Communications System must be fulfilled with a 2 (two)-year period, as of the date of the publication or these rules in the Official Gazette.

SECTION IV

OPERATIONAL PROCEDURES

0619 – QUALIFIED PERSONNEL

At the time of the air operations, the heliport of manned platforms and merchant ships must have the following crew:
a) A maneuvers crew and an aviation fire fighting crew (EMCIA), with the following staff:
1) One agent for taking off and landing of helicopter (ALPH), who should be the leader of EMCIA and must be authorized to operate the portable VHF transceiver; and
2) Two or three Aviation Firemen (BOMBAV), in accordance with the category of the heliport, (H1) or (H2), respectively, to operate the foam guns. In the case of offshore platforms and merchant ships with automatic or remote control guns, the quantity of BOMBAV necessary for the crew will be evaluated as a special case, in accordance with the provisions of item 0625.
b) a radio operator on the radio station of the occupied sea platforms or merchant ships, in order to establish bilateral communications with the aircraft; and
c) a Rescue Vessel and respective crew.
On unmanned platforms, when there are personnel on board, the heliport shall have qualified personnel to operate a portable transceiver radio and the hose to be used on fire fighting.

0620 – OPERATION ATTRIBUTIONS AND RESPONSIBILITIES

Each member of the crew involved with the air operation shall be duly qualified and trained to exercise his/her function and responsibilities as indicated below:
a) MANEUVERS AND AVIATION FIRE FIGHTING CREW (EMCIA)
1) AGENT FOR TAKING OFF AND LANDING OF HELICOPTER (ALPH)
I) Be the crewmember responsible for EMCIA.
II) Be duly qualified by attending the appropriate course for the exercising of his/her functions, the certificate should be valid for two years and the performance will be evaluated at the time of the inspections to the heliport.
III) Attend a ALPH course that fulfills the minimum requirements established on Exhibit 6-B, page 6-B-16.
IV) Know the requirements for heliport maneuvers established in herein.
V) Wear basic fire protection outfit (clothes using high temperature resistant and non-flame spreading material, as well as a vest in contrasting colors (orange and white) to be easily identified from the helicopter.
VI) Shall be provided with a portable VHF transceiver, tuned on the aeronautic frequency of EPTA of the heliport, to communicate, in case of emergency event with the helicopter.
VII) Know the functions and all the members of EMCIA.
VIII) Know the emergency exits and the dangerous areas of the aircraft operating on the heliport.
IX) During air operation agent shall:
a) Assume the functions of leader of EMCIA;

b) Supervise all the activities on the heliport (boarding and leaving of material and personnel, fuel supply to the aircraft, fire fighting, first aid and wounded people transportation);
c) Perform briefings (before the beginning of the air operations) and debriefings (after the end of the air operations) with the other members of EMCIA.
d) Make sure that, before the landing and taking off of any helicopter, the heliport is ready to receive the aircraft (examples: DOE patrol; Safety Signs in accordance with this rule; crane booms near the heliport stopped and in the safest position for air operation; only personnel related to the helicopter operation present on the deck).
e) Establish communications with the aircraft only in emergency cases.
f) Make sure that, before the landing and taking off of any helicopter the load and luggage to be embarked are weighed, packed and labeled (Load and Passengers Manifests);
g) Make sure that, before the landing or taking off of any helicopter the passengers are aware of the regular and emergency procedures;
h) In case of emergency, when communicating by radio with the aircraft, Portuguese language should be used; and
i) Use to radio to communicate with pilots, during landing and taking off of the helicopter, when a hazardous situation arises. Besides the radio, the landing abort sign may be used, in case of an emergency situation.
X) The ALPH course certificate and respective résumé shall be presented at the time of inspection of the heliports.

2) AVIATION FIREMEN (BOMBAV)

I) Duly qualified crew providing fire fighting equipment.
II) Crew duly qualified by attending the appropriate course for exercising of functions, and the certificate supplied shall be valid for two years and the performance will be evaluated at the time of the inspections to the heliport.
III) The course for the crewmember exercising the function of Aviation Fireman must fulfill the minimum requirements established on Exhibit 6-B, page 6-B-16.
IV) Wear basic fire protection outfits (clothes using high temperature resistant and anti flame spreading material).
V) Know the location of emergency exits and the dangerous areas of the aircraft operating on the heliport.
VI) During air operation BOMBAV shall:
a) Follow the Safety Procedures and Norms;
b) Be guarding the heliport at least 15 minutes before the helicopter's estimated time of arrival at the platform and, during the landing or taking off procedures be ready by the foam guns, having the equipment ready to be started. In case of crash followed by large fire, the foam must be immediately released.
VII) The certificate for the BOMBAV course and the respective resume must be presented during the inspections to the heliport.

b) RADIO OPERATOR

1) Should be duly qualified to exercise the functions and have a valid Technical License Certificate (CHT), issued by the Department of Air Space Command (DECEA). The certification shall be presented during the inspections to the heliport.
2) The functions of the radio operator are:
I) To establish communications with the aircraft 30 (thirty) minutes before the helicopter estimated time of arrival;

II) To gather the EMCIA and the Rescue Vessel crew, so that 15 minutes before landing time, all the people involved are ready and equipped;
III) To have the crane operators have their equipment parked in their cradles or safe support positions, previously defined that do not interfere of the Sector Free from Obstruction and the Sector with Obstructions of Limited Height of the heliport;
IV) To maintain radio contact with the aircraft, through the homologated Permitted Air Traffic Station (EPTA), transmitting the necessary aeronautic information;
V) To transmit the flight plans and notifications of the aircraft to the controlling bodies;
VI) To transfer the communications to ALPH when the aircraft reports "ready to land", keeping on permanent stand by until the engines are cut off; and
VII) To use Portuguese language on the radio communications conducted between the platforms and the aircraft, in waters under Brazilian jurisdiction.
Note: The regulations contained herein shall be complied with within a period of 2 (two) years, as of the date of publication thereof on the Official Gazette.

c) RESCUE VESSEL CREW

The rescue vessel shall include a crew of at least three people, and the pilot of the vessel shall have the certificate of proficiency on fast rescue vessels, issued in accordance with rule VI/2 of the STCW 95 Convention. However, all the members of the crew must be qualified by attending a first aid course and have the certificate issued in accordance with rule VI/4 of the same Convention.
The vessels used on the sea support activities and/or services may have in the composition of the crew of the rescue vessel up to two (2) BOMBAV from the EMCIA crew.
The rescue vessel crew of the remaining ships and platforms shall be composed independently from the EMCIA crew.
The responsibilities of the rescue vessel crew include:
1) To keep the vessel ready to be launched, in order to start the launching procedures within the maximum period of two minutes; and
2) To maintain communications with the radio operator and the ALPH during all the period of air operations.
Note: The regulations contained on this item shall be complied with within a period of 6 (six) months, as of the date of publication of these norms in the Official Gazette.

0621 – HELICOPTER COMMANDER

The attributions of the helicopter Commander are:
a) To be aware of the applicable rules issued by the Aeronautic Command;
b) To maintain bilateral contact with the flight protection agencies, platform or merchant ship;
c) To radio communicate with the destination merchant ship or platform at least 30 minutes before the estimated time of arrival. In case the flying time is less than 30 minutes, the communications must start right after taking off.
d) To observe the safety rules for the transportation of outside load and restricted articles; and
e) To report eventual irregularities to the contracting company.

0622 – HELICOPTER OPERATING COMPANY

a) It is the responsibility of the helicopter operating company, by the appropriate personnel, to communicate to DAC and the proprietary or administrator of the platform / owner or master of the merchant ship, any irregularity found in the heliports by the helicopter commanders.

b) It is the responsibility of the helicopter operating company, by the appropriate personnel, to inform the operator of the platform the envelope of wind for landing and taking off, the wind limits to start and shut down the engines and the limits of rolling and pitching for air operations, in regards to mobile platforms and merchant ships.
c) It is the responsibility of the company operating the helicopter, by the appropriate personnel, to inform the operator of the vessel the estimated time for landing and taking off on the corresponding platforms and/or merchant ships;

0623 – PROPRIETARY OR OWNER OR ADMINISTRATOR
The following items are the responsibility of the proprietary or the administrator of the offshore platform and of the Owner or Master of the merchant ship where helicopters are to be operated:
a) To guarantee that the heliport fulfills all the requirements established herein;
b) To inform DPC and DAerM of any change on the conditions of the heliport to which the Homologation Order of the heliport was issued;
c) To inform positioning or re-positioning of the vessel to DaerM and Shipping Office, Department or Agency of the jurisdiction area where the heliport operates, and consider the conditions that will influence the operations, such as the alignment of the approach and take off with the average predominant wind at the site and the position of burners, exhaust fans of turbines or air conditioning units, so that they will not interfere in the approach and take off trajectory or on the heliport surface;
d) To ascertain that the landing and taking off operations will only be conducted within the limits defined in the envelope informed by the company operating the helicopter;
e) To provide for air transportation between the head offices of DAerM and the city closest to the vessel to be inspected, as well as lodging, road and urban transportation for the Inspection Committees; and
f) To provide the Inspection Committee of the MB an exclusive offshore flight, flying directly to the offshore platform(s) to be inspected.

0624 - SANCTIONS
a) The misuse of the heliports by civil helicopters will imply in sanctions foreseen in the current legislation, and may lead to the suspension of air operations to be determined by the Naval Command, through the DPC, or by the Aeronautic Command, through the DAC, at any time, based on insufficiency or impossibility of operation of the installations and/or equipment, or the non observance of any of the indications contained in the corresponding documents, detected during the inspections or communicated by a helicopter operator;
b) Any of the heliports can only operate helicopters duly certified and homologated, respectively, by the Brazilian Navy (DPC) and by the Aeronautic Command (DAC).

0625 – SPECIAL OR UNFORESEEN CASES
Special cases or those not mentioned herein shall be directed to DAerM, with copies to the Shipping Office, Department or Agency involved, to be analyzed and solved by the permanent Commission, constituted by representatives of the Brazilian Navy and the Aeronautics Command.