



# Workshop about Safety and Efficiency in Heliports

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## Outline

- Legislation applied;
- Main definitions;
- Fire fight systems;
- Examples of visual and light aids;
- Problems detected in inspections;
- Example of Checklist used in inspections.

## Legislation applied

Circular N°18/GM5, 14/02/1974 : instructions about operations and constructions of heliports;

Circular N°256/GC5, 13/05/2011 : about obstacles limitations surfaces.

## About the use

Private Heliport: heliport intended for use helicopters only by the owner or persons authorized by him, being prohibited its commercial use.

Public heliport : heliports equipped with installations and facilities to support helicopter operations and the boarding and landing of passengers and cargo.

**ANAC** do not makes inspections in military heliports.

## Heliport type

- **Elevated Heliport** : heliport located on buildings;
- **Ground Heliport** : heliport located on the ground level.

## Elevated heliport in mettalic structure





## Heliports in the ground



## Main components of heliports

- Touch area;
- Landing and Take-off area;
- Peripheral area (safety area); and
- Fire fighting system;



## TOUCH AREA

Part of the landing and takeoff area with defined dimensions, in which it is recommended to touch the helicopter to land.

The Touch Area should be located in the center of the landing area.

(In annex 14 is TLOF = touchdown and lift-off area)

## TAKE-OFF AND LANDING AREA

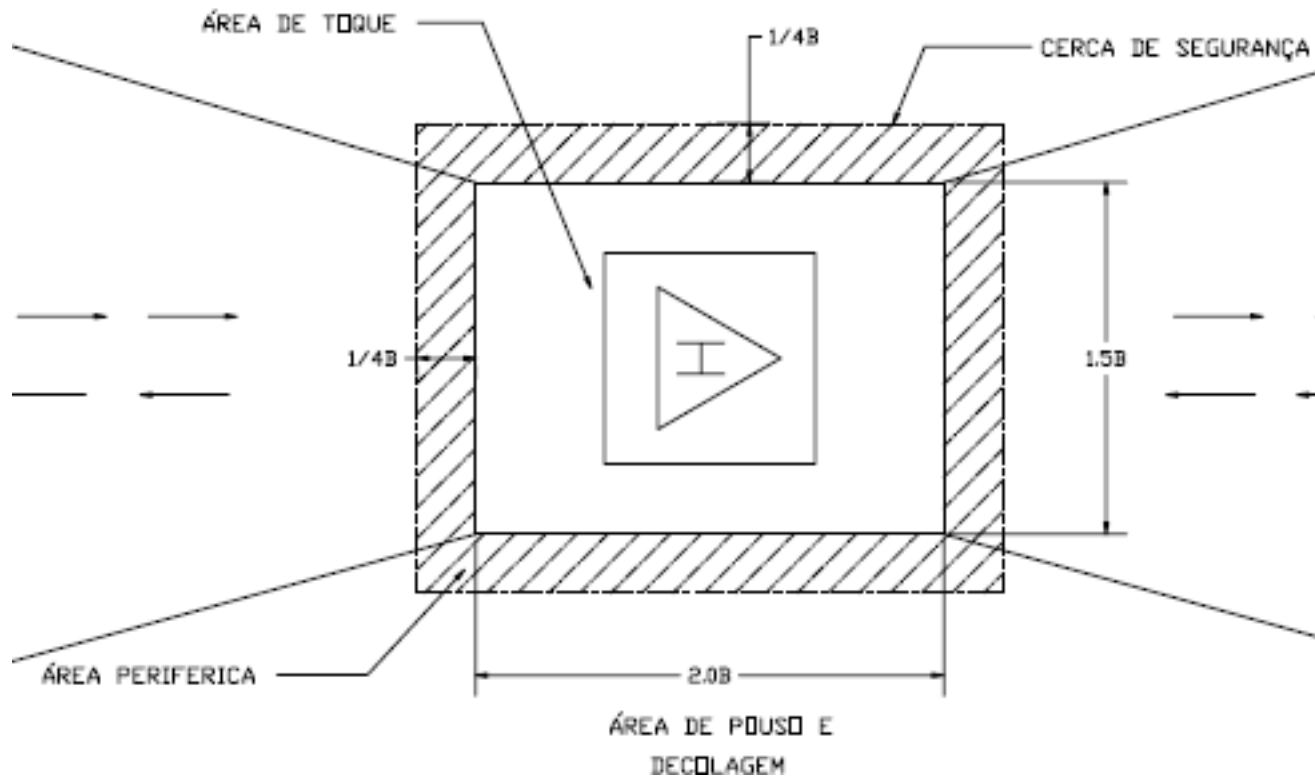
Area with defined dimensions where the helicopter lands and takes off and that involves the touch area.

(In annex 14 is FATO = final approach and take-off area)

## **PERIPHERAL AREA**

It is an area free from obstacles that involves landing area, in order to constitute a security zone. In heliports at ground level area must be surrounded by about a meter in height to prevent entry of animals.

# PERIPHERAL AREA



Peripheral area - Width (L):

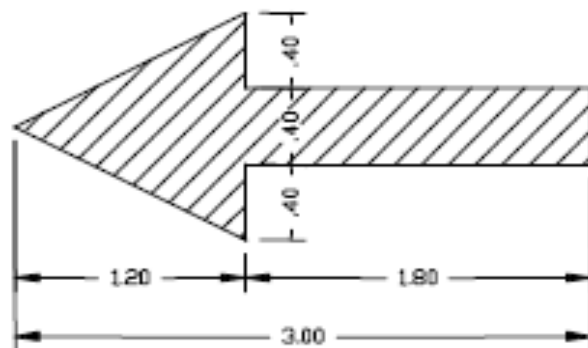
$L = B \frac{1}{4}$ ;

$L \geq 3.0$  meters at least.

## VISUAL AIDS

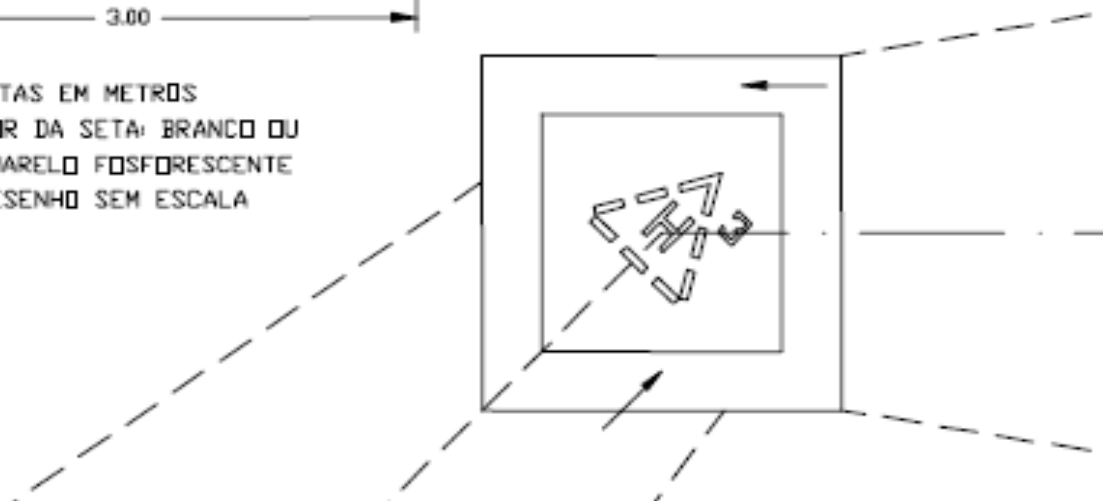
- Paint identification of landing area;
- A letter indicating the type of heliport:  
(**H** = hospital and Public; **P** = Private and **M** = military);
- Triangle with vertex indicating magnetic north;
- Number indicating the maximum permissible weight on the floor in tons located in the right side of the triangle with the same orientation and the letter (H, P or M);
- Arrow indicating the approach surface (free from obstacle);
- Security and safety warning;
- Illuminated wind direction indicator.

## ARROWS APPROACH SURFACE INDICATOR



OBS.1

- 1 - COTAS EM METROS
- 2 - COR DA SETA: BRANCO OU AMARELO FOSFORESCENTE
- 3 - DESENHO SEM ESCALA



## LIGHTS

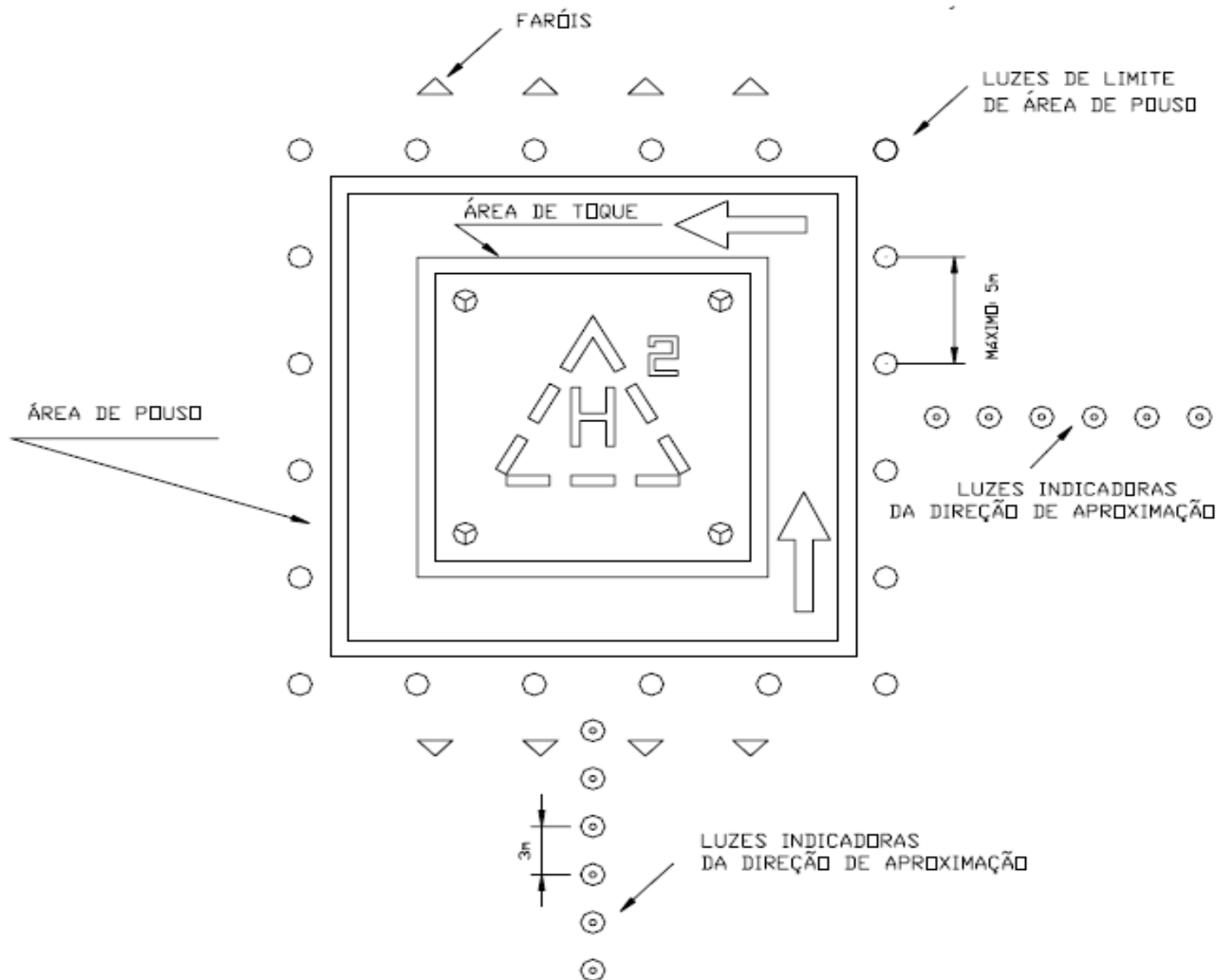
- Touchdown / lift-off area lights;
- Landing / take-off area lights;
- Illuminated wind direction indicator;
- Floodlights;
- Beacon;
- Lights of the approach surfaces.



## Illuminated wind direction indicator



# VISUAL AIDS AND LIGHTS



## Fire Fight System

The principal objective is to save lives. Is provided to create and maintain survivable conditions, to provide the egress for occupants and to initiate the rescue of those occupants unable to make their escape.

Is checked :

- Fire fighting personnel trained to perform their duties;
- Fire extinguishers;
- Effectiveness of equipment;
- We also recommend the existence of portable tools (saw, shears, fire clothing, helmet) in the place indicated (red), easy access and adjacent to the heliport.

## Fire Fight Systems



- With easy access;
- Effectiveness of equipment;
- Equipment should be stored adjacent to the heliport;
- Place should be indicated (red);

# Fire Fight Systems



- With easy access;
- Effectiveness of equipment;
- Equipment should be stored adjacent to the heliport;
- Place should be indicated (red);



# Fire Fight Systems



- Fire fighting personnel trained to perform their duties;
- Fire extinguishers;
- Effectiveness of equipment;
- Equipment stored adjacent to the heliport.



## Fire Fight Systems



- Effectiveness of equipment;
- Equipment stored adjacent to the heliport;
- Place should be indicated (red);

# EXAMPLES OF VISUAL AID AND LIGHTS IN HELIPORTS

## Examples of visual aids



- Indication of north magnetic through the vertex of the triangle;
- Indication private heliport (letter P inserted in the triangle);
- Maximum permissible weight (3,000 kg) on the right side of the triangle vertex with the same orientation as the letter;
- Painting with contrast (blue and yellow); and
- Arrow indicating the approach surface (free from obstacle).

## Examples of visual aids and lights



- Painting and lighting showing the edge between touchdown and final approach areas;
- Arrow indicating the approach surface (free from obstacles);

## Examples of visual aids and lights



- Floodlights taking care to avoid dazzling the pilot during approach and landing.



## Examples of visual aids and lights



- Lights and painting showing the limits between touch and landing/tack off areas;
- Arrow indicating approach surface (free from obstacles).



## Examples of visual aids and lights



- Helicopter landing and the indicator lamps of the landing/tack off area.

## Examples of visual aids and lights



- Indication of north magnetic;
- Maximum permissible weight (4,000 kg);
- Painting with contrast;
- Indication of the type of heliport “Hospital” (letter H inserted in the cross).

## Safety and security warnings



- Heliports must have safety warnings in the access

# PROBLEMS DETECTED IN INSPECTION



- Painting needing recovery.



- Painting needing recovery with insufficient contrast.





- Painting with insufficient contrast needing recovery.



- Arrow indicating approach surface with insufficient contrast needing recovery.



- Painting with insufficient contrast needing recovery;
- Fire fighting equipment not adjacent to the heliport.

## Inspection and certification of heliports

Having a small team, the priority of periodic inspections and certification is given to public airports and public heliports;

The certification of the heliports is done only through documentary analysis with no inspection and the owner is responsible its information and the project sent, respecting the law:

- Circular 18/GM5 from 14/02/1974 ;
- Circular 256/GC5 from 13/05/2011.





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Desenvolvimento  
Padronização  
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Orientações ao Usuário  
Livre Concorrência**





Thanks !

Questions?