

MH 5013-2014
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MH 5013—2014

□□ MH 5013—2008

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Technical Standards of Civil Heliports

2014-06-06 □□

2014-08-01 □□

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Technical Standards of Civil Heliports

MH 5013—2014

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2.1 2
 2.2 6
 3 7
 3.1 ...
 3.2
 3.3 7
 3.4 8
 4 9
 4.1 9
 4.2 16
 4.3 19
 4.4 20
 5 23
 5.1 23
 5.2 25
 6 38
 6.1 38
 6.2 39
 6.3 ... 51
 7 62
 7.1 ... 62
 7.2 62
 7.3 63
 A 65
 B 67
 C 70
 ... 71

1??

- 1.0.1 , , ,
- 1.0.2 [] [] []
 []
- 1.0.3 , 1 2 3 , A
- 1.0.4 [] [] , []
- 1.0.5 [] []

2 ??????

2. 1 ??

- 2. 1. 1 [] heliport []
[]
- 3. 1. 2 [] surface-level heliport []
- 4. 1. 3 [] elevated heliport []
- 5. 1. 4 [] helideck [] ([] [])
[]
- 6. 1. 5 [] shipboard heliport []
- 7. 1. 6 [] water heliport []
- 8. 1. 7 [] over-all length of helicopter []
- 9. 1. 8 [] over-all width of helicopter []
- 10. 1. 9 [] over-all length / width of helicopter []
- 11. 1. 10 [] width of the undercarriage of helicopter
[] , []
- 12. 1. 11 [] final approach and take-off area (FATO)

[] , [] ([] 1 []

[])

2. 1. 12 ??????? helicopter clearway

[] , [] / [] 1
[]

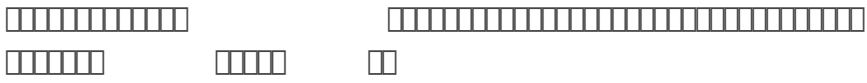
2. 1. 13 ?????????????? runway-type FATO

[] [] 100m []

2. 1. 14 ??????? touchdown and lift-off area (TLOF)



2. 1. 15 ??? safety area



2. 1. 16 ?????????? helicopter ground taxiway



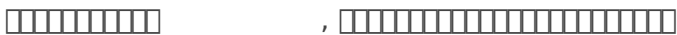
2. 1. 17 ?????????? helicopter air taxiway



2. 1. 18 ?????????? helicopter taxi-route



2. 1. 19 ?????? helicopter stand



2. 1. 20 ??? protection area



2. 1. 21 ?????? winching area

XXXXXXXXXX

,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2. 1. 22 ???????? dynamic load-bearing surface

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

2. 1. 23 ???????? static load-bearing surface

XXXXXXXXXXXXXXXXXXXX

????????????????????

2. 1. 24 ????? ground effect

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

2. 1. 25 ???????? take-off distance available

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

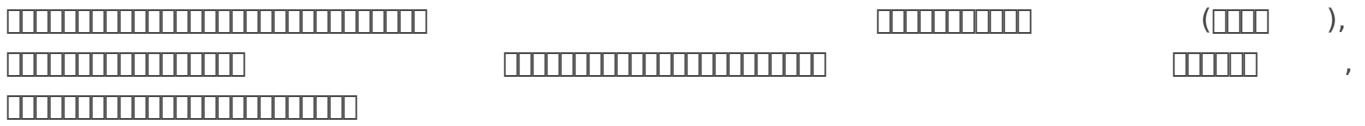
() ,

2. 1. 26 ????????? rejected take-off distance available

XXXXXXXXXXXXXXXXXXXX

, 1

2. 1. 33 ????? point-in-space (PinS) approach



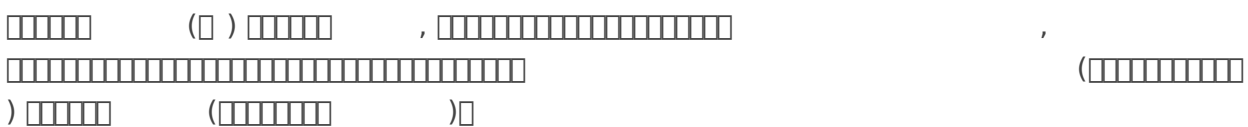
2. 1. 34 ????? point-in-space (PinS) visual segment



2. 1. 35 ????? heliport elevation



2. 1. 36 ??? obstacle



2. 1. 37 ????? principle of being shielded



2. 1. 38 ????? geoid



2. 1. 39 ?????? orthometric height

????????, ?????

2. 1. 40 ?????? (?????) ellipsoid height (geodetic height)

????????, ?????????

2. 1. 41 ?????????? geoid undulation

????? () ??? () ?????????? ??????????
????????? -1984 (WGS-84) ??????????, WGS-84
????????????????? WGS-84 ??????????

2. 1. 42 ?? accuracy

????????????????? ?????????????? 95%???????

2. 1. 43 ??? (?????) integrity (aeronautical data)

??

2. 2 ??

TODAH	??????
RTODAH	????????
LDAH	??????
L	??????
W	??????

0.5 m

0.25 m

3.3

3.3.1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

3.3.2

- 1
- 2
- 3
- 4
- 5

3.4 ??????????

3. 4. 1 [] FATO [] ([]):

1 [] (TODAH);

2 [] (RTODAH);

3 [] (LDAH)

4 ?????

4. 1 ????????

4. 1. 1 ?????

1 []

2 [] , [] ,
[] [] ,
[]

4. 1. 2 ?????????? (FATO)

[] FATO , [] :

1 [] 1 [] , FATO [] , [] ,
[] 1.0 D ; [] 2 [] 3 [] , FATO [] ,
[] 3 175 kg [] , [] 1.0 D , [] 3 175
kg [] , [] 1.0 D , [] 0.83 D [] D
[] FATO [] , []
[]

2 FATO [] 3% [] , [] 1 [] , []
5% ; [] 2 [] 3 [] , [] 7%

3 FATO [] :

1. [] ([]) [] ;

2. [] ;

3. [] 1 [] , [] ;

[] [] [] [] TLOF [] FATO [] [] TLOF [] , [] ;

5. []

FATO [] [] [] []

4. 1. 3 ???

[] 1 [] , [] []

[] , [] FATO [] [] [] []
FATO [] [] [] [] [] , []

4. 1. 4 ??????? (TLOF)

[] TLOF [] TLOF [] FATO [] [] [] FATO [] ,
[] FATO [] TLOF [] TLOF [] :

1 TLOF [] 0. 83 D []

2 TLOF [] 0. 5% [] , [] , [] 2% []

3 TLOF [] FATO [] , [] ; TLOF [] , []
[]

4 TLOF [] FATO [] , [] FATO [] 1. 0 D , [] TLOF [] FATO [] 0.
5 D []

[] D [] TLOF []

4. 1. 5 ???

[] FATO [] , [] :

1 [] (VMC) [] , [] FATO [] 3 m [] 0. 25 D [] ([]
) [] : 1) [] FATO [] , [] 2. 0 D ([] 4. 1. 5-1); []

2) [] FATO [] , [] 2. 0 D [] [] D []
[] (IMC) [] , [] FATO [] 45 m, [] FATO
[] 60 m ([] 4. 1. 5-2) []

5 TLOF [] , []

6 [] , []

7 []

8 [] , []
[] , [] 0.75 D, []

[] 5 cm [] ; [] 0.75 D [] ,
[] [] []

9 [] , [] 0.83D
[] [] D []

4. 1. 9 FATO ??????????

[] , [] FATO
[] [] , FATO
[] 4. 1. 9 []

□ 4. 1. 9 FATO [] []

[] (kg)	FATO [] (m)
<3 175	60
3 175~<5 760	120
5 760~<100 000	180
≥100 000	250

4. 2 ????????

4. 2. 1 ?????????? (FATO)

[] FATO [] FATO [] TLOF [] , [] :

1 [] 1 [] , FATO [] , [] ,
[] 1.0 D; [] 2 [] 3 [] , FATO [] ,
[] 3 175 kg [] , [] 1.0D, [] 3 175
kg [] , [] 1.0 D, [] 0.83 D [] D

1. 2 FATO 0.5% , , 2%
 3 FATO 1.5
 4 FATO ()
 5 FATO

4. 2. 2 ???

FATO 3%
 ,

4. 2. 3 ??????? (TLOF)

$\$TLOF_{\circ} \$$ FATO TLOF, FATO ;
 TLOF , :

1 TLOF 0.83 D
 2 TLOF 0.5% , , 2%

,

4 ,

D TLOF

4. 2. 4 ???

FATO , :

FATO 3 m 0.25 D
 (); 2 3 FATO 3 m
 0.5 D () :1 FATO ,
 2.0 D; 2 FATO , 2.0 D D
 ,

1 FATO [] []
[] []

1.0 D [] D

2 FATO [] []
[] []

3 m [] ,

4. 3. 2 ??????? (TLOF)

[] TLOF, [] :

[] TLOF [] [] kg [] , [] 1.0
D, [] 3 175 kg [] , [] 1.0 D, [] 0.83 D []

2 [] FATO [] , TLOF [] FATO []
[] FATO [] TLOF [] FATO [] FATO [] TLOF
[]

3 TLOF []

4 TLOF []

5 [] TLOF [] ,
[] TLOF
[] , [] D [] 16.0 m [] , [] 25 cm; [] D [] 16.
0 m [] , [] 5 cm []

6 [] TLOF [] 2.5 cm,
[]

7 TLOF [] , []

[] D []

4. 3.3 ????????

[] [] , [] TLOF
[] [] 1.5 m, [] 122kg/m2 []
[]

4. 4 ????????

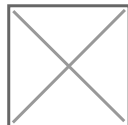
4 / 4.5% , ,

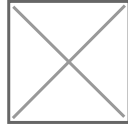
5 , ,
 , ,
 :

1. ;
2. ;
3. ;
4. ;

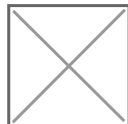
6 , 5.2.1
 , ,

7 ,
 6.3.6


 5.2.1-1 /


 5.2.1-2 /




 : 1 : $S+R$ 575 m $S = 305$ m , R
 \sim m S , R 575 m
 1 075 m, , 5.2.1-1
 ,

5.2.1-4 /



□ 5.2.1-5 □□□□□□

FATO □□□□□



□ 5.2.1-6 □□□□

FATO □□□□



□ 5.2.1-7 □□□□□

FATO □□□□



□ : □□□□

FATO , □□□□□□□□□□□□

□ 5.2.1-8 □□□□

□ 5.2.1-1 □□□□□

FATO □□□□□□□□□□

□□□□	□□□□□		
	A	B	C
□□□□□□□			
□□□□	FATO□□□□□□ / □□□□□□	FATO□□□□□□ / □□□□□□	FATO□□□□□□ / □□□□□□
□□□□	□□□□□□□□ □□□□□□□□ □□□□□□)	□□□□□□	□□□□□□
□□□			
□□□			
□□□	10%	10%	10%
—□□	15%	15%	15%
□□	3386m	245m	1 220 m
□□	4.5%	8%	12.5%
	(1:22.2)	(1:12.5)	(1:8)
□□□□			
□□□	7 RD	/	7 RD

45m	45m	45m	45m	45m	45m	45m
-----	-----	-----	-----	-----	-----	-----

□ 5.2.1-4 □ (□□□□) □□□□□□□□□□

□□□□□□	□□
□□□□	90m
□□□□	□□□□□□
□□	□□□□
□□□□□□	30%
—□□ □□ —□□	2850m
□□□□	
□□□□□□ □□□□	1800m
□□ (□□)□□□□	3.5%
□□□□□□	□□
□□□ □□ □□ —□□	1510m
□□□□ □□□□□□	
□□□□	1800m
□□ (□□)□□□□	3.5%
□□□□	
	□□
□□ □□□□	7640m
—□□□□	
□□□□□□□□	1800m
□□□□	
□□ (□□)□□	2%

□ □□□ □□□□□□□□□□□□□□□□□□□□□□

5.2.2 ????????

□□□□□□□□□□□□□□□□ □□□□□□□□ 5.2.1 □□□□□□

5.2.3 ????????

cm, 





D 





D 

6. 2. 4 FATO ????????

 FATO ,  FATO  FATO ,  :

1  FATO  50 m , 



 3  ();

2  FATO ,  9 m ,  1 m  6.

2. 5-1 ~ 2 

 FATO   ,
 , 



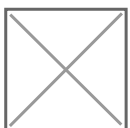
 6. 2. 4-1  FATO  ()

4  FATO,  FATO ,  FATO

  30 cm  1. 5 m,

 1. 5 m,  2 m   FATO

  6. 2. 4-2 



 6. 2. 4-2  FATO  (TLOF  FATO )

1 (MH 5001)

2 0.5 m 3 m ,

0.5
m 25 cm , 5%

3 , ,

6. 2.15 ??????????

:

1 , (MH 5001)

2 , 15 cm , 1.5 m

, 30 m, 15 m,
 W 30 m,
 15 m, W

3 , 4. 1. 7

4 , ,

6. 2. 16 ??????????

, ; ,
 ; , ;
 / ; , 6. 2.16



6.2.16

1 , , 15 cm

2 TLOF , TLOF ,

3 , , , 0.5 m

, 15 cm

5 ,

6

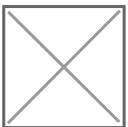
6. 2. 17 ????????????

, , 6. 2. 17
 / , TLOF FATO FATO
 :

1 50 cm, 3 m, 1.6 m, 1.5 m

2 , ;
 ,

3 ,



6. 2. 17








6. 3 ??

6. 3. 1 ?????

1 (MH 5001)






2

3 , ,

2  ,  6 m
 1.5 m,  3 m  ,  5 

3 
 /  ,




4   6. 3. 9-1 
 

6. 3.5 ??????????






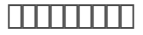




 ()  ,  :














  ;

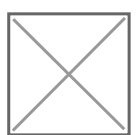
 ;



 :


1  FATO   , 
,  6. 3. 5-1  ,   ,
 3
 3

2  ,  “ “  
  


 



 6. 3. 5-1  : 



14 []

[]

[]

50%

6. 3. 10 ??????????

[]

[]

[], []

[]

[]

10 lx

6. 3.11 ??????????

[]

[]

[]

[]

(MH 5001)

[]

6. 3.12 ??????????

[]

[]

6. 3. 13 ??????????

[]

[]

[]

[]

[]

[]

\$10 \

$\mathrm{c d / m } ^ { 2 }$$

7 ??????

7. 1 ?????

7.1.1 []

[]

7.1.2 []

[]

7.1.3 [redacted] [redacted] ,
[redacted]

7. 1.4 [redacted] , [redacted]

7. 2 ?????

7.2.1 [redacted] [redacted] [redacted] [redacted] 7.2.1
[redacted] [redacted] [redacted]

7.2.2 [redacted] ,
[redacted]

□ 7.2.1 [redacted]

□	[redacted] □
H	< 15 m
H2\$	15 m ~< 24 m
H3	24 m~< 35 m

7. 3 ?????????

7. 3. 1 ???

[redacted] B [redacted] ([redacted] [redacted] (Doc 9137-AN
/ 809) [redacted] [redacted])□

7. 3.2 ?????????

[redacted] [redacted] [redacted] 7. 3. 2-1 □ 7. 3. 2-2
[redacted]

2 [redacted] , [redacted]

3 [redacted] , [redacted] ,
[redacted]

□ 7.3.2-1 [redacted] , [redacted]

□□	□□□□ B□□□□		□□□
(1)	□ (L) (2)	□□□ □□□□ (L/min) (3)	□□□□ □□□ (kg) □ (kg)
H1	500	250	(4) (5) 23 23
H2	1000	500	45 45
H3	1600	800	90 90

□ 7.3.2-2 □□□□□□ , □□□□□□□□

□□	□□□□ B□□□□		□□□	
(1)	□ (L) (2)	□□□ □□□□ (L/min) (3)	□□□□ □□□ (kg) □ (kg) (4)	□
H1	2500	250	45	(5) 45
H2	5000	500	45	45
H3	8000	800	45	45

7. 3. 3 ????

1 □□□□□□□□□□

7. 3. 2-1 □□ 7. 3. 2-2 □□□□□□□□

□□□□□□□□□□□□□□□□

□□ /□□ /□□	□□□□□□	□□□□
FATO□□□□ TLOF□□	1m□□□	□□□
□□□□□□□□	1m□□□	□□□
□□□□□□	1m□□□	□□□
□□□□□□	1m□□□	□□□
□□□□□□□□	1m□□□	□□□
□□□□□□□□ /□□□□□□	1m□□□	□□□
□□□□□□ ILS□□□□□□ FATO □□□□	3m□□□	□□□
□□□□□□ ILS □□□□□□□□□□□□□□	3m□□□	□□□
□□□□□□ ILS□□□□□□□□	3m□□□	□□□
□□□□□□ ILS □□□□□□□□□□□□□□	3m□□□	□□□
□□□□□□ MLS□□□□□□ FATO □□□□	3m□□□	□□□
□□□□□□ MLS □□□□□□□□□□□□□□	3m□□□	□□□
□□□□□□ MLS□□□□□□ DME/P□□□□□□□□□□)	3m□□□	□□□

?? C ?????????

□□□□□□□□□□□□□□ , □□□□□□□□□□□□□□ : □□□□□□□□□□□□□□

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???????

[2] 1111 -111 111111111 6 11111111 1111 111 2007

[3] HELIPORT MANUAL Doc9261-AN / 903 ICAO THIRD EDITION 1995

[4] Heliport Design AC150 / 5390-2C FAA 2012

[5] Standards for Offshore Helicopter Landing Areas CAP 437 UK Civil Aviation Authority 2013

[6] Heliports Standard 325 Canadian Aviation Regulations (CARs) 2012

111 #5

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