



**ПНСТ
497—
2020/
IEC/FDIS 63115-2**

,

-

2

**(IEC/FDIS 63115-2,
Secondary cells and batteries containing alkaline or other non-acid electrolytes —
Sealed nickel-metal hydride cells and batteries for use in industrial applications —
Part 2: Safety, IDT)**

2020

497—2020

1 « » (-
 « »)
 , 4. « -
 - , »
 (« »)

2 044 « »

3 12 2020 . 113-

4 IEC/FDIS 63115-2 « -
 , .
 .

2. » (IEC/FDIS 631152 «Secondary cells and batteries containing alkaline or other -acid electrolytes — Sealed nickel-metal hydride cells and batteries for use in industrial applications — Part 2: Safety», IDT).

1.5—2012 (3.5).

1.16—2011 (5 6).

42. . 1. . VI. /
 : 123112 . , . 10. . 2.
 « »

(www.gost.fu)

© IEC/FDIS —
 © . 2020

1	.....	1
2	.....	1
3	.....	2
4	.....	3
5	.....	4
5.1	.....	4
5.2	.....	4
5.3	.....	4
5.4	..... / / .....	5
5.5	.....	5
5.6	.....	5
5.7	.....	5
5.8	.....	5
5.9	.....	5
6	.....	6
6.1	.....	6
6.2	.....	6
6.3	.....	7
6.4	.....	7
6.5	.....	9
7	..... ( ).....	11
7.1	..... ( ) ( ).....	11
7.2	..... ( ).....	12
8	.....	13
9	.....	13
10	.....	13
	()	14
	()	15
	.....	16

2

Secondary cells and batteries containing alkaline or other non-acid electrolytes.
Secondary sealed nickel-metal hydride cells and batteries for use in industrial applications.
Part 2. Safety requirements and test methods

— 2021—03—01
2024—03—01

1

2

().
IEC 60050-482. International Electrotechnical Vocabulary (IEV) — Part 482: Primary and Secondary cells and batteries ((IEV). 482. -

IEC 63115-1:2020, Secondary cells and batteries containing alkaline or other -acid electrolytes — Sealed nickel-metal hydride cells and batteries for use in industrial applications — Part 1: Performance (-

1.)
ISO/IEC Guide 51. Safety aspects — Guidelines for their inclusion in standards ()

1

497—2020

3

51. 60050*482. 63115-1 /

51. : -

- . http://www.electropedia.org/;

- . http://www.iso.org/obp.

3.1 (safety):

(60050-903:2013. 903-01-19)

3.2 (risk):

[60050-903:2013. 903*01*07,]

3.3 (harm):

[60050-351:2013. 351-57*02]

3.4 (hazard):

[60050-351:2013, 351-57*01,]

3.5 (intended use):

[60050-903:2013, 903-01-13, « -

» « » « »]

3.6 (reasonably foreseeable misuse): -

[60050-903:2013, 903-01-14]

3.7 (cell, nickel-metal hydride cell): -

3.8 [60050-482:2004, 482-05-17] (cell block): -

3.9 (monobloc): -

[60050-482:2004, 482-02-17,]

3.10 (module): /

3.11 (battery pack):

3.12 (battery system, battery):

1 —

2 —

3 —
4 —

3.13 (battery enclosure, enclosure): -

3.14 ; (battery management system: BMS): *

1 — / , ,
/ ,
2 — ,
3 —
4 — ().

3.15 (final voltage): ,

(60050*482:2004. 482-03*30. « -
», « » « »)

3.16 (nominal voltage): -

1.2 1 — - -
2 —

[60050*482:2004, 482-03*31, -
; « »; -
« »)

3.17 (rated capacity): , -

— — 5° - - 0 -
, 7.3.1.

[60050-482:2004. 482-03*15. -
: « » ,]

3.18 (explosion): , -

3.19 (rupture): , -

3.20 (leakage): ,

(62133-1:2017, 3.9] -
3.21 (venting): -

4 -

a) ±1 % — ;
b) ±1 % — ;

5.4

/ /

,

-

63115-1:2020.

5.5

,

-

(

60068-2-60.

60068-2-11

.)

5.6

,

,

,

-

/

,

-

5.7

,

,

,

-

5.8

,

,

-

5.9

6

1.
(25 ± 5) °C.

-

6

6

-

497—2020

1 —

	(6.1)	
	[	( .1
6.4.1	R	R
6.4.2	—	R
6.4.3	R	—
6.5.1	R	R
6.5.2	R	R
6.5.3 ()	R	R
6.5.4	R	—
6.5.5	R	—
6.5.6	R	—
6.5.7 [. ^d 4	R	R
6.5.8	R	—

6

6.1

- 1)
- 2)
- 3)
- 4)
- 5)

6.2

$(20 \pm 5) *$

$0.2/c . 1.0$

(20 ± 5)

7.2

63115-1:2020

$$I_1(\omega) = I_5(\omega) / I_1(\omega)$$

6.3

500

100

60

2.

IP.

2.

61032

60529.

2 —

(
1	\$50	<60
2	\$12.5	>60
3	\$2.5	>160
4	\$1	>500
5		—
6		—

6.4

6.4.1

a)

b)

6.2.

7 200
3

7

15

12

$1g_n$
0,8

(

1.6

),

7—18

$1.4g_n$ (

20

).

200

1,4

c)

6.4.2

a)

b)

497—2020

6.2. (70 ± 2) ' 7 .

)

IP-

6.4.3

a)

b)

1.

(20 ' . 70) 6.2.

1. 4

(70 ± 5) * ;

2. 30 (20 ± 5)

3. 30 (2015) *

4. 4 : 30 (20 ± 5) '

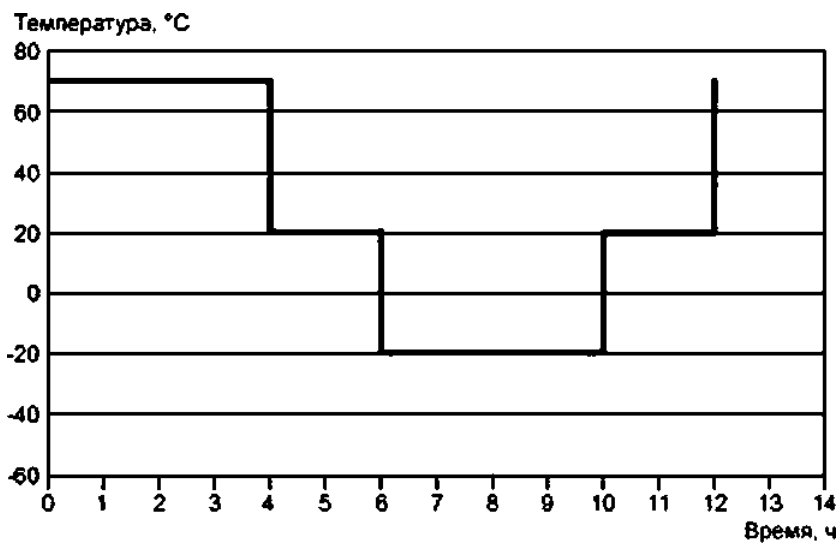
5. 1—4 (). 4 1

30 ;

6.

24 .

c)



1 —

6.5

6.5.1

a)

b)

(20 ± 5) °C.

(80 ± 20)

(

20 %

24

6.2.

0.2

0.8

1 .

0.1

30

c)

6.5.2

a)

b)

0,2/|.

6.2.

3.

6.2.

1 .

c)

3—

50	10,0
50	5.0
100	2.5
—	-

6.5.3

a)

b)

6.2,

497—2020

3

490 / 2 (50).
(20 ± 5) .

1

100

)

6.5.4

a)

b)

6.2

(201 5) " .

(5 ± 2) ' /

1) (130 ± 5)' :

2) (8515) * .

30

c)

6.5.5

)

}

6.2.

(13 ± 0.78) .

6.5.6

a)

b)

(20 ± 5) °C.

6.2,

11,6

6 ;

(15.24)

c)

6.5.7

a)

(

).

b)

(20 ± 5) .

0.2/ . 1,0 /

(20 ± 5) ' -
63115-1:2020 (-

7.2) 250 % (250 %) , . -

(10 30) -

6.5.8
a)

b)

(20 ± 5) .

0,2/.. . 1,0 / .

90 .

0,2/|. . 7.5 .

(10 °C 30) -

c)

7 ()

7.1 () ()

7.1.1

(SIL)

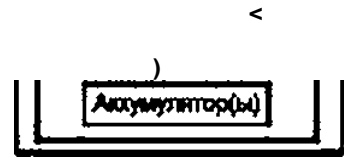
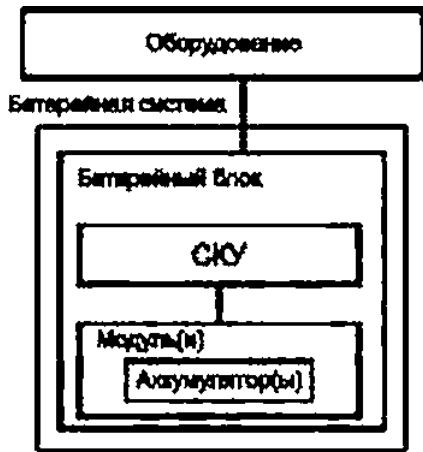
7.2.

1 —
(. 2).
2 —

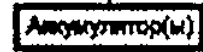
(. 2).

62973-4).

497—2020



MeV*»



a) 7.2 ()
b) / ,
(20 ± 5) ' (,
0.2/| . 1,0 / . 50 %
5 °C ,
1 (/
c))
d) 8 ()

8

()

9

10

63115-1:2020.

497—2020

()

61508. 60730*1:2013.
(. FTA. FMEA).
FMEA FTA.
60812. 61025 . . .
a) ;
b) ;
c) (SIL)

()

.1

IEC 60050-482	IDT	60050-462—2011 « »') . -
IEC 63115-1:2020	IDT	63115-1—2020 « - - - 1. - »
ISO/IEC Guide 51	IDT	57149—2016/ISO/IEC Guide 51:2014 « - »
<p>— :</p> <p>• IDT — .</p>		

'>

58593—2019 «

.

».

497—2020

IEC 60050-903:2013	International Electrotechnical Vocabulary (IEV) — Part 903: Risk assessment () . 903. ()
1 60068-2-11	Basic environmental testing procedures. Part 2: Tests. Test Ka: Salt mist (. 2. . : ())
IEC 60068-2-60	Environmental testing — Part 2-60: Tests — Test Ke: Flowing mixed gas corrosion test ((. 2-60. . . .))
IEC 60529	Degrees of protection provided by enclosures (IP Code) (, (IP)] ,
IEC 60664-1	Insulation coordination for equipment within low-voltage systems — Part 1: Principles, requirements and tests (1. , ())
IEC 60730-1:2013	Automatic electrical controls — Part 1: General requirements (. 1. ())
IEC 60812	Analysis techniques for system reliability — Procedure for failure modes and effects analysis (FMEA) [(FMEA)] .
IEC61025	Fault tree analysis (FTA) ((FTA)])
IEC 61032:1997	Protection of persons and equipment by enclosures — Probes for verification (. ())
IEC 61434	Secondary cells and batteries containing alkaline or other -acid electrolytes — Guide to the designation of content in alkaline secondary cell and battery standards (, ())
IEC 61508 (all parts)	Functional safety of electrical/electronic/programmable electronic safety-related systems ((, , ,))
IEC61511-1	Safety instrumented systems for the process industry sector — Part 1: Framework, definitions, system, hardware and application programming requirements (- 1. , ())
IEC61513	Nuclear power plants — instrumentation and control important to safety — General requirements for systems (. , . . ())
IEC61951-2:2017	Secondary cells and batteries containing alkaline or other non-aod electrolytes — Secondary sealed cells and batteries for portable applications — Part 2: Nickel-metal hydride (- 1. - ())
IEC 62061	Safety of machinery — Functional safety of safely-related electrical, electronic and programmable electronic control systems (. , , ())

IEC 62133-1:2017	Secondary cells and batteries containing alkaline or other non-acid electrolytes — Safety requirement for portable sealed secondary cells, and for batteries made from them, for use in portable applications — Part 1: Nickel systems ()
IEC 62675	Secondary cells and batteries containing alkaline or other non-acid electrolytes — Sealed nickel-metal hydride prismatic rechargeable cells ()
IEC 62933-2-1:2017	Electrical energy storage (EES) systems — Part 2-1: Unit parameters and testing methods — General specification [()]. 2-1.
IEC TS 62933-5-1:2017	Electrical energy storage (EES) systems — Part 5-1: Safety considerations for grid-integrated EES systems — General specification [()]. 5-1.
IEC 62973-4	Railway applications — Rolling stock — Batteries for auxiliary power supply systems — Part 4: Secondary sealed nickel-metal hydride batteries () 4.
IEC 62465-2:2010	Safety requirements for secondary batteries and battery installations — Part 2: Stationary batteries () 2.
ISO 9001:2015	Quality management systems—Requirements ()

12—2020

..
..
..

13.11.2020. 27.11.2020. 60'84%.
. . . 2.70. - . . 2.37.

,

« »

117418 . - . . 31. . 2.
www.gostinfo.ru info@gostinfo.ru